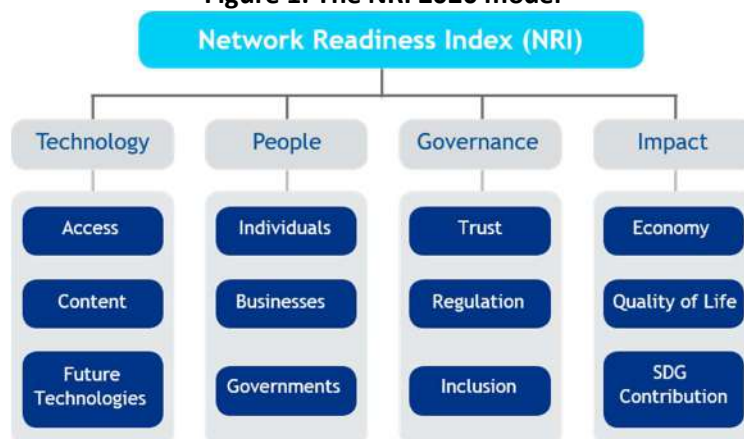# Network Readiness Index 2020 Albania

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
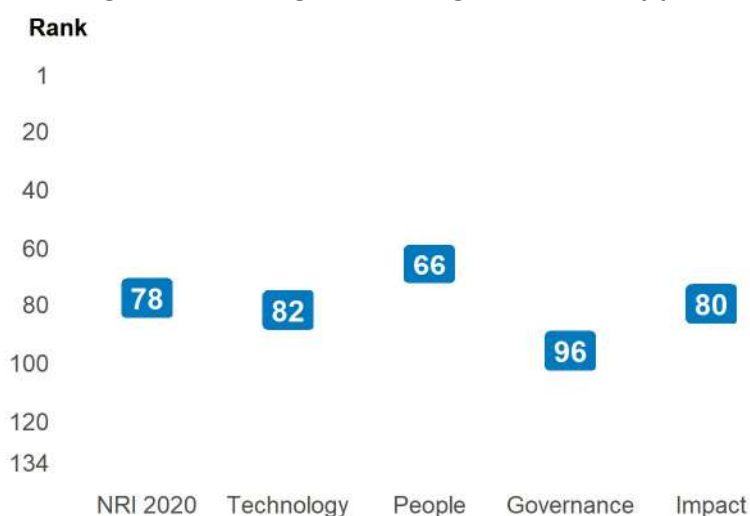
Figure 1: The NRI 2020 model

Global NRI position of Albania

Albania ranks 78th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Albania global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Albania relate to Governments, Content and Quality of Life, among others (Table 1). More could be done, though, to improve the economy's performances in the Economy, Future Technologies and Inclusion sub-pillars.

Table 1: Albania rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	44	Trust	75
Content	54	Regulation	76
Quality of Life	65	Access	84
Individuals	68	Economy	107
SDG Contribution	68	Future Technologies	117
Businesses	69	Inclusion	117

NRI score and income

Figure 3 shows the position of Albania in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Albania is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
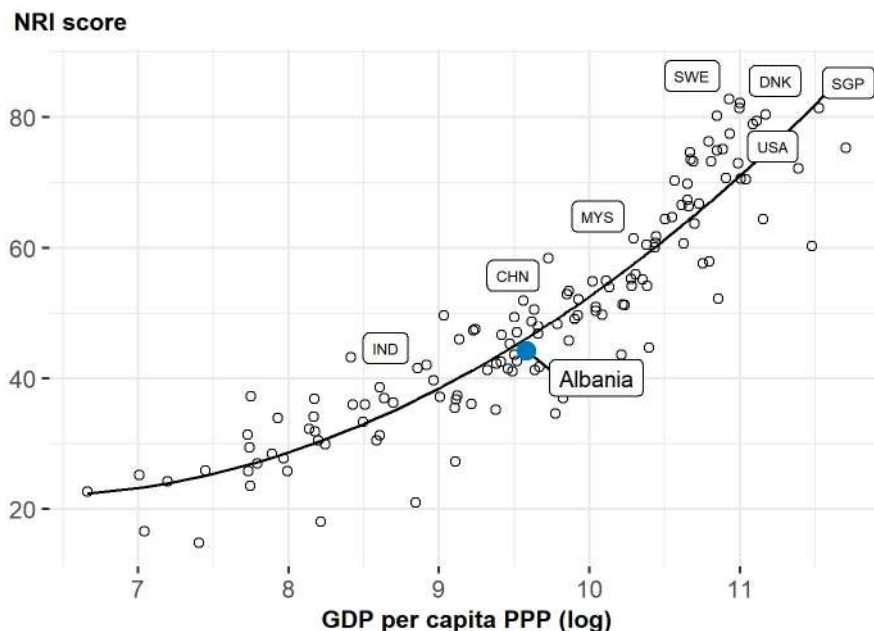
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Albania belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Europe-is Sweden (SWE).

Performance against its income group and region

Upper-middle-income countries
Albania is ranked 25th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: people. At the sub-pillar level, it outperforms upper-middle-income countries in five of the twelve sub-pillars: Content, Governments, Regulation, Quality of Life and SDG Contribution.

Europe
Albania is ranked 40th within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Albania against its income group and region, overall and by pillar

Table 2: Albania scores vs. averages of its income group and region, overall and by pillar

Dimension	Albania	Upper-middle-income countries	Europe
NRI	44.21	47.39	64.21
Technology	33.63	38.42	59.93
People	48.62	46.66	59.89
Governance	45.74	54.31	72.98
Impact	48.83	50.17	64.04

Strongest and weakest indicators

The indicators where Albania performs particularly well include SDG 7: Affordable and Clean Energy, Privacy protection by law content, and Adult literacy rate (Table 3). By contrast, the economy's weakest indicators include High-tech exports, Socioeconomic gap in use of digital payments, Availability of local online content, and Rural gap in use of digital payments.

Table 3: Top-ranked and bottom-ranked indicators of Albania

Strongest indicators	Rank	Weakest indicators	Rank
SDG 7: Affordable and Clean Energy	16	Legal framework's adaptability to emerging technologies	102
Privacy protection by law content	25	Business use of digital tools	110
Adult literacy rate	30	Medium and high-tech industry	110
Government online services	31	Online access to financial account	112
E-Participation	36	Investment in emerging technologies	116
Income inequality	39	Adoption of emerging technologies	117
Healthy life expectancy at birth	43	Availability of local online content	121
Internet access in schools	44	Rural gap in use of digital payments	121
International Internet bandwidth	46	Socioeconomic gap in use of digital payments	122
Wikipedia edits	47	High-tech exports	127

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NRI 2020 At-A-Glance: Albania

Network Readiness Index   Rank: 78 (out of 134)   Score: 44.21

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	82	33.63	C. Governance pillar	96	45.74
1st sub-pillar: Access	84	50.17	1st sub-pillar: Trust	75	34.41
2nd sub-pillar: Content	54	34.16	2nd sub-pillar: Regulation	76	63.58
3rd sub-pillar: Future Technologies	117	16.57	3rd sub-pillar: Inclusion	117	39.23
B. People pillar	66	48.62	D. Impact pillar	80	48.83
1st sub-pillar: Individuals	68	54.49	1st sub-pillar: Economy	107	14.58
2nd sub-pillar: Businesses	69	41.82	2nd sub-pillar: Quality of Life	65	65.82
3rd sub-pillar: Governments	44	49.54	3rd sub-pillar: SDG Contribution	68	66.09

The Network Readiness Index in detail

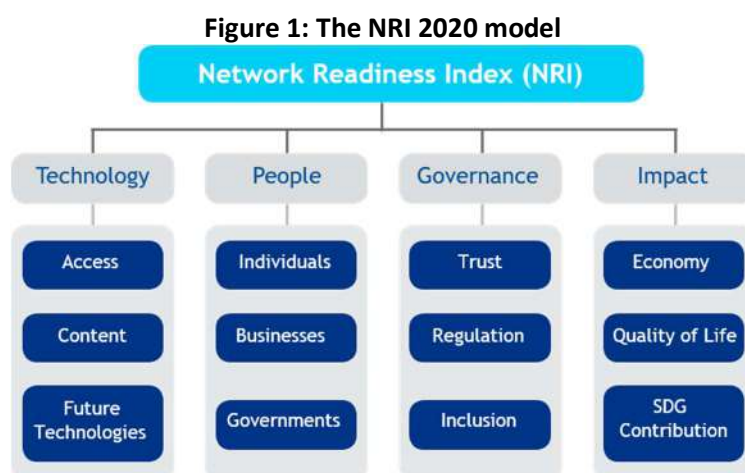| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	82	33.63	**C. Governance pillar**	96	45.74
1st sub-pillar: Access	84	50.17	*1st sub-pillar: Trust*	75	34.41
1.1.1 Mobile tariffs	85	52.38	3.1.1 Secure Internet servers	65	53.01
1.1.2 Handset prices	82	37.43	3.1.2 Cybersecurity	65	67.50
1.1.3 Internet access	96	30.00	3.1.3 Online access to financial account	112	8.62
1.1.4 4G mobile network coverage	74	85.50	3.1.4 Internet shopping	80	8.51
1.1.5 Fixed-broadband subscriptions	84	28.65	*2nd sub-pillar: Regulation*	76	63.58
1.1.6 International Internet bandwidth	46	70.49	3.2.1 Regulatory quality	57	57.62
1.1.7 Internet access in schools	44	46.77	3.2.2 ICT regulatory environment	67	83.40
2nd sub-pillar: Content	54	34.16	3.2.3 Legal framework's adaptability to emerging technologies	102	20.74
1.2.1 GitHub commits	69	3.30	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	47	63.89	3.2.5 Privacy protection by law content	25	81.17
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	117	39.23
1.2.4 Mobile apps development	65	63.70	3.3.1 E-Participation	36	83.95
3rd sub-pillar: Future Technologies	117	16.57	3.3.2 Socioeconomic gap in use of digital payments	122	22.80
1.3.1 Adoption of emerging technologies	117	19.18	3.3.3 Availability of local online content	121	26.14
1.3.2 Investment in emerging technologies	116	21.88	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	121	24.03
1.3.4 Computer software spending	87	8.66	**D. Impact pillar**	80	48.83
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	107	14.58
B. People pillar	66	48.62	4.1.1 Medium and high-tech industry	110	8.26
1st sub-pillar: Individuals	68	54.49	4.1.2 High-tech exports	127	0.09
2.1.1 Internet users	60	71.33	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	84	23.91	4.1.4 Labor productivity per employee	74	21.82
2.1.3 Use of virtual social networks	81	48.45	4.1.5 Prevalence of gig economy	99	28.16
2.1.4 Tertiary enrollment	53	39.87	*2nd sub-pillar: Quality of Life*	65	65.82
2.1.5 Adult literacy rate	30	97.64	4.2.1 Happiness	97	45.25
2.1.6 ICT skills	78	45.72	4.2.2 Freedom to make life choices	81	68.41
2nd sub-pillar: Businesses	69	41.82	4.2.3 Income inequality	39	76.80
2.2.1 Firms with website	54	58.40	4.2.4 Healthy life expectancy at birth	43	72.81
2.2.2 Ease of doing business	77	66.36	*3rd sub-pillar: SDG Contribution*	68	66.09
2.2.3 Professionals	54	29.44	4.3.1 SDG 3: Good Health and Well-Being	100	50.82
2.2.4 Technicians and associate professionals	90	19.83	4.3.2 SDG 4: Quality Education	47	42.10
2.2.5 Business use of digital tools	110	35.07	4.3.3 SDG 5: Gender Equality	61	75.69
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	16	90.10
3rd sub-pillar: Governments	44	49.54	.	.	.
2.3.1 Government online services	31	83.64			
2.3.2 Publication and use of open data	50	32.43			
2.3.3 Government promotion of investment in emerging tech	81	32.54			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

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Network Readiness Index 2020 Algeria

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Algeria

Algeria ranks 107th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Algeria global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Algeria relate to Governments, Individuals and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Regulation and Trust sub-pillars.

Table 1: Algeria rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	76	Inclusion	103
Individuals	84	Quality of Life	107
Economy	89	Content	111
Access	93	Businesses	117
Future Technologies	96	Regulation	120
SDG Contribution	98	Trust	122

NRI score and income

Figure 3 shows the position of Algeria in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Algeria is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
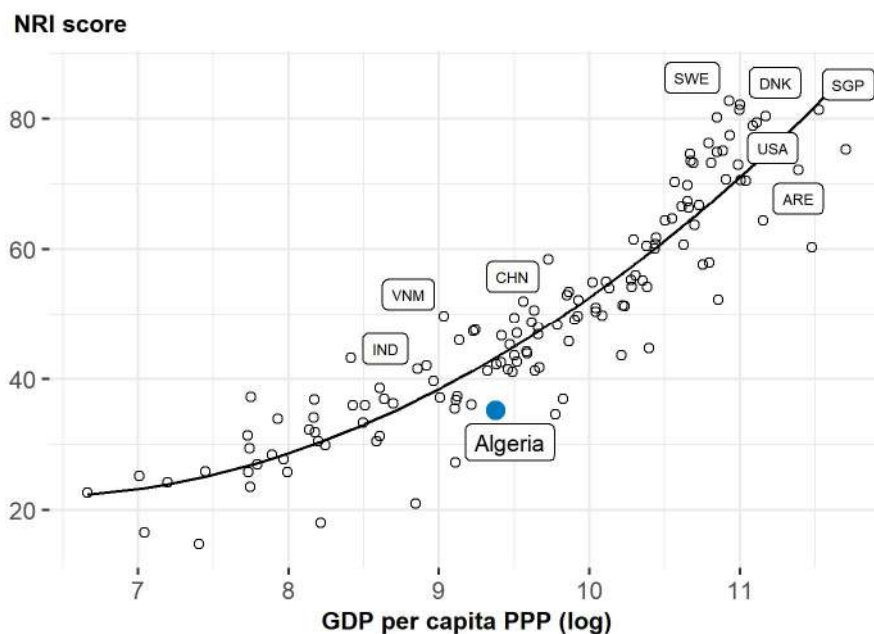
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Algeria belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Arab States-is United Arab Emirates (ARE).

Performance against its income group and region

Lower-middle-income countries
Algeria is ranked 22nd in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: people. At the sub-pillar level, it outperforms lower-middle-income countries in four of the twelve sub-pillars: Access, Individuals, Governments and SDG Contribution.

Arab States
Algeria is ranked 12th within Arab States (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Algeria against its income group and region, overall and by pillar
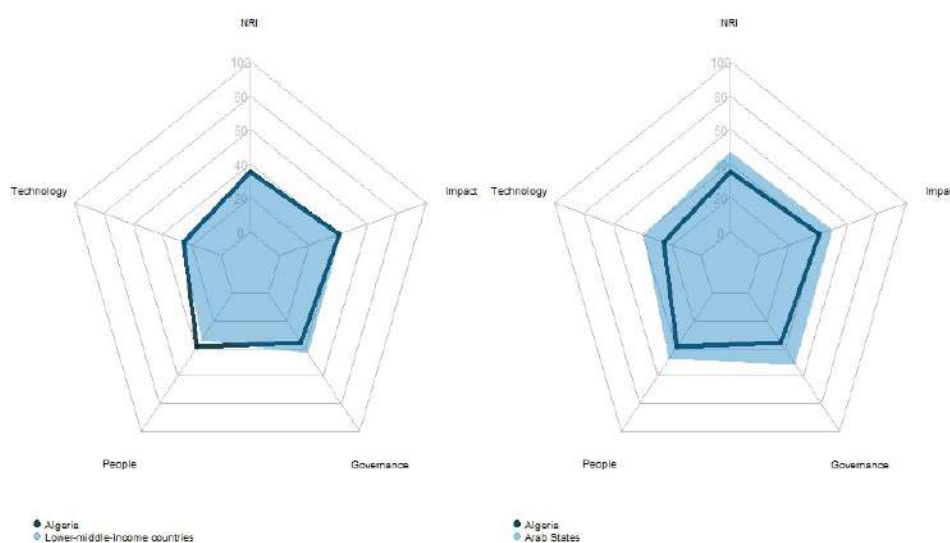
Table 2: Algeria scores vs. averages of its income group and region, overall and by pillar

Dimension	Algeria	Lower-middle-income countries	Arab States
NRI	35.15	36.72	47.18
Technology	25.66	27.72	39.24
People	38.85	33.88	47.97
Governance	35.24	43.15	51.70
Impact	40.85	42.15	49.82

Strongest and weakest indicators

The indicators where Algeria performs particularly well include Rural gap in use of digital payments, Income inequality, and SDG 3: Good Health and Well-Being (Table 3). By contrast, the economy's weakest indicators include E-Participation, Freedom to make life choices, and Regulatory quality.

Table 3: Top-ranked and bottom-ranked indicators of Algeria

Strongest indicators	Rank	Weakest indicators	Rank
Rural gap in use of digital payments	3	ICT regulatory environment	120
Income inequality	12	Medium and high-tech industry	120
SDG 3: Good Health and Well-Being	30	SDG 5: Gender Equality	121
Prevalence of gig economy	32	Computer software spending	122
Active mobile-broadband subscriptions	34	Mobile apps development	123
R&D expenditure by governments and higher education	37	Ease of doing business	124
Government promotion of investment in emerging technologies	41	Government online services	127
SDG 7: Affordable and Clean Energy	52	Regulatory quality	129
Legal framework's adaptability to emerging technologies	53	E-Participation	132
Internet access	54	Freedom to make life choices	132

NRI 2020 At-A-Glance: Algeria

Network Readiness Index   Rank: 107 (out of 134)   Score: 35.15

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	108	25.66	C. Governance pillar	120	35.24
1st sub-pillar: Access	93	43.71	1st sub-pillar: Trust	122	16.63
2nd sub-pillar: Content	111	12.79	2nd sub-pillar: Regulation	120	41.36
3rd sub-pillar: Future Technologies	96	20.48	3rd sub-pillar: Inclusion	103	47.73
B. People pillar	86	38.85	D. Impact pillar	101	40.85
1st sub-pillar: Individuals	84	50.88	1st sub-pillar: Economy	89	18.99
2nd sub-pillar: Businesses	117	25.65	2nd sub-pillar: Quality of Life	107	49.35
3rd sub-pillar: Governments	76	40.01	3rd sub-pillar: SDG Contribution	98	54.21

The Network Readiness Index in detail

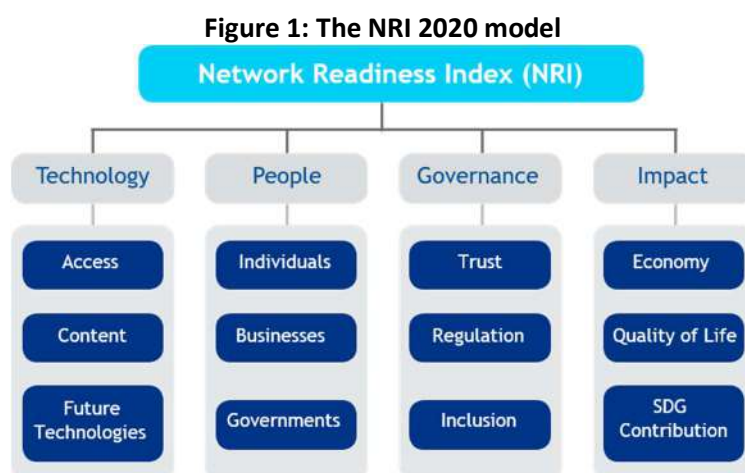| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	108	25.66	**C. Governance pillar**	120	35.24
1st sub-pillar: Access	93	43.71	*1st sub-pillar: Trust*	122	16.63
1.1.1 Mobile tariffs	110	35.94	3.1.1 Secure Internet servers	111	31.27
1.1.2 Handset prices	98	32.17	3.1.2 Cybersecurity	107	27.52
1.1.3 Internet access	54	74.31	3.1.3 Online access to financial account	119	4.16
1.1.4 4G mobile network coverage	117	30.64	3.1.4 Internet shopping	104	3.56
1.1.5 Fixed-broadband subscriptions	85	28.20	*2nd sub-pillar: Regulation*	120	41.36
1.1.6 International Internet bandwidth	105	61.03	3.2.1 Regulatory quality	129	23.58
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	120	58.50
2nd sub-pillar: Content	111	12.79	3.2.3 Legal framework's adaptability to emerging technologies	53	46.28
1.2.1 GitHub commits	113	0.33	3.2.4 e-commerce legislation	115	50.00
1.2.2 Wikipedia edits	95	25.52	3.2.5 Privacy protection by law content	70	28.44
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	103	47.73
1.2.4 Mobile apps development	123	25.02	3.3.1 E-Participation	132	12.35
3rd sub-pillar: Future Technologies	96	20.48	3.3.2 Socioeconomic gap in use of digital payments	78	60.38
1.3.1 Adoption of emerging technologies	65	47.15	3.3.3 Availability of local online content	93	47.78
1.3.2 Investment in emerging technologies	85	33.92	3.3.4 Gender gap in Internet use	83	28.16
1.3.3 ICT PCT patent applications	78	0.24	3.3.5 Rural gap in use of digital payments	3	89.99
1.3.4 Computer software spending	122	0.63	**D. Impact pillar**	101	40.85
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	89	18.99
B. People pillar	86	38.85	4.1.1 Medium and high-tech industry	120	3.12
1st sub-pillar: Individuals	84	50.88	4.1.2 High-tech exports	118	1.14
2.1.1 Internet users	80	58.68	4.1.3 PCT patent applications	81	0.04
2.1.2 Active mobile-broadband subscriptions	34	37.67	4.1.4 Labor productivity per employee	64	28.02
2.1.3 Use of virtual social networks	74	50.52	4.1.5 Prevalence of gig economy	32	62.63
2.1.4 Tertiary enrollment	57	37.22	*2nd sub-pillar: Quality of Life*	107	49.35
2.1.5 Adult literacy rate	77	76.09	4.2.1 Happiness	107	40.32
2.1.6 ICT skills	79	45.09	4.2.2 Freedom to make life choices	132	1.79
2nd sub-pillar: Businesses	117	25.65	4.2.3 Income inequality	12	91.24
2.2.1 Firms with website	NA	NA	4.2.4 Healthy life expectancy at birth	75	64.04
2.2.2 Ease of doing business	124	32.48	*3rd sub-pillar: SDG Contribution*	98	54.21
2.2.3 Professionals	68	23.59	4.3.1 SDG 3: Good Health and Well-Being	30	81.97
2.2.4 Technicians and associate professionals	89	19.85	4.3.2 SDG 4: Quality Education	76	12.96
2.2.5 Business use of digital tools	86	51.40	4.3.3 SDG 5: Gender Equality	121	39.70
2.2.6 R&D expenditure by businesses	77	0.92	4.3.4 SDG 7: Affordable and Clean Energy	52	82.23
3rd sub-pillar: Governments	76	40.01	.	.	.
2.3.1 Government online services	127	25.46			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	41	48.79			
2.3.4 R&D expenditure by governments and higher education	37	45.78			

* Confidential data

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Network Readiness Index 2020 Angola

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Figure 1: The NRI 2020 model

Global NRI position of Angola

Angola ranks 131st out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People and Impact.

Figure 2: Angola global ranking, overall and by pillar
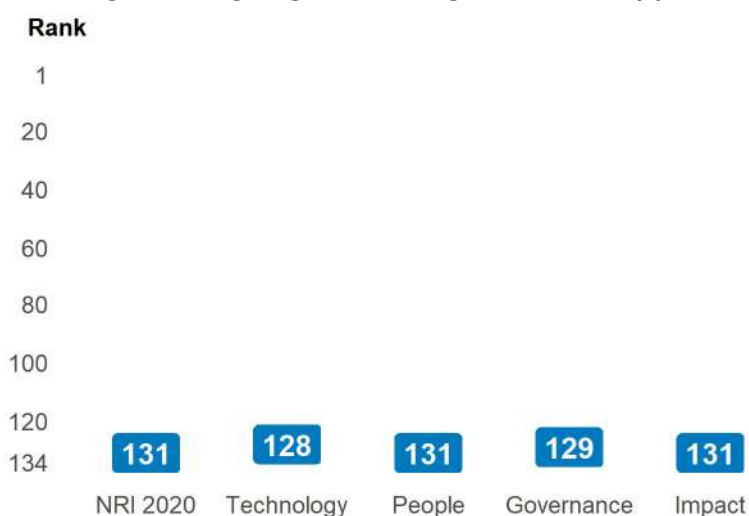
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Angola relate to SDG Contribution, Regulation and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Future Technologies, Inclusion and Quality of Life sub-pillars.

Table 1: Angola rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	111	Content	128
Regulation	117	Individuals	128
Access	123	Economy	131
Governments	124	Future Technologies	132
Trust	124	Inclusion	133
Businesses	127	Quality of Life	134

NRI score and income

Figure 3 shows the position of Angola in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Angola is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
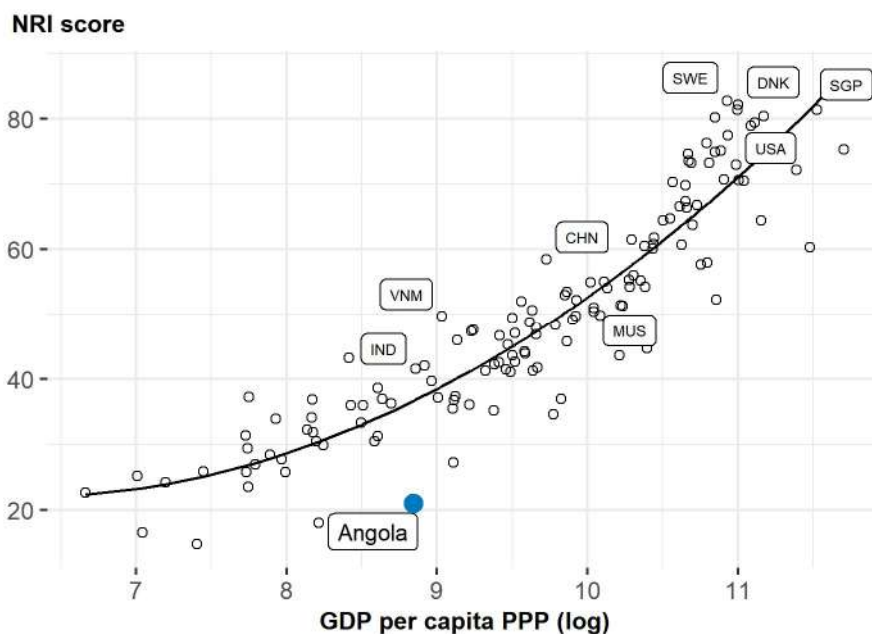
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Angola belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries
Angola is ranked 34th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it trails lower-middle-income countries in all of them.

Africa
Angola is ranked 29th within Africa (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in one of the twelve sub-pillars: SDG Contribution.

Figure 4: Performance of Angola against its income group and region, overall and by pillar
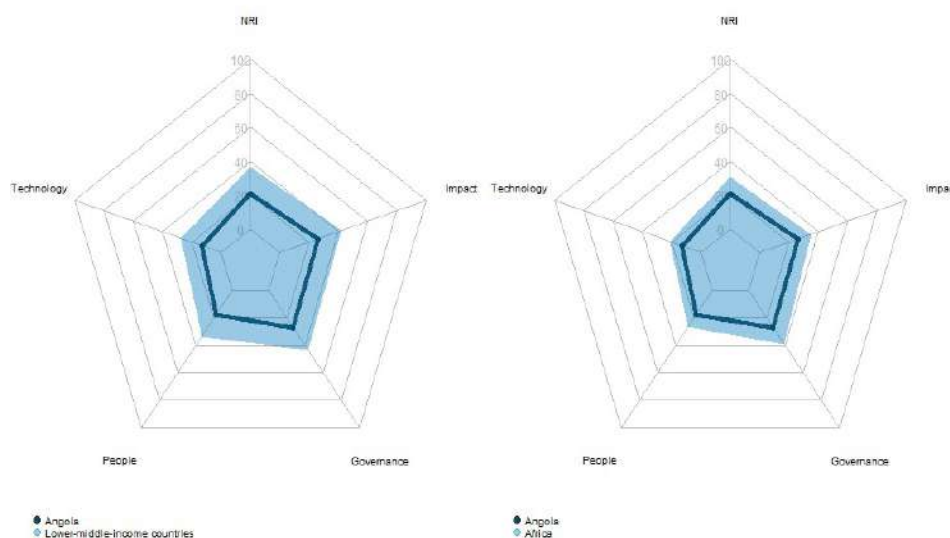
Table 2: Angola scores vs. averages of its income group and region, overall and by pillar

Dimension	Angola	Lower-middle-income countries	Africa
NRI	20.96	36.72	30.62
Technology	13.09	27.72	21.47
People	17.41	33.88	26.75
Governance	27.24	43.15	39.31
Impact	26.09	42.15	34.94

Strongest and weakest indicators

The indicators where Angola performs particularly well include SDG 7: Affordable and Clean Energy, Internet access in schools, and High-tech exports (Table 3). By contrast, the economy's weakest indicators include ICT skills, Freedom to make life choices, and Investment in emerging technologies.

Table 3: Top-ranked and bottom-ranked indicators of Angola

Strongest indicators	Rank	Weakest indicators	Rank
SDG 7: Affordable and Clean Energy	51	Use of virtual social networks	126
Internet access in schools	68	Cybersecurity	126
High-tech exports	75	Regulatory quality	126
e-commerce legislation	77	SDG 3: Good Health and Well-Being	126
SDG 11: Sustainable Cities and Communities	89	Rural gap in use of digital payments	127
Labor productivity per employee	94	Internet domain registrations	130
Adult literacy rate	95	Ease of doing business	130
Fixed-broadband subscriptions	96	Investment in emerging technologies	131
Mobile tariffs	99	ICT skills	133
Firms with website	104	Freedom to make life choices	133

NRI 2020 At-A-Glance: Angola

Network Readiness Index   Rank: 131 (out of 134)   Score: 20.96

Pillar/sub-pillar	Rank	Score
A. Technology pillar	128	13.09
1st sub-pillar: Access	123	24.47
2nd sub-pillar: Content	128	6.58
3rd sub-pillar: Future Technologies	132	8.21
B. People pillar	131	17.41
1st sub-pillar: Individuals	128	14.27
2nd sub-pillar: Businesses	127	19.18
3rd sub-pillar: Governments	124	18.78

Pillar/sub-pillar	Rank	Score
C. Governance pillar	129	27.24
1st sub-pillar: Trust	124	15.64
2nd sub-pillar: Regulation	117	44.44
3rd sub-pillar: Inclusion	133	21.63
D. Impact pillar	131	26.09
1st sub-pillar: Economy	131	7.42
2nd sub-pillar: Quality of Life	134	20.73
3rd sub-pillar: SDG Contribution	111	50.13

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	128	13.09
1st sub-pillar: Access	123	24.47
1.1.1 Mobile tariffs	99	47.35
1.1.2 Handset prices	107	27.56
1.1.3 Internet access	121	11.06
1.1.4 4G mobile network coverage	126	8.00
1.1.5 Fixed-broadband subscriptions	96	16.14
1.1.6 International Internet bandwidth	111	58.51
1.1.7 Internet access in schools	68	2.70
2nd sub-pillar: Content	128	6.58
1.2.1 GitHub commits	122	0.09
1.2.2 Wikipedia edits	NA	NA
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	126	19.64
3rd sub-pillar: Future Technologies	132	8.21
1.3.1 Adoption of emerging technologies	121	16.41
1.3.2 Investment in emerging technologies	131	0.00
1.3.3 ICT PCT patent applications	NA	NA
1.3.4 Computer software spending	NA	NA
1.3.5 Robot density	NA	NA
B. People pillar	131	17.41
1st sub-pillar: Individuals	128	14.27
2.1.1 Internet users	126	12.04
2.1.2 Active mobile-broadband subscriptions	124	6.07
2.1.3 Use of virtual social networks	126	4.95
2.1.4 Tertiary enrollment	111	6.27
2.1.5 Adult literacy rate	95	56.29
2.1.6 ICT skills	133	0.00
2nd sub-pillar: Businesses	127	19.18
2.2.1 Firms with website	104	22.52
2.2.2 Ease of doing business	130	19.55
2.2.3 Professionals	105	12.43
2.2.4 Technicians and associate professionals	104	14.90
2.2.5 Business use of digital tools	119	26.48
2.2.6 R&D expenditure by businesses	NA	NA
3rd sub-pillar: Governments	124	18.78
2.3.1 Government online services	106	47.27
2.3.2 Publication and use of open data	NA	NA
2.3.3 Government promotion of investment in emerging tech	120	8.39
2.3.4 R&D expenditure by governments and higher education	110	0.68

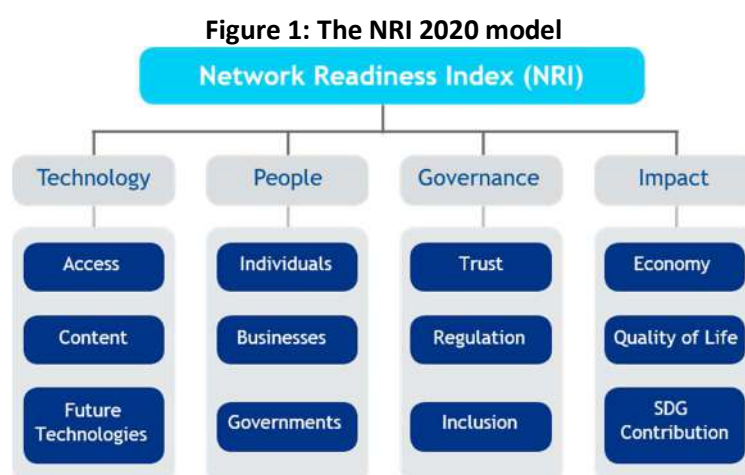| Indicator	Rank	Score
C. Governance pillar	129	27.24
1st sub-pillar: Trust	124	15.64
3.1.1 Secure Internet servers	124	21.63
3.1.2 Cybersecurity	126	9.64
3.1.3 Online access to financial account	NA	NA
3.1.4 Internet shopping	NA	NA
2nd sub-pillar: Regulation	117	44.44
3.2.1 Regulatory quality	126	29.39
3.2.2 ICT regulatory environment	113	62.17
3.2.3 Legal framework's adaptability to emerging technologies	117	11.18
3.2.4 e-commerce legislation	77	75.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	133	21.63
3.3.1 E-Participation	105	43.21
3.3.2 Socioeconomic gap in use of digital payments	125	17.79
3.3.3 Availability of local online content	125	23.19
3.3.4 Gender gap in Internet use	NA	NA
3.3.5 Rural gap in use of digital payments	127	2.34
D. Impact pillar	131	26.09
1st sub-pillar: Economy	131	7.42
4.1.1 Medium and high-tech industry	118	3.99
4.1.2 High-tech exports	75	10.09
4.1.3 PCT patent applications	NA	NA
4.1.4 Labor productivity per employee	94	10.15
4.1.5 Prevalence of gig economy	123	5.46
2nd sub-pillar: Quality of Life	134	20.73
4.2.1 Happiness	125	21.65
4.2.2 Freedom to make life choices	133	0.00
4.2.3 Income inequality	113	30.15
4.2.4 Healthy life expectancy at birth	114	31.10
3rd sub-pillar: SDG Contribution	111	50.13
4.3.1 SDG 3: Good Health and Well-Being	126	19.67
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 SDG 5: Gender Equality	106	52.27
4.3.4 SDG 7: Affordable and Clean Energy	51	82.30
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* Confidential data

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Network Readiness Index 2020 Argentina

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Argentina

Argentina ranks 60th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Argentina global ranking, overall and by pillar
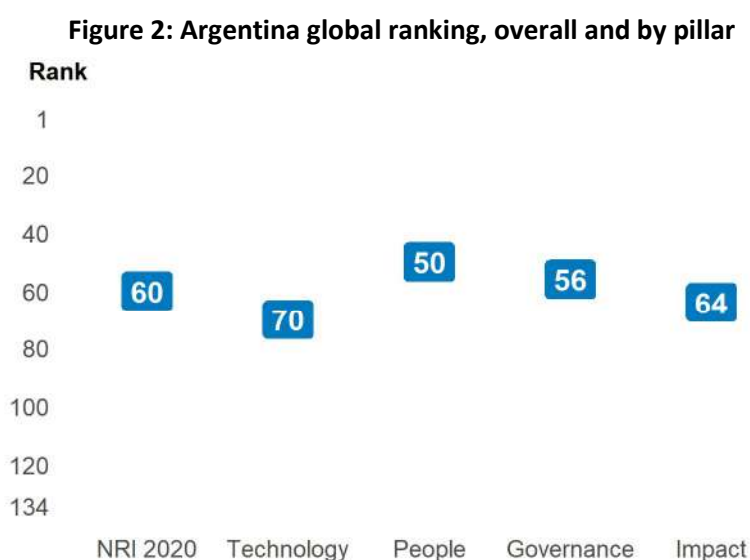
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Argentina relate to Individuals, Governments and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Economy and Future Technologies sub-pillars.

Table 1: Argentina rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	32	SDG Contribution	64
Governments	48	Businesses	67
Regulation	51	Trust	71
Inclusion	51	Access	72
Content	55	Economy	75
Quality of Life	58	Future Technologies	92

NRI score and income

Figure 3 shows the position of Argentina in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Argentina is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
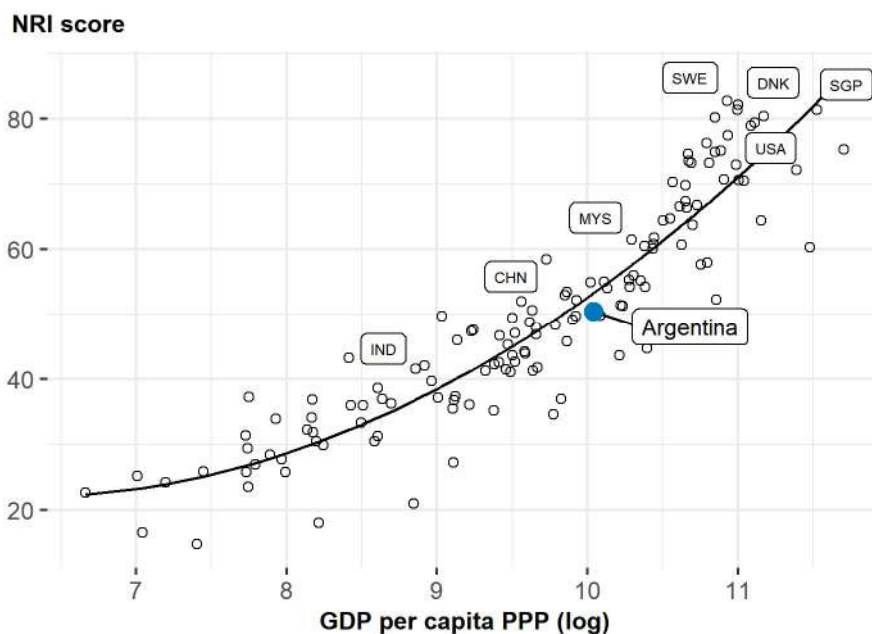
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Argentina belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

Upper-middle-income countries
Argentina is ranked 13th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in eight of the twelve sub-pillars: Access, Content, Individuals, Governments, Regulation, Inclusion, Quality of Life and SDG Contribution.

The Americas
Argentina is ranked 7th within The Americas (Figure 4, right panel). It has a score above the regional average in three of the four pillars: nri.score, technology, people and governance. With regard to sub-pillars, it outperforms the average in The Americas in nine of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Trust, Regulation, Inclusion and Quality of Life.

Figure 4: Performance of Argentina against its income group and region, overall and by pillar
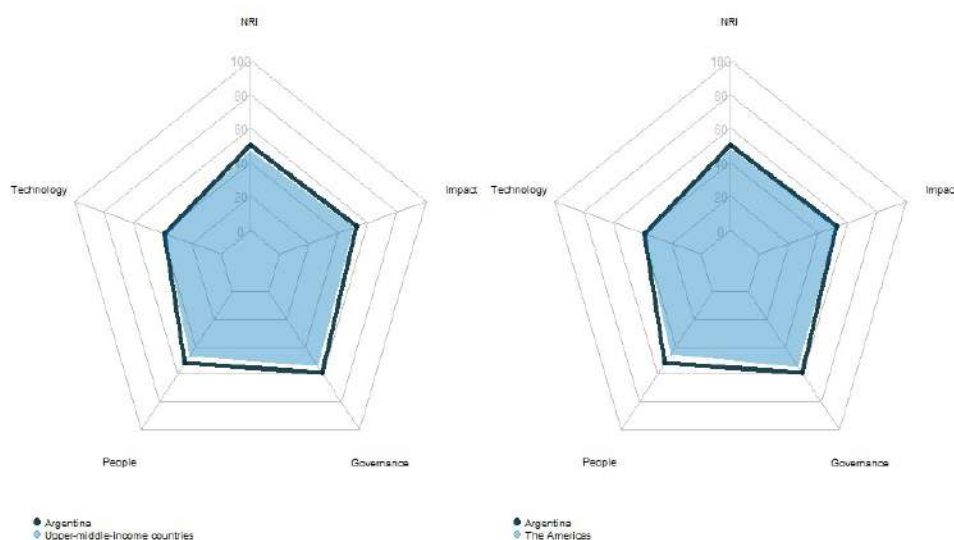
Table 2: Argentina scores vs. averages of its income group and region, overall and by pillar

Dimension	Argentina	Upper-middle-income countries	The Americas
NRI	50.36	47.39	47.67
Technology	38.66	38.42	38.26
People	51.87	46.66	45.24
Governance	58.62	54.31	54.59
Impact	52.28	50.17	52.61

Strongest and weakest indicators
The indicators where Argentina performs particularly well include e-commerce legislation, Tertiary enrollment, and Use of virtual social networks (Table 3). By contrast, the economy's weakest indicators include Ease of doing business, Cybersecurity, and Regulatory quality.

Table 3: Top-ranked and bottom-ranked indicators of Argentina

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	ICT skills	77
Tertiary enrollment	4	Online access to financial account	77
Use of virtual social networks	14	Computer software spending	79
Adult literacy rate	18	High-tech exports	80
E-Participation	29	Prevalence of gig economy	81
Government online services	30	Investment in emerging technologies	83
Privacy protection by law content	34	Income inequality	84
SDG 5: Gender Equality	35	Regulatory quality	91
Gender gap in Internet use	37	Cybersecurity	94
Firms with website	38	Ease of doing business	106

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NRI 2020 At-A-Glance: Argentina

Network Readiness Index   Rank: 60 (out of 134)   Score: 50.36

Pillar/sub-pillar	Rank	Score
A. Technology pillar	70	38.66
1st sub-pillar: Access	72	60.87
2nd sub-pillar: Content	55	33.92
3rd sub-pillar: Future Technologies	92	21.19
B. People pillar	50	51.87
1st sub-pillar: Individuals	32	65.32
2nd sub-pillar: Businesses	67	42.16
3rd sub-pillar: Governments	48	48.14

Pillar/sub-pillar	Rank	Score
C. Governance pillar	56	58.62
1st sub-pillar: Trust	71	37.15
2nd sub-pillar: Regulation	51	70.14
3rd sub-pillar: Inclusion	51	68.57
D. Impact pillar	64	52.28
1st sub-pillar: Economy	75	22.09
2nd sub-pillar: Quality of Life	58	67.78
3rd sub-pillar: SDG Contribution	64	66.96

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	70	38.66
1st sub-pillar: Access	72	60.87
1.1.1 Mobile tariffs	69	60.86
1.1.2 Handset prices	67	44.12
1.1.3 Internet access	53	75.88
1.1.4 4G mobile network coverage	75	85.00
1.1.5 Fixed-broadband subscriptions	68	53.45
1.1.6 International Internet bandwidth	77	66.77
1.1.7 Internet access in schools	48	39.98
2nd sub-pillar: Content	55	33.92
1.2.1 GitHub commits	52	8.22
1.2.2 Wikipedia edits	54	55.09
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	55	67.74
3rd sub-pillar: Future Technologies	92	21.19
1.3.1 Adoption of emerging technologies	51	51.97
1.3.2 Investment in emerging technologies	83	34.66
1.3.3 ICT PCT patent applications	68	1.67
1.3.4 Computer software spending	79	12.48
1.3.5 Robot density	41	5.17
B. People pillar	50	51.87
1st sub-pillar: Individuals	32	65.32
2.1.1 Internet users	54	73.86
2.1.2 Active mobile-broadband subscriptions	58	31.17
2.1.3 Use of virtual social networks	14	76.29
2.1.4 Tertiary enrollment	4	65.65
2.1.5 Adult literacy rate	18	98.75
2.1.6 ICT skills	77	46.18
2nd sub-pillar: Businesses	67	42.16
2.2.1 Firms with website	38	69.43
2.2.2 Ease of doing business	106	50.82
2.2.3 Professionals	67	23.93
2.2.4 Technicians and associate professionals	52	40.51
2.2.5 Business use of digital tools	54	64.81
2.2.6 R&D expenditure by businesses	58	3.45
3rd sub-pillar: Governments	48	48.14
2.3.1 Government online services	30	84.25
2.3.2 Publication and use of open data	39	37.51
2.3.3 Government promotion of investment in emerging tech	71	34.98
2.3.4 R&D expenditure by governments and higher education	51	35.80

Indicator	Rank	Score
C. Governance pillar	56	58.62
1st sub-pillar: Trust	71	37.15
3.1.1 Secure Internet servers	50	63.94
3.1.2 Cybersecurity	94	43.23
3.1.3 Online access to financial account	77	22.93
3.1.4 Internet shopping	61	18.52
2nd sub-pillar: Regulation	51	70.14
3.2.1 Regulatory quality	91	46.06
3.2.2 ICT regulatory environment	51	86.88
3.2.3 Legal framework's adaptability to emerging technologies	64	42.48
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	34	75.26
3rd sub-pillar: Inclusion	51	68.57
3.3.1 E-Participation	29	85.18
3.3.2 Socioeconomic gap in use of digital payments	73	62.32
3.3.3 Availability of local online content	58	64.13
3.3.4 Gender gap in Internet use	37	62.78
3.3.5 Rural gap in use of digital payments	63	68.43
D. Impact pillar	64	52.28
1st sub-pillar: Economy	75	22.09
4.1.1 Medium and high-tech industry	59	33.06
4.1.2 High-tech exports	80	9.71
4.1.3 PCT patent applications	70	0.31
4.1.4 Labor productivity per employee	55	30.37
4.1.5 Prevalence of gig economy	81	37.00
2nd sub-pillar: Quality of Life	58	67.78
4.2.1 Happiness	50	66.68
4.2.2 Freedom to make life choices	68	75.16
4.2.3 Income inequality	84	55.67
4.2.4 Healthy life expectancy at birth	39	73.62
3rd sub-pillar: SDG Contribution	64	66.96
4.3.1 SDG 3: Good Health and Well-Being	39	78.69
4.3.2 SDG 4: Quality Education	71	20.41
4.3.3 SDG 5: Gender Equality	35	81.29
4.3.4 SDG 7: Affordable and Clean Energy	66	78.97
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* Confidential data

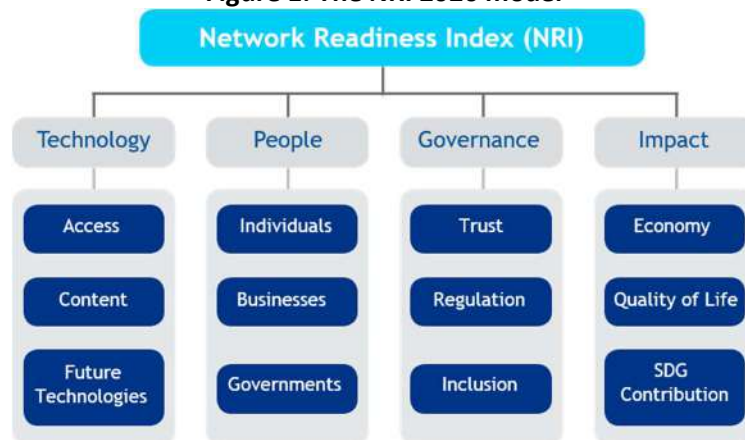**Sources**

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Network Readiness Index 2020
Armenia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
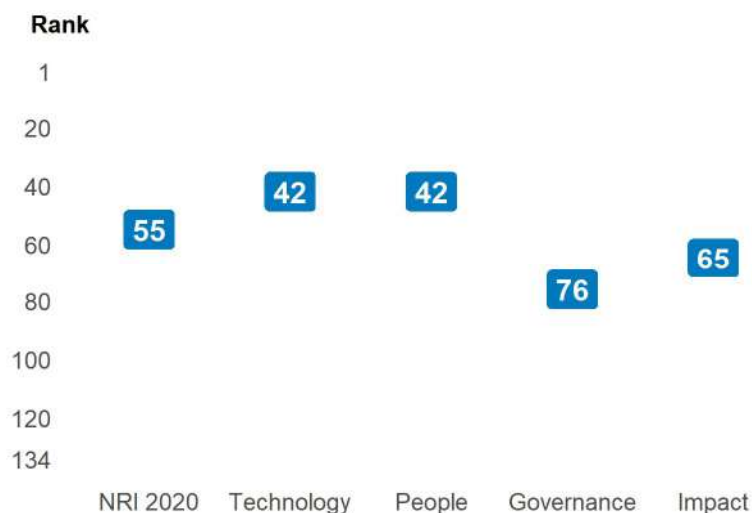
Figure 1: The NRI 2020 model

Global NRI position of Armenia

Armenia ranks 55th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology and People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Armenia global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Armenia relate to Content, Businesses and Governments, among others (Table 1). More could be done, though, to improve the economy's performances in the Inclusion, Trust and Economy sub-pillars.

Table 1: Armenia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Content	27	Quality of Life	68
Businesses	36	Future Technologies	72
Governments	52	Regulation	77
SDG Contribution	53	Inclusion	77
Individuals	58	Trust	80
Access	62	Economy	87

NRI score and income

Figure 3 shows the position of Armenia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Armenia is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
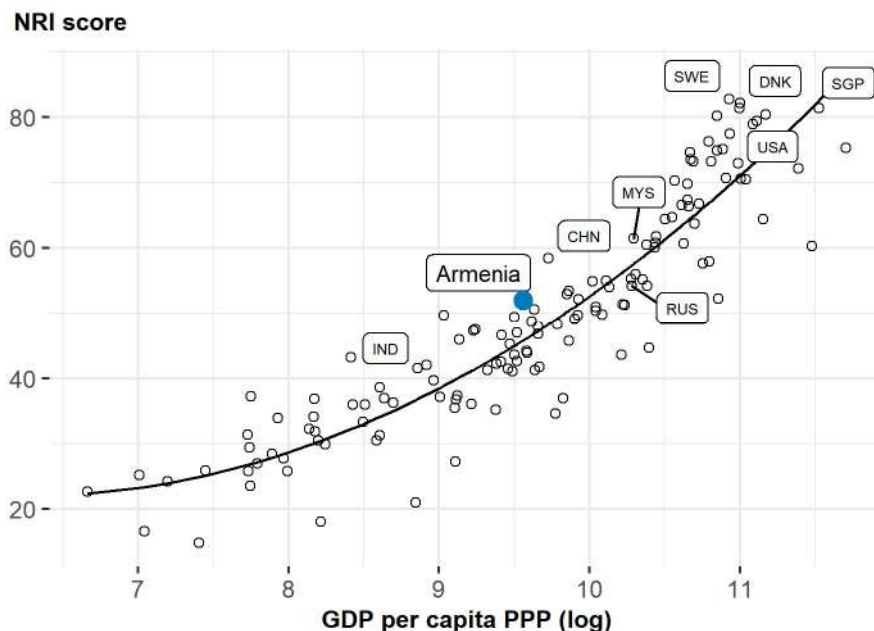
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Armenia belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-CIS-is Russia (RUS).

Performance against its income group and region

Upper-middle-income countries
Armenia is ranked 8th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, people and impact. At the sub-pillar level, it outperforms upper-middle-income countries in ten of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Regulation, Inclusion, Quality of Life and SDG Contribution.

CIS
Armenia is ranked 2nd within CIS (Figure 4, right panel). It has a score above the regional average in three of the four pillars: nri.score, technology, people and governance. With regard to sub-pillars, it outperforms the average in CIS in eight of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Regulation and SDG Contribution.

Figure 4: Performance of Armenia against its income group and region, overall and by pillar
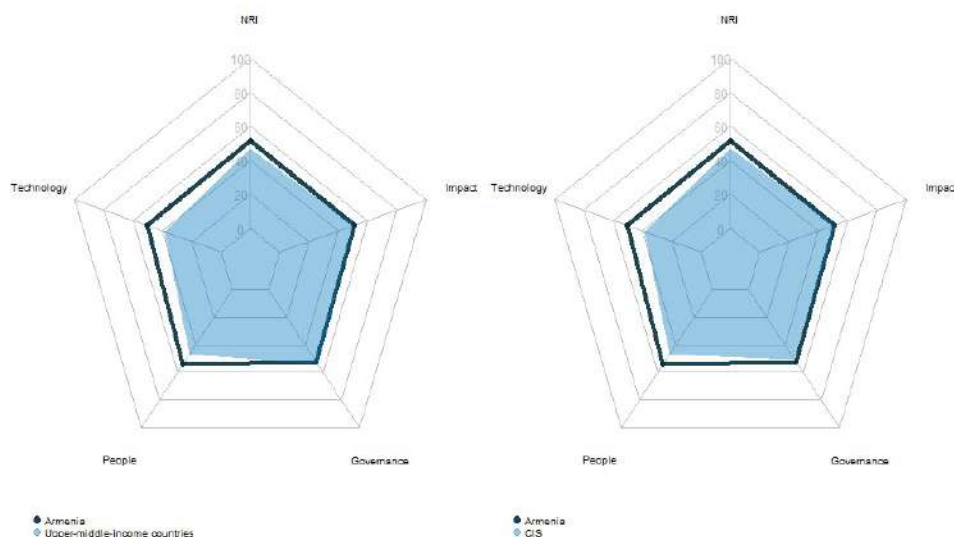
Table 2: Armenia scores vs. averages of its income group and region, overall and by pillar

Dimension	Armenia	Upper-middle-income countries	CIS
NRI	51.91	47.39	46.88
Technology	50.19	38.42	38.47
People	54.09	46.66	47.10
Governance	52.36	54.31	50.71
Impact	50.99	50.17	51.26

Strongest and weakest indicators

The indicators where Armenia performs particularly well include Internet access in schools, Wikipedia edits, and Adult literacy rate (Table 3). By contrast, the economy's weakest indicators include Medium and high-tech industry, Socioeconomic gap in use of digital payments, and Happiness.

Table 3: Top-ranked and bottom-ranked indicators of Armenia

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	e-commerce legislation	77
Wikipedia edits	7	Mobile tariffs	80
Adult literacy rate	9	Cybersecurity	80
Firms with website	28	R&D expenditure by governments and higher education	84
Government promotion of investment in emerging technologies	28	Online access to financial account	85
International Internet bandwidth	34	SDG 7: Affordable and Clean Energy	86
Ease of doing business	46	Computer software spending	88
Professionals	46	Happiness	91
ICT skills	47	Socioeconomic gap in use of digital payments	98
Income inequality	47	Medium and high-tech industry	115

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NRI 2020 At-A-Glance: Armenia

Network Readiness Index   Rank: 55 (out of 134)   Score: 51.91

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	42	50.19	C. Governance pillar	76	52.36
1st sub-pillar: Access	62	67.56	1st sub-pillar: Trust	80	32.60
2nd sub-pillar: Content	27	55.90	2nd sub-pillar: Regulation	77	63.03
3rd sub-pillar: Future Technologies	72	27.12	3rd sub-pillar: Inclusion	77	61.44
B. People pillar	42	54.09	D. Impact pillar	65	50.99
1st sub-pillar: Individuals	58	57.47	1st sub-pillar: Economy	87	19.81
2nd sub-pillar: Businesses	36	57.56	2nd sub-pillar: Quality of Life	68	65.12
3rd sub-pillar: Governments	52	47.22	3rd sub-pillar: SDG Contribution	53	68.03

The Network Readiness Index in detail

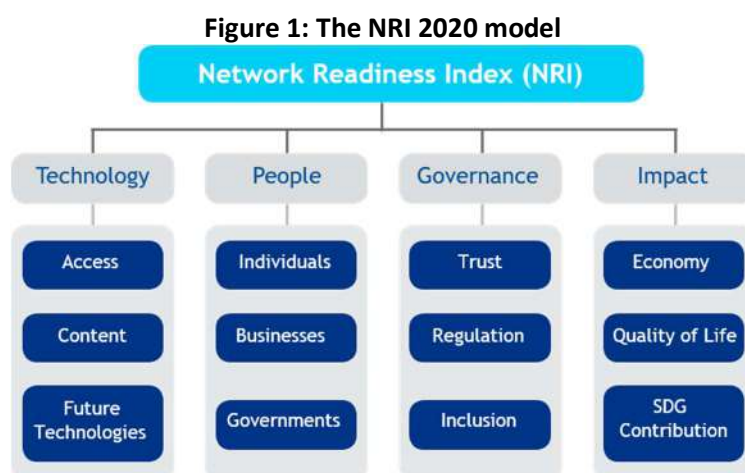| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	42	50.19	**C. Governance pillar**	76	52.36
1st sub-pillar: Access	62	67.56	*1st sub-pillar: Trust*	80	32.60
1.1.1 Mobile tariffs	80	55.81	3.1.1 Secure Internet servers	71	49.25
1.1.2 Handset prices	74	41.74	3.1.2 Cybersecurity	80	52.76
1.1.3 Internet access	71	64.60	3.1.3 Online access to financial account	85	17.52
1.1.4 4G mobile network coverage	66	90.05	3.1.4 Internet shopping	72	10.88
1.1.5 Fixed-broadband subscriptions	74	47.98	*2nd sub-pillar: Regulation*	77	63.03
1.1.6 International Internet bandwidth	34	72.77	3.2.1 Regulatory quality	59	57.34
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	57	86.30
2nd sub-pillar: Content	27	55.90	3.2.3 Legal framework's adaptability to emerging technologies	58	43.81
1.2.1 GitHub commits	51	8.35	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	7	90.42	3.2.5 Privacy protection by law content	55	52.70
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	77	61.44
1.2.4 Mobile apps development	53	68.94	3.3.1 E-Participation	56	74.07
3rd sub-pillar: Future Technologies	72	27.12	3.3.2 Socioeconomic gap in use of digital payments	98	46.09
1.3.1 Adoption of emerging technologies	64	47.72	3.3.3 Availability of local online content	71	59.29
1.3.2 Investment in emerging technologies	52	46.26	3.3.4 Gender gap in Internet use	56	59.10
1.3.3 ICT PCT patent applications	53	5.84	3.3.5 Rural gap in use of digital payments	62	68.63
1.3.4 Computer software spending	88	8.65	**D. Impact pillar**	65	50.99
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	87	19.81
B. People pillar	42	54.09	4.1.1 Medium and high-tech industry	115	5.46
1st sub-pillar: Individuals	58	57.47	4.1.2 High-tech exports	49	18.70
2.1.1 Internet users	75	64.01	4.1.3 PCT patent applications	50	1.06
2.1.2 Active mobile-broadband subscriptions	67	29.22	4.1.4 Labor productivity per employee	67	27.01
2.1.3 Use of virtual social networks	74	50.52	4.1.5 Prevalence of gig economy	57	46.85
2.1.4 Tertiary enrollment	54	39.58	*2nd sub-pillar: Quality of Life*	68	65.12
2.1.5 Adult literacy rate	9	99.69	4.2.1 Happiness	91	46.57
2.1.6 ICT skills	47	61.81	4.2.2 Freedom to make life choices	72	73.56
2nd sub-pillar: Businesses	36	57.56	4.2.3 Income inequality	47	73.71
2.2.1 Firms with website	28	76.74	4.2.4 Healthy life expectancy at birth	64	66.62
2.2.2 Ease of doing business	46	78.29	*3rd sub-pillar: SDG Contribution*	53	68.03
2.2.3 Professionals	46	35.79	4.3.1 SDG 3: Good Health and Well-Being	73	67.21
2.2.4 Technicians and associate professionals	60	34.12	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	59	62.89	4.3.3 SDG 5: Gender Equality	57	75.96
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	86	72.76
3rd sub-pillar: Governments	52	47.22	.	.	.
2.3.1 Government online services	68	69.09			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	28	56.97			
2.3.4 R&D expenditure by governments and higher education	84	15.61			

* Confidential data

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Network Readiness Index 2020 Australia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Australia

Australia ranks 12th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Australia global ranking, overall and by pillar
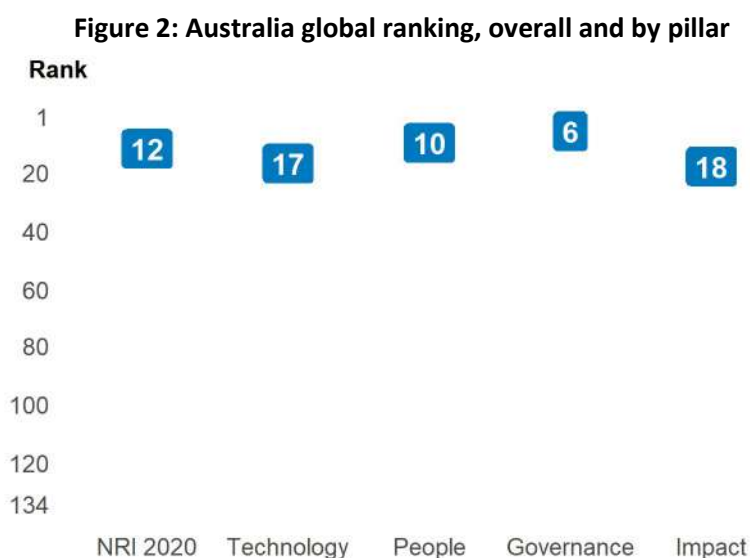
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Australia relate to Regulation, Individuals and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Future Technologies and Economy sub-pillars.

Table 1: Australia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	5	Inclusion	14
Individuals	6	Quality of Life	14
Access	8	SDG Contribution	16
Trust	8	Businesses	22
Governments	12	Future Technologies	23
Content	14	Economy	24

NRI score and income

Figure 3 shows the position of Australia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Australia is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
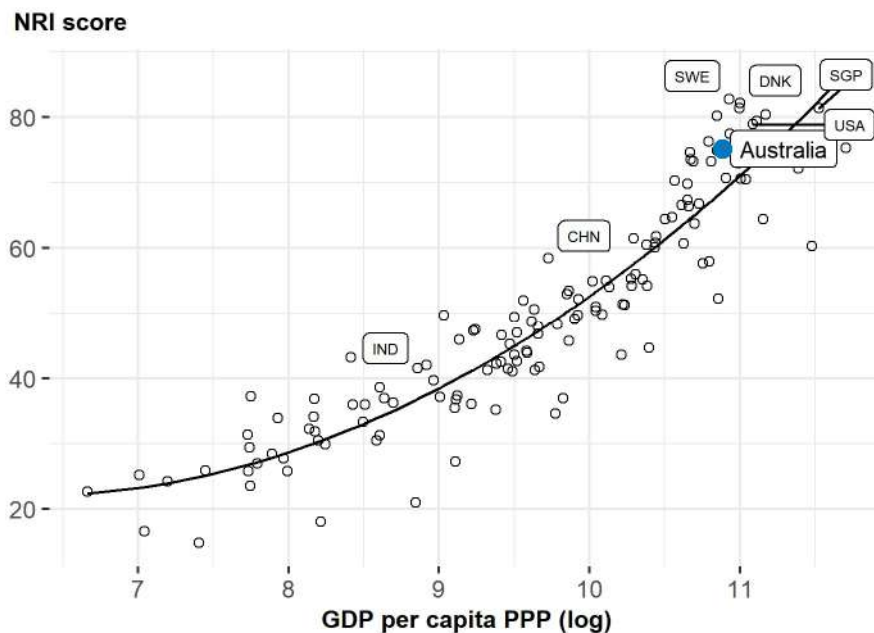
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Australia belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region
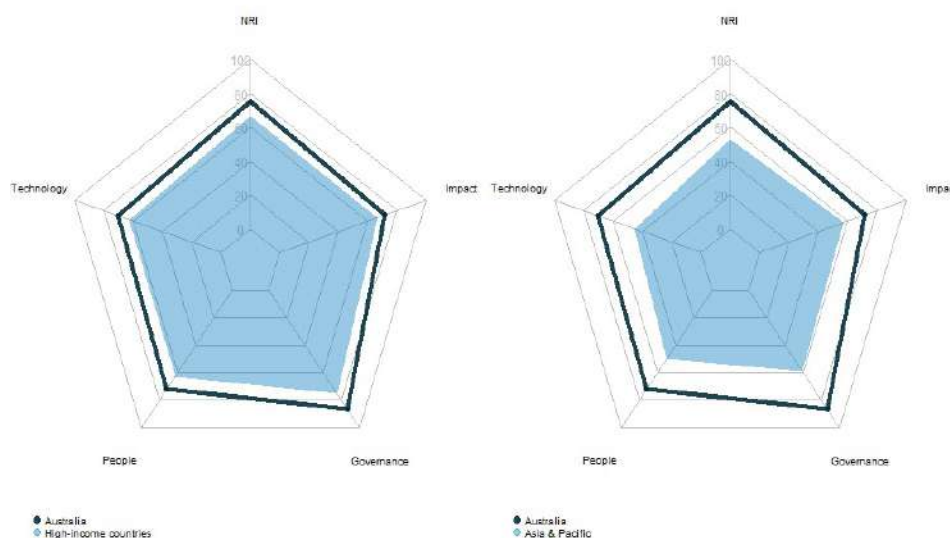
High-income countries
Australia is ranked 12th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it has a higher score than the average of high-income countries in all of them.

Asia & Pacific
Australia is ranked 2nd within Asia & Pacific (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of Australia against its income group and region, overall and by pillar

Table 2: Australia scores vs. averages of its income group and region, overall and by pillar

Dimension	Australia	High-income countries	Asia & Pacific
NRI	75.09	66.82	52.76
Technology	70.38	62.51	45.33
People	71.91	62.72	49.64
Governance	86.77	75.41	59.20
Impact	71.30	66.63	56.86

Strongest and weakest indicators

The indicators where Australia performs particularly well include Internet access in schools, e-commerce legislation, and Handset prices (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, Rural gap in use of digital payments, International Internet bandwidth, and Medium and high-tech industry.

Table 3: Top-ranked and bottom-ranked indicators of Australia

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	Gender gap in Internet use	31
e-commerce legislation	1	Internet access	32
Handset prices	2	Government promotion of investment in emerging technologies	36
Tertiary enrollment	2	Income inequality	47
SDG 3: Good Health and Well-Being	2	Computer software spending	53
Regulatory quality	5	SDG 5: Gender Equality	54
Publication and use of open data	6	International Internet bandwidth	56
Government online services	7	Medium and high-tech industry	56
ICT regulatory environment	8	Rural gap in use of digital payments	66
Availability of local online content	8	SDG 7: Affordable and Clean Energy	80

NRI 2020 At-A-Glance: Australia

Network Readiness Index Rank: 12 (out of 134) Score: 75.09

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	17	70.38	C. Governance pillar	6	86.77
1st sub-pillar: Access	8	88.84	1st sub-pillar: Trust	8	86.40
2nd sub-pillar: Content	14	72.81	2nd sub-pillar: Regulation	5	90.32
3rd sub-pillar: Future Technologies	23	49.49	3rd sub-pillar: Inclusion	14	83.57
B. People pillar	10	71.91	D. Impact pillar	18	71.30
1st sub-pillar: Individuals	6	74.08	1st sub-pillar: Economy	24	46.86
2nd sub-pillar: Businesses	22	65.21	2nd sub-pillar: Quality of Life	14	86.12
3rd sub-pillar: Governments	12	76.44	3rd sub-pillar: SDG Contribution	16	80.94

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	17	70.38	**C. Governance pillar**	6	86.77
1st sub-pillar: Access	8	88.84	*1st sub-pillar: Trust*	8	86.40
1.1.1 Mobile tariffs	25	80.25	3.1.1 Secure Internet servers	16	83.87
1.1.2 Handset prices	2	94.04	3.1.2 Cybersecurity	11	95.56
1.1.3 Internet access	32	86.08	3.1.3 Online access to financial account	11	79.37
1.1.4 4G mobile network coverage	24	99.00	3.1.4 Internet shopping	10	86.81
1.1.5 Fixed-broadband subscriptions	29	92.80	*2nd sub-pillar: Regulation*	5	90.32
1.1.6 International Internet bandwidth	56	69.71	3.2.1 Regulatory quality	5	93.91
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	8	96.72
2nd sub-pillar: Content	14	72.81	3.2.3 Legal framework's adaptability to emerging technologies	17	70.66
1.2.1 GitHub commits	13	61.22	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	26	78.42	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	14	83.57
1.2.4 Mobile apps development	16	87.44	3.3.1 E-Participation	9	96.30
3rd sub-pillar: Future Technologies	23	49.49	3.3.2 Socioeconomic gap in use of digital payments	10	96.86
1.3.1 Adoption of emerging technologies	15	82.33	3.3.3 Availability of local online content	8	93.01
1.3.2 Investment in emerging technologies	24	65.76	3.3.4 Gender gap in Internet use	31	64.91
1.3.3 ICT PCT patent applications	22	54.67	3.3.5 Rural gap in use of digital payments	66	66.79
1.3.4 Computer software spending	53	22.79	**D. Impact pillar**	18	71.30
1.3.5 Robot density	24	21.92	*1st sub-pillar: Economy*	24	46.86
B. People pillar	10	71.91	4.1.1 Medium and high-tech industry	56	34.38
1st sub-pillar: Individuals	6	74.08	4.1.2 High-tech exports	28	31.66
2.1.1 Internet users	25	86.49	4.1.3 PCT patent applications	22	20.93
2.1.2 Active mobile-broadband subscriptions	9	54.05	4.1.4 Labor productivity per employee	16	65.17
2.1.3 Use of virtual social networks	22	71.13	4.1.5 Prevalence of gig economy	11	82.16
2.1.4 Tertiary enrollment	2	82.72	*2nd sub-pillar: Quality of Life*	14	86.12
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	10	89.26
2.1.6 ICT skills	23	76.02	4.2.2 Freedom to make life choices	16	92.22
2nd sub-pillar: Businesses	22	65.21	4.2.3 Income inequality	47	73.71
2.2.1 Firms with website	25	78.79	4.2.4 Healthy life expectancy at birth	12	89.27
2.2.2 Ease of doing business	14	90.18	*3rd sub-pillar: SDG Contribution*	16	80.94
2.2.3 Professionals	17	53.66	4.3.1 SDG 3: Good Health and Well-Being	2	96.72
2.2.4 Technicians and associate professionals	30	55.88	4.3.2 SDG 4: Quality Education	28	62.43
2.2.5 Business use of digital tools	12	86.56	4.3.3 SDG 5: Gender Equality	54	76.98
2.2.6 R&D expenditure by businesses	21	26.21	4.3.4 SDG 7: Affordable and Clean Energy	80	74.57
3rd sub-pillar: Governments	12	76.44	.	.	.
2.3.1 Government online services	7	94.55			
2.3.2 Publication and use of open data	6	81.15			
2.3.3 Government promotion of investment in emerging tech	36	51.42			
2.3.4 R&D expenditure by governments and higher education	10	78.66			

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5

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Network Readiness Index 2020 Austria

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
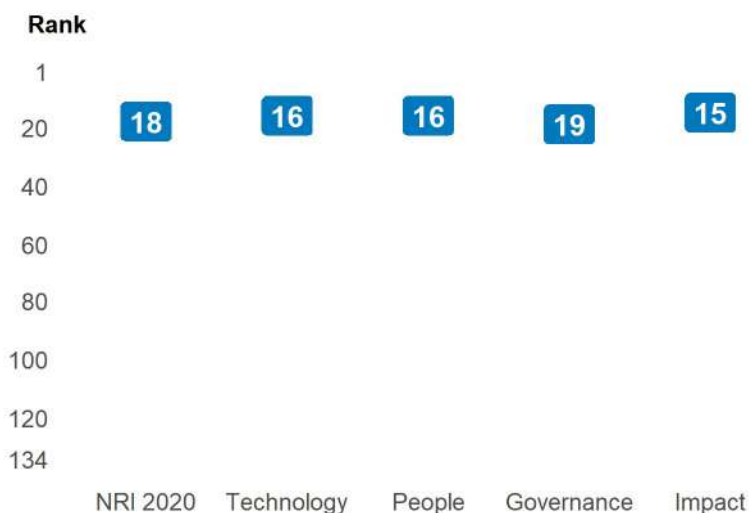
Figure 1: The NRI 2020 model
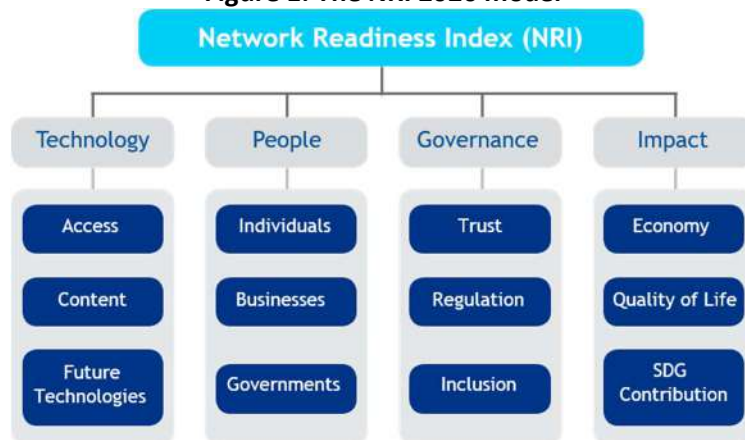
Global NRI position of Austria

Austria ranks 18th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Austria global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Austria relate to Quality of Life, Businesses and Governments, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Access and Individuals sub-pillars.

Table 1: Austria rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	11	Regulation	17
Businesses	13	Trust	23
Governments	13	Economy	23
Content	15	SDG Contribution	23
Inclusion	15	Access	35
Future Technologies	17	Individuals	45

NRI score and income

Figure 3 shows the position of Austria in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Austria is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
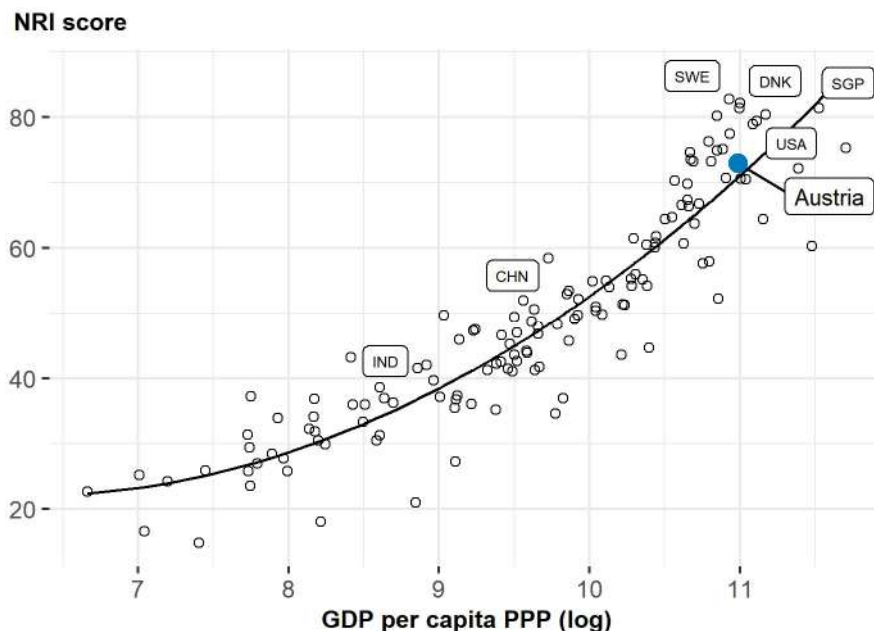
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Austria belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Austria is ranked 18th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in ten of the twelve sub-pillars: Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Europe
Austria is ranked 11th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Austria against its income group and region, overall and by pillar
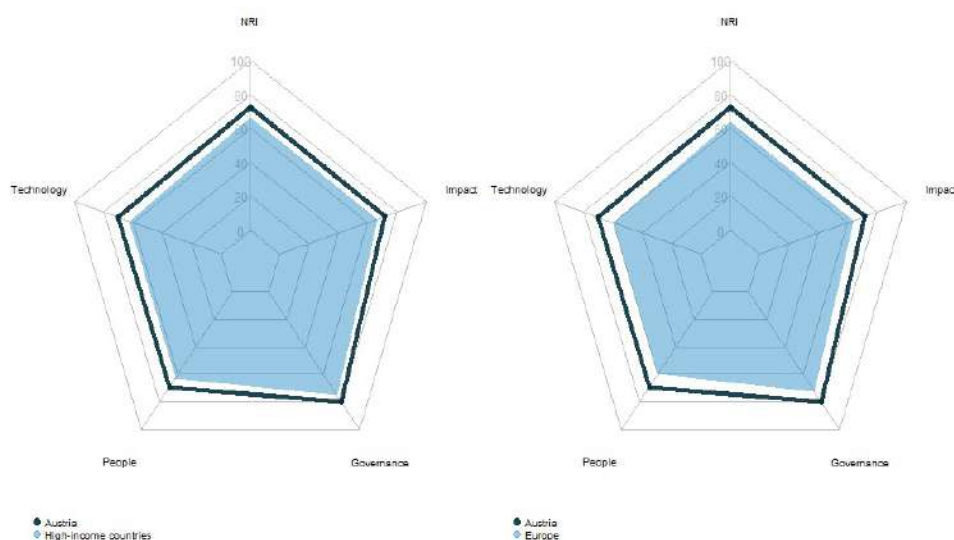
Table 2: Austria scores vs. averages of its income group and region, overall and by pillar

Dimension	Austria	High-income countries	Europe
NRI	72.92	66.82	64.21
Technology	70.47	62.51	59.93
People	69.44	62.72	59.89
Governance	80.04	75.41	72.98
Impact	71.74	66.63	64.04

Strongest and weakest indicators

The indicators where Austria performs particularly well include e-commerce legislation, Mobile apps development, and R&D expenditure by businesses (Table 3). By contrast, the economy's weakest indicators include Use of virtual social networks, Prevalence of gig economy, and SDG 5: Gender Equality.

Table 3: Top-ranked and bottom-ranked indicators of Austria

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	SDG 7: Affordable and Clean Energy	40
Mobile apps development	2	High-tech exports	41
R&D expenditure by businesses	6	Business use of digital tools	43
E-Participation	6	Active mobile-broadband subscriptions	47
Firms with website	7	Gender gap in Internet use	58
Government online services	7	Fixed-broadband subscriptions	61
R&D expenditure by governments and higher education	7	International Internet bandwidth	66
Rural gap in use of digital payments	10	SDG 5: Gender Equality	77
PCT patent applications	10	Use of virtual social networks	79
Tertiary enrollment	11	Prevalence of gig economy	79

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NRI 2020 At-A-Glance: Austria

Network Readiness Index   Rank: 18 (out of 134)   Score: 72.92

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	16	70.47	C. Governance pillar	19	80.04
1st sub-pillar: Access	35	79.66	1st sub-pillar: Trust	23	71.58
2nd sub-pillar: Content	15	71.13	2nd sub-pillar: Regulation	17	85.32
3rd sub-pillar: Future Technologies	17	60.61	3rd sub-pillar: Inclusion	15	83.22
B. People pillar	16	69.44	D. Impact pillar	15	71.74
1st sub-pillar: Individuals	45	60.46	1st sub-pillar: Economy	23	47.84
2nd sub-pillar: Businesses	13	71.79	2nd sub-pillar: Quality of Life	11	87.85
3rd sub-pillar: Governments	13	76.07	3rd sub-pillar: SDG Contribution	23	79.54

The Network Readiness Index in detail

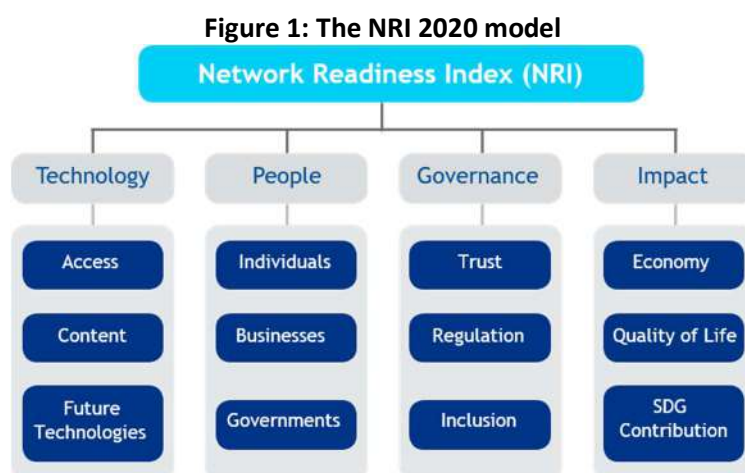| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	16	70.47	**C. Governance pillar**	19	80.04
1st sub-pillar: Access	35	79.66	*1st sub-pillar: Trust*	23	71.58
1.1.1 Mobile tariffs	16	84.44	3.1.1 Secure Internet servers	22	81.21
1.1.2 Handset prices	19	69.12	3.1.2 Cybersecurity	30	88.62
1.1.3 Internet access	21	88.76	3.1.3 Online access to financial account	22	59.89
1.1.4 4G mobile network coverage	38	98.00	3.1.4 Internet shopping	29	56.59
1.1.5 Fixed-broadband subscriptions	61	69.51	*2nd sub-pillar: Regulation*	17	85.32
1.1.6 International Internet bandwidth	66	68.11	3.2.1 Regulatory quality	18	85.44
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	32	90.93
2nd sub-pillar: Content	15	71.13	3.2.3 Legal framework's adaptability to emerging technologies	18	67.88
1.2.1 GitHub commits	21	44.48	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	14	84.99	3.2.5 Privacy protection by law content	21	82.37
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	15	83.22
1.2.4 Mobile apps development	2	97.21	3.3.1 E-Participation	6	97.53
3rd sub-pillar: Future Technologies	17	60.61	3.3.2 Socioeconomic gap in use of digital payments	19	95.06
1.3.1 Adoption of emerging technologies	21	74.59	3.3.3 Availability of local online content	22	85.27
1.3.2 Investment in emerging technologies	26	64.42	3.3.4 Gender gap in Internet use	58	58.74
1.3.3 ICT PCT patent applications	17	60.07	3.3.5 Rural gap in use of digital payments	10	79.51
1.3.4 Computer software spending	15	52.25	**D. Impact pillar**	15	71.74
1.3.5 Robot density	12	51.73	*1st sub-pillar: Economy*	23	47.84
B. People pillar	16	69.44	4.1.1 Medium and high-tech industry	17	58.29
1st sub-pillar: Individuals	45	60.46	4.1.2 High-tech exports	41	22.05
2.1.1 Internet users	23	87.69	4.1.3 PCT patent applications	10	50.06
2.1.2 Active mobile-broadband subscriptions	47	34.13	4.1.4 Labor productivity per employee	12	71.62
2.1.3 Use of virtual social networks	79	49.48	4.1.5 Prevalence of gig economy	79	37.17
2.1.4 Tertiary enrollment	11	62.04	*2nd sub-pillar: Quality of Life*	11	87.85
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	12	88.50
2.1.6 ICT skills	38	68.95	4.2.2 Freedom to make life choices	26	89.83
2nd sub-pillar: Businesses	13	71.79	4.2.3 Income inequality	18	85.82
2.2.1 Firms with website	7	92.82	4.2.4 Healthy life expectancy at birth	17	87.26
2.2.2 Ease of doing business	26	85.81	*3rd sub-pillar: SDG Contribution*	23	79.54
2.2.3 Professionals	23	48.66	4.3.1 SDG 3: Good Health and Well-Being	25	83.61
2.2.4 Technicians and associate professionals	12	74.37	4.3.2 SDG 4: Quality Education	21	65.28
2.2.5 Business use of digital tools	43	72.43	4.3.3 SDG 5: Gender Equality	77	72.89
2.2.6 R&D expenditure by businesses	6	56.65	4.3.4 SDG 7: Affordable and Clean Energy	40	85.04
3rd sub-pillar: Governments	13	76.07	.	.	.
2.3.1 Government online services	7	94.55			
2.3.2 Publication and use of open data	14	70.22			
2.3.3 Government promotion of investment in emerging tech	32	53.85			
2.3.4 R&D expenditure by governments and higher education	7	85.68			

* Confidential data

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Network Readiness Index 2020 Azerbaijan

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Azerbaijan

Azerbaijan ranks 66th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Azerbaijan global ranking, overall and by pillar
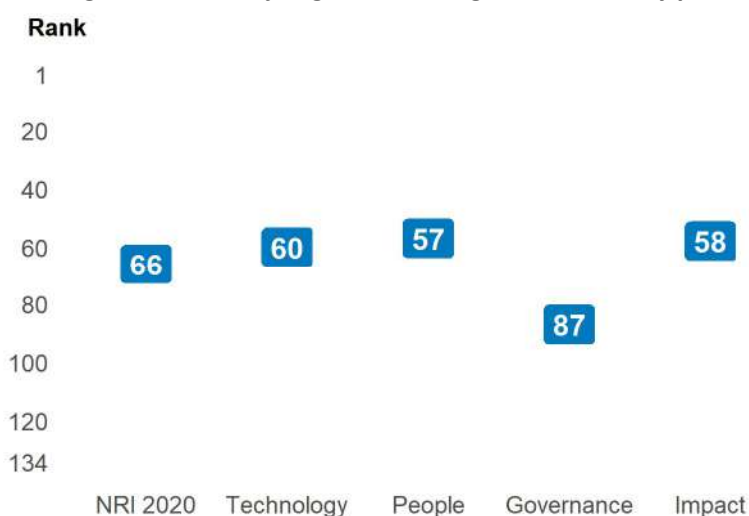
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Azerbaijan relate to Future Technologies, Governments and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Access and Inclusion sub-pillars.

Table 1: Azerbaijan rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	27	SDG Contribution	70
Governments	42	Quality of Life	73
Economy	52	Regulation	78
Content	61	Trust	82
Individuals	64	Access	85
Businesses	65	Inclusion	95

NRI score and income

Figure 3 shows the position of Azerbaijan in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Azerbaijan is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
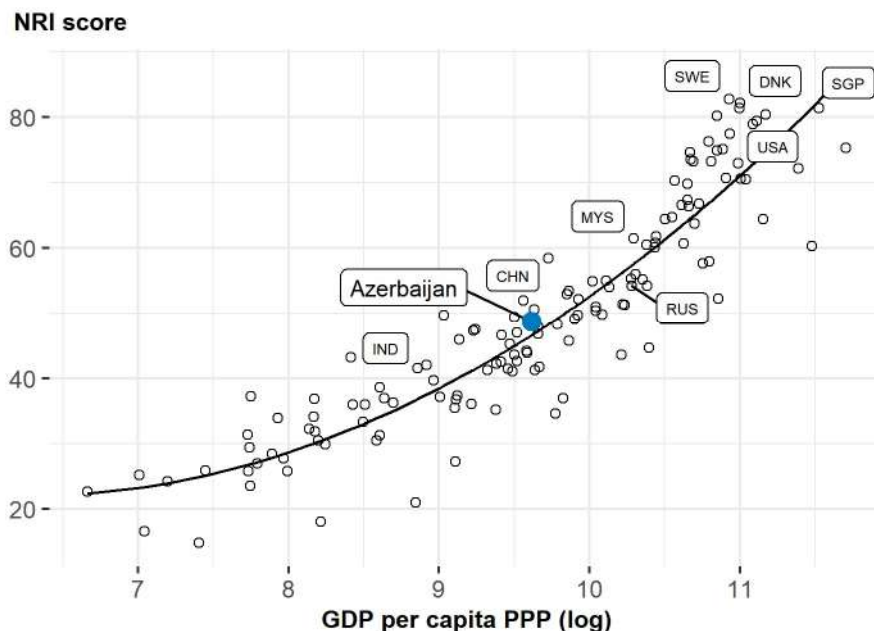
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Azerbaijan belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-CIS-is Russia (RUS).

Performance against its income group and region

Upper-middle-income countries
Azerbaijan is ranked 16th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, people and impact. At the sub-pillar level, it outperforms upper-middle-income countries in seven of the twelve sub-pillars: Future Technologies, Individuals, Governments, Regulation, Economy, Quality of Life and SDG Contribution.

CIS
Azerbaijan is ranked 5th within CIS (Figure 4, right panel). It has a score above the regional average in three of the four pillars: nri.score, technology, people and impact. With regard to sub-pillars, it outperforms the average in CIS in six of the twelve sub-pillars: Future Technologies, Individuals, Governments, Regulation, Economy and SDG Contribution.

Figure 4: Performance of Azerbaijan against its income group and region, overall and by pillar
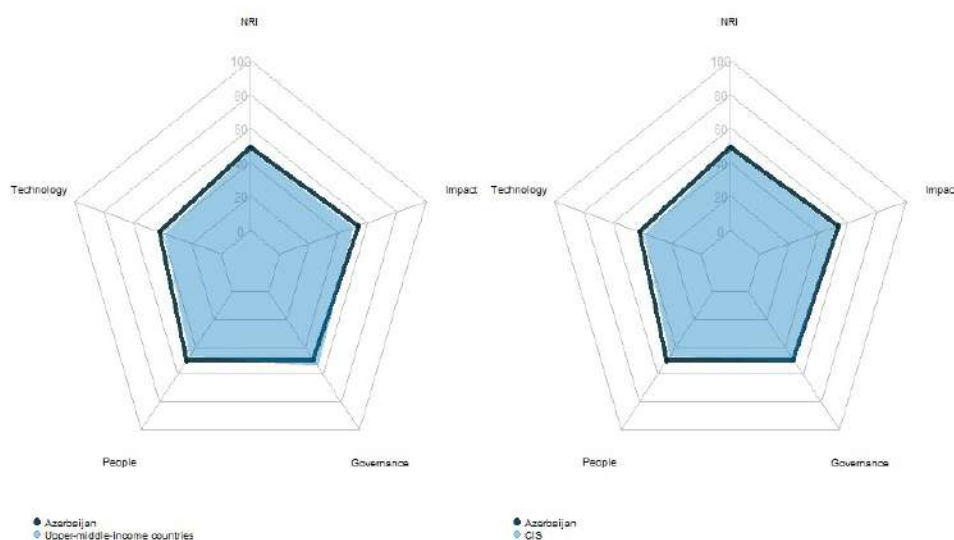
Table 2: Azerbaijan scores vs. averages of its income group and region, overall and by pillar

Dimension	Azerbaijan	Upper-middle-income countries	CIS
NRI	48.76	47.39	46.88
Technology	41.70	38.42	38.47
People	50.04	46.66	47.10
Governance	49.45	54.31	50.71
Impact	53.84	50.17	51.26

Strongest and weakest indicators

The indicators where Azerbaijan performs particularly well include Adult literacy rate, Prevalence of gig economy, and ICT skills (Table 3). By contrast, the economy's weakest indicators include Rural gap in use of digital payments, Online access to financial account, and Handset prices.

Table 3: Top-ranked and bottom-ranked indicators of Azerbaijan

Strongest indicators	Rank	Weakest indicators	Rank
Adult literacy rate	6	GitHub commits	98
Prevalence of gig economy	15	Use of virtual social networks	98
ICT skills	18	Firms with website	99
Government promotion of investment in emerging technologies	19	Fixed-broadband subscriptions	101
Investment in emerging technologies	23	ICT regulatory environment	101
Availability of local online content	23	4G mobile network coverage	104
Legal framework's adaptability to emerging technologies	26	Socioeconomic gap in use of digital payments	106
Business use of digital tools	32	Handset prices	112
Ease of doing business	33	Online access to financial account	114
Adoption of emerging technologies	34	Rural gap in use of digital payments	124

NRI 2020 At-A-Glance: Azerbaijan

Network Readiness Index   Rank: 66 (out of 134)   Score: 48.76

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	60	41.70	C. Governance pillar	87	49.45
1st sub-pillar: Access	85	49.61	1st sub-pillar: Trust	82	32.53
2nd sub-pillar: Content	61	30.15	2nd sub-pillar: Regulation	78	62.85
3rd sub-pillar: Future Technologies	27	45.35	3rd sub-pillar: Inclusion	95	52.97
B. People pillar	57	50.04	D. Impact pillar	58	53.84
1st sub-pillar: Individuals	64	56.00	1st sub-pillar: Economy	52	31.60
2nd sub-pillar: Businesses	65	42.85	2nd sub-pillar: Quality of Life	73	64.02
3rd sub-pillar: Governments	42	51.26	3rd sub-pillar: SDG Contribution	70	65.90

The Network Readiness Index in detail

| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	60	41.70	**C. Governance pillar**	87	49.45
1st sub-pillar: Access	85	49.61	*1st sub-pillar: Trust*	82	32.53
1.1.1 Mobile tariffs	56	67.37	3.1.1 Secure Internet servers	78	47.17
1.1.2 Handset prices	112	22.84	3.1.2 Cybersecurity	56	69.88
1.1.3 Internet access	50	78.14	3.1.3 Online access to financial account	114	6.93
1.1.4 4G mobile network coverage	104	49.00	3.1.4 Internet shopping	88	6.15
1.1.5 Fixed-broadband subscriptions	101	8.20	*2nd sub-pillar: Regulation*	78	62.85
1.1.6 International Internet bandwidth	67	68.10	3.2.1 Regulatory quality	97	43.03
1.1.7 Internet access in schools	41	53.63	3.2.2 ICT regulatory environment	101	68.92
2nd sub-pillar: Content	61	30.15	3.2.3 Legal framework's adaptability to emerging technologies	26	64.46
1.2.1 GitHub commits	98	1.17	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	49	61.17	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	95	52.97
1.2.4 Mobile apps development	78	56.86	3.3.1 E-Participation	72	67.90
3rd sub-pillar: Future Technologies	27	45.35	3.3.2 Socioeconomic gap in use of digital payments	106	41.30
1.3.1 Adoption of emerging technologies	34	62.72	3.3.3 Availability of local online content	23	85.01
1.3.2 Investment in emerging technologies	23	67.18	3.3.4 Gender gap in Internet use	74	49.90
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	124	20.72
1.3.4 Computer software spending	95	6.14	**D. Impact pillar**	58	53.84
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	52	31.60
B. People pillar	57	50.04	4.1.1 Medium and high-tech industry	78	25.71
1st sub-pillar: Individuals	64	56.00	4.1.2 High-tech exports	86	8.74
2.1.1 Internet users	40	79.53	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	87	22.61	4.1.4 Labor productivity per employee	81	18.36
2.1.3 Use of virtual social networks	98	36.08	4.1.5 Prevalence of gig economy	15	73.58
2.1.4 Tertiary enrollment	85	19.80	*2nd sub-pillar: Quality of Life*	73	64.02
2.1.5 Adult literacy rate	6	99.76	4.2.1 Happiness	85	48.75
2.1.6 ICT skills	18	78.23	4.2.2 Freedom to make life choices	52	81.48
2nd sub-pillar: Businesses	65	42.85	4.2.3 Income inequality	NA	NA
2.2.1 Firms with website	99	27.28	4.2.4 Healthy life expectancy at birth	83	61.85
2.2.2 Ease of doing business	33	82.21	*3rd sub-pillar: SDG Contribution*	70	65.90
2.2.3 Professionals	51	30.05	4.3.1 SDG 3: Good Health and Well-Being	88	60.66
2.2.4 Technicians and associate professionals	53	39.92	4.3.2 SDG 4: Quality Education	50	39.76
2.2.5 Business use of digital tools	32	77.54	4.3.3 SDG 5: Gender Equality	91	65.28
2.2.6 R&D expenditure by businesses	88	0.11	4.3.4 SDG 7: Affordable and Clean Energy	46	83.45
3rd sub-pillar: Governments	42	51.26	.	.	.
2.3.1 Government online services	64	69.70			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	19	69.32			
2.3.4 R&D expenditure by governments and higher education	85	14.77			

* Confidential data

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Network Readiness Index 2020 Bahrain

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model
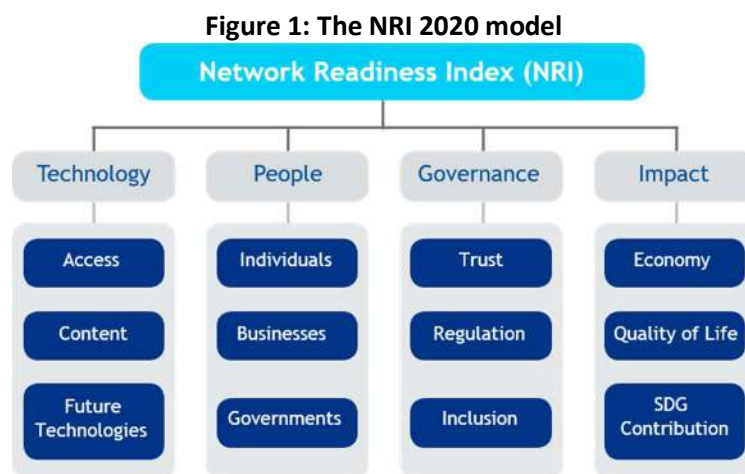
Global NRI position of Bahrain

Bahrain ranks 42nd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology and Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Bahrain global ranking, overall and by pillar
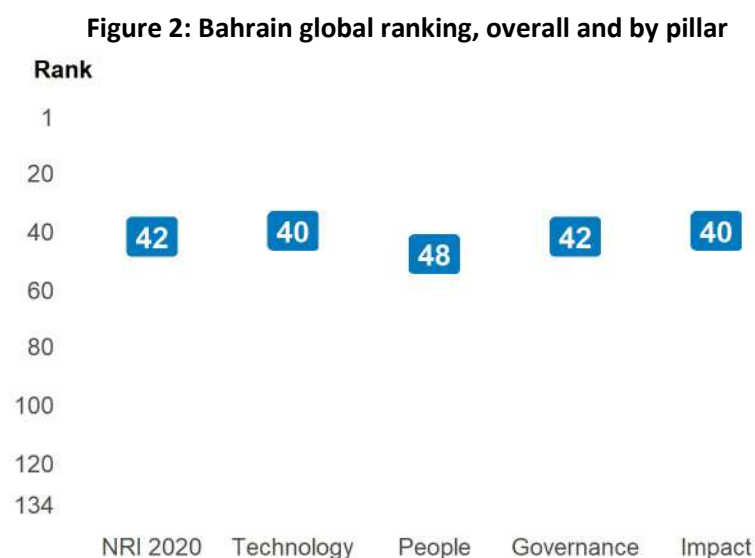
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Bahrain relate to Individuals, Future Technologies and Quality of Life, among others (Table 1). More could be done, though, to improve the economy's performances in the Governments, Businesses and SDG Contribution sub-pillars.

Table 1: Bahrain rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	9	Access	41
Future Technologies	25	Trust	60
Quality of Life	27	Content	62
Inclusion	28	Governments	67
Economy	33	Businesses	74
Regulation	36	SDG Contribution	83

NRI score and income

Figure 3 shows the position of Bahrain in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Bahrain is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
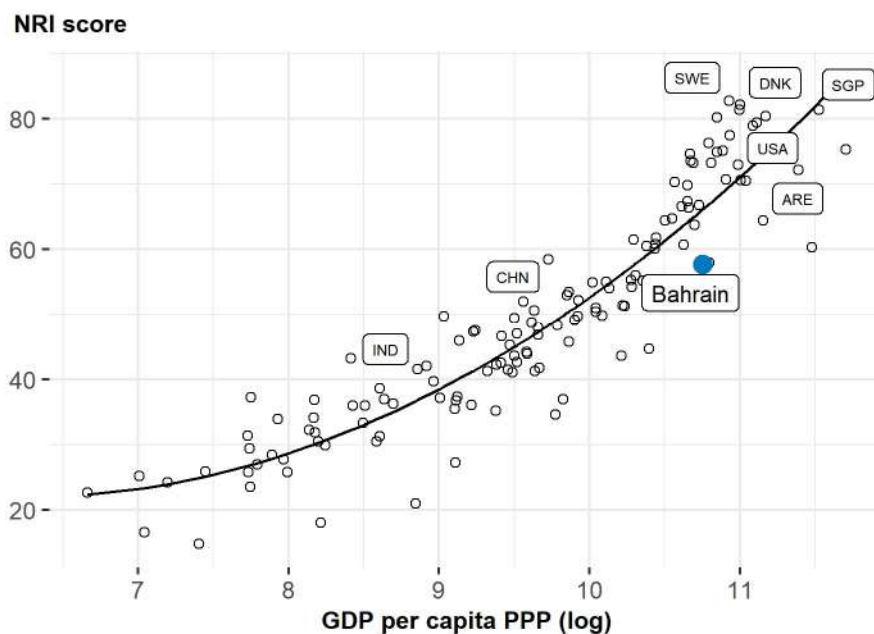
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Bahrain belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Arab States-is United Arab Emirates (ARE).

Performance against its income group and region

High-income countries
Bahrain is ranked 40th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in one of the twelve sub-pillars: Individuals.

Arab States
Bahrain is ranked 4th within Arab States (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Arab States in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Bahrain against its income group and region, overall and by pillar

Table 2: Bahrain scores vs. averages of its income group and region, overall and by pillar

Dimension	Bahrain	High-income countries	Arab States
NRI	57.59	66.82	47.18
Technology	51.16	62.51	39.24
People	52.39	62.72	47.97
Governance	67.00	75.41	51.70
Impact	59.80	66.63	49.82

Strongest and weakest indicators

The indicators where Bahrain performs particularly well include 4G mobile network coverage, Internet access in schools, and e-commerce legislation (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, High-tech exports, and Handset prices.

Table 3: Top-ranked and bottom-ranked indicators of Bahrain

Strongest indicators	Rank	Weakest indicators	Rank
4G mobile network coverage	1	Technicians and associate professionals	77
Internet access in schools	1	Mobile tariffs	78
e-commerce legislation	1	Professionals	80
Internet users	4	R&D expenditure by businesses	80
Use of virtual social networks	6	GitHub commits	93
Internet access	7	SDG 5: Gender Equality	94
Active mobile-broadband subscriptions	13	R&D expenditure by governments and higher education	101
Availability of local online content	13	Handset prices	110
Government promotion of investment in emerging technologies	17	High-tech exports	119
Fixed-broadband subscriptions	20	SDG 7: Affordable and Clean Energy	125

NRI 2020 At-A-Glance: Bahrain

Network Readiness Index   Rank: 42 (out of 134)   Score: 57.59

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	40	51.16	C. Governance pillar	42	67.00
1st sub-pillar: Access	41	78.07	1st sub-pillar: Trust	60	45.55
2nd sub-pillar: Content	62	29.69	2nd sub-pillar: Regulation	36	78.57
3rd sub-pillar: Future Technologies	25	45.72	3rd sub-pillar: Inclusion	28	76.89
B. People pillar	48	52.39	D. Impact pillar	40	59.80
1st sub-pillar: Individuals	9	73.35	1st sub-pillar: Economy	33	39.98
2nd sub-pillar: Businesses	74	40.45	2nd sub-pillar: Quality of Life	27	77.44
3rd sub-pillar: Governments	67	43.37	3rd sub-pillar: SDG Contribution	83	62.00

The Network Readiness Index in detail

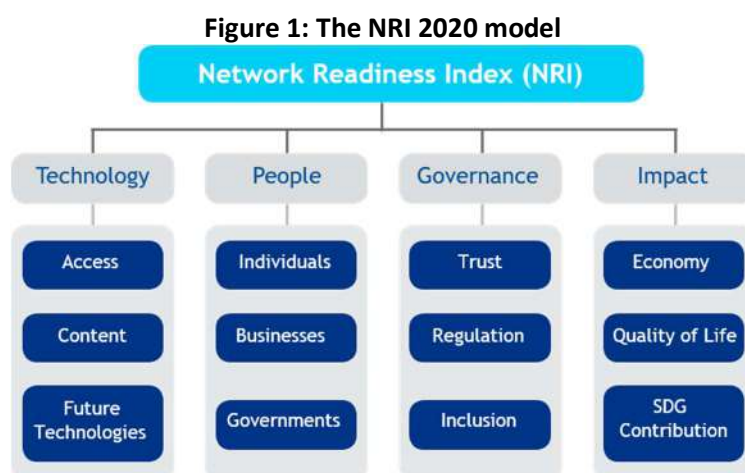| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	40	51.16	**C. Governance pillar**	42	67.00
1st sub-pillar: Access	41	78.07	*1st sub-pillar: Trust*	60	45.55
1.1.1 Mobile tariffs	78	57.10	3.1.1 Secure Internet servers	75	47.59
1.1.2 Handset prices	110	23.16	3.1.2 Cybersecurity	70	62.51
1.1.3 Internet access	7	97.54	3.1.3 Online access to financial account	47	40.00
1.1.4 4G mobile network coverage	1	100.00	3.1.4 Internet shopping	43	32.09
1.1.5 Fixed-broadband subscriptions	20	94.83	*2nd sub-pillar: Regulation*	36	78.57
1.1.6 International Internet bandwidth	26	73.88	3.2.1 Regulatory quality	50	61.24
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	45	88.42
2nd sub-pillar: Content	62	29.69	3.2.3 Legal framework's adaptability to emerging technologies	25	64.62
1.2.1 GitHub commits	93	1.45	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	70	42.29	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	28	76.89
1.2.4 Mobile apps development	44	72.18	3.3.1 E-Participation	50	76.54
3rd sub-pillar: Future Technologies	25	45.72	3.3.2 Socioeconomic gap in use of digital payments	48	77.50
1.3.1 Adoption of emerging technologies	30	65.71	3.3.3 Availability of local online content	13	88.80
1.3.2 Investment in emerging technologies	NA	NA	3.3.4 Gender gap in Internet use	25	66.36
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	31	75.26
1.3.4 Computer software spending	41	25.74	**D. Impact pillar**	40	59.80
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	33	39.98
B. People pillar	48	52.39	4.1.1 Medium and high-tech industry	68	28.14
1st sub-pillar: Individuals	9	73.35	4.1.2 High-tech exports	119	0.85
2.1.1 Internet users	4	98.96	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	13	49.60	4.1.4 Labor productivity per employee	21	64.06
2.1.3 Use of virtual social networks	6	84.54	4.1.5 Prevalence of gig economy	24	66.86
2.1.4 Tertiary enrollment	60	36.57	*2nd sub-pillar: Quality of Life*	27	77.44
2.1.5 Adult literacy rate	34	96.77	4.2.1 Happiness	43	69.47
2.1.6 ICT skills	27	73.66	4.2.2 Freedom to make life choices	25	90.24
2nd sub-pillar: Businesses	74	40.45	4.2.3 Income inequality	NA	NA
2.2.1 Firms with website	NA	NA	4.2.4 Healthy life expectancy at birth	44	72.61
2.2.2 Ease of doing business	42	81.00	*3rd sub-pillar: SDG Contribution*	83	62.00
2.2.3 Professionals	80	17.86	4.3.1 SDG 3: Good Health and Well-Being	34	80.33
2.2.4 Technicians and associate professionals	77	26.16	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	33	76.71	4.3.3 SDG 5: Gender Equality	94	63.98
2.2.6 R&D expenditure by businesses	80	0.52	4.3.4 SDG 7: Affordable and Clean Energy	125	41.69
3rd sub-pillar: Governments	67	43.37	.	.	.
2.3.1 Government online services	45	78.18			
2.3.2 Publication and use of open data	74	18.91			
2.3.3 Government promotion of investment in emerging tech	17	71.20			
2.3.4 R&D expenditure by governments and higher education	101	5.22			

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Network Readiness Index 2020 Bangladesh

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Bangladesh

Bangladesh ranks 105th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Bangladesh global ranking, overall and by pillar
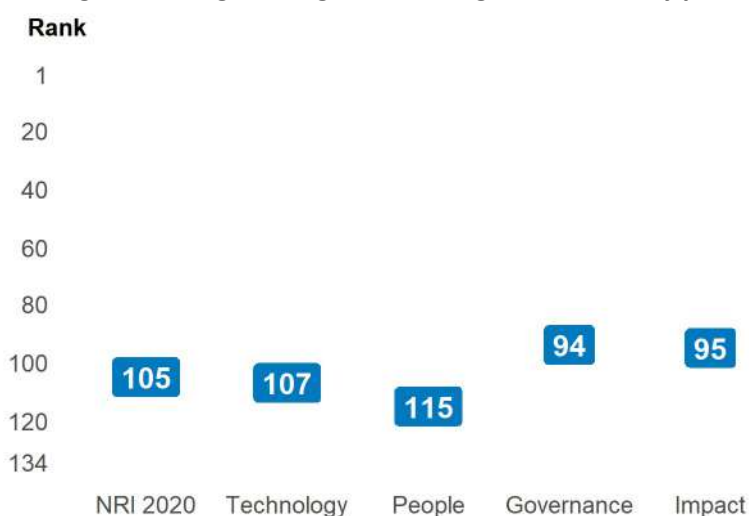
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Bangladesh relate to Quality of Life, Inclusion and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, Economy and Businesses sub-pillars.

Table 1: Bangladesh rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	56	SDG Contribution	104
Inclusion	76	Content	105
Future Technologies	86	Regulation	110
Governments	90	Individuals	115
Trust	98	Economy	119
Access	102	Businesses	122

NRI score and income

Figure 3 shows the position of Bangladesh in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Bangladesh is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
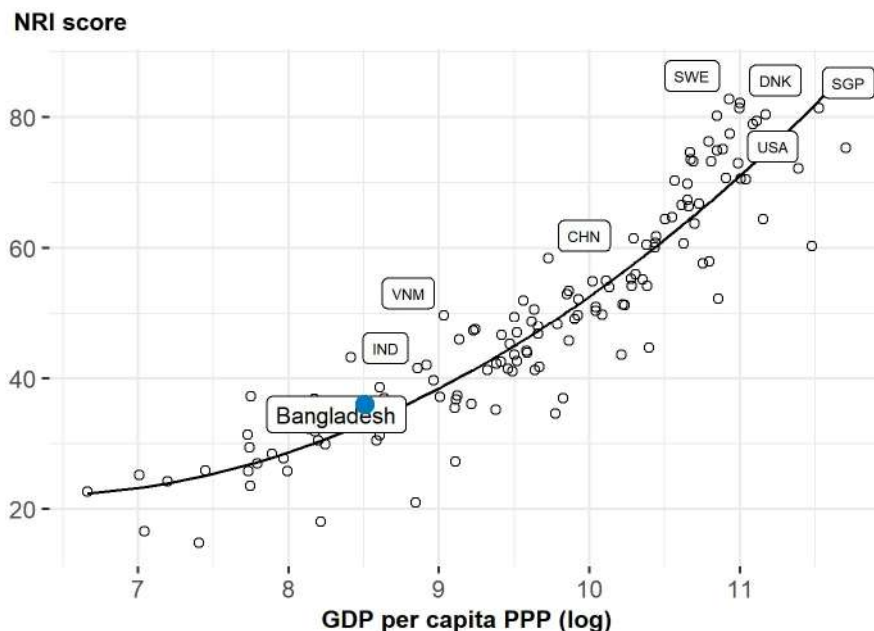
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Bangladesh belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Asia & Pacific-is Singapore (SGP).

2

Performance against its income group and region

Lower-middle-income countries
Bangladesh is ranked 21st in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: governance and impact. At the sub-pillar level, it outperforms lower-middle-income countries in four of the twelve sub-pillars: Future Technologies, Governments, Inclusion and Quality of Life.

Asia & Pacific
Bangladesh is ranked 19th within Asia & Pacific (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Asia & Pacific in one of the twelve sub-pillars: Quality of Life.

Figure 4: Performance of Bangladesh against its income group and region, overall and by pillar
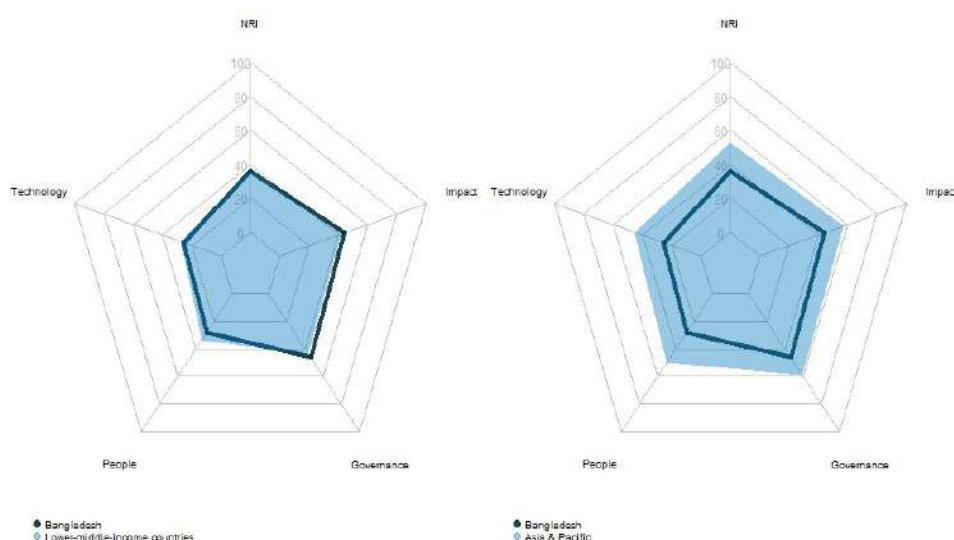
Table 2: Bangladesh scores vs. averages of its income group and region, overall and by pillar

Dimension	Bangladesh	Lower-middle-income countries	Asia & Pacific
NRI	36.01	36.72	52.76
Technology	25.78	27.72	45.33
People	27.90	33.88	49.64
Governance	46.30	43.15	59.20
Impact	44.06	42.15	56.86

Strongest and weakest indicators

The indicators where Bangladesh performs particularly well include Rural gap in use of digital payments, SDG 7: Affordable and Clean Energy, and Freedom to make life choices (Table 3). By contrast, the economy's weakest indicators include Internet access, Ease of doing business, and Internet users.

Table 3: Top-ranked and bottom-ranked indicators of Bangladesh

Strongest indicators	Rank	Weakest indicators	Rank
Rural gap in use of digital payments	7	SDG 5: Gender Equality	110
SDG 7: Affordable and Clean Energy	22	Mobile apps development	111
Freedom to make life choices	29	Internet domain registrations	113
Income inequality	29	Technicians and associate professionals	116
Mobile tariffs	50	Regulatory quality	119
Handset prices	59	Internet shopping	120
Internet access in schools	67	High-tech exports	120
Government promotion of investment in emerging technologies	70	Internet users	125
Computer software spending	73	Ease of doing business	129
Socioeconomic gap in use of digital payments	76	Internet access	130

NRI 2020 At-A-Glance: Bangladesh

Network Readiness Index   Rank: 105 (out of 134)   Score: 36.01

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	107	25.78	C. Governance pillar	94	46.30
1st sub-pillar: Access	102	38.33	1st sub-pillar: Trust	98	27.12
2nd sub-pillar: Content	105	15.18	2nd sub-pillar: Regulation	110	50.05
3rd sub-pillar: Future Technologies	86	23.82	3rd sub-pillar: Inclusion	76	61.74
B. People pillar	115	27.90	D. Impact pillar	95	44.06
1st sub-pillar: Individuals	115	26.76	1st sub-pillar: Economy	119	11.34
2nd sub-pillar: Businesses	122	21.67	2nd sub-pillar: Quality of Life	56	68.14
3rd sub-pillar: Governments	90	35.26	3rd sub-pillar: SDG Contribution	104	52.71

The Network Readiness Index in detail

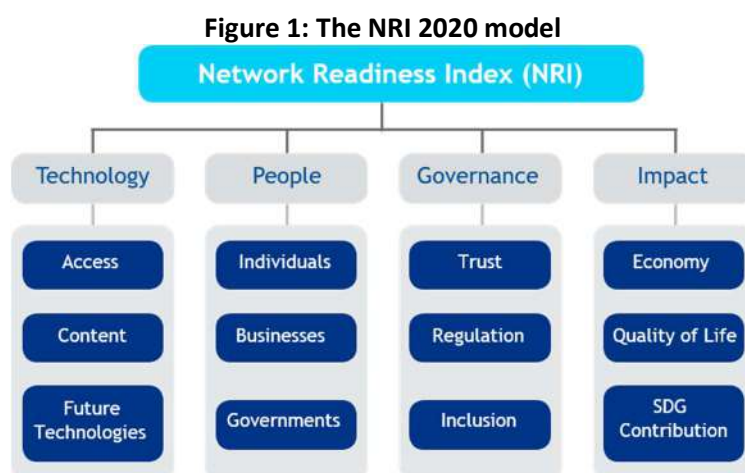| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	107	25.78	**C. Governance pillar**	94	46.30
1st sub-pillar: Access	102	38.33	*1st sub-pillar: Trust*	98	27.12
1.1.1 Mobile tariffs	50	69.55	3.1.1 Secure Internet servers	100	36.79
1.1.2 Handset prices	59	46.95	3.1.2 Cybersecurity	79	56.01
1.1.3 Internet access	130	6.50	3.1.3 Online access to financial account	96	14.08
1.1.4 4G mobile network coverage	99	58.00	3.1.4 Internet shopping	120	1.59
1.1.5 Fixed-broadband subscriptions	94	20.00	*2nd sub-pillar: Regulation*	110	50.05
1.1.6 International Internet bandwidth	92	63.19	3.2.1 Regulatory quality	119	33.22
1.1.7 Internet access in schools	67	4.14	3.2.2 ICT regulatory environment	89	73.75
2nd sub-pillar: Content	105	15.18	3.2.3 Legal framework's adaptability to emerging technologies	105	18.21
1.2.1 GitHub commits	99	1.07	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	98	22.80	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	76	61.74
1.2.4 Mobile apps development	111	36.61	3.3.1 E-Participation	90	55.55
3rd sub-pillar: Future Technologies	86	23.82	3.3.2 Socioeconomic gap in use of digital payments	76	61.43
1.3.1 Adoption of emerging technologies	107	27.75	3.3.3 Availability of local online content	89	50.03
1.3.2 Investment in emerging technologies	98	29.07	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	7	79.95
1.3.4 Computer software spending	73	14.65	**D. Impact pillar**	95	44.06
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	119	11.34
B. People pillar	115	27.90	4.1.1 Medium and high-tech industry	103	12.20
1st sub-pillar: Individuals	115	26.76	4.1.2 High-tech exports	120	0.58
2.1.1 Internet users	125	12.72	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	110	13.65	4.1.4 Labor productivity per employee	102	6.91
2.1.3 Use of virtual social networks	106	20.62	4.1.5 Prevalence of gig economy	102	25.67
2.1.4 Tertiary enrollment	93	14.54	*2nd sub-pillar: Quality of Life*	56	68.14
2.1.5 Adult literacy rate	89	66.44	4.2.1 Happiness	88	47.59
2.1.6 ICT skills	109	32.60	4.2.2 Freedom to make life choices	29	89.57
2nd sub-pillar: Businesses	122	21.67	4.2.3 Income inequality	29	78.87
2.2.1 Firms with website	106	19.50	4.2.4 Healthy life expectancy at birth	92	56.53
2.2.2 Ease of doing business	129	26.20	*3rd sub-pillar: SDG Contribution*	104	52.71
2.2.3 Professionals	109	10.98	4.3.1 SDG 3: Good Health and Well-Being	109	32.79
2.2.4 Technicians and associate professionals	116	7.14	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	101	44.54	4.3.3 SDG 5: Gender Equality	110	50.11
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	22	88.87
3rd sub-pillar: Governments	90	35.26	.	.	.
2.3.1 Government online services	84	60.00			
2.3.2 Publication and use of open data	92	10.57			
2.3.3 Government promotion of investment in emerging tech	70	35.22			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

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Network Readiness Index 2020 Belarus

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Belarus

Belarus ranks 65th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Belarus global ranking, overall and by pillar
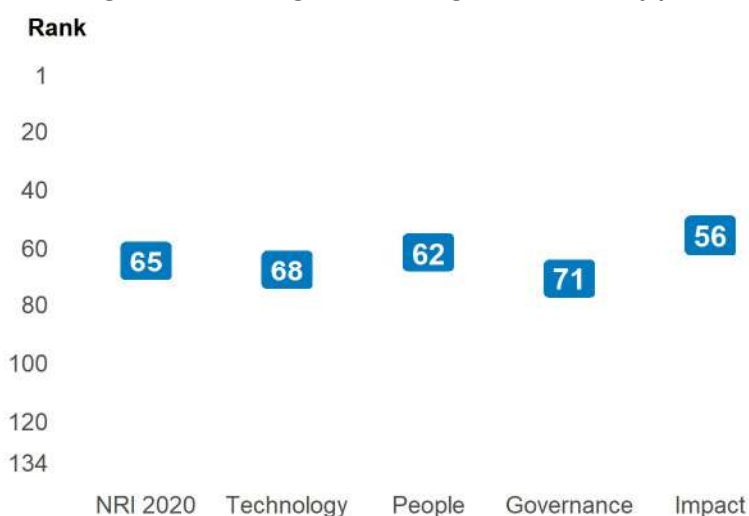
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Belarus relate to Individuals, SDG Contribution and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Governments, Regulation and Future Technologies sub-pillars.

Table 1: Belarus rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	36	Access	58
SDG Contribution	40	Quality of Life	59
Content	41	Economy	77
Inclusion	44	Governments	94
Trust	45	Regulation	122
Businesses	46	Future Technologies	134

NRI score and income

Figure 3 shows the position of Belarus in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Belarus is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
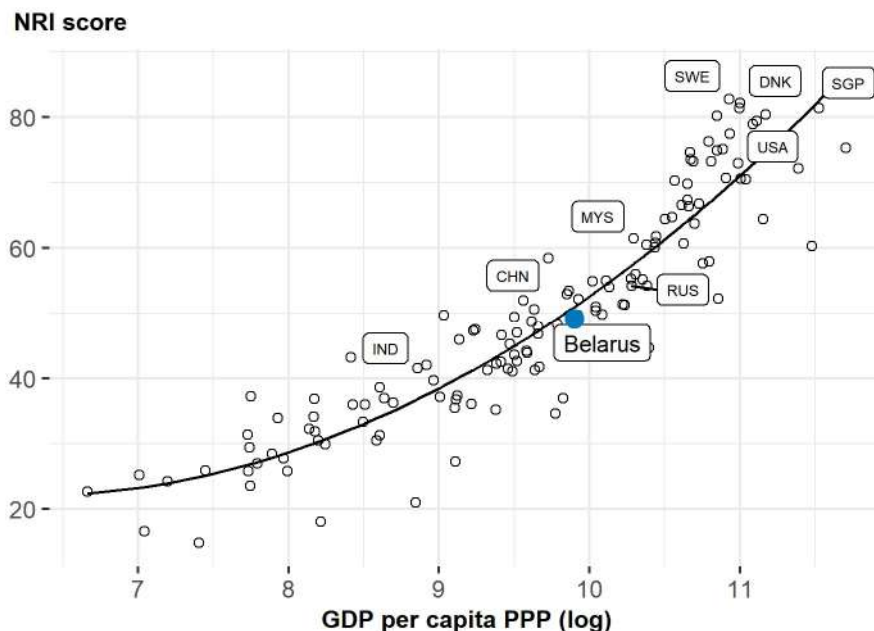
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Belarus belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-CIS-is Russia (RUS).

Performance against its income group and region

Upper-middle-income countries
Belarus is ranked 15th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in eight of the twelve sub-pillars: Access, Content, Individuals, Businesses, Trust, Inclusion, Quality of Life and SDG Contribution.

CIS
Belarus is ranked 4th within CIS (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in CIS in eight of the twelve sub-pillars: Access, Content, Individuals, Businesses, Trust, Inclusion, Quality of Life and SDG Contribution.

Figure 4: Performance of Belarus against its income group and region, overall and by pillar
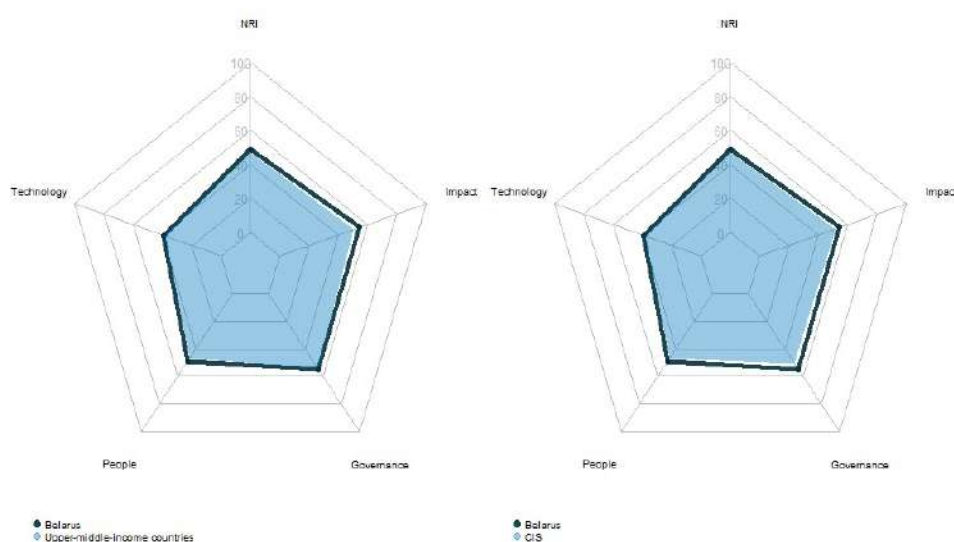
Table 2: Belarus scores vs. averages of its income group and region, overall and by pillar

Dimension	Belarus	Upper-middle-income countries	CIS
NRI	49.16	47.39	46.88
Technology	39.05	38.42	38.47
People	48.94	46.66	47.10
Governance	54.47	54.31	50.71
Impact	54.17	50.17	51.26

Strongest and weakest indicators

The indicators where Belarus performs particularly well include Income inequality, Adult literacy rate, and Tertiary enrollment (Table 3). By contrast, the economy's weakest indicators include ICT regulatory environment, Freedom to make life choices, and Regulatory quality.

Table 3: Top-ranked and bottom-ranked indicators of Belarus

Strongest indicators	Rank	Weakest indicators	Rank
Income inequality	3	R&D expenditure by governments and higher education	83
Adult literacy rate	8	Rural gap in use of digital payments	84
Tertiary enrollment	10	Publication and use of open data	91
SDG 5: Gender Equality	10	High-tech exports	91
International Internet bandwidth	14	Use of virtual social networks	94
Professionals	19	Computer software spending	105
Gender gap in Internet use	28	SDG 7: Affordable and Clean Energy	107
Socioeconomic gap in use of digital payments	29	Regulatory quality	111
Medium and high-tech industry	29	Freedom to make life choices	120
Firms with website	30	ICT regulatory environment	127

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NRI 2020 At-A-Glance: Belarus

Network Readiness Index   Rank: 65 (out of 134)   Score: 49.16

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	68	39.05	C. Governance pillar	71	54.47
1st sub-pillar: Access	58	70.07	1st sub-pillar: Trust	45	53.82
2nd sub-pillar: Content	41	42.03	2nd sub-pillar: Regulation	122	38.67
3rd sub-pillar: Future Technologies	134	5.06	3rd sub-pillar: Inclusion	44	70.90
B. People pillar	62	48.94	D. Impact pillar	56	54.17
1st sub-pillar: Individuals	36	63.21	1st sub-pillar: Economy	77	21.63
2nd sub-pillar: Businesses	46	51.51	2nd sub-pillar: Quality of Life	59	67.66
3rd sub-pillar: Governments	94	32.12	3rd sub-pillar: SDG Contribution	40	73.24

The Network Readiness Index in detail

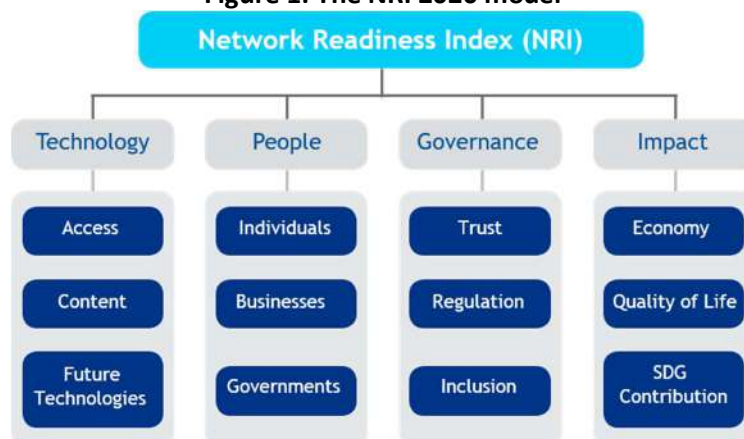| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	68	39.05	**C. Governance pillar**	71	54.47
1st sub-pillar: Access	58	70.07	*1st sub-pillar: Trust*	45	53.82
1.1.1 Mobile tariffs	37	74.30	3.1.1 Secure Internet servers	46	69.04
1.1.2 Handset prices	62	46.77	3.1.2 Cybersecurity	71	61.76
1.1.3 Internet access	59	72.37	3.1.3 Online access to financial account	38	46.02
1.1.4 4G mobile network coverage	82	75.70	3.1.4 Internet shopping	37	38.49
1.1.5 Fixed-broadband subscriptions	67	57.86	*2nd sub-pillar: Regulation*	122	38.67
1.1.6 International Internet bandwidth	14	76.52	3.2.1 Regulatory quality	111	36.88
1.1.7 Internet access in schools	32	87.01	3.2.2 ICT regulatory environment	127	38.80
2nd sub-pillar: Content	41	42.03	3.2.3 Legal framework's adaptability to emerging technologies	NA	NA
1.2.1 GitHub commits	31	27.68	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	38	68.97	3.2.5 Privacy protection by law content	79	4.00
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	44	70.90
1.2.4 Mobile apps development	58	66.85	3.3.1 E-Participation	56	74.07
3rd sub-pillar: Future Technologies	134	5.06	3.3.2 Socioeconomic gap in use of digital payments	29	86.15
1.3.1 Adoption of emerging technologies	NA	NA	3.3.3 Availability of local online content	NA	NA
1.3.2 Investment in emerging technologies	NA	NA	3.3.4 Gender gap in Internet use	28	66.06
1.3.3 ICT PCT patent applications	43	11.33	3.3.5 Rural gap in use of digital payments	84	57.32
1.3.4 Computer software spending	105	3.28	**D. Impact pillar**	56	54.17
1.3.5 Robot density	58	0.56	*1st sub-pillar: Economy*	77	21.63
B. People pillar	62	48.94	4.1.1 Medium and high-tech industry	29	51.75
1st sub-pillar: Individuals	36	63.21	4.1.2 High-tech exports	91	7.55
2.1.1 Internet users	44	78.84	4.1.3 PCT patent applications	57	0.74
2.1.2 Active mobile-broadband subscriptions	51	33.48	4.1.4 Labor productivity per employee	68	26.46
2.1.3 Use of virtual social networks	94	40.21	4.1.5 Prevalence of gig economy	NA	NA
2.1.4 Tertiary enrollment	10	63.78	*2nd sub-pillar: Quality of Life*	59	67.66
2.1.5 Adult literacy rate	8	99.72	4.2.1 Happiness	65	61.49
2.1.6 ICT skills	NA	NA	4.2.2 Freedom to make life choices	120	47.96
2nd sub-pillar: Businesses	46	51.51	4.2.3 Income inequality	3	97.42
2.2.1 Firms with website	30	74.30	4.2.4 Healthy life expectancy at birth	77	63.77
2.2.2 Ease of doing business	48	77.93	*3rd sub-pillar: SDG Contribution*	40	73.24
2.2.3 Professionals	19	50.85	4.3.1 SDG 3: Good Health and Well-Being	39	78.69
2.2.4 Technicians and associate professionals	49	43.78	4.3.2 SDG 4: Quality Education	37	55.11
2.2.5 Business use of digital tools	NA	NA	4.3.3 SDG 5: Gender Equality	10	88.86
2.2.6 R&D expenditure by businesses	41	10.68	4.3.4 SDG 7: Affordable and Clean Energy	107	63.44
3rd sub-pillar: Governments	94	32.12	.	.	.
2.3.1 Government online services	64	69.70			
2.3.2 Publication and use of open data	91	10.95			
2.3.3 Government promotion of investment in emerging tech	NA	NA			
2.3.4 R&D expenditure by governments and higher education	83	15.70			

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Network Readiness Index 2020 Belgium

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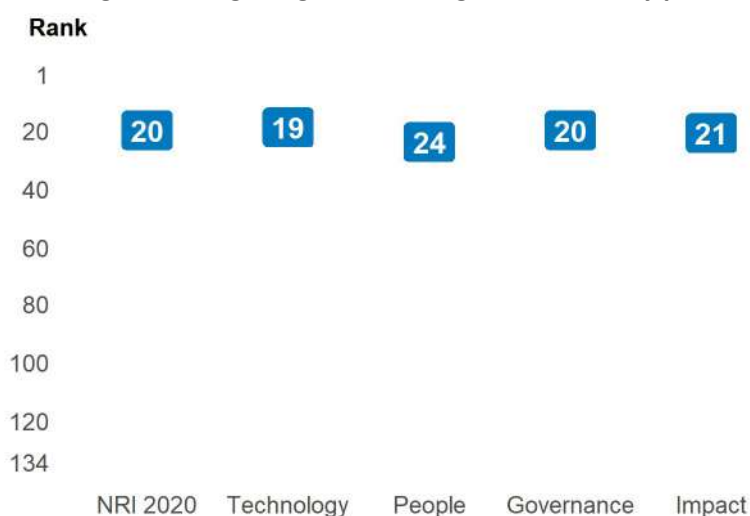
Figure 1: The NRI 2020 model

Global NRI position of Belgium

Belgium ranks 20th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Belgium global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Belgium relate to Trust, Access and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Content, Inclusion and Individuals sub-pillars.

Table 1: Belgium rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Trust	15	Quality of Life	21
Access	17	Governments	22
Future Technologies	18	Regulation	22
Businesses	20	Content	23
Economy	20	Inclusion	25
SDG Contribution	20	Individuals	42

NRI score and income

Figure 3 shows the position of Belgium in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Belgium is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
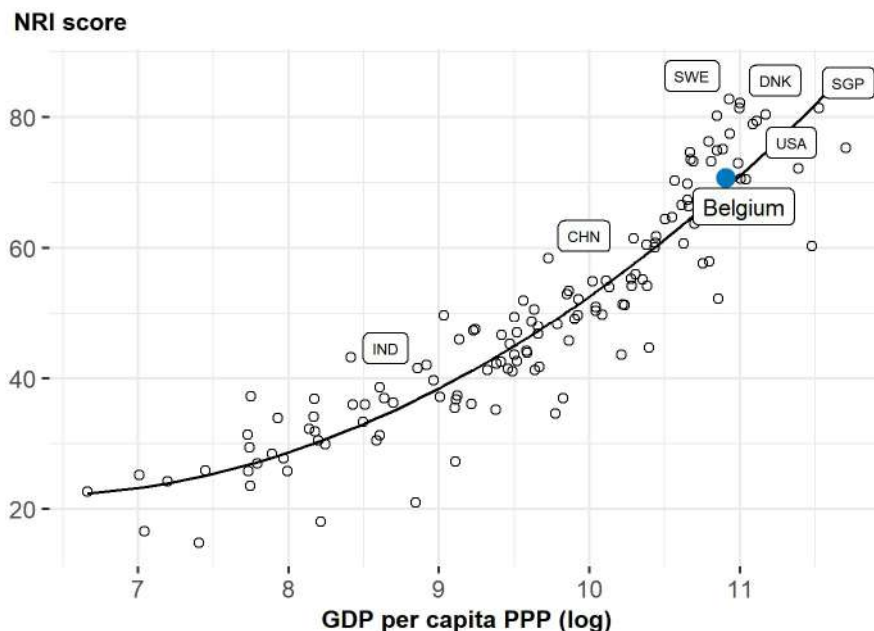
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Belgium belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Belgium is ranked 20th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Europe
Belgium is ranked 13th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Belgium against its income group and region, overall and by pillar
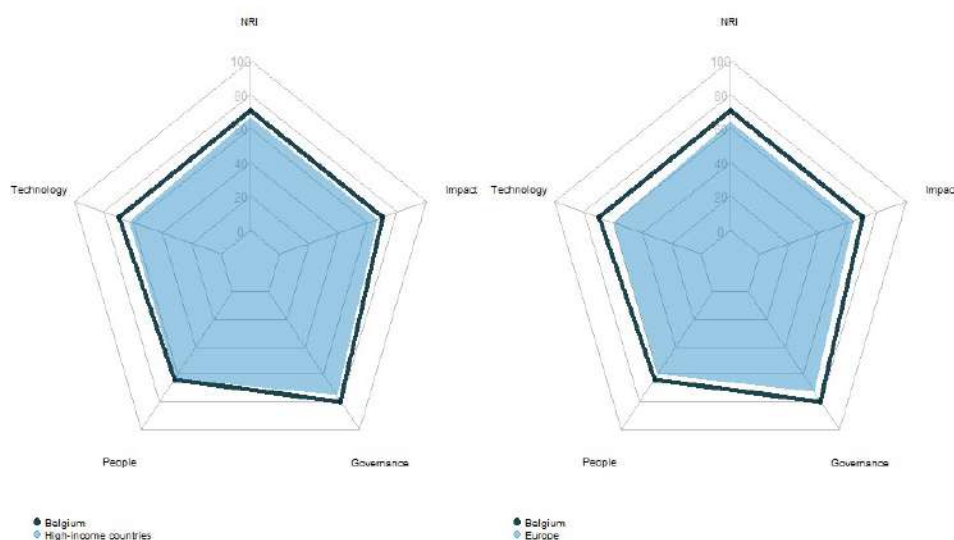
Table 2: Belgium scores vs. averages of its income group and region, overall and by pillar

Dimension	Belgium	High-income countries	Europe
NRI	70.67	66.82	64.21
Technology	69.26	62.51	59.93
People	63.80	62.72	59.89
Governance	79.57	75.41	72.98
Impact	70.05	66.63	64.04

Strongest and weakest indicators

The indicators where Belgium performs particularly well include 4G mobile network coverage, Internet access in schools, and Socioeconomic gap in use of digital payments (Table 3). By contrast, the economy's weakest indicators include Freedom to make life choices, e-commerce legislation, and SDG 7: Affordable and Clean Energy.

Table 3: Top-ranked and bottom-ranked indicators of Belgium

Strongest indicators	Rank	Weakest indicators	Rank
4G mobile network coverage	1	Mobile tariffs	42
Internet access in schools	1	Ease of doing business	45
Socioeconomic gap in use of digital payments	6	Gender gap in Internet use	46
Labor productivity per employee	6	SDG 5: Gender Equality	58
Computer software spending	7	Active mobile-broadband subscriptions	68
Firms with website	9	Government online services	75
Income inequality	9	E-Participation	76
Robot density	10	e-commerce legislation	77
SDG 3: Good Health and Well-Being	10	SDG 7: Affordable and Clean Energy	77
Professionals	11	Freedom to make life choices	82

NRI 2020 At-A-Glance: Belgium

Network Readiness Index Rank: 20 (out of 134) Score: 70.67

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	19	69.26	C. Governance pillar	20	79.57
1st sub-pillar: Access	17	85.91	1st sub-pillar: Trust	15	78.20
2nd sub-pillar: Content	23	62.34	2nd sub-pillar: Regulation	22	83.31
3rd sub-pillar: Future Technologies	18	59.53	3rd sub-pillar: Inclusion	25	77.20
B. People pillar	24	63.80	D. Impact pillar	21	70.05
1st sub-pillar: Individuals	42	62.25	1st sub-pillar: Economy	20	48.78
2nd sub-pillar: Businesses	20	67.05	2nd sub-pillar: Quality of Life	21	81.17
3rd sub-pillar: Governments	22	62.10	3rd sub-pillar: SDG Contribution	20	80.19

The Network Readiness Index in detail

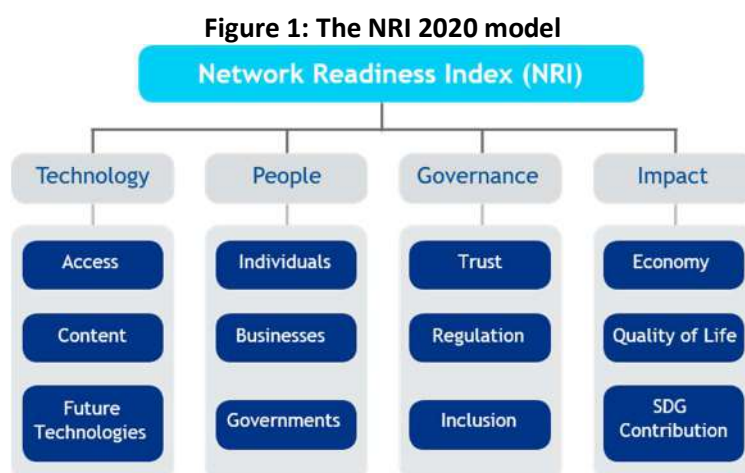| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	19	69.26	**C. Governance pillar**	20	79.57
1st sub-pillar: Access	17	85.91	*1st sub-pillar: Trust*	15	78.20
1.1.1 Mobile tariffs	42	71.98	3.1.1 Secure Internet servers	30	78.89
1.1.2 Handset prices	14	71.27	3.1.2 Cybersecurity	32	87.32
1.1.3 Internet access	27	87.24	3.1.3 Online access to financial account	13	73.15
1.1.4 4G mobile network coverage	1	100.00	3.1.4 Internet shopping	14	73.44
1.1.5 Fixed-broadband subscriptions	12	96.76	*2nd sub-pillar: Regulation*	22	83.31
1.1.6 International Internet bandwidth	24	74.10	3.2.1 Regulatory quality	25	78.59
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	11	96.14
2nd sub-pillar: Content	23	62.34	3.2.3 Legal framework's adaptability to emerging technologies	NA	NA
1.2.1 GitHub commits	22	42.95	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	21	80.03	3.2.5 Privacy protection by law content	18	83.49
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	25	77.20
1.2.4 Mobile apps development	33	78.79	3.3.1 E-Participation	76	64.20
3rd sub-pillar: Future Technologies	18	59.53	3.3.2 Socioeconomic gap in use of digital payments	6	97.89
1.3.1 Adoption of emerging technologies	NA	NA	3.3.3 Availability of local online content	24	84.52
1.3.2 Investment in emerging technologies	21	67.50	3.3.4 Gender gap in Internet use	46	61.30
1.3.3 ICT PCT patent applications	21	56.93	3.3.5 Rural gap in use of digital payments	14	78.08
1.3.4 Computer software spending	7	57.95	**D. Impact pillar**	21	70.05
1.3.5 Robot density	10	55.75	*1st sub-pillar: Economy*	20	48.78
B. People pillar	24	63.80	4.1.1 Medium and high-tech industry	14	63.25
1st sub-pillar: Individuals	42	62.25	4.1.2 High-tech exports	40	22.64
2.1.1 Internet users	21	88.66	4.1.3 PCT patent applications	17	30.06
2.1.2 Active mobile-broadband subscriptions	68	29.17	4.1.4 Labor productivity per employee	6	79.17
2.1.3 Use of virtual social networks	40	64.95	4.1.5 Prevalence of gig economy	NA	NA
2.1.4 Tertiary enrollment	19	58.06	*2nd sub-pillar: Quality of Life*	21	81.17
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	21	80.18
2.1.6 ICT skills	35	70.43	4.2.2 Freedom to make life choices	82	68.22
2nd sub-pillar: Businesses	20	67.05	4.2.3 Income inequality	9	91.75
2.2.1 Firms with website	9	89.65	4.2.4 Healthy life expectancy at birth	26	84.54
2.2.2 Ease of doing business	45	79.17	*3rd sub-pillar: SDG Contribution*	20	80.19
2.2.3 Professionals	11	61.46	4.3.1 SDG 3: Good Health and Well-Being	10	91.80
2.2.4 Technicians and associate professionals	26	60.09	4.3.2 SDG 4: Quality Education	13	68.71
2.2.5 Business use of digital tools	NA	NA	4.3.3 SDG 5: Gender Equality	58	75.80
2.2.6 R&D expenditure by businesses	11	44.87	4.3.4 SDG 7: Affordable and Clean Energy	77	75.14
3rd sub-pillar: Governments	22	62.10	.	.	.
2.3.1 Government online services	75	64.85			
2.3.2 Publication and use of open data	29	45.28			
2.3.3 Government promotion of investment in emerging tech	NA	NA			
2.3.4 R&D expenditure by governments and higher education	11	76.18			

* Confidential data

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Network Readiness Index 2020 Benin

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Benin

Benin ranks 112th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Benin global ranking, overall and by pillar
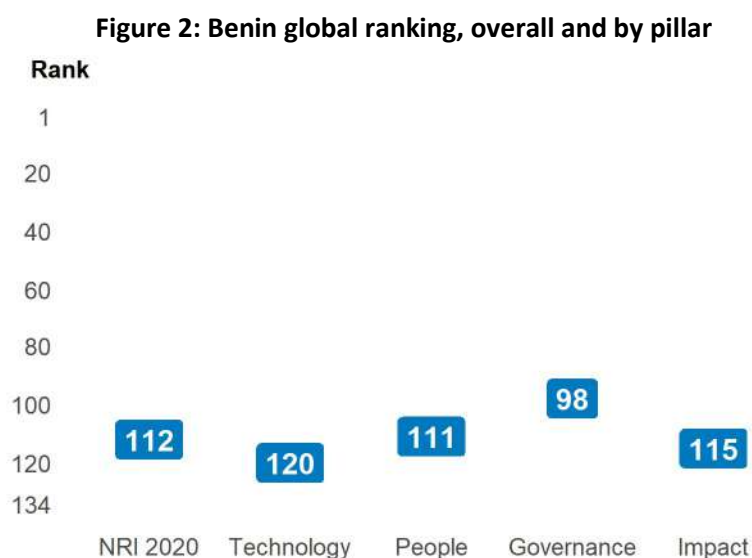
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Benin relate to Economy, Businesses and Inclusion, among others (Table 1). More could be done, though, to improve the economy's performances in the Quality of Life, Individuals and SDG Contribution sub-pillars.

Table 1: Benin rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Economy	64	Future Technologies	112
Businesses	76	Access	117
Inclusion	92	Content	117
Regulation	93	Quality of Life	117
Governments	98	Individuals	124
Trust	102	SDG Contribution	125

NRI score and income

Figure 3 shows the position of Benin in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Benin is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
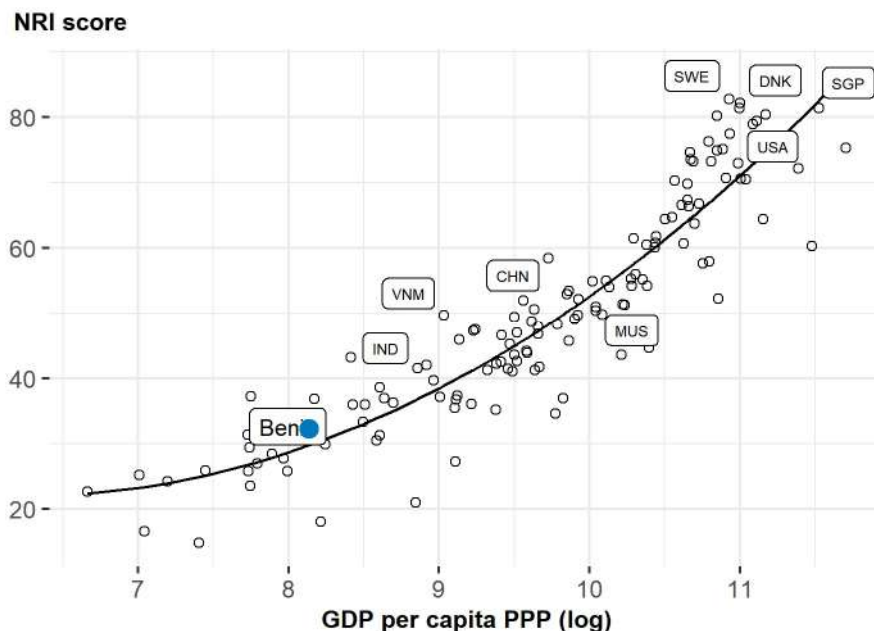
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Benin belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries
Benin is ranked 25th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: governance. At the sub-pillar level, it outperforms lower-middle-income countries in four of the twelve sub-pillars: Businesses, Regulation, Inclusion and Economy.

Africa
Benin is ranked 11th within Africa (Figure 4, right panel). It has a score above the regional average in three of the four pillars: nri.score, people, governance and impact. With regard to sub-pillars, it outperforms the average in Africa in seven of the twelve sub-pillars: Businesses, Governments, Trust, Regulation, Inclusion, Economy and Quality of Life.

Figure 4: Performance of Benin against its income group and region, overall and by pillar
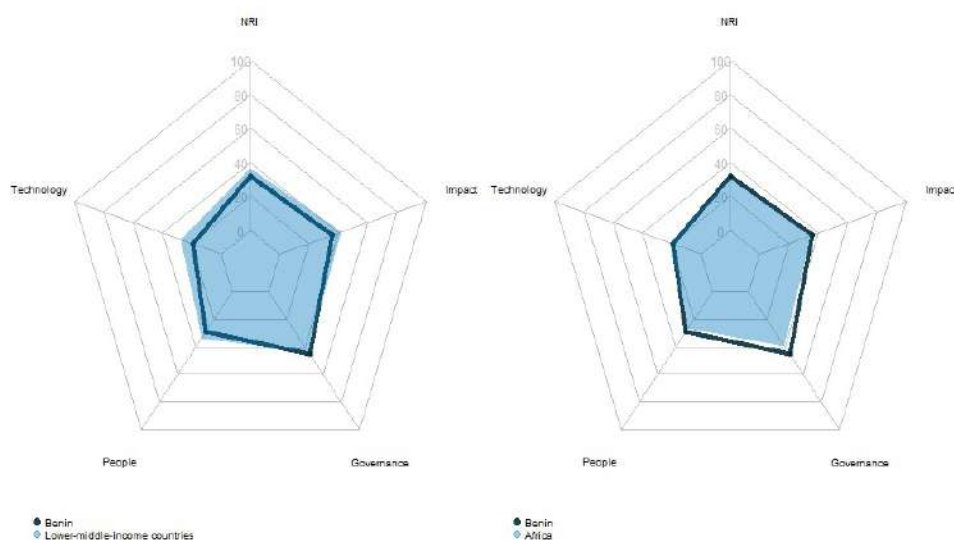
Table 2: Benin scores vs. averages of its income group and region, overall and by pillar

Dimension	Benin	Lower-middle-income countries	Africa
NRI	32.25	36.72	30.62
Technology	19.14	27.72	21.47
People	29.05	33.88	26.75
Governance	45.19	43.15	39.31
Impact	35.64	42.15	34.94

Strongest and weakest indicators

The indicators where Benin performs particularly well include e-commerce legislation, Socioeconomic gap in use of digital payments, and Privacy protection by law content (Table 3). By contrast, the economy's weakest indicators include Internet access, Handset prices, Secure Internet servers, and SDG 3: Good Health and Well-Being.

Table 3: Top-ranked and bottom-ranked indicators of Benin

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Ease of doing business	118
Socioeconomic gap in use of digital payments	56	Mobile apps development	121
Privacy protection by law content	59	Healthy life expectancy at birth	121
Prevalence of gig economy	59	SDG 7: Affordable and Clean Energy	121
Online access to financial account	63	Mobile tariffs	122
Government promotion of investment in emerging technologies	78	Active mobile-broadband subscriptions	123
Cybersecurity	81	Handset prices	126
Rural gap in use of digital payments	81	Secure Internet servers	126
Freedom to make life choices	86	SDG 3: Good Health and Well-Being	126
Fixed-broadband subscriptions	89	Internet access	128

![Portulans Institute logo]

NRI 2020 At-A-Glance: Benin

Network Readiness Index   Rank: 112 (out of 134)   Score: 32.25

Pillar/sub-pillar	Rank	Score
A. Technology pillar	120	19.14
1st sub-pillar: Access	117	28.61
2nd sub-pillar: Content	117	11.39
3rd sub-pillar: Future Technologies	112	17.41
B. People pillar	111	29.05
1st sub-pillar: Individuals	124	17.09
2nd sub-pillar: Businesses	76	39.88
3rd sub-pillar: Governments	98	30.17

Pillar/sub-pillar	Rank	Score
C. Governance pillar	98	45.19
1st sub-pillar: Trust	102	26.03
2nd sub-pillar: Regulation	93	56.03
3rd sub-pillar: Inclusion	92	53.50
D. Impact pillar	115	35.64
1st sub-pillar: Economy	64	25.65
2nd sub-pillar: Quality of Life	117	43.63
3rd sub-pillar: SDG Contribution	125	37.64

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	120	19.14
1st sub-pillar: Access	117	28.61
1.1.1 Mobile tariffs	122	27.38
1.1.2 Handset prices	126	10.17
1.1.3 Internet access	128	7.65
1.1.4 4G mobile network coverage	109	40.00
1.1.5 Fixed-broadband subscriptions	89	23.56
1.1.6 International Internet bandwidth	94	62.87
1.1.7 Internet access in schools	NA	NA
2nd sub-pillar: Content	117	11.39
1.2.1 GitHub commits	107	0.57
1.2.2 Wikipedia edits	102	18.34
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	121	26.41
3rd sub-pillar: Future Technologies	112	17.41
1.3.1 Adoption of emerging technologies	110	26.30
1.3.2 Investment in emerging technologies	115	21.93
1.3.3 ICT PCT patent applications	NA	NA
1.3.4 Computer software spending	100	4.02
1.3.5 Robot density	NA	NA
B. People pillar	111	29.05
1st sub-pillar: Individuals	124	17.09
2.1.1 Internet users	118	17.88
2.1.2 Active mobile-broadband subscriptions	123	6.44
2.1.3 Use of virtual social networks	118	7.42
2.1.4 Tertiary enrollment	103	8.43
2.1.5 Adult literacy rate	104	25.82
2.1.6 ICT skills	99	36.53
2nd sub-pillar: Businesses	76	39.88
2.2.1 Firms with website	90	33.44
2.2.2 Ease of doing business	118	39.22
2.2.3 Professionals	NA	NA
2.2.4 Technicians and associate professionals	NA	NA
2.2.5 Business use of digital tools	96	47.00
2.2.6 R&D expenditure by businesses	NA	NA
3rd sub-pillar: Governments	98	30.17
2.3.1 Government online services	102	49.70
2.3.2 Publication and use of open data	98	7.32
2.3.3 Government promotion of investment in emerging tech	78	33.50
2.3.4 R&D expenditure by governments and higher education	NA	NA

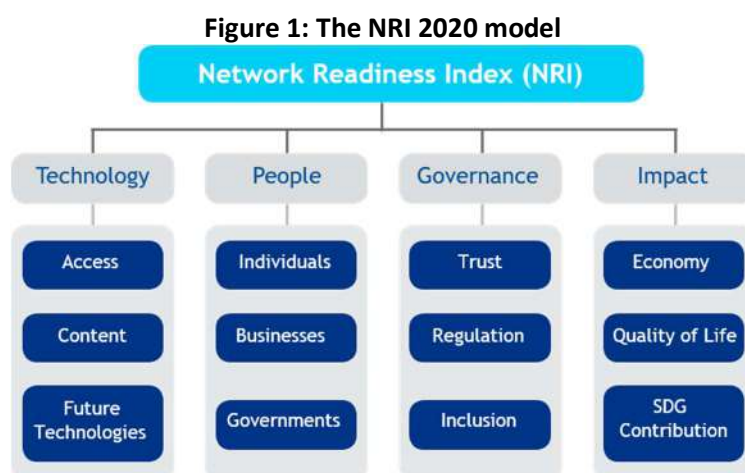| Indicator	Rank	Score
C. Governance pillar	98	45.19
1st sub-pillar: Trust	102	26.03
3.1.1 Secure Internet servers	126	18.55
3.1.2 Cybersecurity	81	51.68
3.1.3 Online access to financial account	63	30.59
3.1.4 Internet shopping	109	3.31
2nd sub-pillar: Regulation	93	56.03
3.2.1 Regulatory quality	94	43.94
3.2.2 ICT regulatory environment	112	62.55
3.2.3 Legal framework's adaptability to emerging technologies	92	27.61
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	59	46.05
3rd sub-pillar: Inclusion	92	53.50
3.3.1 E-Participation	93	53.09
3.3.2 Socioeconomic gap in use of digital payments	56	72.04
3.3.3 Availability of local online content	113	29.61
3.3.4 Gender gap in Internet use	NA	NA
3.3.5 Rural gap in use of digital payments	81	59.28
D. Impact pillar	115	35.64
1st sub-pillar: Economy	64	25.65
4.1.1 Medium and high-tech industry	NA	NA
4.1.2 High-tech exports	97	5.38
4.1.3 PCT patent applications	NA	NA
4.1.4 Labor productivity per employee	NA	NA
4.1.5 Prevalence of gig economy	59	45.91
2nd sub-pillar: Quality of Life	117	43.63
4.2.1 Happiness	99	44.88
4.2.2 Freedom to make life choices	86	67.23
4.2.3 Income inequality	108	39.18
4.2.4 Healthy life expectancy at birth	121	23.23
3rd sub-pillar: SDG Contribution	125	37.64
4.3.1 SDG 3: Good Health and Well-Being	126	19.67
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 SDG 5: Gender Equality	112	46.07
4.3.4 SDG 7: Affordable and Clean Energy	121	49.35
.	.	.

* Confidential data

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Network Readiness Index 2020 Bolivia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Bolivia

Bolivia ranks 101st out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Bolivia global ranking, overall and by pillar
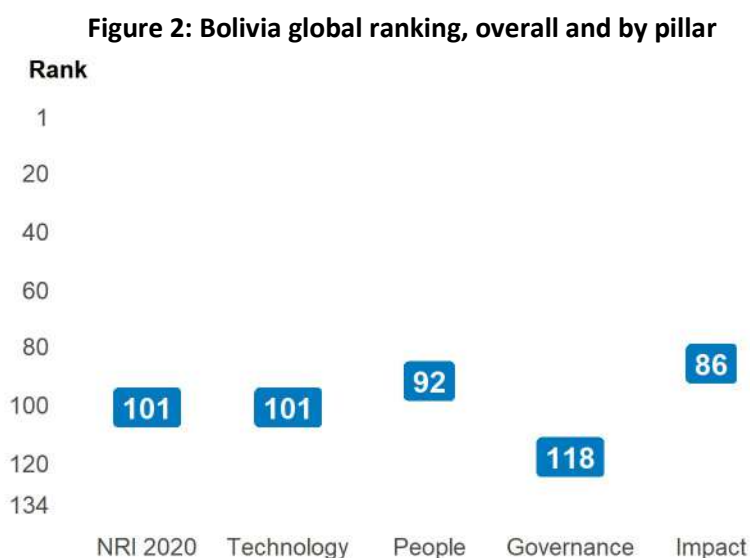
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Bolivia relate to SDG Contribution, Quality of Life and Individuals, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Economy and Regulation sub-pillars.

Table 1: Bolivia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	56	Governments	97
Quality of Life	75	Access	100
Individuals	86	Businesses	103
Future Technologies	93	Trust	119
Content	94	Economy	123
Inclusion	96	Regulation	124

NRI score and income

Figure 3 shows the position of Bolivia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Bolivia is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
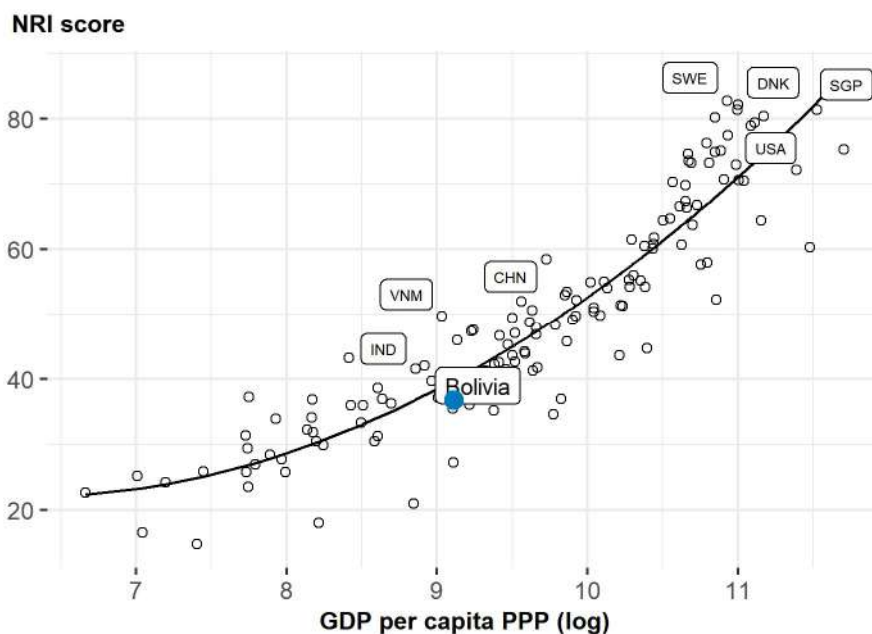
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Bolivia belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

Lower-middle-income countries
Bolivia is ranked 18th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: people and impact. At the sub-pillar level, it outperforms lower-middle-income countries in five of the twelve sub-pillars: Content, Individuals, Inclusion, Quality of Life and SDG Contribution.

The Americas
Bolivia is ranked 18th within The Americas (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Bolivia against its income group and region, overall and by pillar
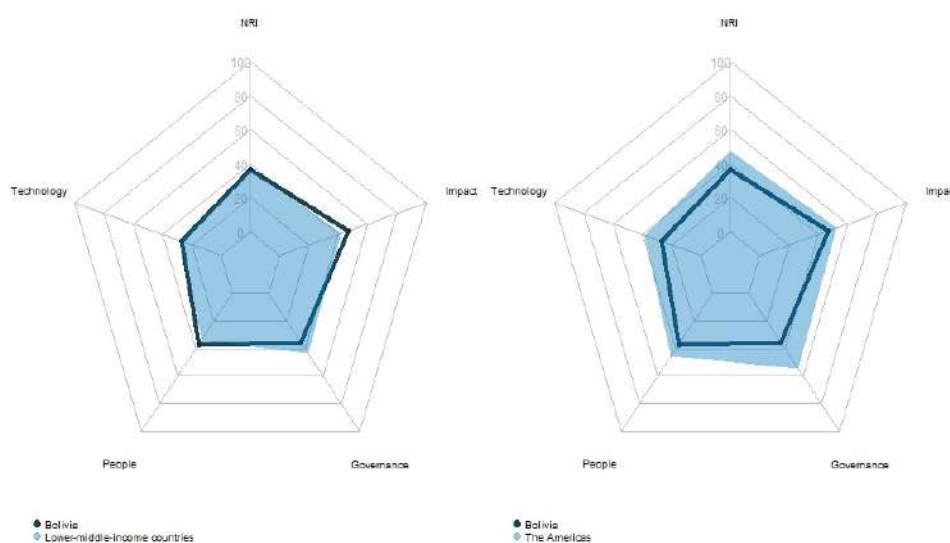
Table 2: Bolivia scores vs. averages of its income group and region, overall and by pillar

Dimension	Bolivia	Lower-middle-income countries	The Americas
NRI	36.72	36.72	47.67
Technology	27.00	27.72	38.26
People	37.21	33.88	45.24
Governance	35.63	43.15	54.59
Impact	47.04	42.15	52.61

Strongest and weakest indicators

The indicators where Bolivia performs particularly well include Use of virtual social networks, Freedom to make life choices, and Rural gap in use of digital payments (Table 3). By contrast, the economy's weakest indicators include ICT regulatory environment, Investment in emerging technologies, and Legal framework's adaptability to emerging technologies.

Table 3: Top-ranked and bottom-ranked indicators of Bolivia

Strongest indicators	Rank	Weakest indicators	Rank
Use of virtual social networks	40	Availability of local online content	116
Freedom to make life choices	41	Ease of doing business	119
Rural gap in use of digital payments	43	Cybersecurity	121
Privacy protection by law content	48	ICT skills	123
Computer software spending	52	Government promotion of investment in emerging technologies	123
Publication and use of open data	56	Regulatory quality	123
Active mobile-broadband subscriptions	59	Prevalence of gig economy	124
Adult literacy rate	61	Legal framework's adaptability to emerging technologies	125
Internet access in schools	64	Investment in emerging technologies	127
SDG 11: Sustainable Cities and Communities	64	ICT regulatory environment	130

NRI 2020 At-A-Glance: Bolivia

Network Readiness Index   Rank: 101 (out of 134)   Score: 36.72

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	101	27.00	C. Governance pillar	118	35.63
1st sub-pillar: Access	100	39.01	1st sub-pillar: Trust	119	18.58
2nd sub-pillar: Content	94	21.09	2nd sub-pillar: Regulation	124	35.56
3rd sub-pillar: Future Technologies	93	20.89	3rd sub-pillar: Inclusion	96	52.74
B. People pillar	92	37.21	D. Impact pillar	86	47.04
1st sub-pillar: Individuals	86	50.29	1st sub-pillar: Economy	123	10.06
2nd sub-pillar: Businesses	103	30.82	2nd sub-pillar: Quality of Life	75	63.45
3rd sub-pillar: Governments	97	30.52	3rd sub-pillar: SDG Contribution	56	67.59

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	101	27.00	**C. Governance pillar**	118	35.63
1st sub-pillar: Access	100	39.01	*1st sub-pillar: Trust*	119	18.58
1.1.1 Mobile tariffs	82	53.67	3.1.1 Secure Internet servers	93	41.12
1.1.2 Handset prices	99	32.07	3.1.2 Cybersecurity	121	14.19
1.1.3 Internet access	93	31.98	3.1.3 Online access to financial account	101	12.41
1.1.4 4G mobile network coverage	86	74.48	3.1.4 Internet shopping	85	6.61
1.1.5 Fixed-broadband subscriptions	103	8.14	*2nd sub-pillar: Regulation*	124	35.56
1.1.6 International Internet bandwidth	81	65.18	3.2.1 Regulatory quality	123	31.71
1.1.7 Internet access in schools	64	7.52	3.2.2 ICT regulatory environment	130	27.22
2nd sub-pillar: Content	94	21.09	3.2.3 Legal framework's adaptability to emerging technologies	125	6.48
1.2.1 GitHub commits	83	1.92	3.2.4 e-commerce legislation	115	50.00
1.2.2 Wikipedia edits	90	29.66	3.2.5 Privacy protection by law content	48	62.38
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	96	52.74
1.2.4 Mobile apps development	93	51.70	3.3.1 E-Participation	86	58.02
3rd sub-pillar: Future Technologies	93	20.89	3.3.2 Socioeconomic gap in use of digital payments	83	56.89
1.3.1 Adoption of emerging technologies	106	27.75	3.3.3 Availability of local online content	116	28.29
1.3.2 Investment in emerging technologies	127	12.03	3.3.4 Gender gap in Internet use	77	47.08
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	43	73.42
1.3.4 Computer software spending	52	22.88	**D. Impact pillar**	86	47.04
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	123	10.06
B. People pillar	92	37.21	4.1.1 Medium and high-tech industry	97	14.65
1st sub-pillar: Individuals	86	50.29	4.1.2 High-tech exports	84	9.20
2.1.1 Internet users	97	42.45	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	59	30.85	4.1.4 Labor productivity per employee	92	11.08
2.1.3 Use of virtual social networks	40	64.95	4.1.5 Prevalence of gig economy	124	5.31
2.1.4 Tertiary enrollment	NA	NA	*2nd sub-pillar: Quality of Life*	75	63.45
2.1.5 Adult literacy rate	61	90.32	4.2.1 Happiness	69	58.60
2.1.6 ICT skills	123	22.91	4.2.2 Freedom to make life choices	41	86.07
2nd sub-pillar: Businesses	103	30.82	4.2.3 Income inequality	89	53.61
2.2.1 Firms with website	70	46.32	4.2.4 Healthy life expectancy at birth	94	55.53
2.2.2 Ease of doing business	119	37.89	*3rd sub-pillar: SDG Contribution*	56	67.59
2.2.3 Professionals	88	16.82	4.3.1 SDG 3: Good Health and Well-Being	79	65.57
2.2.4 Technicians and associate professionals	88	19.86	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	113	33.23	4.3.3 SDG 5: Gender Equality	95	63.81
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	81	74.42
3rd sub-pillar: Governments	97	30.52	.	.	.
2.3.1 Government online services	88	56.98			
2.3.2 Publication and use of open data	56	27.87			
2.3.3 Government promotion of investment in emerging tech	123	6.71			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

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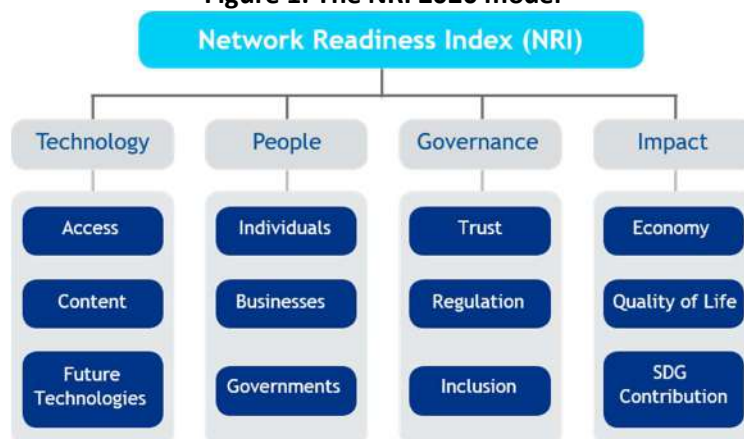
Network Readiness Index 2020
Bosnia and Herzegovina

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
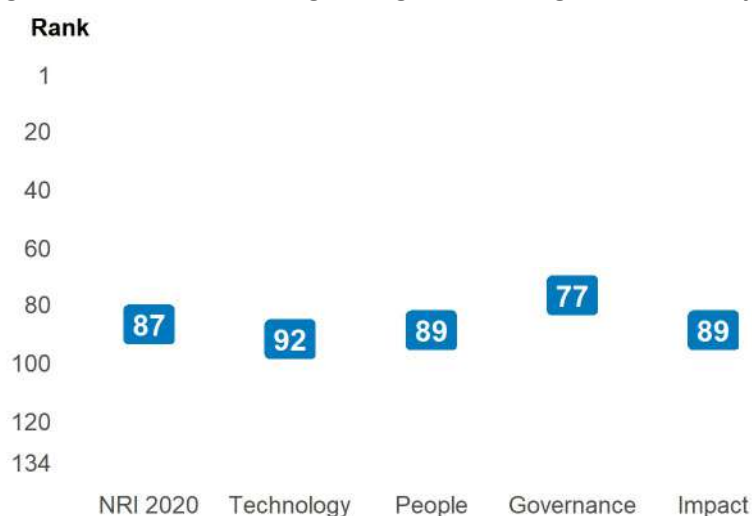
Figure 1: The NRI 2020 model

Global NRI position of Bosnia and Herzegovina

Bosnia and Herzegovina ranks 87th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Bosnia and Herzegovina global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Bosnia and Herzegovina relate to Content, Regulation and Quality of Life, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Governments and Future Technologies sub-pillars.

Table 1: Bosnia and Herzegovina rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Content	57	Economy	90
Regulation	57	Access	91
Quality of Life	57	Trust	95
Individuals	66	SDG Contribution	102
Businesses	77	Governments	125
Inclusion	79	Future Technologies	129

NRI score and income

Figure 3 shows the position of Bosnia and Herzegovina in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Bosnia and Herzegovina is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
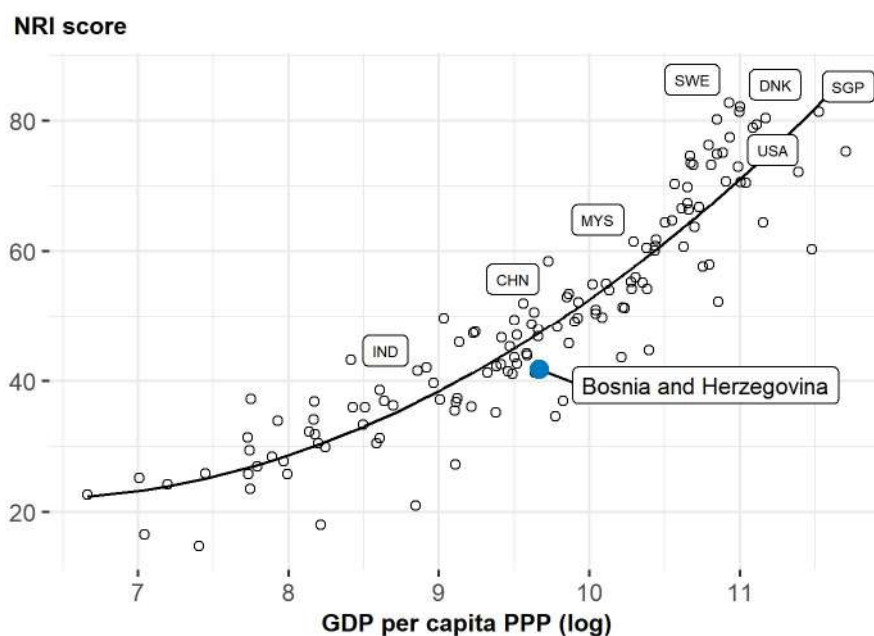
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Bosnia and Herzegovina belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Europe-is Sweden (SWE).

Performance against its income group and region

Upper-middle-income countries
Bosnia and Herzegovina is ranked 29th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in three of the twelve sub-pillars: Content, Regulation and Quality of Life.

Europe
Bosnia and Herzegovina is ranked 41st within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Bosnia and Herzegovina against its income group and region, overall and by pillar
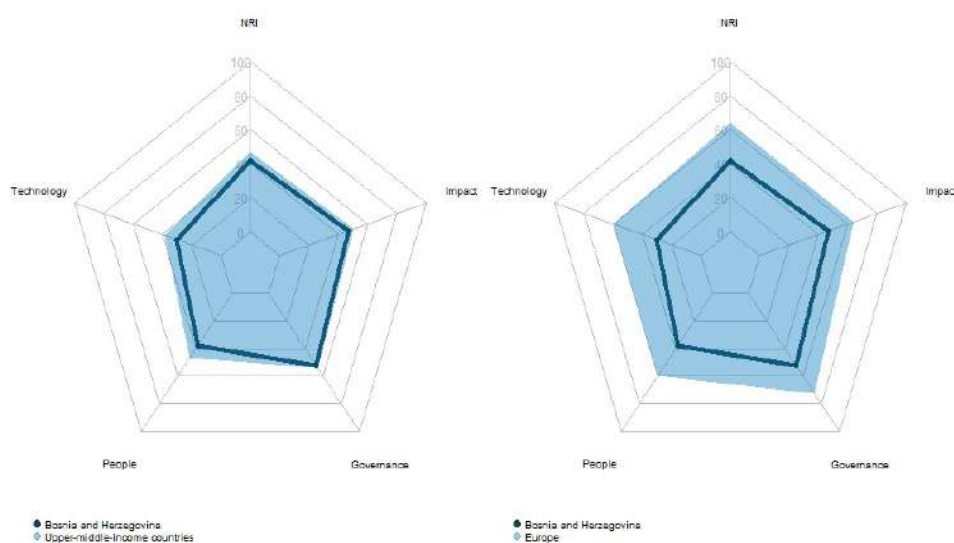
Table 2: Bosnia and Herzegovina scores vs. averages of its income group and region, overall and by pillar

Dimension	Bosnia and Herzegovina	Upper-middle-income countries	Europe
NRI	41.73	47.39	64.21
Technology	30.26	38.42	59.93
People	37.82	46.66	59.89
Governance	52.24	54.31	72.98
Impact	46.60	50.17	64.04

Strongest and weakest indicators

The indicators where Bosnia and Herzegovina performs particularly well include e-commerce legislation, ICT regulatory environment, and Privacy protection by law content (Table 3). By contrast, the economy's weakest indicators include 4G mobile network coverage, Government promotion of investment in emerging technologies, and Investment in emerging technologies.

Table 3: Top-ranked and bottom-ranked indicators of Bosnia and Herzegovina

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Freedom to make life choices	103
ICT regulatory environment	19	SDG 5: Gender Equality	103
Privacy protection by law content	26	Legal framework's adaptability to emerging technologies	104
Rural gap in use of digital payments	33	Business use of digital tools	105
Adult literacy rate	37	Prevalence of gig economy	108
Income inequality	37	Cybersecurity	112
Wikipedia edits	41	SDG 7: Affordable and Clean Energy	112
Firms with website	41	Investment in emerging technologies	124
Labor productivity per employee	48	Government promotion of investment in emerging technologies	125
Healthy life expectancy at birth	50	4G mobile network coverage	130

NRI 2020 At-A-Glance: Bosnia and Herzegovina

Network Readiness Index　　　　Rank: 87 (out of 134)　　　Score: 41.73

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	92	30.26	C. Governance pillar	77	52.24
1st sub-pillar: Access	91	46.12	1st sub-pillar: Trust	95	27.48
2nd sub-pillar: Content	57	32.94	2nd sub-pillar: Regulation	57	68.31
3rd sub-pillar: Future Technologies	129	11.72	3rd sub-pillar: Inclusion	79	60.92
B. People pillar	89	37.82	D. Impact pillar	89	46.60
1st sub-pillar: Individuals	66	55.03	1st sub-pillar: Economy	90	18.98
2nd sub-pillar: Businesses	77	39.79	2nd sub-pillar: Quality of Life	57	67.79
3rd sub-pillar: Governments	125	18.63	3rd sub-pillar: SDG Contribution	102	53.02

The Network Readiness Index in detail

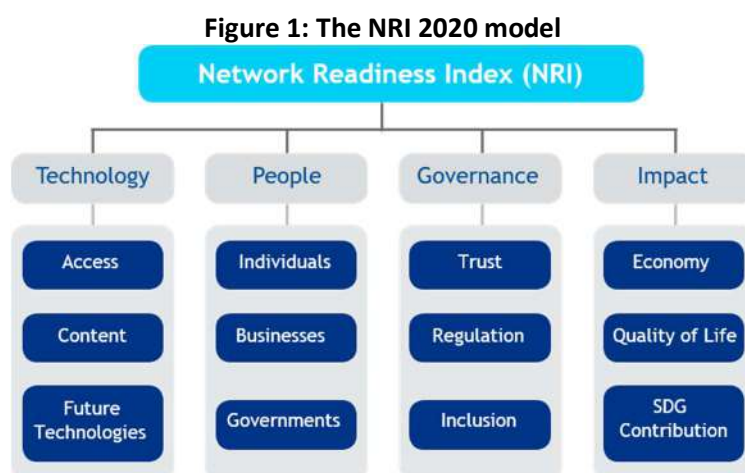| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	92	30.26	**C. Governance pillar**	77	52.24
1st sub-pillar: Access	91	46.12	*1st sub-pillar: Trust*	95	27.48
1.1.1　Mobile tariffs	94	49.42	3.1.1　Secure Internet servers	53	62.92
1.1.2　Handset prices	75	41.31	3.1.2　Cybersecurity	112	21.24
1.1.3　Internet access	67	69.11	3.1.3　Online access to financial account	103	10.71
1.1.4　4G mobile network coverage	130	0.00	3.1.4　Internet shopping	68	15.07
1.1.5　Fixed-broadband subscriptions	75	46.79	*2nd sub-pillar: Regulation*	57	68.31
1.1.6　International Internet bandwidth	52	70.08	3.2.1　Regulatory quality	86	46.87
1.1.7　Internet access in schools	NA	NA	3.2.2　ICT regulatory environment	19	94.98
2nd sub-pillar: Content	57	32.94	3.2.3　Legal framework's adaptability to emerging technologies	104	19.36
1.2.1　GitHub commits	56	7.09	3.2.4　e-commerce legislation	1	100.00
1.2.2　Wikipedia edits	41	66.50	3.2.5　Privacy protection by law content	26	80.37
1.2.3　Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	79	60.92
1.2.4　Mobile apps development	84	54.84	3.3.1　E-Participation	84	59.26
3rd sub-pillar: Future Technologies	129	11.72	3.3.2　Socioeconomic gap in use of digital payments	74	62.05
1.3.1　Adoption of emerging technologies	95	33.05	3.3.3　Availability of local online content	76	54.25
1.3.2　Investment in emerging technologies	124	16.99	3.3.4　Gender gap in Internet use	69	54.04
1.3.3　ICT PCT patent applications	74	0.73	3.3.5　Rural gap in use of digital payments	33	75.01
1.3.4　Computer software spending	92	7.26	**D. Impact pillar**	89	46.60
1.3.5　Robot density	59	0.55	*1st sub-pillar: Economy*	90	18.98
B. People pillar	89	37.82	4.1.1　Medium and high-tech industry	83	23.31
1st sub-pillar: Individuals	66	55.03	4.1.2　High-tech exports	78	9.99
2.1.1　Internet users	65	69.55	4.1.3　PCT patent applications	73	0.26
2.1.2　Active mobile-broadband subscriptions	94	20.90	4.1.4　Labor productivity per employee	48	38.41
2.1.3　Use of virtual social networks	72	51.55	4.1.5　Prevalence of gig economy	108	22.92
2.1.4　Tertiary enrollment	NA	NA	*2nd sub-pillar: Quality of Life*	57	67.79
2.1.5　Adult literacy rate	37	96.16	4.2.1　Happiness	54	65.31
2.1.6　ICT skills	97	37.00	4.2.2　Freedom to make life choices	103	58.94
2nd sub-pillar: Businesses	77	39.79	4.2.3　Income inequality	37	77.32
2.2.1　Firms with website	41	68.03	4.2.4　Healthy life expectancy at birth	50	69.59
2.2.2　Ease of doing business	84	62.28	*3rd sub-pillar: SDG Contribution*	102	53.02
2.2.3　Professionals	66	24.58	4.3.1　SDG 3: Good Health and Well-Being	96	54.10
2.2.4　Technicians and associate professionals	55	39.38	4.3.2　SDG 4: Quality Education	62	30.52
2.2.5　Business use of digital tools	105	42.73	4.3.3　SDG 5: Gender Equality	103	59.66
2.2.6　R&D expenditure by businesses	66	1.76	4.3.4　SDG 7: Affordable and Clean Energy	112	59.75
3rd sub-pillar: Governments	125	18.63	.	.	.
2.3.1　Government online services	95	52.12			
2.3.2　Publication and use of open data	97	8.02			
2.3.3　Government promotion of investment in emerging tech	125	4.61			
2.3.4　R&D expenditure by governments and higher education	90	9.76			

* Confidential data

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Network Readiness Index 2020 Botswana

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Botswana

Botswana ranks 99th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Botswana global ranking, overall and by pillar
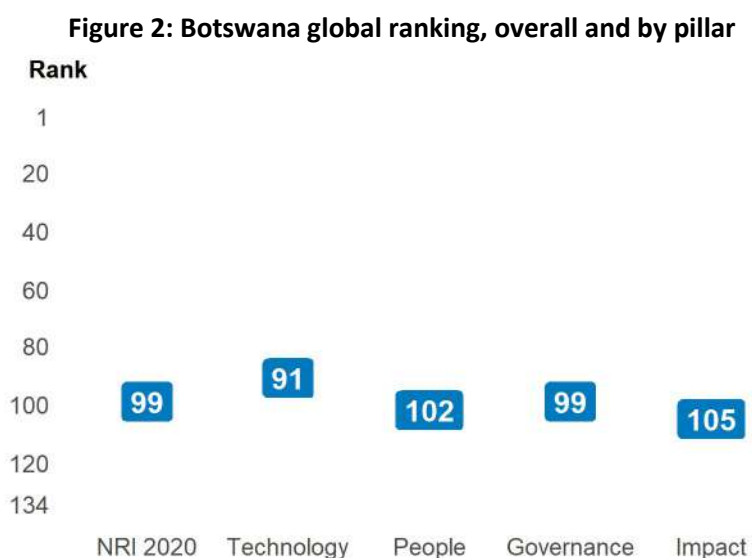
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Botswana relate to SDG Contribution, Trust and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the Economy, Inclusion and Quality of Life sub-pillars.

Table 1: Botswana rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	50	Individuals	94
Trust	81	Businesses	108
Regulation	85	Governments	111
Content	87	Economy	111
Access	90	Inclusion	112
Future Technologies	90	Quality of Life	123

NRI score and income

Figure 3 shows the position of Botswana in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Botswana is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
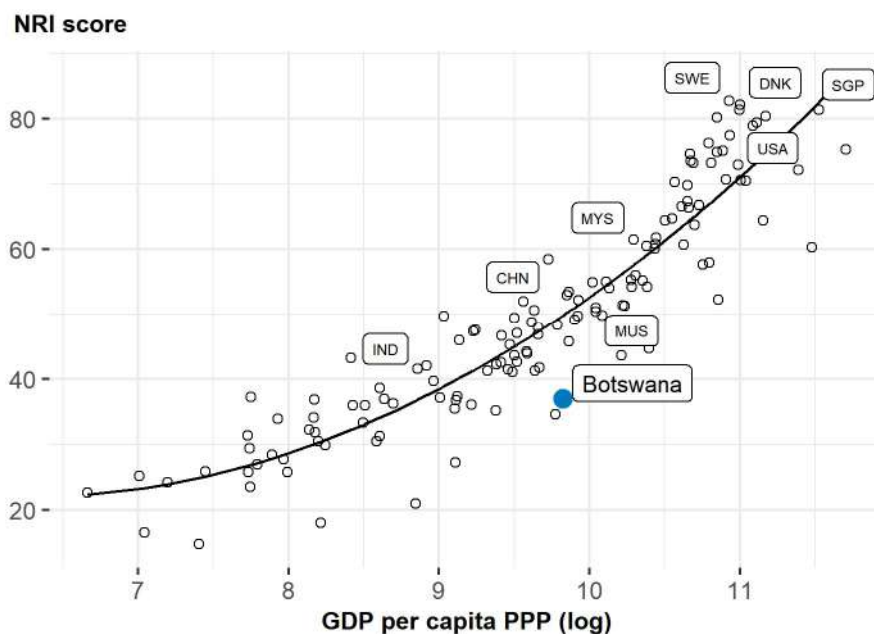
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Botswana belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Upper-middle-income countries

Botswana is ranked 32nd in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in one of the twelve sub-pillars: SDG Contribution.

Africa

Botswana is ranked 7th within Africa (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in eight of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Trust, Regulation and SDG Contribution.

Figure 4: Performance of Botswana against its income group and region, overall and by pillar

Table 2: Botswana scores vs. averages of its income group and region, overall and by pillar

Dimension	Botswana	Upper-middle-income countries	Africa
NRI	36.94	47.39	30.62
Technology	30.31	38.42	21.47
People	32.53	46.66	26.75
Governance	44.38	54.31	39.31
Impact	40.53	50.17	34.94

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Strongest and weakest indicators

The indicators where Botswana performs particularly well include SDG 7: Affordable and Clean Energy, Privacy protection by law content, and SDG 5: Gender Equality (Table 3). By contrast, the economy's weakest indicators include Happiness, Availability of local online content, and Prevalence of gig economy.

Table 3: Top-ranked and bottom-ranked indicators of Botswana

Strongest indicators	Rank	Weakest indicators	Rank
SDG 7: Affordable and Clean Energy	24	Fixed-broadband subscriptions	114
Privacy protection by law content	29	E-Participation	114
SDG 5: Gender Equality	31	Business use of digital tools	115
Handset prices	39	e-commerce legislation	115
Regulatory quality	48	Income inequality	115
Labor productivity per employee	50	High-tech exports	116
Online access to financial account	51	Government online services	117
R&D expenditure by governments and higher education	59	Prevalence of gig economy	119
Freedom to make life choices	59	Availability of local online content	124
ICT regulatory environment	61	Happiness	129

NRI 2020 At-A-Glance: Botswana

Network Readiness Index   Rank: 99 (out of 134)   Score: 36.94

Pillar/sub-pillar	Rank	Score
A. Technology pillar	91	30.31
1st sub-pillar: Access	90	46.37
2nd sub-pillar: Content	87	22.31
3rd sub-pillar: Future Technologies	90	22.27
B. People pillar	102	32.53
1st sub-pillar: Individuals	94	42.59
2nd sub-pillar: Businesses	108	29.92
3rd sub-pillar: Governments	111	25.08

Pillar/sub-pillar	Rank	Score
C. Governance pillar	99	44.38
1st sub-pillar: Trust	81	32.58
2nd sub-pillar: Regulation	85	59.41
3rd sub-pillar: Inclusion	112	41.17
D. Impact pillar	105	40.53
1st sub-pillar: Economy	111	13.99
2nd sub-pillar: Quality of Life	123	38.72
3rd sub-pillar: SDG Contribution	50	68.88

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	91	30.31
1st sub-pillar: Access	90	46.37
1.1.1 Mobile tariffs	101	46.05
1.1.2 Handset prices	39	58.28
1.1.3 Internet access	85	45.57
1.1.4 4G mobile network coverage	96	65.00
1.1.5 Fixed-broadband subscriptions	114	1.18
1.1.6 International Internet bandwidth	98	62.12
1.1.7 Internet access in schools	NA	NA
2nd sub-pillar: Content	87	22.31
1.2.1 GitHub commits	82	2.16
1.2.2 Wikipedia edits	73	40.54
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	100	45.28
3rd sub-pillar: Future Technologies	90	22.27
1.3.1 Adoption of emerging technologies	109	26.73
1.3.2 Investment in emerging technologies	95	30.84
1.3.3 ICT PCT patent applications	NA	NA
1.3.4 Computer software spending	85	9.23
1.3.5 Robot density	NA	NA
B. People pillar	102	32.53
1st sub-pillar: Individuals	94	42.59
2.1.1 Internet users	92	45.71
2.1.2 Active mobile-broadband subscriptions	62	29.92
2.1.3 Use of virtual social networks	88	42.27
2.1.4 Tertiary enrollment	88	17.70
2.1.5 Adult literacy rate	71	83.07
2.1.6 ICT skills	98	36.86
2nd sub-pillar: Businesses	108	29.92
2.2.1 Firms with website	92	31.46
2.2.2 Ease of doing business	82	63.62
2.2.3 Professionals	91	15.79
2.2.4 Technicians and associate professionals	63	33.17
2.2.5 Business use of digital tools	115	33.06
2.2.6 R&D expenditure by businesses	64	2.42
3rd sub-pillar: Governments	111	25.08
2.3.1 Government online services	117	34.55
2.3.2 Publication and use of open data	99	5.89
2.3.3 Government promotion of investment in emerging tech	90	29.70
2.3.4 R&D expenditure by governments and higher education	59	30.19

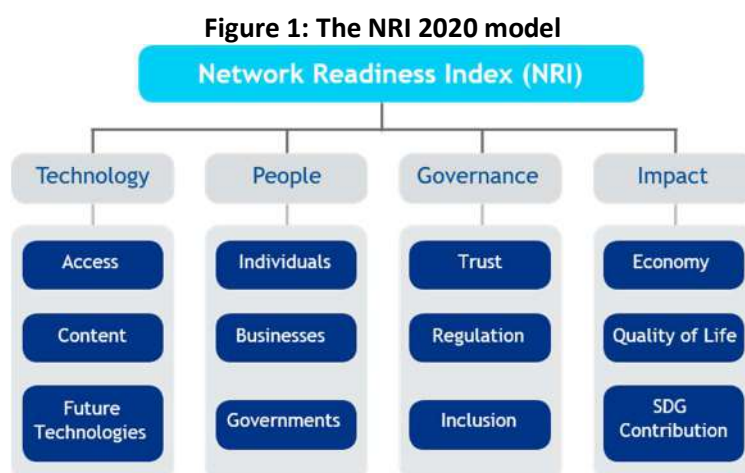| Indicator	Rank	Score
C. Governance pillar	99	44.38
1st sub-pillar: Trust	81	32.58
3.1.1 Secure Internet servers	88	42.72
3.1.2 Cybersecurity	88	46.80
3.1.3 Online access to financial account	51	36.21
3.1.4 Internet shopping	97	4.60
2nd sub-pillar: Regulation	85	59.41
3.2.1 Regulatory quality	48	61.43
3.2.2 ICT regulatory environment	61	85.72
3.2.3 Legal framework's adaptability to emerging technologies	101	22.24
3.2.4 e-commerce legislation	115	50.00
3.2.5 Privacy protection by law content	29	77.64
3rd sub-pillar: Inclusion	112	41.17
3.3.1 E-Participation	114	34.56
3.3.2 Socioeconomic gap in use of digital payments	99	44.09
3.3.3 Availability of local online content	124	23.56
3.3.4 Gender gap in Internet use	NA	NA
3.3.5 Rural gap in use of digital payments	77	62.45
D. Impact pillar	105	40.53
1st sub-pillar: Economy	111	13.99
4.1.1 Medium and high-tech industry	113	7.08
4.1.2 High-tech exports	116	1.27
4.1.3 PCT patent applications	NA	NA
4.1.4 Labor productivity per employee	50	35.03
4.1.5 Prevalence of gig economy	119	12.56
2nd sub-pillar: Quality of Life	123	38.72
4.2.1 Happiness	129	15.29
4.2.2 Freedom to make life choices	59	77.79
4.2.3 Income inequality	115	25.00
4.2.4 Healthy life expectancy at birth	109	36.79
3rd sub-pillar: SDG Contribution	50	68.88
4.3.1 SDG 3: Good Health and Well-Being	96	54.10
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 SDG 5: Gender Equality	31	81.84
4.3.4 SDG 7: Affordable and Clean Energy	24	88.73
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* Confidential data

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Network Readiness Index 2020 Brazil

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Brazil

Brazil ranks 59th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Technology and Impact.

Figure 2: Brazil global ranking, overall and by pillar
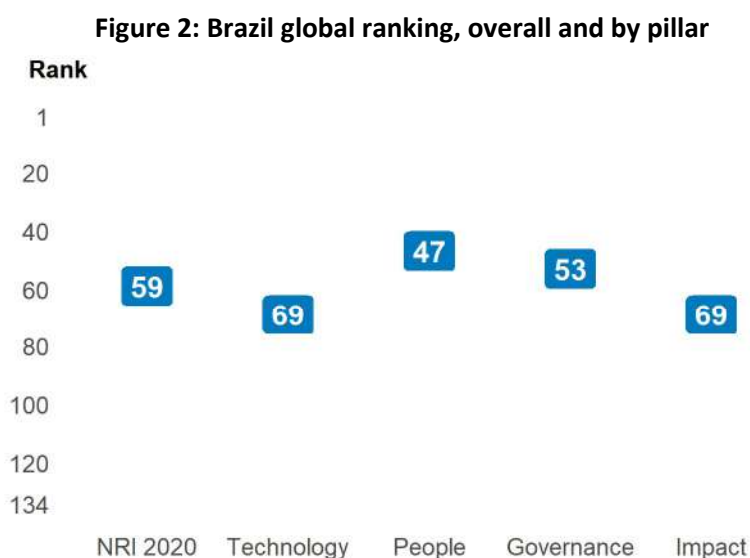
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Brazil relate to Governments, Inclusion and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, Future Technologies and Quality of Life sub-pillars.

Table 1: Brazil rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	29	Trust	69
Inclusion	43	Economy	69
Regulation	53	Access	73
Businesses	56	Individuals	79
Content	59	Future Technologies	85
SDG Contribution	60	Quality of Life	87

NRI score and income

Figure 3 shows the position of Brazil in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Brazil is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
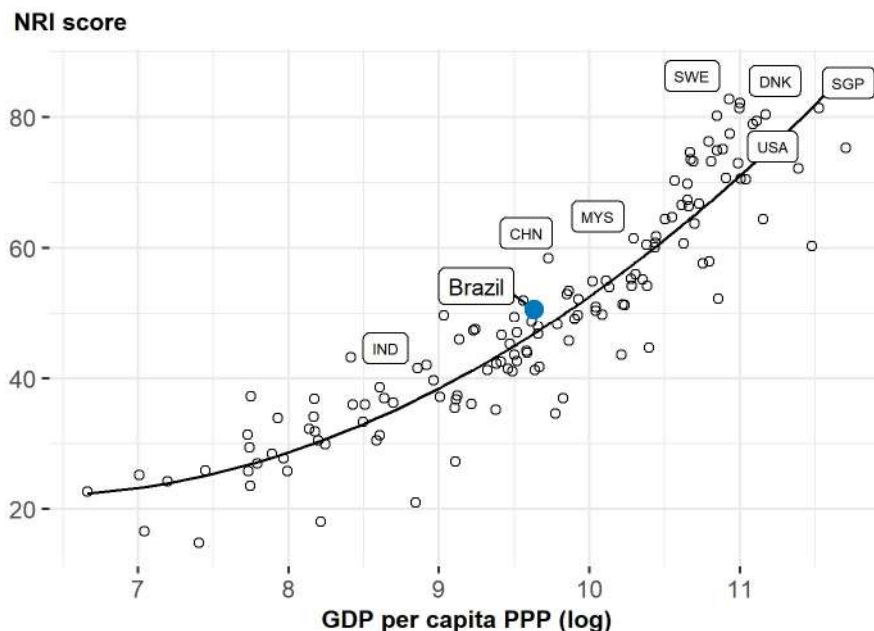
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Brazil belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

Upper-middle-income countries
Brazil is ranked 12th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in nine of the twelve sub-pillars: Access, Content, Businesses, Governments, Trust, Regulation, Inclusion, Economy and SDG Contribution.

The Americas
Brazil is ranked 6th within The Americas (Figure 4, right panel). It has a score above the regional average in three of the four pillars: nri.score, technology, people and governance. With regard to sub-pillars, it outperforms the average in The Americas in eight of the twelve sub-pillars: Access, Content, Businesses, Governments, Trust, Regulation, Inclusion and Economy.

Figure 4: Performance of Brazil against its income group and region, overall and by pillar
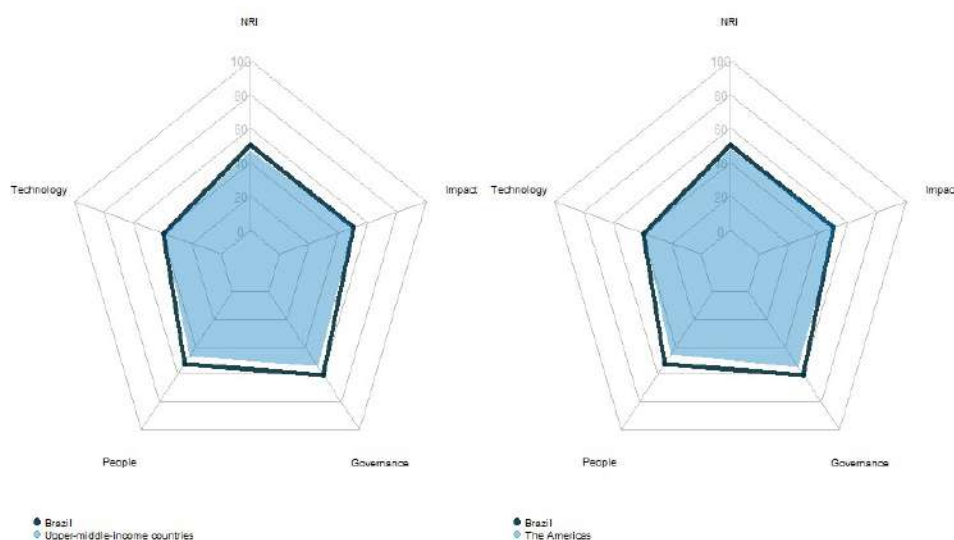
Table 2: Brazil scores vs. averages of its income group and region, overall and by pillar

Dimension	Brazil	Upper-middle-income countries	The Americas
NRI	50.58	47.39	47.67
Technology	38.95	38.42	38.26
People	52.41	46.66	45.24
Governance	60.51	54.31	54.59
Impact	50.45	50.17	52.61

Strongest and weakest indicators

The indicators where Brazil performs particularly well include e-commerce legislation, Publication and use of open data, and E-Participation (Table 3). By contrast, the economy's weakest indicators include ICT skills, Income inequality, and Ease of doing business.

Table 3: Top-ranked and bottom-ranked indicators of Brazil

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Labor productivity per employee	80
Publication and use of open data	18	Socioeconomic gap in use of digital payments	81
E-Participation	18	International Internet bandwidth	82
Government online services	20	Regulatory quality	93
SDG 3: Good Health and Well-Being	25	Prevalence of gig economy	93
SDG 5: Gender Equality	25	Government promotion of investment in emerging technologies	94
Rural gap in use of digital payments	30	Handset prices	96
Happiness	30	Ease of doing business	104
Gender gap in Internet use	32	Income inequality	116
ICT regulatory environment	35	ICT skills	126

NRI 2020 At-A-Glance: Brazil

Network Readiness Index   Rank: 59 (out of 134)   Score: 50.58

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	69	38.95	C. Governance pillar	53	60.51
1st sub-pillar: Access	73	60.50	1st sub-pillar: Trust	69	40.73
2nd sub-pillar: Content	59	32.25	2nd sub-pillar: Regulation	53	69.73
3rd sub-pillar: Future Technologies	85	24.10	3rd sub-pillar: Inclusion	43	71.07
B. People pillar	47	52.41	D. Impact pillar	69	50.45
1st sub-pillar: Individuals	79	52.41	1st sub-pillar: Economy	69	24.01
2nd sub-pillar: Businesses	56	46.78	2nd sub-pillar: Quality of Life	87	60.11
3rd sub-pillar: Governments	29	58.03	3rd sub-pillar: SDG Contribution	60	67.23

The Network Readiness Index in detail

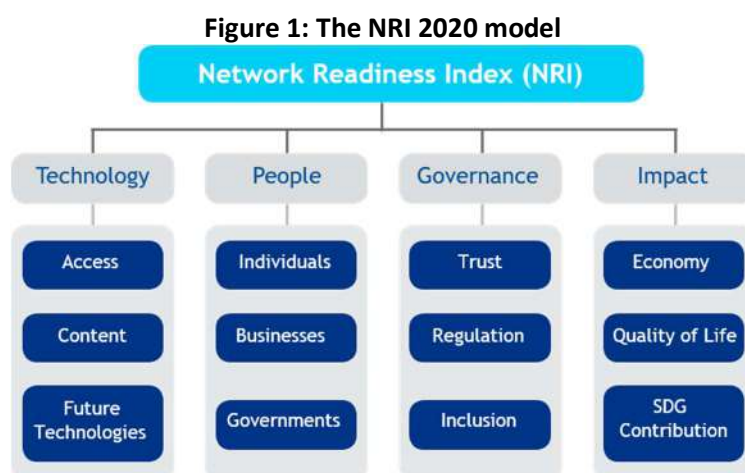| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	69	38.95	**C. Governance pillar**	53	60.51
1st sub-pillar: Access	73	60.50	*1st sub-pillar: Trust*	69	40.73
1.1.1 Mobile tariffs	52	68.61	3.1.1 Secure Internet servers	52	63.17
1.1.2 Handset prices	96	32.70	3.1.2 Cybersecurity	72	61.65
1.1.3 Internet access	74	60.65	3.1.3 Online access to financial account	79	19.93
1.1.4 4G mobile network coverage	76	83.05	3.1.4 Internet shopping	63	18.19
1.1.5 Fixed-broadband subscriptions	71	52.04	*2nd sub-pillar: Regulation*	53	69.73
1.1.6 International Internet bandwidth	82	64.42	3.2.1 Regulatory quality	93	44.51
1.1.7 Internet access in schools	38	62.04	3.2.2 ICT regulatory environment	35	89.77
2nd sub-pillar: Content	59	32.25	3.2.3 Legal framework's adaptability to emerging technologies	48	48.36
1.2.1 GitHub commits	48	9.43	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	66	43.55	3.2.5 Privacy protection by law content	45	66.01
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	43	71.07
1.2.4 Mobile apps development	49	70.16	3.3.1 E-Participation	18	90.13
3rd sub-pillar: Future Technologies	85	24.10	3.3.2 Socioeconomic gap in use of digital payments	81	58.01
1.3.1 Adoption of emerging technologies	46	55.65	3.3.3 Availability of local online content	50	67.46
1.3.2 Investment in emerging technologies	66	38.96	3.3.4 Gender gap in Internet use	32	64.50
1.3.3 ICT PCT patent applications	51	7.81	3.3.5 Rural gap in use of digital payments	30	75.26
1.3.4 Computer software spending	76	14.05	**D. Impact pillar**	69	50.45
1.3.5 Robot density	43	4.01	*1st sub-pillar: Economy*	69	24.01
B. People pillar	47	52.41	4.1.1 Medium and high-tech industry	39	45.11
1st sub-pillar: Individuals	79	52.41	4.1.2 High-tech exports	36	24.54
2.1.1 Internet users	68	66.82	4.1.3 PCT patent applications	52	0.99
2.1.2 Active mobile-broadband subscriptions	44	34.20	4.1.4 Labor productivity per employee	80	18.39
2.1.3 Use of virtual social networks	37	65.98	4.1.5 Prevalence of gig economy	93	31.02
2.1.4 Tertiary enrollment	58	37.21	*2nd sub-pillar: Quality of Life*	87	60.11
2.1.5 Adult literacy rate	58	91.31	4.2.1 Happiness	30	73.87
2.1.6 ICT skills	126	18.95	4.2.2 Freedom to make life choices	61	77.39
2nd sub-pillar: Businesses	56	46.78	4.2.3 Income inequality	116	23.45
2.2.1 Firms with website	63	50.38	4.2.4 Healthy life expectancy at birth	70	65.74
2.2.2 Ease of doing business	104	51.03	*3rd sub-pillar: SDG Contribution*	60	67.23
2.2.3 Professionals	59	26.93	4.3.1 SDG 3: Good Health and Well-Being	25	83.61
2.2.4 Technicians and associate professionals	64	32.77	4.3.2 SDG 4: Quality Education	70	21.96
2.2.5 Business use of digital tools	39	72.82	4.3.3 SDG 5: Gender Equality	25	83.72
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	56	81.50
3rd sub-pillar: Governments	29	58.03	.	.	.
2.3.1 Government online services	20	86.67			
2.3.2 Publication and use of open data	18	58.86			
2.3.3 Government promotion of investment in emerging tech	94	28.57			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

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Network Readiness Index 2020 Bulgaria

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Bulgaria

Bulgaria ranks 46th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Bulgaria global ranking, overall and by pillar
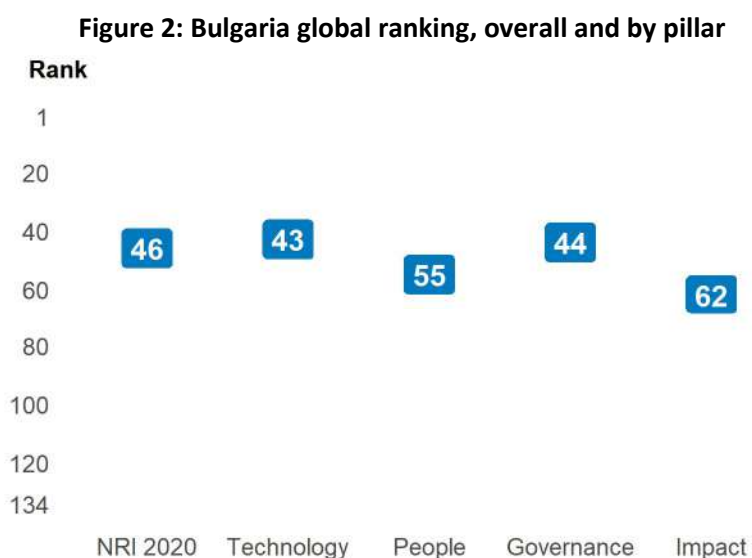
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Bulgaria relate to Content, Regulation and Individuals, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Future Technologies and Quality of Life sub-pillars.

Table 1: Bulgaria rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Content	33	Economy	56
Regulation	35	Inclusion	58
Individuals	40	Governments	65
Trust	48	SDG Contribution	67
Access	50	Future Technologies	78
Businesses	55	Quality of Life	81

NRI score and income

Figure 3 shows the position of Bulgaria in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Bulgaria is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
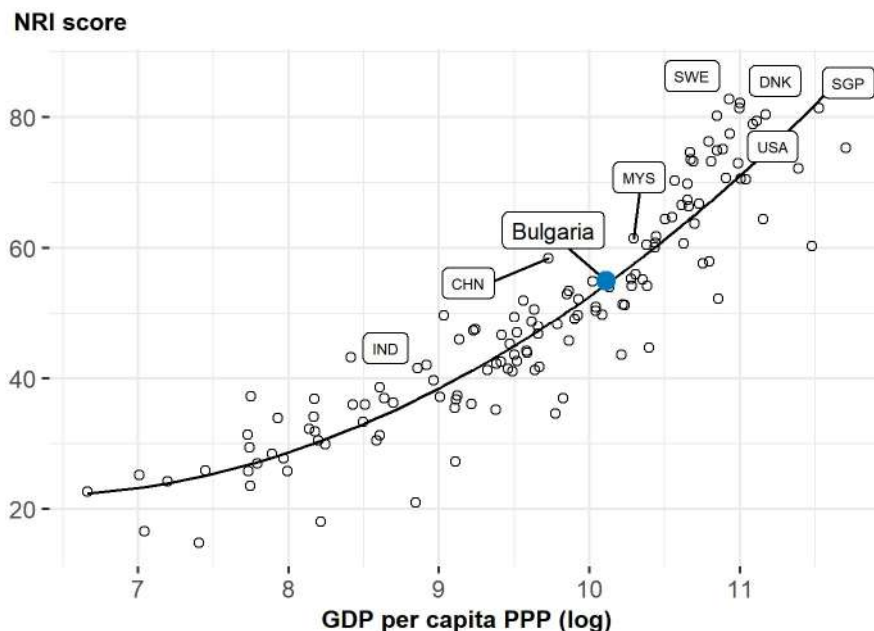
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Bulgaria belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Europe-is Sweden (SWE).

Performance against its income group and region

Upper-middle-income countries
Bulgaria is ranked 3rd in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it has a higher score than the average of upper-middle-income countries in all of them.

Europe
Bulgaria is ranked 31st within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Bulgaria against its income group and region, overall and by pillar

Table 2: Bulgaria scores vs. averages of its income group and region, overall and by pillar

Dimension	Bulgaria	Upper-middle-income countries	Europe
NRI	55.03	47.39	64.21
Technology	50.13	38.42	59.93
People	51.27	46.66	59.89
Governance	65.53	54.31	72.98
Impact	53.19	50.17	64.04

Strongest and weakest indicators

The indicators where Bulgaria performs particularly well include e-commerce legislation, Fixed-broadband subscriptions, and International Internet bandwidth (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, Handset prices, Online access to financial account, and Socioeconomic gap in use of digital payments.

Table 3: Top-ranked and bottom-ranked indicators of Bulgaria

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	R&D expenditure by governments and higher education	75
Fixed-broadband subscriptions	10	Firms with website	76
International Internet bandwidth	12	Income inequality	79
Privacy protection by law content	12	SDG 3: Good Health and Well-Being	85
Secure Internet servers	14	Rural gap in use of digital payments	87
4G mobile network coverage	16	Happiness	89
E-Participation	23	Online access to financial account	92
Prevalence of gig economy	23	Socioeconomic gap in use of digital payments	92
ICT regulatory environment	26	Handset prices	95
SDG 5: Gender Equality	26	SDG 7: Affordable and Clean Energy	98

![Portulans Institute]

NRI 2020 At-A-Glance: Bulgaria

Network Readiness Index   Rank: 46 (out of 134)   Score: 55.03

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	43	50.13	C. Governance pillar	44	65.53
1st sub-pillar: Access	50	74.33	1st sub-pillar: Trust	48	51.50
2nd sub-pillar: Content	33	49.93	2nd sub-pillar: Regulation	35	78.69
3rd sub-pillar: Future Technologies	78	26.13	3rd sub-pillar: Inclusion	58	66.39
B. People pillar	55	51.27	D. Impact pillar	62	53.19
1st sub-pillar: Individuals	40	62.42	1st sub-pillar: Economy	56	31.10
2nd sub-pillar: Businesses	55	46.96	2nd sub-pillar: Quality of Life	81	62.14
3rd sub-pillar: Governments	65	44.43	3rd sub-pillar: SDG Contribution	67	66.33

The Network Readiness Index in detail

| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	43	50.13	**C. Governance pillar**	44	65.53
1st sub-pillar: Access	50	74.33	*1st sub-pillar: Trust*	48	51.50
1.1.1 Mobile tariffs	62	64.87	3.1.1 Secure Internet servers	14	84.60
1.1.2 Handset prices	95	33.06	3.1.2 Cybersecurity	48	77.25
1.1.3 Internet access	61	72.06	3.1.3 Online access to financial account	92	16.23
1.1.4 4G mobile network coverage	16	99.71	3.1.4 Internet shopping	48	27.91
1.1.5 Fixed-broadband subscriptions	10	97.71	*2nd sub-pillar: Regulation*	35	78.69
1.1.6 International Internet bandwidth	12	78.58	3.2.1 Regulatory quality	42	64.11
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	26	93.25
2nd sub-pillar: Content	33	49.93	3.2.3 Legal framework's adaptability to emerging technologies	51	48.04
1.2.1 GitHub commits	27	30.16	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	33	72.97	3.2.5 Privacy protection by law content	12	88.07
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	58	66.39
1.2.4 Mobile apps development	28	81.97	3.3.1 E-Participation	23	88.89
3rd sub-pillar: Future Technologies	78	26.13	3.3.2 Socioeconomic gap in use of digital payments	92	50.14
1.3.1 Adoption of emerging technologies	60	48.94	3.3.3 Availability of local online content	35	78.10
1.3.2 Investment in emerging technologies	50	46.61	3.3.4 Gender gap in Internet use	53	59.35
1.3.3 ICT PCT patent applications	46	11.01	3.3.5 Rural gap in use of digital payments	87	55.45
1.3.4 Computer software spending	56	21.77	**D. Impact pillar**	62	53.19
1.3.5 Robot density	45	2.34	*1st sub-pillar: Economy*	56	31.10
B. People pillar	55	51.27	4.1.1 Medium and high-tech industry	50	37.85
1st sub-pillar: Individuals	40	62.42	4.1.2 High-tech exports	47	19.46
2.1.1 Internet users	74	64.05	4.1.3 PCT patent applications	46	2.13
2.1.2 Active mobile-broadband subscriptions	27	39.97	4.1.4 Labor productivity per employee	60	28.89
2.1.3 Use of virtual social networks	63	55.67	4.1.5 Prevalence of gig economy	23	67.17
2.1.4 Tertiary enrollment	27	51.71	*2nd sub-pillar: Quality of Life*	81	62.14
2.1.5 Adult literacy rate	27	97.91	4.2.1 Happiness	89	47.47
2.1.6 ICT skills	44	65.24	4.2.2 Freedom to make life choices	65	75.99
2nd sub-pillar: Businesses	55	46.96	4.2.3 Income inequality	79	58.25
2.2.1 Firms with website	76	42.03	4.2.4 Healthy life expectancy at birth	62	66.86
2.2.2 Ease of doing business	59	73.84	*3rd sub-pillar: SDG Contribution*	67	66.33
2.2.3 Professionals	40	40.24	4.3.1 SDG 3: Good Health and Well-Being	85	62.30
2.2.4 Technicians and associate professionals	54	39.40	4.3.2 SDG 4: Quality Education	48	41.66
2.2.5 Business use of digital tools	40	72.75	4.3.3 SDG 5: Gender Equality	26	82.88
2.2.6 R&D expenditure by businesses	38	13.50	4.3.4 SDG 7: Affordable and Clean Energy	98	67.63
3rd sub-pillar: Governments	65	44.43	.	.	.
2.3.1 Government online services	46	76.37			
2.3.2 Publication and use of open data	41	37.14			
2.3.3 Government promotion of investment in emerging tech	49	45.90			
2.3.4 R&D expenditure by governments and higher education	75	18.30			

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Network Readiness Index 2020 Burkina Faso

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model
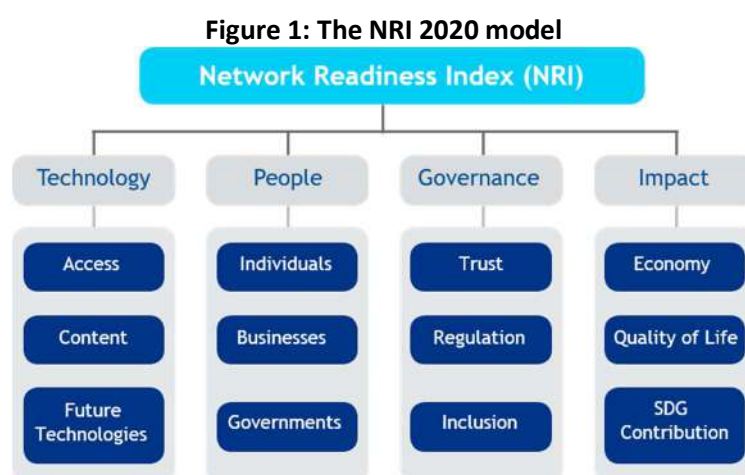
Global NRI position of Burkina Faso
Burkina Faso ranks 125th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Burkina Faso global ranking, overall and by pillar
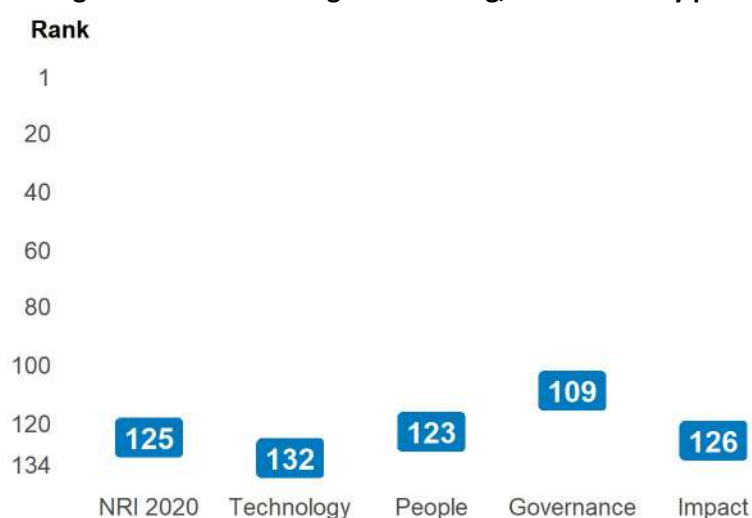
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Burkina Faso relate to Governments, Regulation and Inclusion, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Future Technologies and Individuals sub-pillars.

Table 1: Burkina Faso rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	83	Economy	125
Regulation	100	Content	129
Inclusion	114	Businesses	129
Quality of Life	114	Access	130
Trust	115	Future Technologies	130
SDG Contribution	122	Individuals	133

NRI score and income

Figure 3 shows the position of Burkina Faso in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Burkina Faso is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
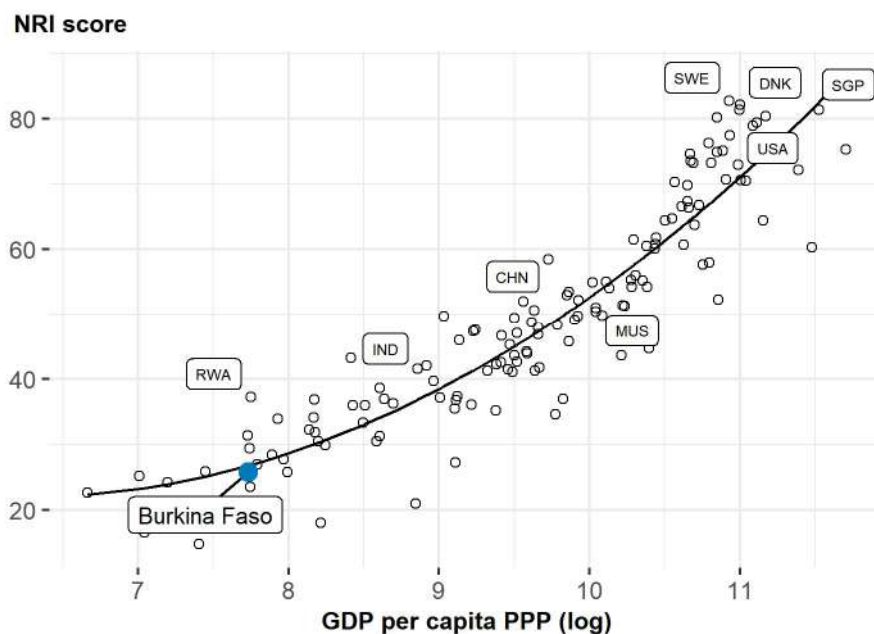
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Burkina Faso belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Low-income countries
Burkina Faso is ranked 8th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: nri.score, people and governance. At the sub-pillar level, it outperforms low-income countries in six of the twelve sub-pillars: Governments, Trust, Regulation, Inclusion, Quality of Life and SDG Contribution.

Africa
Burkina Faso is ranked 23rd within Africa (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in three of the twelve sub-pillars: Governments, Regulation and Quality of Life.

Figure 4: Performance of Burkina Faso against its income group and region, overall and by pillar

Table 2: Burkina Faso scores vs. averages of its income group and region, overall and by pillar

Dimension	Burkina Faso	Low-income countries	Africa
NRI	25.79	25.61	30.62
Technology	10.53	16.33	21.47
People	22.49	20.61	26.75
Governance	38.14	32.58	39.31
Impact	31.97	32.92	34.94

Strongest and weakest indicators

The indicators where Burkina Faso performs particularly well include R&D expenditure by governments and higher education, Income inequality, and ICT regulatory environment (Table 3). By contrast, the economy's weakest indicators include GitHub commits, Availability of local online content, and Secure Internet servers.

Table 3: Top-ranked and bottom-ranked indicators of Burkina Faso

Strongest indicators	Rank	Weakest indicators	Rank
R&D expenditure by governments and higher education	17	Internet domain registrations	126
Income inequality	54	SDG 3: Good Health and Well-Being	126
ICT regulatory environment	65	Adoption of emerging technologies	127
Publication and use of open data	67	Business use of digital tools	127
Online access to financial account	69	Mobile apps development	128
Internet access in schools	70	ICT skills	128
High-tech exports	72	4G mobile network coverage	130
Rural gap in use of digital payments	76	Secure Internet servers	131
e-commerce legislation	77	GitHub commits	132
Technicians and associate professionals	91	Availability of local online content	132

NRI 2020 At-A-Glance: Burkina Faso

Network Readiness Index   Rank: 125 (out of 134)   Score: 25.79

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	132	10.53	C. Governance pillar	109	38.14
1st sub-pillar: Access	130	15.86	1st sub-pillar: Trust	115	20.55
2nd sub-pillar: Content	129	6.15	2nd sub-pillar: Regulation	100	53.63
3rd sub-pillar: Future Technologies	130	9.59	3rd sub-pillar: Inclusion	114	40.25
B. People pillar	123	22.49	D. Impact pillar	126	31.97
1st sub-pillar: Individuals	133	12.00	1st sub-pillar: Economy	125	9.88
2nd sub-pillar: Businesses	129	18.56	2nd sub-pillar: Quality of Life	114	46.12
3rd sub-pillar: Governments	83	36.92	3rd sub-pillar: SDG Contribution	122	39.91

The Network Readiness Index in detail

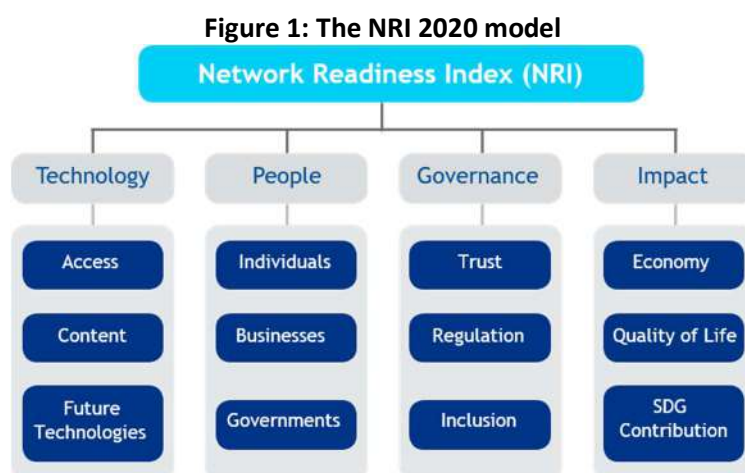| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	132	10.53	**C. Governance pillar**	109	38.14
1st sub-pillar: Access	130	15.86	*1st sub-pillar: Trust*	115	20.55
1.1.1 Mobile tariffs	119	28.97	3.1.1 Secure Internet servers	131	10.45
1.1.2 Handset prices	123	15.26	3.1.2 Cybersecurity	98	42.47
1.1.3 Internet access	119	12.66	3.1.3 Online access to financial account	69	27.27
1.1.4 4G mobile network coverage	130	0.00	3.1.4 Internet shopping	119	2.00
1.1.5 Fixed-broadband subscriptions	122	0.00	*2nd sub-pillar: Regulation*	100	53.63
1.1.6 International Internet bandwidth	119	53.95	3.2.1 Regulatory quality	99	42.90
1.1.7 Internet access in schools	70	0.14	3.2.2 ICT regulatory environment	65	84.56
2nd sub-pillar: Content	129	6.15	3.2.3 Legal framework's adaptability to emerging technologies	115	12.07
1.2.1 GitHub commits	132	0.01	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	NA	NA	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	114	40.25
1.2.4 Mobile apps development	128	18.40	3.3.1 E-Participation	97	49.38
3rd sub-pillar: Future Technologies	130	9.59	3.3.2 Socioeconomic gap in use of digital payments	112	40.14
1.3.1 Adoption of emerging technologies	127	2.44	3.3.3 Availability of local online content	132	8.47
1.3.2 Investment in emerging technologies	109	23.92	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	76	63.01
1.3.4 Computer software spending	111	2.43	**D. Impact pillar**	126	31.97
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	125	9.88
B. People pillar	123	22.49	4.1.1 Medium and high-tech industry	NA	NA
1st sub-pillar: Individuals	133	12.00	4.1.2 High-tech exports	72	11.28
2.1.1 Internet users	123	13.75	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	118	10.55	4.1.4 Labor productivity per employee	114	1.57
2.1.3 Use of virtual social networks	123	5.98	4.1.5 Prevalence of gig economy	115	16.77
2.1.4 Tertiary enrollment	118	4.18	*2nd sub-pillar: Quality of Life*	114	46.12
2.1.5 Adult literacy rate	105	24.35	4.2.1 Happiness	108	40.25
2.1.6 ICT skills	128	13.16	4.2.2 Freedom to make life choices	115	51.46
2nd sub-pillar: Businesses	129	18.56	4.2.3 Income inequality	54	71.39
2.2.1 Firms with website	121	8.94	4.2.4 Healthy life expectancy at birth	122	21.39
2.2.2 Ease of doing business	120	37.44	*3rd sub-pillar: SDG Contribution*	122	39.91
2.2.3 Professionals	104	12.75	4.3.1 SDG 3: Good Health and Well-Being	126	19.67
2.2.4 Technicians and associate professionals	91	19.81	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	127	13.89	4.3.3 SDG 5: Gender Equality	115	43.11
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	92	69.51
3rd sub-pillar: Governments	83	36.92	.	.	.
2.3.1 Government online services	109	44.85			
2.3.2 Publication and use of open data	67	21.63			
2.3.3 Government promotion of investment in emerging tech	105	18.48			
2.3.4 R&D expenditure by governments and higher education	17	62.72			

* Confidential data

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Network Readiness Index 2020 Burundi

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Burundi

Burundi ranks 130th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Burundi global ranking, overall and by pillar
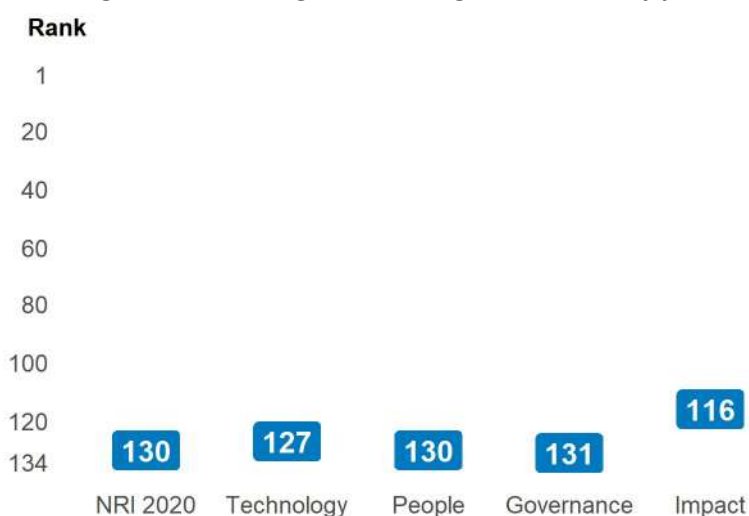
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Burundi relate to Economy, Content and SDG Contribution, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Access and Inclusion sub-pillars.

Table 1: Burundi rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Economy	74	Quality of Life	126
Content	113	Regulation	127
SDG Contribution	114	Trust	129
Governments	118	Businesses	130
Future Technologies	119	Access	131
Individuals	126	Inclusion	132

NRI score and income

Figure 3 shows the position of Burundi in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Burundi is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
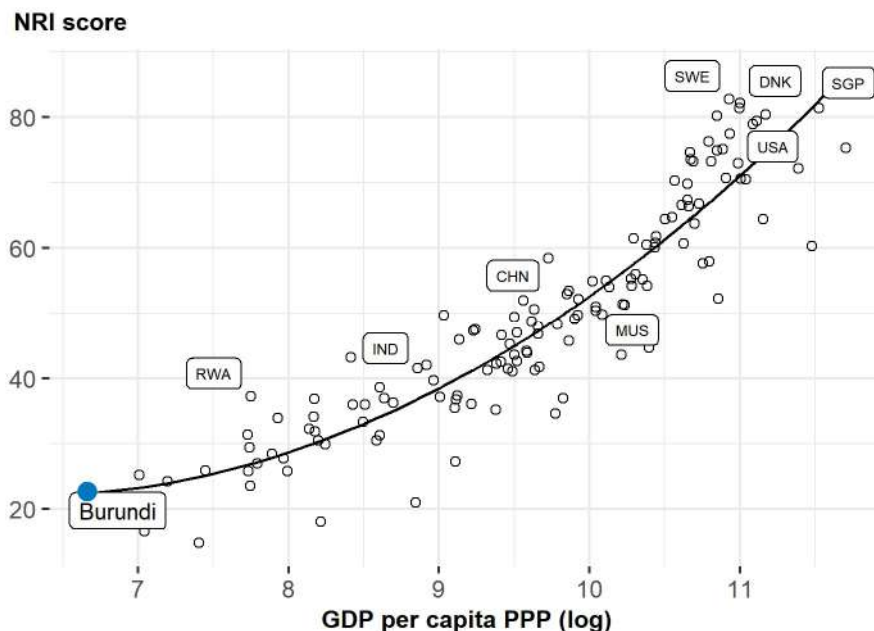
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Burundi belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Low-income countries
Burundi is ranked 12th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: impact. At the sub-pillar level, it outperforms low-income countries in three of the twelve sub-pillars: Content, Economy and SDG Contribution.

Africa
Burundi is ranked 28th within Africa (Figure 4, right panel). It has a score above the regional average in one of the four pillars: impact. With regard to sub-pillars, it outperforms the average in Africa in two of the twelve sub-pillars: Content and Economy.

Figure 4: Performance of Burundi against its income group and region, overall and by pillar

Table 2: Burundi scores vs. averages of its income group and region, overall and by pillar

Dimension	Burundi	Low-income countries	Africa
NRI	22.62	25.61	30.62
Technology	14.43	16.33	21.47
People	17.58	20.61	26.75
Governance	23.28	32.58	39.31
Impact	35.18	32.92	34.94

Strongest and weakest indicators

The indicators where Burundi performs particularly well include SDG 5: Gender Equality, High-tech exports, and Income inequality (Table 3). By contrast, the economy's weakest indicators include Internet access, Internet users, and Handset prices.

Table 3: Top-ranked and bottom-ranked indicators of Burundi

Strongest indicators	Rank	Weakest indicators	Rank
SDG 5: Gender Equality	17	Secure Internet servers	127
High-tech exports	26	Cybersecurity	127
Income inequality	70	e-commerce legislation	127
Internet access in schools	71	Socioeconomic gap in use of digital payments	127
Gender gap in Internet use	87	GitHub commits	131
Prevalence of gig economy	90	Active mobile-broadband subscriptions	131
R&D expenditure by governments and higher education	91	Use of virtual social networks	131
Adult literacy rate	93	Handset prices	132
Computer software spending	97	Internet access	134
International Internet bandwidth	99	Internet users	134

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NRI 2020 At-A-Glance: Burundi

Network Readiness Index   Rank: 130 (out of 134)   Score: 22.62

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	127	14.43	C. Governance pillar	131	23.28
1st sub-pillar: Access	131	15.43	1st sub-pillar: Trust	129	13.26
2nd sub-pillar: Content	113	12.32	2nd sub-pillar: Regulation	127	33.04
3rd sub-pillar: Future Technologies	119	15.54	3rd sub-pillar: Inclusion	132	23.56
B. People pillar	130	17.58	D. Impact pillar	116	35.18
1st sub-pillar: Individuals	126	15.29	1st sub-pillar: Economy	74	22.57
2nd sub-pillar: Businesses	130	16.02	2nd sub-pillar: Quality of Life	126	37.63
3rd sub-pillar: Governments	118	21.41	3rd sub-pillar: SDG Contribution	114	45.32

The Network Readiness Index in detail

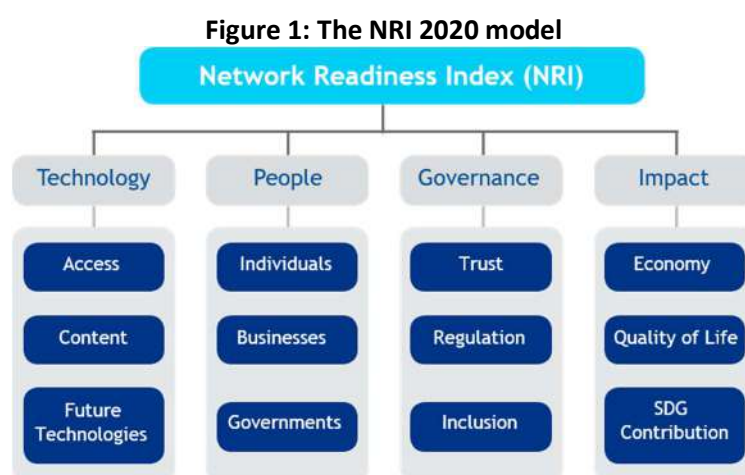| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	127	14.43	**C. Governance pillar**	131	23.28
1st sub-pillar: Access	131	15.43	*1st sub-pillar: Trust*	129	13.26
1.1.1 Mobile tariffs	125	22.70	3.1.1 Secure Internet servers	127	17.97
1.1.2 Handset prices	132	0.00	3.1.2 Cybersecurity	127	8.56
1.1.3 Internet access	134	0.00	3.1.3 Online access to financial account	NA	NA
1.1.4 4G mobile network coverage	121	20.93	3.1.4 Internet shopping	NA	NA
1.1.5 Fixed-broadband subscriptions	112	2.24	*2nd sub-pillar: Regulation*	127	33.04
1.1.6 International Internet bandwidth	99	62.11	3.2.1 Regulatory quality	125	29.77
1.1.7 Internet access in schools	71	0.00	3.2.2 ICT regulatory environment	114	61.39
2nd sub-pillar: Content	113	12.32	3.2.3 Legal framework's adaptability to emerging technologies	108	15.98
1.2.1 GitHub commits	131	0.01	3.2.4 e-commerce legislation	127	25.00
1.2.2 Wikipedia edits	NA	NA	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	132	23.56
1.2.4 Mobile apps development	110	36.88	3.3.1 E-Participation	119	30.86
3rd sub-pillar: Future Technologies	119	15.54	3.3.2 Socioeconomic gap in use of digital payments	127	8.40
1.3.1 Adoption of emerging technologies	118	17.31	3.3.3 Availability of local online content	120	26.19
1.3.2 Investment in emerging technologies	111	23.48	3.3.4 Gender gap in Internet use	87	0.00
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	101	52.33
1.3.4 Computer software spending	97	5.82	**D. Impact pillar**	116	35.18
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	74	22.57
B. People pillar	130	17.58	4.1.1 Medium and high-tech industry	121	2.97
1st sub-pillar: Individuals	126	15.29	4.1.2 High-tech exports	26	32.30
2.1.1 Internet users	134	0.00	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	131	3.04	4.1.4 Labor productivity per employee	NA	NA
2.1.3 Use of virtual social networks	131	2.58	4.1.5 Prevalence of gig economy	90	32.45
2.1.4 Tertiary enrollment	119	3.85	*2nd sub-pillar: Quality of Life*	126	37.63
2.1.5 Adult literacy rate	93	59.31	4.2.1 Happiness	126	21.27
2.1.6 ICT skills	122	22.97	4.2.2 Freedom to make life choices	122	46.17
2nd sub-pillar: Businesses	130	16.02	4.2.3 Income inequality	70	62.89
2.2.1 Firms with website	108	18.69	4.2.4 Healthy life expectancy at birth	123	20.21
2.2.2 Ease of doing business	127	29.26	*3rd sub-pillar: SDG Contribution*	114	45.32
2.2.3 Professionals	125	0.00	4.3.1 SDG 3: Good Health and Well-Being	122	22.95
2.2.4 Technicians and associate professionals	117	6.08	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	120	26.07	4.3.3 SDG 5: Gender Equality	17	86.47
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	120	51.23
3rd sub-pillar: Governments	118	21.41	.	.	.
2.3.1 Government online services	120	33.33			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	102	21.29			
2.3.4 R&D expenditure by governments and higher education	91	9.62			

* Confidential data

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Network Readiness Index 2020 Cabo Verde

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Cabo Verde

Cabo Verde ranks 86th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Cabo Verde global ranking, overall and by pillar
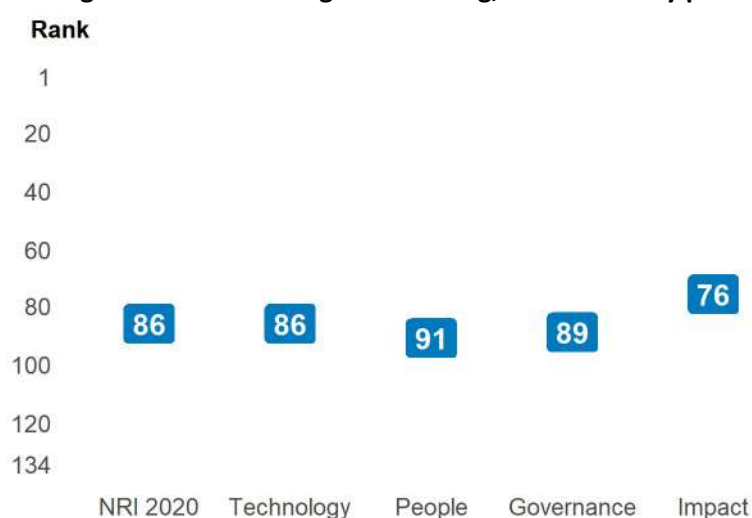
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Cabo Verde relate to Future Technologies, SDG Contribution and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the Content, Inclusion and Businesses sub-pillars.

Table 1: Cabo Verde rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	45	Individuals	89
SDG Contribution	48	Trust	94
Regulation	70	Quality of Life	97
Economy	71	Content	99
Governments	81	Inclusion	100
Access	89	Businesses	111

NRI score and income

Figure 3 shows the position of Cabo Verde in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Cabo Verde is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
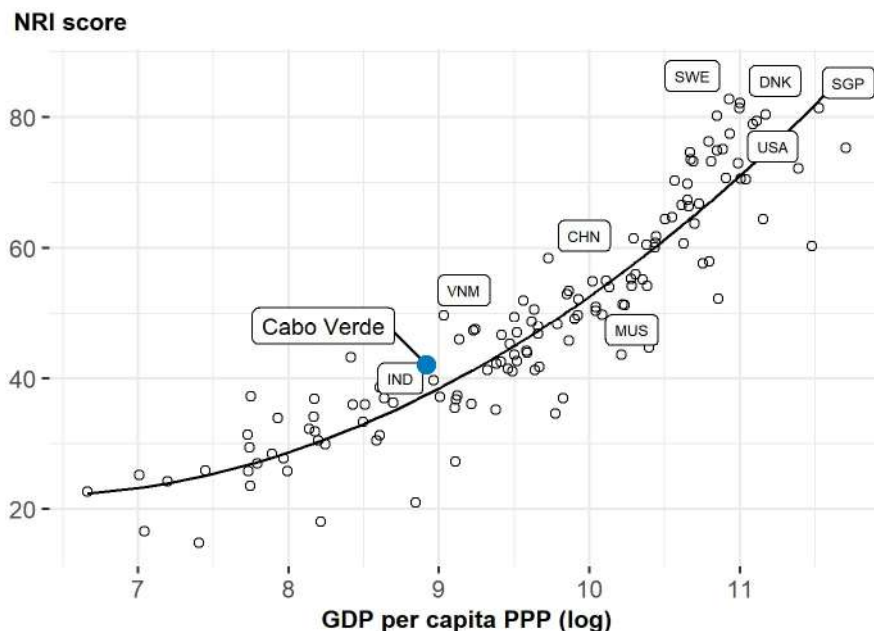
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Cabo Verde belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries
Cabo Verde is ranked 8th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in ten of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Governments, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Africa
Cabo Verde is ranked 4th within Africa (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of Cabo Verde against its income group and region, overall and by pillar
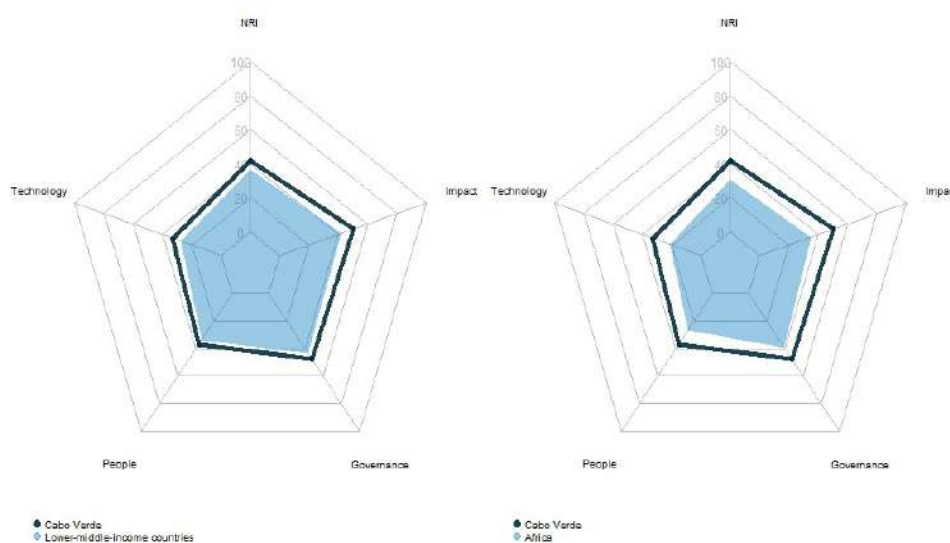
Table 2: Cabo Verde scores vs. averages of its income group and region, overall and by pillar

Dimension	Cabo Verde	Lower-middle-income countries	Africa
NRI	42.01	36.72	30.62
Technology	32.90	27.72	21.47
People	37.22	33.88	26.75
Governance	47.96	43.15	39.31
Impact	49.97	42.15	34.94

Strongest and weakest indicators

The indicators where Cabo Verde performs particularly well include e-commerce legislation, SDG 7: Affordable and Clean Energy, and Fixed-broadband subscriptions (Table 3). By contrast, the economy's weakest indicators include 4G mobile network coverage, Cybersecurity, and High-tech exports.

Table 3: Top-ranked and bottom-ranked indicators of Cabo Verde

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Adoption of emerging technologies	102
SDG 7: Affordable and Clean Energy	15	Government online services	104
Fixed-broadband subscriptions	23	GitHub commits	106
Privacy protection by law content	37	Business use of digital tools	106
Gender gap in Internet use	38	E-Participation	109
SDG 5: Gender Equality	43	Ease of doing business	111
Medium and high-tech industry	55	Firms with website	116
Internet access in schools	56	Cybersecurity	129
Internet access	64	High-tech exports	129
Secure Internet servers	69	4G mobile network coverage	130

NRI 2020 At-A-Glance: Cabo Verde

Network Readiness Index   Rank: 86 (out of 134)   Score: 42.01

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	86	32.90	C. Governance pillar	89	47.96
1st sub-pillar: Access	89	47.44	1st sub-pillar: Trust	94	27.50
2nd sub-pillar: Content	99	19.37	2nd sub-pillar: Regulation	70	65.59
3rd sub-pillar: Future Technologies	45	31.90	3rd sub-pillar: Inclusion	100	50.80
B. People pillar	91	37.22	D. Impact pillar	76	49.97
1st sub-pillar: Individuals	89	46.33	1st sub-pillar: Economy	71	23.45
2nd sub-pillar: Businesses	111	27.85	2nd sub-pillar: Quality of Life	97	56.87
3rd sub-pillar: Governments	81	37.48	3rd sub-pillar: SDG Contribution	48	69.58

The Network Readiness Index in detail

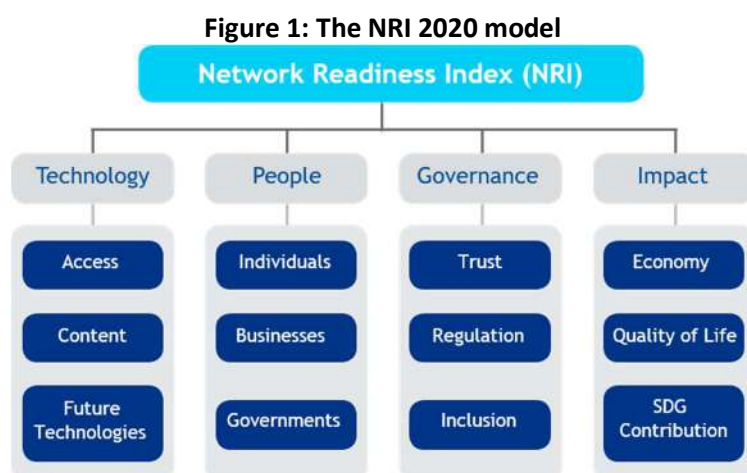| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	86	32.90	**C. Governance pillar**	89	47.96
1st sub-pillar: Access	89	47.44	*1st sub-pillar: Trust*	94	27.50
1.1.1 Mobile tariffs	81	54.32	3.1.1 Secure Internet servers	69	50.34
1.1.2 Handset prices	92	34.38	3.1.2 Cybersecurity	129	4.66
1.1.3 Internet access	64	70.01	3.1.3 Online access to financial account	NA	NA
1.1.4 4G mobile network coverage	130	0.00	3.1.4 Internet shopping	NA	NA
1.1.5 Fixed-broadband subscriptions	23	93.61	*2nd sub-pillar: Regulation*	70	65.59
1.1.6 International Internet bandwidth	85	63.88	3.2.1 Regulatory quality	89	46.10
1.1.7 Internet access in schools	56	15.85	3.2.2 ICT regulatory environment	76	81.47
2nd sub-pillar: Content	99	19.37	3.2.3 Legal framework's adaptability to emerging technologies	94	26.27
1.2.1 GitHub commits	106	0.67	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	NA	NA	3.2.5 Privacy protection by law content	37	74.09
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	100	50.80
1.2.4 Mobile apps development	83	55.41	3.3.1 E-Participation	109	39.51
3rd sub-pillar: Future Technologies	45	31.90	3.3.2 Socioeconomic gap in use of digital payments	NA	NA
1.3.1 Adoption of emerging technologies	102	29.74	3.3.3 Availability of local online content	88	50.38
1.3.2 Investment in emerging technologies	84	34.06	3.3.4 Gender gap in Internet use	38	62.50
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	NA	NA
1.3.4 Computer software spending	NA	NA	**D. Impact pillar**	76	49.97
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	71	23.45
B. People pillar	91	37.22	4.1.1 Medium and high-tech industry	55	34.47
1st sub-pillar: Individuals	89	46.33	4.1.2 High-tech exports	129	0.00
2.1.1 Internet users	83	57.23	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	81	25.55	4.1.4 Labor productivity per employee	NA	NA
2.1.3 Use of virtual social networks	81	48.45	4.1.5 Prevalence of gig economy	83	35.88
2.1.4 Tertiary enrollment	89	16.79	*2nd sub-pillar: Quality of Life*	97	56.87
2.1.5 Adult literacy rate	72	83.02	4.2.1 Happiness	NA	NA
2.1.6 ICT skills	75	46.94	4.2.2 Freedom to make life choices	NA	NA
2nd sub-pillar: Businesses	111	27.85	4.2.3 Income inequality	90	53.09
2.2.1 Firms with website	116	11.26	4.2.4 Healthy life expectancy at birth	84	60.64
2.2.2 Ease of doing business	111	43.88	*3rd sub-pillar: SDG Contribution*	48	69.58
2.2.3 Professionals	75	19.47	4.3.1 SDG 3: Good Health and Well-Being	73	67.21
2.2.4 Technicians and associate professionals	87	22.79	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	106	41.86	4.3.3 SDG 5: Gender Equality	43	79.92
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	15	90.39
3rd sub-pillar: Governments	81	37.48	.	.	.
2.3.1 Government online services	104	48.49			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	98	26.48			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

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Network Readiness Index 2020 Cambodia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Cambodia

Cambodia ranks 104th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Cambodia global ranking, overall and by pillar
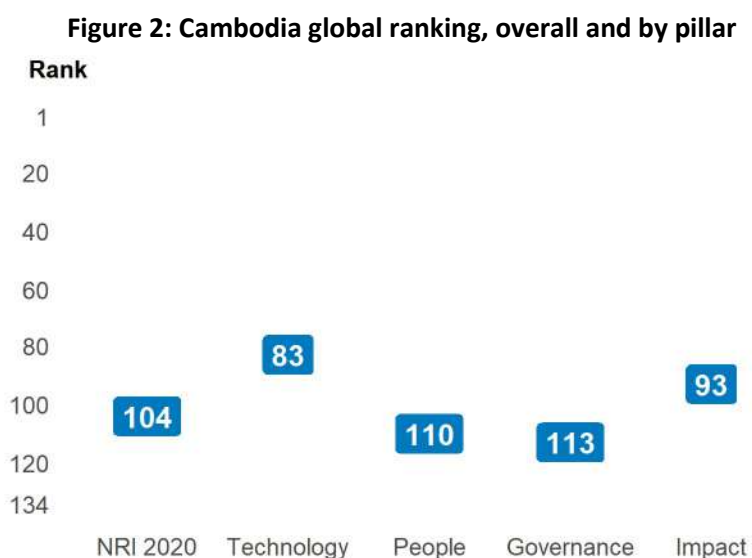
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Cambodia relate to Quality of Life, Access and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Businesses and Economy sub-pillars.

Table 1: Cambodia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	71	Content	104
Access	76	Governments	105
Future Technologies	79	Regulation	119
SDG Contribution	87	Trust	123
Individuals	96	Businesses	125
Inclusion	99	Economy	127

NRI score and income

Figure 3 shows the position of Cambodia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Cambodia is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
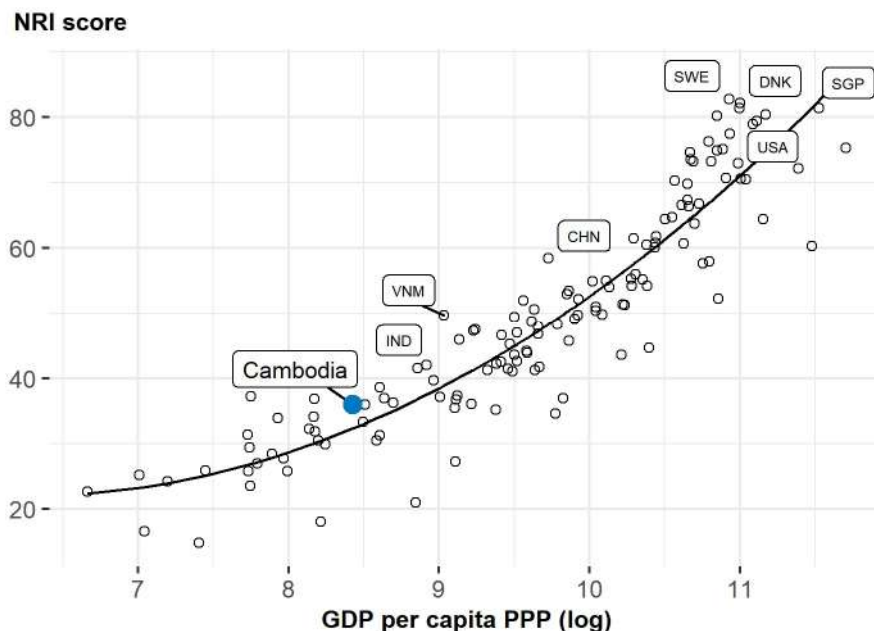
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Cambodia belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Lower-middle-income countries
Cambodia is ranked 20th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: technology and impact. At the sub-pillar level, it outperforms lower-middle-income countries in six of the twelve sub-pillars: Access, Future Technologies, Individuals, Inclusion, Quality of Life and SDG Contribution.

Asia & Pacific
Cambodia is ranked 18th within Asia & Pacific (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Cambodia against its income group and region, overall and by pillar
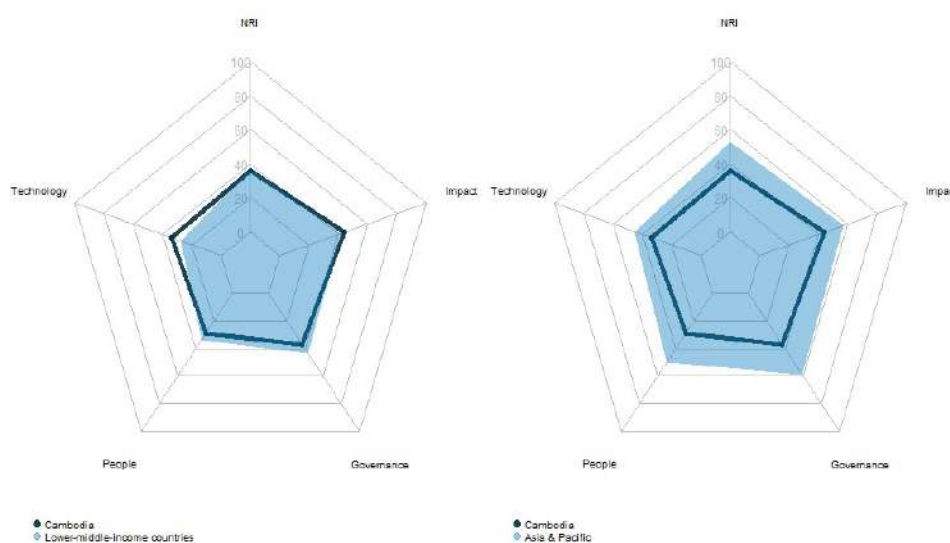
Table 2: Cambodia scores vs. averages of its income group and region, overall and by pillar

Dimension	Cambodia	Lower-middle-income countries	Asia & Pacific
NRI	36.01	36.72	52.76
Technology	33.59	27.72	45.33
People	29.08	33.88	49.64
Governance	37.14	43.15	59.20
Impact	44.24	42.15	56.86

Strongest and weakest indicators

The indicators where Cambodia performs particularly well include Freedom to make life choices, Gender gap in Internet use, and Fixed-broadband subscriptions (Table 3). By contrast, the economy's weakest indicators include Medium and high-tech industry, Technicians and associate professionals, and Cybersecurity.

Table 3: Top-ranked and bottom-ranked indicators of Cambodia

Strongest indicators	Rank	Weakest indicators	Rank
Freedom to make life choices	3	ICT regulatory environment	111
Gender gap in Internet use	21	Wikipedia edits	113
Fixed-broadband subscriptions	42	Computer software spending	113
Investment in emerging technologies	55	Professionals	114
Active mobile-broadband subscriptions	55	e-commerce legislation	115
Use of virtual social networks	59	Ease of doing business	116
International Internet bandwidth	73	Online access to financial account	117
SDG 11: Sustainable Cities and Communities	74	Cybersecurity	119
4G mobile network coverage	79	Technicians and associate professionals	121
Adult literacy rate	79	Medium and high-tech industry	126

![Portulans Institute logo]

NRI 2020 At-A-Glance: Cambodia

Network Readiness Index   Rank: 104 (out of 134)   Score: 36.01

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	83	33.59	C. Governance pillar	113	37.14
1st sub-pillar: Access	76	58.65	1st sub-pillar: Trust	123	16.55
2nd sub-pillar: Content	104	16.15	2nd sub-pillar: Regulation	119	43.92
3rd sub-pillar: Future Technologies	79	25.97	3rd sub-pillar: Inclusion	99	50.94
B. People pillar	110	29.08	D. Impact pillar	93	44.24
1st sub-pillar: Individuals	96	40.97	1st sub-pillar: Economy	127	8.80
2nd sub-pillar: Businesses	125	20.21	2nd sub-pillar: Quality of Life	71	64.10
3rd sub-pillar: Governments	105	26.05	3rd sub-pillar: SDG Contribution	87	59.81

The Network Readiness Index in detail

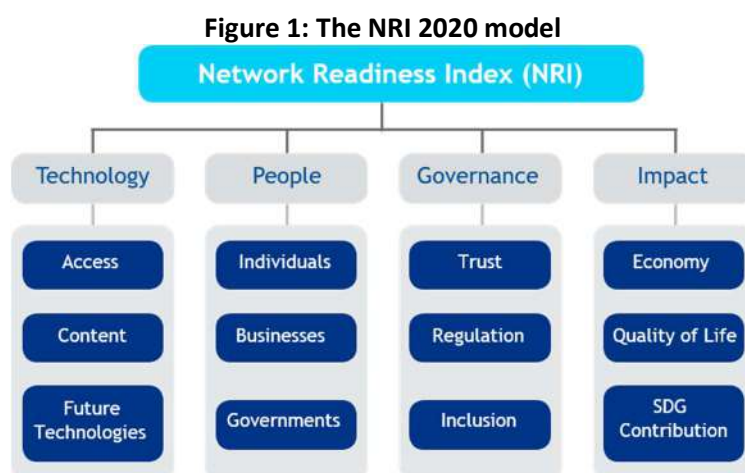| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	83	33.59	**C. Governance pillar**	113	37.14
1st sub-pillar: Access	76	58.65	*1st sub-pillar: Trust*	123	16.55
1.1.1 Mobile tariffs	89	49.89	3.1.1 Secure Internet servers	94	40.48
1.1.2 Handset prices	104	29.07	3.1.2 Cybersecurity	119	16.58
1.1.3 Internet access	87	39.84	3.1.3 Online access to financial account	117	5.27
1.1.4 4G mobile network coverage	79	80.30	3.1.4 Internet shopping	101	3.88
1.1.5 Fixed-broadband subscriptions	42	85.21	*2nd sub-pillar: Regulation*	119	43.92
1.1.6 International Internet bandwidth	73	67.63	3.2.1 Regulatory quality	104	40.29
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	111	62.93
2nd sub-pillar: Content	104	16.15	3.2.3 Legal framework's adaptability to emerging technologies	100	22.46
1.2.1 GitHub commits	100	1.01	3.2.4 e-commerce legislation	115	50.00
1.2.2 Wikipedia edits	113	11.64	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	99	50.94
1.2.4 Mobile apps development	94	51.54	3.3.1 E-Participation	109	39.51
3rd sub-pillar: Future Technologies	79	25.97	3.3.2 Socioeconomic gap in use of digital payments	90	50.34
1.3.1 Adoption of emerging technologies	99	32.06	3.3.3 Availability of local online content	95	45.15
1.3.2 Investment in emerging technologies	55	43.85	3.3.4 Gender gap in Internet use	21	66.71
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	96	52.97
1.3.4 Computer software spending	113	2.01	**D. Impact pillar**	93	44.24
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	127	8.80
B. People pillar	110	29.08	4.1.1 Medium and high-tech industry	126	0.00
1st sub-pillar: Individuals	96	40.97	4.1.2 High-tech exports	108	2.66
2.1.1 Internet users	99	38.50	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	55	32.05	4.1.4 Labor productivity per employee	108	3.44
2.1.3 Use of virtual social networks	59	57.73	4.1.5 Prevalence of gig economy	96	29.12
2.1.4 Tertiary enrollment	99	9.47	*2nd sub-pillar: Quality of Life*	71	64.10
2.1.5 Adult literacy rate	79	74.96	4.2.1 Happiness	96	45.31
2.1.6 ICT skills	107	33.12	4.2.2 Freedom to make life choices	3	98.89
2nd sub-pillar: Businesses	125	20.21	4.2.3 Income inequality	NA	NA
2.2.1 Firms with website	109	17.07	4.2.4 Healthy life expectancy at birth	100	48.11
2.2.2 Ease of doing business	116	41.76	*3rd sub-pillar: SDG Contribution*	87	59.81
2.2.3 Professionals	114	7.43	4.3.1 SDG 3: Good Health and Well-Being	99	52.46
2.2.4 Technicians and associate professionals	121	5.08	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	91	49.53	4.3.3 SDG 5: Gender Equality	104	58.10
2.2.6 R&D expenditure by businesses	82	0.40	4.3.4 SDG 7: Affordable and Clean Energy	93	69.00
3rd sub-pillar: Governments	105	26.05	.	.	.
2.3.1 Government online services	111	43.63			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	85	31.34			
2.3.4 R&D expenditure by governments and higher education	107	3.17			

* Confidential data

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Network Readiness Index 2020 Cameroon

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Cameroon

Cameroon ranks 118th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Cameroon global ranking, overall and by pillar
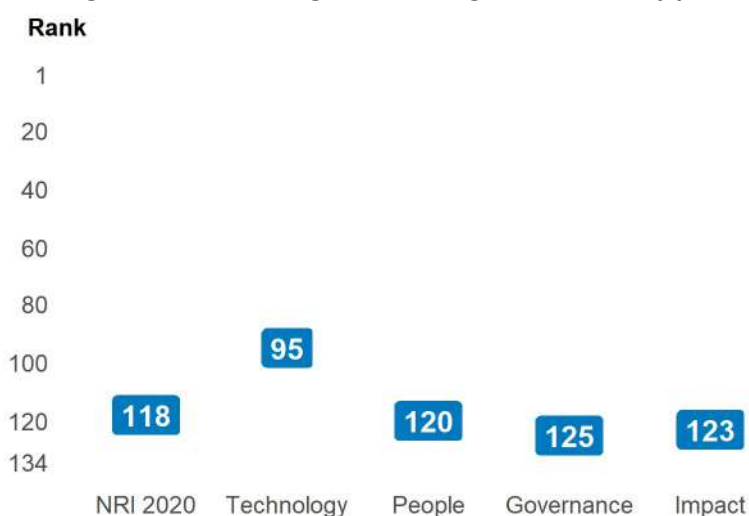
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Cameroon relate to Future Technologies, Economy and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, SDG Contribution and Inclusion sub-pillars.

Table 1: Cameroon rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	67	Individuals	113
Economy	85	Regulation	118
Access	94	Quality of Life	122
Governments	104	Businesses	123
Trust	108	SDG Contribution	123
Content	110	Inclusion	126

NRI score and income

Figure 3 shows the position of Cameroon in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Cameroon is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
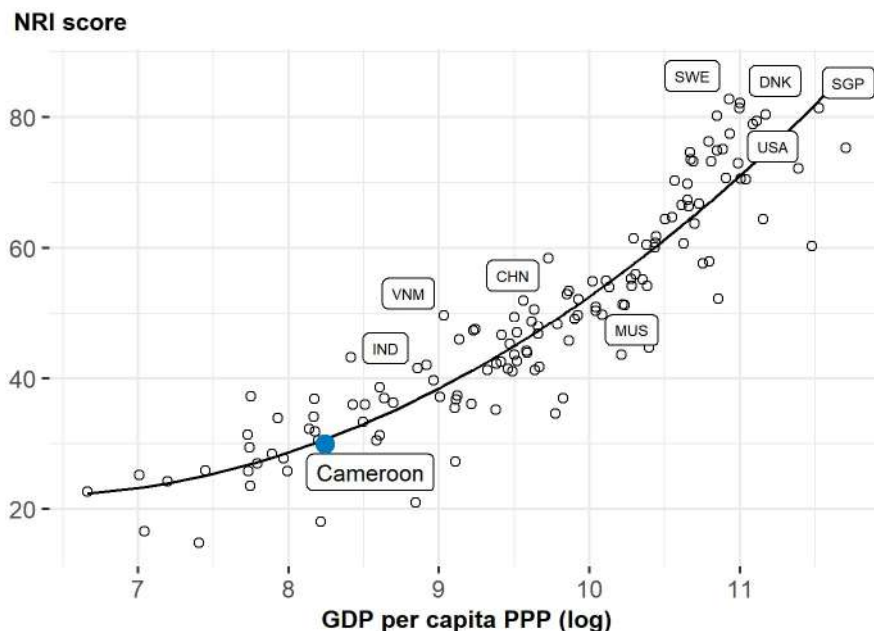
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Cameroon belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries
Cameroon is ranked 30th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: technology. At the sub-pillar level, it outperforms lower-middle-income countries in three of the twelve sub-pillars: Access, Future Technologies and Economy.

Africa
Cameroon is ranked 16th within Africa (Figure 4, right panel). It has a score above the regional average in one of the four pillars: technology. With regard to sub-pillars, it outperforms the average in Africa in five of the twelve sub-pillars: Access, Content, Future Technologies, Individuals and Economy.

Figure 4: Performance of Cameroon against its income group and region, overall and by pillar

Table 2: Cameroon scores vs. averages of its income group and region, overall and by pillar

Dimension	Cameroon	Lower-middle-income countries	Africa
NRI	29.86	36.72	30.62
Technology	28.27	27.72	21.47
People	25.08	33.88	26.75
Governance	33.41	43.15	39.31
Impact	32.70	42.15	34.94

3

Strongest and weakest indicators

The indicators where Cameroon performs particularly well include Prevalence of gig economy, Handset prices, and Online access to financial account (Table 3). By contrast, the economy's weakest indicators include International Internet bandwidth, Ease of doing business, and SDG 11: Sustainable Cities and Communities.

Table 3: Top-ranked and bottom-ranked indicators of Cameroon

Strongest indicators	Rank	Weakest indicators	Rank
Prevalence of gig economy	41	Mobile apps development	116
Handset prices	73	Regulatory quality	118
Online access to financial account	73	SDG 5: Gender Equality	118
Privacy protection by law content	73	Active mobile-broadband subscriptions	121
SDG 7: Affordable and Clean Energy	76	Availability of local online content	122
Computer software spending	77	Secure Internet servers	123
e-commerce legislation	77	Healthy life expectancy at birth	127
ICT skills	82	International Internet bandwidth	128
Adult literacy rate	83	Ease of doing business	128
High-tech exports	83	SDG 11: Sustainable Cities and Communities	128

NRI 2020 At-A-Glance: Cameroon

Network Readiness Index   Rank: 118 (out of 134)   Score: 29.86

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	95	28.27	C. Governance pillar	125	33.41
1st sub-pillar: Access	94	43.30	1st sub-pillar: Trust	108	23.86
2nd sub-pillar: Content	110	13.76	2nd sub-pillar: Regulation	118	44.09
3rd sub-pillar: Future Technologies	67	27.74	3rd sub-pillar: Inclusion	126	32.27
B. People pillar	120	25.08	D. Impact pillar	123	32.70
1st sub-pillar: Individuals	113	27.29	1st sub-pillar: Economy	85	20.13
2nd sub-pillar: Businesses	123	21.14	2nd sub-pillar: Quality of Life	122	39.69
3rd sub-pillar: Governments	104	26.80	3rd sub-pillar: SDG Contribution	123	38.29

The Network Readiness Index in detail

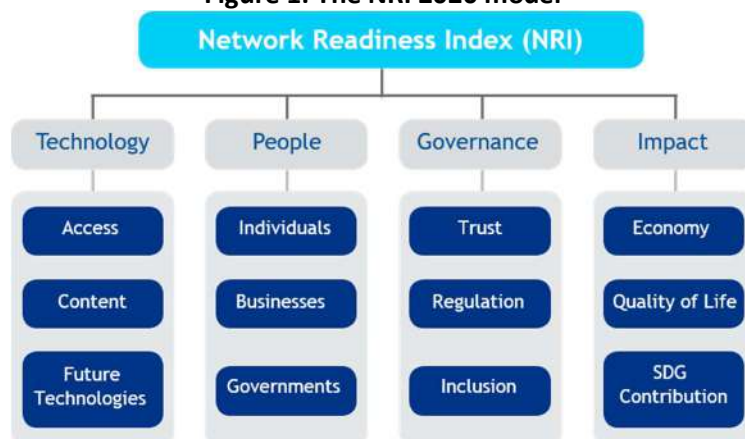| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	95	28.27	**C. Governance pillar**	125	33.41
1st sub-pillar: Access	94	43.30	*1st sub-pillar: Trust*	108	23.86
1.1.1 Mobile tariffs	105	39.53	3.1.1 Secure Internet servers	123	21.85
1.1.2 Handset prices	73	41.76	3.1.2 Cybersecurity	91	45.94
1.1.3 Internet access	109	21.49	3.1.3 Online access to financial account	73	24.15
1.1.4 4G mobile network coverage	95	65.48	3.1.4 Internet shopping	105	3.51
1.1.5 Fixed-broadband subscriptions	NA	NA	*2nd sub-pillar: Regulation*	118	44.09
1.1.6 International Internet bandwidth	128	48.25	3.2.1 Regulatory quality	118	33.81
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	114	61.39
2nd sub-pillar: Content	110	13.76	3.2.3 Legal framework's adaptability to emerging technologies	93	26.29
1.2.1 GitHub commits	110	0.44	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	114	8.17	3.2.5 Privacy protection by law content	73	23.96
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	126	32.27
1.2.4 Mobile apps development	116	32.67	3.3.1 E-Participation	109	39.51
3rd sub-pillar: Future Technologies	67	27.74	3.3.2 Socioeconomic gap in use of digital payments	109	40.99
1.3.1 Adoption of emerging technologies	92	36.36	3.3.3 Availability of local online content	122	24.87
1.3.2 Investment in emerging technologies	88	33.24	3.3.4 Gender gap in Internet use	85	14.60
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	112	41.37
1.3.4 Computer software spending	77	13.62	**D. Impact pillar**	123	32.70
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	85	20.13
B. People pillar	120	25.08	4.1.1 Medium and high-tech industry	105	9.44
1st sub-pillar: Individuals	113	27.29	4.1.2 High-tech exports	83	9.31
2.1.1 Internet users	115	21.18	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	121	8.01	4.1.4 Labor productivity per employee	110	2.83
2.1.3 Use of virtual social networks	115	12.37	4.1.5 Prevalence of gig economy	41	58.96
2.1.4 Tertiary enrollment	101	8.79	*2nd sub-pillar: Quality of Life*	122	39.69
2.1.5 Adult literacy rate	83	70.51	4.2.1 Happiness	102	44.10
2.1.6 ICT skills	82	42.89	4.2.2 Freedom to make life choices	106	57.23
2nd sub-pillar: Businesses	123	21.14	4.2.3 Income inequality	107	42.27
2.2.1 Firms with website	110	15.21	4.2.4 Healthy life expectancy at birth	127	15.18
2.2.2 Ease of doing business	128	28.06	*3rd sub-pillar: SDG Contribution*	123	38.29
2.2.3 Professionals	108	11.51	4.3.1 SDG 3: Good Health and Well-Being	114	29.51
2.2.4 Technicians and associate professionals	108	11.64	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	107	39.27	4.3.3 SDG 5: Gender Equality	118	41.16
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	76	75.22
3rd sub-pillar: Governments	104	26.80	.	.	.
2.3.1 Government online services	108	45.46			
2.3.2 Publication and use of open data	101	5.15			
2.3.3 Government promotion of investment in emerging tech	89	29.80			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

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Network Readiness Index 2020 Canada

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
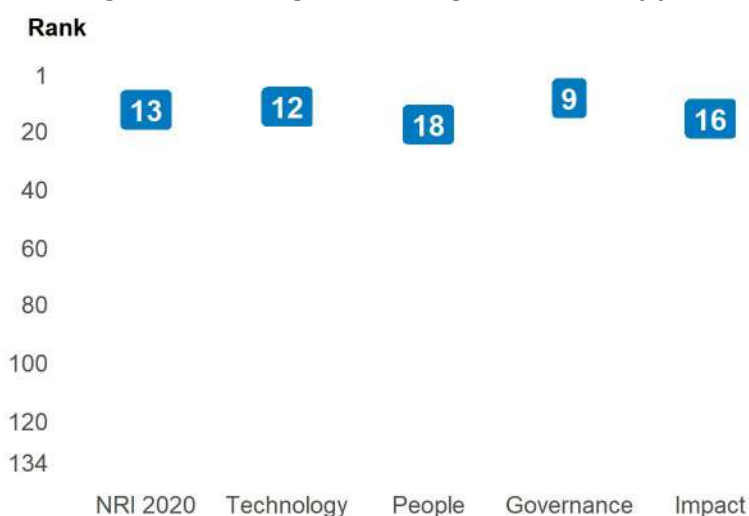
Figure 1: The NRI 2020 model

Global NRI position of Canada

Canada ranks 13th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Canada global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Canada relate to Inclusion, Governments and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Regulation, Access and Individuals sub-pillars.

Table 1: Canada rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Inclusion	1	SDG Contribution	17
Governments	7	Economy	21
Trust	7	Businesses	26
Future Technologies	11	Regulation	28
Content	13	Access	29
Quality of Life	15	Individuals	38

NRI score and income

Figure 3 shows the position of Canada in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Canada is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
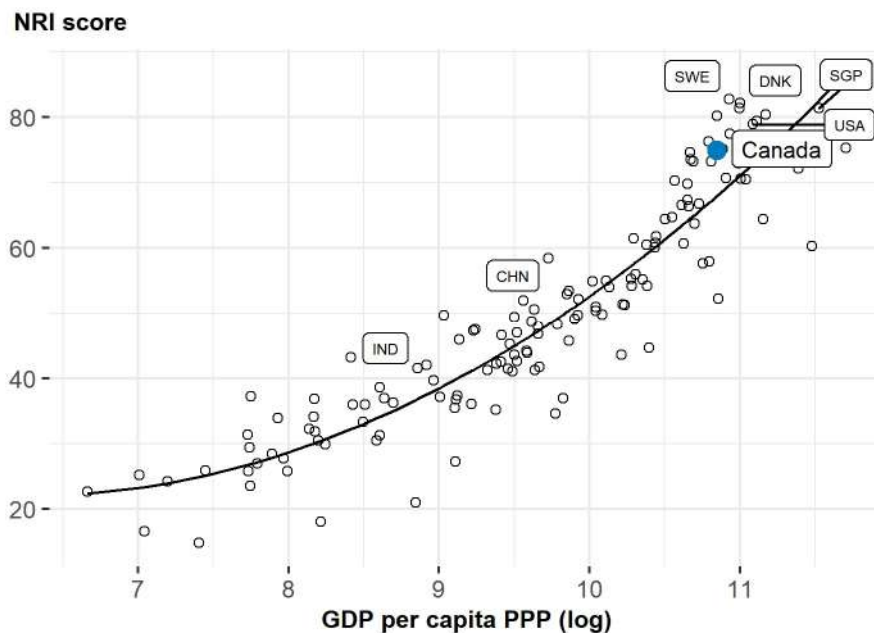
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Canada belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

High-income countries
Canada is ranked 13th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in ten of the twelve sub-pillars: Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

The Americas
Canada is ranked 2nd within The Americas (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of Canada against its income group and region, overall and by pillar

Table 2: Canada scores vs. averages of its income group and region, overall and by pillar

Dimension	Canada	High-income countries	The Americas
NRI	74.92	66.82	47.67
Technology	73.59	62.51	38.26
People	68.71	62.72	45.24
Governance	85.85	75.41	54.59
Impact	71.53	66.63	52.61

Strongest and weakest indicators

The indicators where Canada performs particularly well include e-commerce legislation, SDG 3: Good Health and Well-Being, and Publication and use of open data (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, Active mobile-broadband subscriptions, and ICT regulatory environment.

Table 3: Top-ranked and bottom-ranked indicators of Canada

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Use of virtual social networks	34
SDG 3: Good Health and Well-Being	1	Mobile tariffs	40
Publication and use of open data	2	Fixed-broadband subscriptions	40
Socioeconomic gap in use of digital payments	3	Income inequality	43
Computer software spending	6	International Internet bandwidth	47
Healthy life expectancy at birth	7	Medium and high-tech industry	47
Prevalence of gig economy	8	Privacy protection by law content	56
GitHub commits	9	ICT regulatory environment	57
Cybersecurity	9	Active mobile-broadband subscriptions	64
Internet shopping	9	SDG 7: Affordable and Clean Energy	113

NRI 2020 At-A-Glance: Canada

Network Readiness Index   Rank: 13 (out of 134)   Score: 74.92

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	12	73.59	C. Governance pillar	9	85.85
1st sub-pillar: Access	29	81.57	1st sub-pillar: Trust	7	87.24
2nd sub-pillar: Content	13	73.74	2nd sub-pillar: Regulation	28	80.57
3rd sub-pillar: Future Technologies	11	65.48	3rd sub-pillar: Inclusion	1	89.74
B. People pillar	18	68.71	D. Impact pillar	16	71.53
1st sub-pillar: Individuals	38	63.08	1st sub-pillar: Economy	21	48.19
2nd sub-pillar: Businesses	26	64.18	2nd sub-pillar: Quality of Life	15	85.80
3rd sub-pillar: Governments	7	78.88	3rd sub-pillar: SDG Contribution	17	80.59

The Network Readiness Index in detail

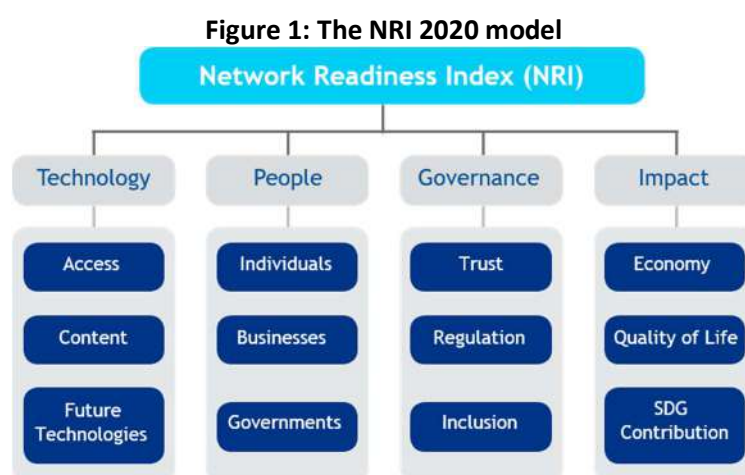| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	12	73.59	**C. Governance pillar**	9	85.85
1st sub-pillar: Access	29	81.57	*1st sub-pillar: Trust*	7	87.24
1.1.1 Mobile tariffs	40	72.45	3.1.1 Secure Internet servers	19	83.69
1.1.2 Handset prices	17	69.66	3.1.2 Cybersecurity	9	95.77
1.1.3 Internet access	16	91.21	3.1.3 Online access to financial account	10	81.53
1.1.4 4G mobile network coverage	24	99.00	3.1.4 Internet shopping	9	87.95
1.1.5 Fixed-broadband subscriptions	40	86.69	*2nd sub-pillar: Regulation*	28	80.57
1.1.6 International Internet bandwidth	47	70.38	3.2.1 Regulatory quality	14	88.09
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	57	86.30
2nd sub-pillar: Content	13	73.74	3.2.3 Legal framework's adaptability to emerging technologies	10	77.69
1.2.1 GitHub commits	9	70.30	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	27	78.23	3.2.5 Privacy protection by law content	56	50.75
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	1	89.74
1.2.4 Mobile apps development	20	85.63	3.3.1 E-Participation	16	93.83
3rd sub-pillar: Future Technologies	11	65.48	3.3.2 Socioeconomic gap in use of digital payments	3	99.49
1.3.1 Adoption of emerging technologies	11	85.04	3.3.3 Availability of local online content	14	88.53
1.3.2 Investment in emerging technologies	20	68.25	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	14	63.16	3.3.5 Rural gap in use of digital payments	16	77.09
1.3.4 Computer software spending	6	60.08	**D. Impact pillar**	16	71.53
1.3.5 Robot density	14	50.86	*1st sub-pillar: Economy*	21	48.19
B. People pillar	18	68.71	4.1.1 Medium and high-tech industry	47	38.92
1st sub-pillar: Individuals	38	63.08	4.1.2 High-tech exports	29	31.62
2.1.1 Internet users	14	91.08	4.1.3 PCT patent applications	21	22.68
2.1.2 Active mobile-broadband subscriptions	64	29.57	4.1.4 Labor productivity per employee	24	61.67
2.1.3 Use of virtual social networks	34	67.01	4.1.5 Prevalence of gig economy	8	86.07
2.1.4 Tertiary enrollment	31	50.15	*2nd sub-pillar: Quality of Life*	15	85.80
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	14	86.80
2.1.6 ICT skills	19	77.60	4.2.2 Freedom to make life choices	21	91.20
2nd sub-pillar: Businesses	26	64.18	4.2.3 Income inequality	43	75.26
2.2.1 Firms with website	22	80.11	4.2.4 Healthy life expectancy at birth	7	89.94
2.2.2 Ease of doing business	22	87.40	*3rd sub-pillar: SDG Contribution*	17	80.59
2.2.3 Professionals	29	45.30	4.3.1 SDG 3: Good Health and Well-Being	1	100.00
2.2.4 Technicians and associate professionals	15	72.80	4.3.2 SDG 4: Quality Education	10	70.19
2.2.5 Business use of digital tools	31	78.84	4.3.3 SDG 5: Gender Equality	32	81.68
2.2.6 R&D expenditure by businesses	25	20.64	4.3.4 SDG 7: Affordable and Clean Energy	113	56.94
3rd sub-pillar: Governments	7	78.88	.	.	.
2.3.1 Government online services	31	83.64			
2.3.2 Publication and use of open data	2	89.54			
2.3.3 Government promotion of investment in emerging tech	12	74.43			
2.3.4 R&D expenditure by governments and higher education	14	67.91			

* Confidential data

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Network Readiness Index 2020 Chad

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Chad

Chad ranks 134th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology and Governance. The greatest scope for improvement, meanwhile, concerns People and Impact.

Figure 2: Chad global ranking, overall and by pillar
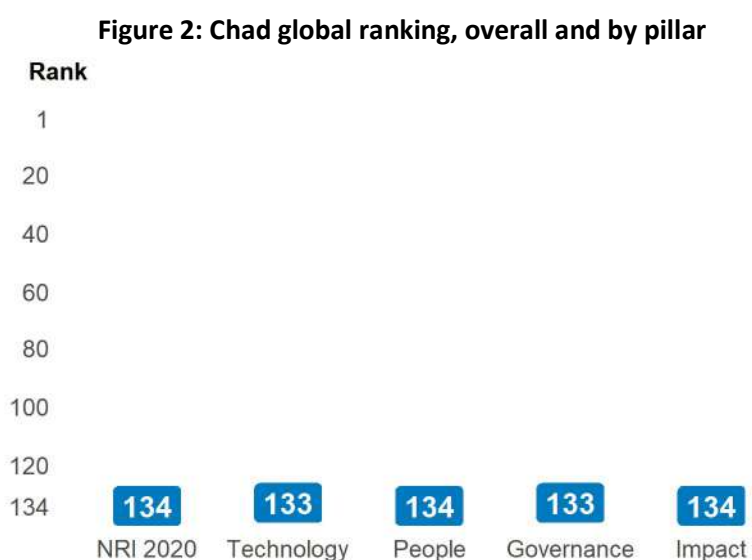
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Chad relate to Inclusion, Governments and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, Businesses and Trust sub-pillars.

Table 1: Chad rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Inclusion	124	Access	133
Governments	126	Future Technologies	133
Content	131	Economy	133
Regulation	131	Individuals	134
Quality of Life	132	Businesses	134
SDG Contribution	132	Trust	134

NRI score and income

Figure 3 shows the position of Chad in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Chad is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
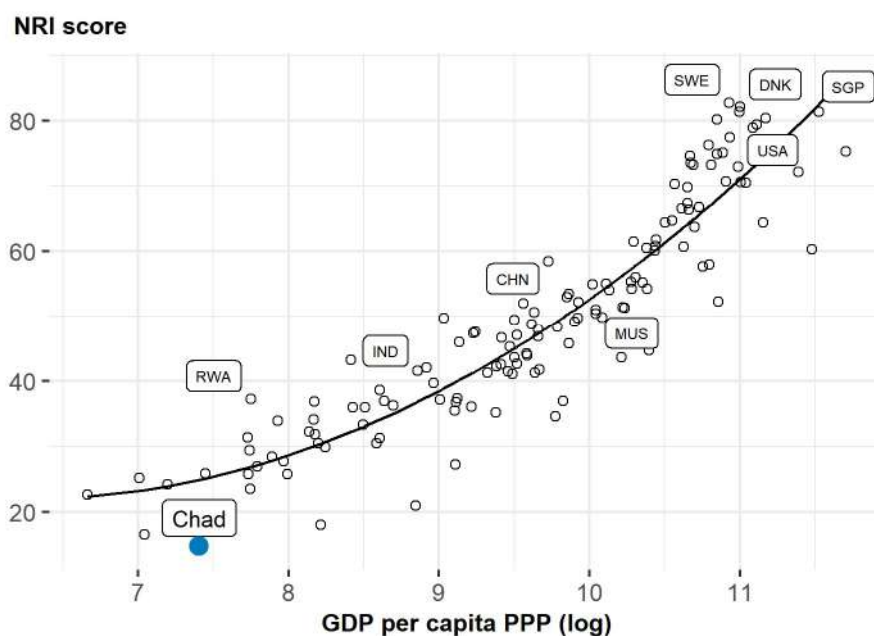
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Chad belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Low-income countries
Chad is ranked 15th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it trails low-income countries in all of them.

Africa
Chad is ranked 31st within Africa (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Chad against its income group and region, overall and by pillar
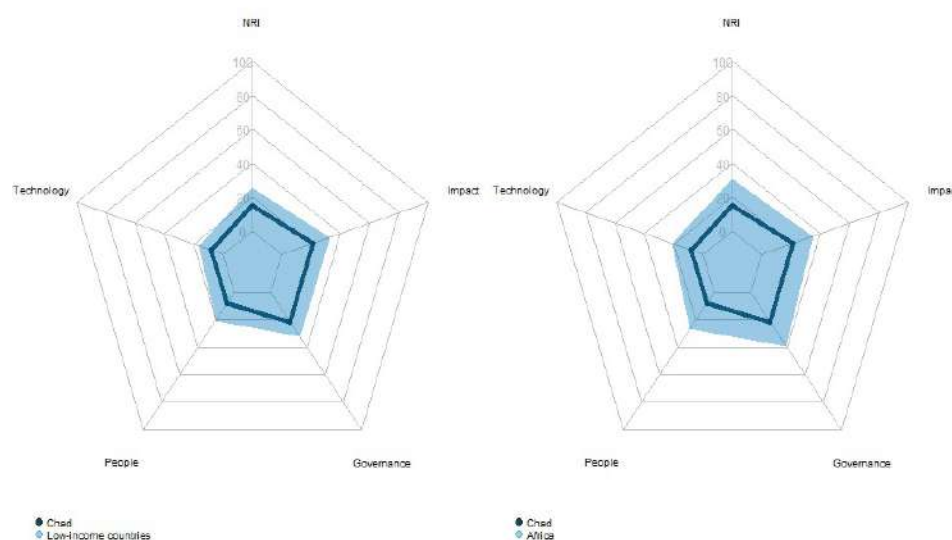
Table 2: Chad scores vs. averages of its income group and region, overall and by pillar

Dimension	Chad	Low-income countries	Africa
NRI	14.80	25.61	30.62
Technology	8.16	16.33	21.47
People	8.25	20.61	26.75
Governance	21.47	32.58	39.31
Impact	21.32	32.92	34.94

Strongest and weakest indicators

The indicators where Chad performs particularly well include SDG 7: Affordable and Clean Energy, R&D expenditure by governments and higher education, and Rural gap in use of digital payments (Table 3). By contrast, the economy's weakest indicators include Active mobile-broadband subscriptions, Use of virtual social networks, and Secure Internet servers.

Table 3: Top-ranked and bottom-ranked indicators of Chad

Strongest indicators	Rank	Weakest indicators	Rank
SDG 7: Affordable and Clean Energy	25	Internet access	132
R&D expenditure by governments and higher education	64	Healthy life expectancy at birth	132
Rural gap in use of digital payments	70	SDG 3: Good Health and Well-Being	132
Income inequality	95	SDG 5: Gender Equality	132
Socioeconomic gap in use of digital payments	104	GitHub commits	133
Adult literacy rate	108	Internet users	133
Labor productivity per employee	115	Availability of local online content	133
Internet shopping	117	Active mobile-broadband subscriptions	134
Government promotion of investment in emerging technologies	118	Use of virtual social networks	134
Happiness	119	Secure Internet servers	134

NRI 2020 At-A-Glance: Chad

Network Readiness Index   Rank: 134 (out of 134)   Score: 14.80

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	133	8.16	C. Governance pillar	133	21.47
1st sub-pillar: Access	133	11.69	1st sub-pillar: Trust	134	3.95
2nd sub-pillar: Content	131	4.70	2nd sub-pillar: Regulation	131	28.01
3rd sub-pillar: Future Technologies	133	8.08	3rd sub-pillar: Inclusion	124	32.44
B. People pillar	134	8.25	D. Impact pillar	134	21.32
1st sub-pillar: Individuals	134	3.14	1st sub-pillar: Economy	133	6.52
2nd sub-pillar: Businesses	134	3.95	2nd sub-pillar: Quality of Life	132	27.80
3rd sub-pillar: Governments	126	17.67	3rd sub-pillar: SDG Contribution	132	29.64

The Network Readiness Index in detail

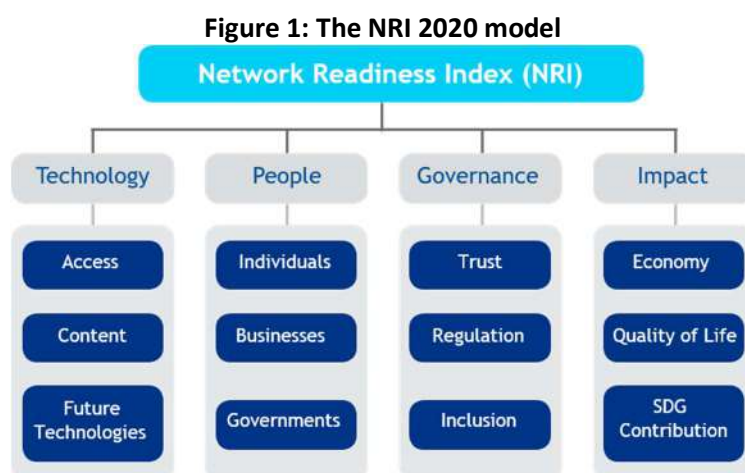| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	133	8.16	**C. Governance pillar**	133	21.47
1st sub-pillar: Access	133	11.69	*1st sub-pillar: Trust*	134	3.95
1.1.1 Mobile tariffs	129	8.42	3.1.1 Secure Internet servers	134	0.00
1.1.2 Handset prices	131	1.63	3.1.2 Cybersecurity	125	9.75
1.1.3 Internet access	132	3.17	3.1.3 Online access to financial account	NA	NA
1.1.4 4G mobile network coverage	124	12.00	3.1.4 Internet shopping	117	2.10
1.1.5 Fixed-broadband subscriptions	122	0.00	*2nd sub-pillar: Regulation*	131	28.01
1.1.6 International Internet bandwidth	131	44.91	3.2.1 Regulatory quality	128	26.92
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	122	54.82
2nd sub-pillar: Content	131	4.70	3.2.3 Legal framework's adaptability to emerging technologies	126	5.30
1.2.1 GitHub commits	133	0.00	3.2.4 e-commerce legislation	127	25.00
1.2.2 Wikipedia edits	NA	NA	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	124	32.44
1.2.4 Mobile apps development	130	14.07	3.3.1 E-Participation	128	23.46
3rd sub-pillar: Future Technologies	133	8.08	3.3.2 Socioeconomic gap in use of digital payments	104	41.85
1.3.1 Adoption of emerging technologies	126	3.37	3.3.3 Availability of local online content	133	0.00
1.3.2 Investment in emerging technologies	125	12.79	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	70	64.45
1.3.4 Computer software spending	NA	NA	**D. Impact pillar**	134	21.32
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	133	6.52
B. People pillar	134	8.25	4.1.1 Medium and high-tech industry	NA	NA
1st sub-pillar: Individuals	134	3.14	4.1.2 High-tech exports	NA	NA
2.1.1 Internet users	133	3.96	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	134	0.00	4.1.4 Labor productivity per employee	115	1.52
2.1.3 Use of virtual social networks	134	0.00	4.1.5 Prevalence of gig economy	120	11.52
2.1.4 Tertiary enrollment	125	1.79	*2nd sub-pillar: Quality of Life*	132	27.80
2.1.5 Adult literacy rate	108	0.00	4.2.1 Happiness	119	30.61
2.1.6 ICT skills	129	13.08	4.2.2 Freedom to make life choices	130	27.63
2nd sub-pillar: Businesses	134	3.95	4.2.3 Income inequality	95	50.77
2.2.1 Firms with website	124	0.00	4.2.4 Healthy life expectancy at birth	132	2.19
2.2.2 Ease of doing business	131	11.85	*3rd sub-pillar: SDG Contribution*	132	29.64
2.2.3 Professionals	NA	NA	4.3.1 SDG 3: Good Health and Well-Being	132	0.00
2.2.4 Technicians and associate professionals	NA	NA	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	128	0.00	4.3.3 SDG 5: Gender Equality	132	9.30
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	25	88.51
3rd sub-pillar: Governments	126	17.67	.	.	.
2.3.1 Government online services	130	17.58			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	118	9.22			
2.3.4 R&D expenditure by governments and higher education	64	26.21			

* Confidential data

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Network Readiness Index 2020 Chile

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Chile

Chile ranks 50th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Chile global ranking, overall and by pillar
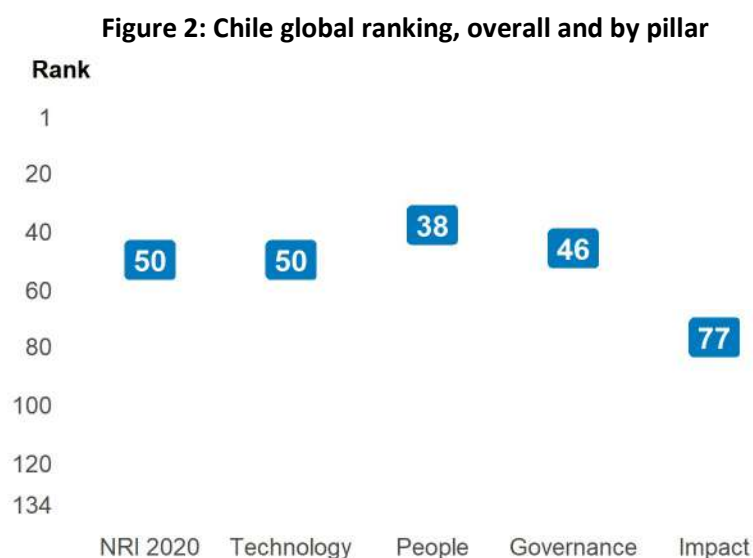
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Chile relate to Individuals, Regulation and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Economy, Future Technologies and Quality of Life sub-pillars.

Table 1: Chile rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	24	Trust	52
Regulation	41	Governments	54
Access	43	SDG Contribution	69
Businesses	44	Economy	72
Inclusion	50	Future Technologies	81
Content	51	Quality of Life	90

NRI score and income

Figure 3 shows the position of Chile in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Chile is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
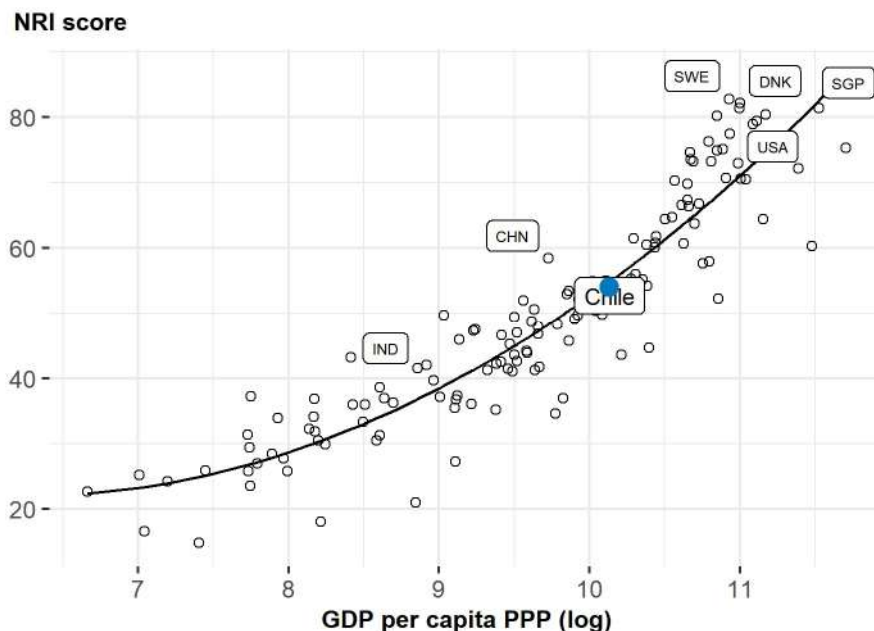
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Chile belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

High-income countries
Chile is ranked 46th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in one of the twelve sub-pillars: Individuals.

The Americas
Chile is ranked 4th within The Americas (Figure 4, right panel). It has a score above the regional average in three of the four pillars: nri.score, technology, people and governance. With regard to sub-pillars, it outperforms the average in The Americas in nine of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Trust, Regulation, Inclusion and Economy.

Figure 4: Performance of Chile against its income group and region, overall and by pillar

Table 2: Chile scores vs. averages of its income group and region, overall and by pillar

Dimension	Chile	High-income countries	The Americas
NRI	54.06	66.82	47.67
Technology	45.92	62.51	38.26
People	56.15	62.72	45.24
Governance	64.60	75.41	54.59
Impact	49.57	66.63	52.61

Strongest and weakest indicators

The indicators where Chile performs particularly well include e-commerce legislation, Tertiary enrollment, and Use of virtual social networks (Table 3). By contrast, the economy's weakest indicators include Freedom to make life choices, Income inequality, ICT regulatory environment, and Medium and high-tech industry.

Table 3: Top-ranked and bottom-ranked indicators of Chile

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	SDG 3: Good Health and Well-Being	69
Tertiary enrollment	6	4G mobile network coverage	72
Use of virtual social networks	10	R&D expenditure by governments and higher education	79
Firms with website	20	SDG 5: Gender Equality	80
Regulatory quality	20	Rural gap in use of digital payments	82
Government online services	24	Cybersecurity	83
Handset prices	25	ICT regulatory environment	84
Internet access	26	Medium and high-tech industry	84
International Internet bandwidth	27	Income inequality	100
Publication and use of open data	27	Freedom to make life choices	119

NRI 2020 At-A-Glance: Chile

Network Readiness Index Rank: 50 (out of 134) Score: 54.06

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	50	45.92	C. Governance pillar	46	64.60
1st sub-pillar: Access	43	76.39	1st sub-pillar: Trust	52	48.27
2nd sub-pillar: Content	51	35.63	2nd sub-pillar: Regulation	41	76.51
3rd sub-pillar: Future Technologies	81	25.74	3rd sub-pillar: Inclusion	50	69.03
B. People pillar	38	56.15	D. Impact pillar	77	49.57
1st sub-pillar: Individuals	24	68.47	1st sub-pillar: Economy	72	23.07
2nd sub-pillar: Businesses	44	53.23	2nd sub-pillar: Quality of Life	90	59.60
3rd sub-pillar: Governments	54	46.75	3rd sub-pillar: SDG Contribution	69	66.03

The Network Readiness Index in detail

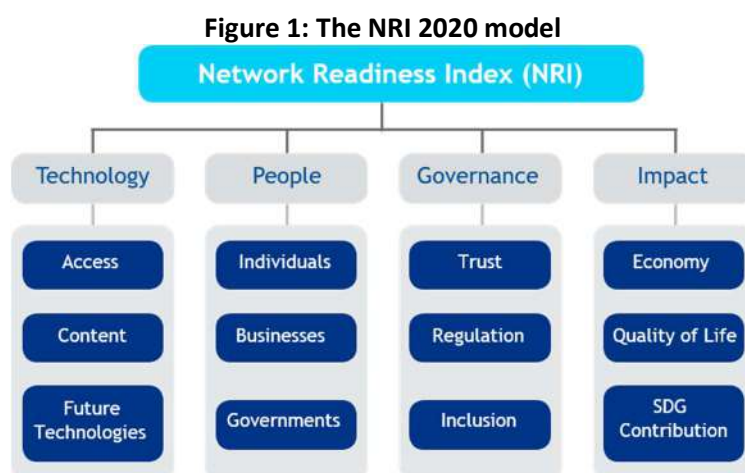| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	50	45.92	**C. Governance pillar**	46	64.60
1st sub-pillar: Access	43	76.39	*1st sub-pillar: Trust*	52	48.27
1.1.1 Mobile tariffs	65	63.29	3.1.1 Secure Internet servers	38	74.26
1.1.2 Handset prices	25	65.32	3.1.2 Cybersecurity	83	50.05
1.1.3 Internet access	26	87.50	3.1.3 Online access to financial account	48	39.41
1.1.4 4G mobile network coverage	72	88.00	3.1.4 Internet shopping	46	29.38
1.1.5 Fixed-broadband subscriptions	47	80.46	*2nd sub-pillar: Regulation*	41	76.51
1.1.6 International Internet bandwidth	27	73.76	3.2.1 Regulatory quality	20	81.00
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	84	78.77
2nd sub-pillar: Content	51	35.63	3.2.3 Legal framework's adaptability to emerging technologies	45	49.56
1.2.1 GitHub commits	55	7.29	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	50	59.41	3.2.5 Privacy protection by law content	38	73.21
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	50	69.03
1.2.4 Mobile apps development	60	66.59	3.3.1 E-Participation	29	85.18
3rd sub-pillar: Future Technologies	81	25.74	3.3.2 Socioeconomic gap in use of digital payments	51	75.11
1.3.1 Adoption of emerging technologies	36	61.55	3.3.3 Availability of local online content	54	66.30
1.3.2 Investment in emerging technologies	69	38.42	3.3.4 Gender gap in Internet use	51	59.87
1.3.3 ICT PCT patent applications	60	3.00	3.3.5 Rural gap in use of digital payments	82	58.69
1.3.4 Computer software spending	44	25.04	**D. Impact pillar**	77	49.57
1.3.5 Robot density	57	0.70	*1st sub-pillar: Economy*	72	23.07
B. People pillar	38	56.15	4.1.1 Medium and high-tech industry	84	22.58
1st sub-pillar: Individuals	24	68.47	4.1.2 High-tech exports	67	13.15
2.1.1 Internet users	31	82.14	4.1.3 PCT patent applications	41	2.54
2.1.2 Active mobile-broadband subscriptions	41	35.61	4.1.4 Labor productivity per employee	52	34.61
2.1.3 Use of virtual social networks	10	79.38	4.1.5 Prevalence of gig economy	64	42.48
2.1.4 Tertiary enrollment	6	64.55	*2nd sub-pillar: Quality of Life*	90	59.60
2.1.5 Adult literacy rate	39	95.40	4.2.1 Happiness	60	63.87
2.1.6 ICT skills	61	53.72	4.2.2 Freedom to make life choices	119	48.34
2nd sub-pillar: Businesses	44	53.23	4.2.3 Income inequality	100	47.94
2.2.1 Firms with website	20	80.34	4.2.4 Healthy life expectancy at birth	30	78.27
2.2.2 Ease of doing business	57	74.91	*3rd sub-pillar: SDG Contribution*	69	66.03
2.2.3 Professionals	50	31.43	4.3.1 SDG 3: Good Health and Well-Being	69	68.85
2.2.4 Technicians and associate professionals	39	50.23	4.3.2 SDG 4: Quality Education	58	34.66
2.2.5 Business use of digital tools	30	78.94	4.3.3 SDG 5: Gender Equality	80	72.52
2.2.6 R&D expenditure by businesses	56	3.55	4.3.4 SDG 7: Affordable and Clean Energy	50	82.73
3rd sub-pillar: Governments	54	46.75	.	.	.
2.3.1 Government online services	24	84.84			
2.3.2 Publication and use of open data	27	47.41			
2.3.3 Government promotion of investment in emerging tech	63	38.19			
2.3.4 R&D expenditure by governments and higher education	79	16.56			

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Network Readiness Index 2020 China

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of China

China ranks 40th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: China global ranking, overall and by pillar
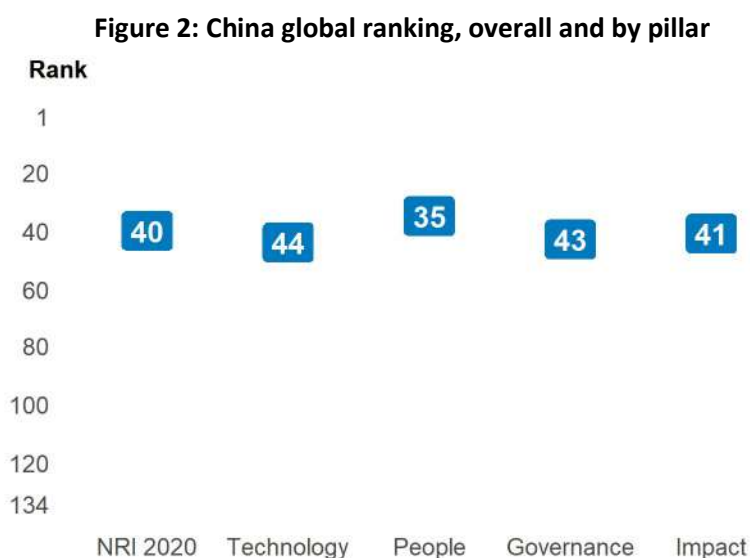
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of China relate to Future Technologies, Businesses and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Quality of Life, Regulation and Content sub-pillars.

Table 1: China rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	24	SDG Contribution	44
Businesses	25	Inclusion	45
Trust	36	Individuals	47
Economy	39	Quality of Life	52
Access	42	Regulation	75
Governments	43	Content	83

NRI score and income

Figure 3 shows the position of China in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, China is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
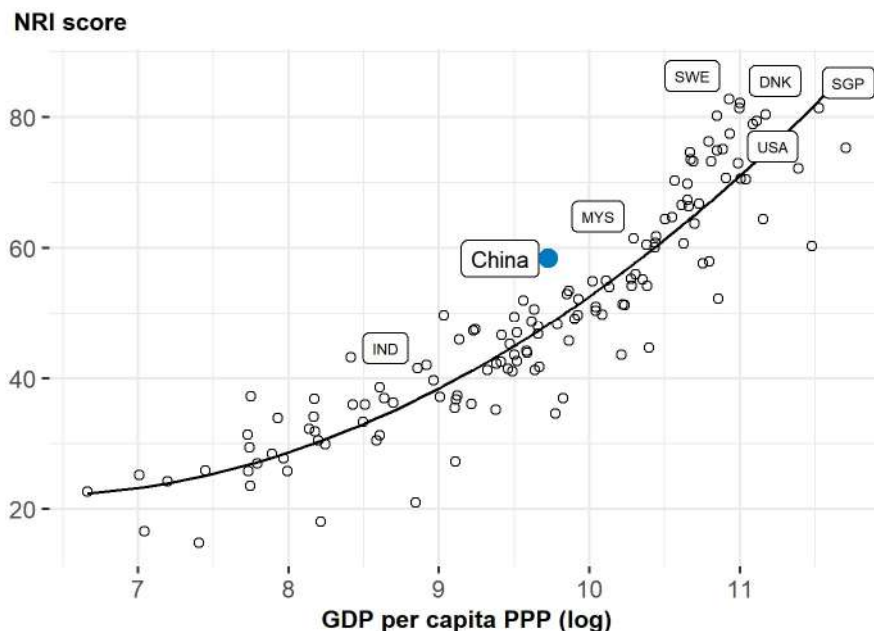
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), IND = India (88). USA is ranked 8th. China belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Upper-middle-income countries
China is ranked 2nd in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in eleven of the twelve sub-pillars: Access, Future Technologies, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Asia & Pacific
China is ranked 8th within Asia & Pacific (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Asia & Pacific in nine of the twelve sub-pillars: Access, Future Technologies, Individuals, Businesses, Governments, Trust, Inclusion, Quality of Life and SDG Contribution.

Figure 4: Performance of China against its income group and region, overall and by pillar

Table 2: China scores vs. averages of its income group and region, overall and by pillar

Dimension	China	Upper-middle-income countries	Asia & Pacific
NRI	58.44	47.39	52.76
Technology	49.80	38.42	45.33
People	58.47	46.66	49.64
Governance	66.33	54.31	59.20
Impact	59.17	50.17	56.86

3

Strongest and weakest indicators

The indicators where China performs particularly well include e-commerce legislation, SDG 4: Quality Education, and Fixed-broadband subscriptions (Table 3). By contrast, the economy's weakest indicators include ICT regulatory environment, SDG 7: Affordable and Clean Energy, and SDG 11: Sustainable Cities and Communities.

Table 3: Top-ranked and bottom-ranked indicators of China

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Socioeconomic gap in use of digital payments	80
SDG 4: Quality Education	1	Regulatory quality	81
Fixed-broadband subscriptions	7	SDG 5: Gender Equality	81
E-Participation	9	Labor productivity per employee	82
High-tech exports	9	International Internet bandwidth	83
Freedom to make life choices	11	Happiness	87
R&D expenditure by businesses	12	Internet users	89
Government online services	12	SDG 11: Sustainable Cities and Communities	100
ICT PCT patent applications	20	SDG 7: Affordable and Clean Energy	103
Use of virtual social networks	20	ICT regulatory environment	126

NRI 2020 At-A-Glance: China

Network Readiness Index   Rank: 40 (out of 134)   Score: 58.44

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	44	49.80	C. Governance pillar	43	66.33
1st sub-pillar: Access	42	77.74	1st sub-pillar: Trust	36	64.27
2nd sub-pillar: Content	83	23.79	2nd sub-pillar: Regulation	75	64.15
3rd sub-pillar: Future Technologies	24	47.88	3rd sub-pillar: Inclusion	45	70.55
B. People pillar	35	58.47	D. Impact pillar	41	59.17
1st sub-pillar: Individuals	47	60.09	1st sub-pillar: Economy	39	35.12
2nd sub-pillar: Businesses	25	64.21	2nd sub-pillar: Quality of Life	52	69.96
3rd sub-pillar: Governments	43	51.10	3rd sub-pillar: SDG Contribution	44	72.43

The Network Readiness Index in detail

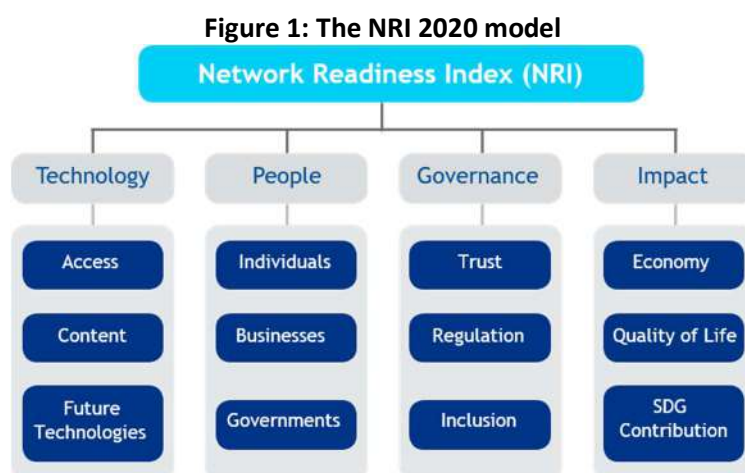| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	44	49.80	**C. Governance pillar**	43	66.33
1st sub-pillar: Access	42	77.74	*1st sub-pillar: Trust*	36	64.27
1.1.1 Mobile tariffs	26	79.82	3.1.1 Secure Internet servers	66	52.67
1.1.2 Handset prices	63	46.73	3.1.2 Cybersecurity	29	88.84
1.1.3 Internet access	77	59.46	3.1.3 Online access to financial account	26	57.53
1.1.4 4G mobile network coverage	21	99.40	3.1.4 Internet shopping	28	58.06
1.1.5 Fixed-broadband subscriptions	7	98.47	*2nd sub-pillar: Regulation*	75	64.15
1.1.6 International Internet bandwidth	83	64.08	3.2.1 Regulatory quality	81	48.44
1.1.7 Internet access in schools	29	96.25	3.2.2 ICT regulatory environment	126	44.02
2nd sub-pillar: Content	83	23.79	3.2.3 Legal framework's adaptability to emerging technologies	NA	NA
1.2.1 GitHub commits	67	3.39	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	NA	NA	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	45	70.55
1.2.4 Mobile apps development	69	62.76	3.3.1 E-Participation	9	96.30
3rd sub-pillar: Future Technologies	24	47.88	3.3.2 Socioeconomic gap in use of digital payments	80	58.25
1.3.1 Adoption of emerging technologies	NA	NA	3.3.3 Availability of local online content	60	63.41
1.3.2 Investment in emerging technologies	33	59.71	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	20	58.38	3.3.5 Rural gap in use of digital payments	71	64.25
1.3.4 Computer software spending	23	33.77	**D. Impact pillar**	41	59.17
1.3.5 Robot density	21	39.65	*1st sub-pillar: Economy*	39	35.12
B. People pillar	35	58.47	4.1.1 Medium and high-tech industry	26	52.90
1st sub-pillar: Individuals	47	60.09	4.1.2 High-tech exports	9	59.57
2.1.1 Internet users	89	53.24	4.1.3 PCT patent applications	29	9.90
2.1.2 Active mobile-broadband subscriptions	35	37.16	4.1.4 Labor productivity per employee	82	18.11
2.1.3 Use of virtual social networks	20	72.16	4.1.5 Prevalence of gig economy	NA	NA
2.1.4 Tertiary enrollment	59	36.66	*2nd sub-pillar: Quality of Life*	52	69.96
2.1.5 Adult literacy rate	38	95.97	4.2.1 Happiness	87	48.18
2.1.6 ICT skills	43	65.37	4.2.2 Freedom to make life choices	11	93.89
2nd sub-pillar: Businesses	25	64.21	4.2.3 Income inequality	69	63.14
2.2.1 Firms with website	46	65.71	4.2.4 Healthy life expectancy at birth	35	74.65
2.2.2 Ease of doing business	30	84.37	*3rd sub-pillar: SDG Contribution*	44	72.43
2.2.3 Professionals	NA	NA	4.3.1 SDG 3: Good Health and Well-Being	25	83.61
2.2.4 Technicians and associate professionals	NA	NA	4.3.2 SDG 4: Quality Education	1	100.00
2.2.5 Business use of digital tools	NA	NA	4.3.3 SDG 5: Gender Equality	81	72.13
2.2.6 R&D expenditure by businesses	12	42.53	4.3.4 SDG 7: Affordable and Clean Energy	103	65.90
3rd sub-pillar: Governments	43	51.10	.	.	.
2.3.1 Government online services	12	90.30			
2.3.2 Publication and use of open data	71	19.64			
2.3.3 Government promotion of investment in emerging tech	NA	NA			
2.3.4 R&D expenditure by governments and higher education	42	43.37			

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Network Readiness Index 2020 Colombia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Colombia

Colombia ranks 72nd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Colombia global ranking, overall and by pillar
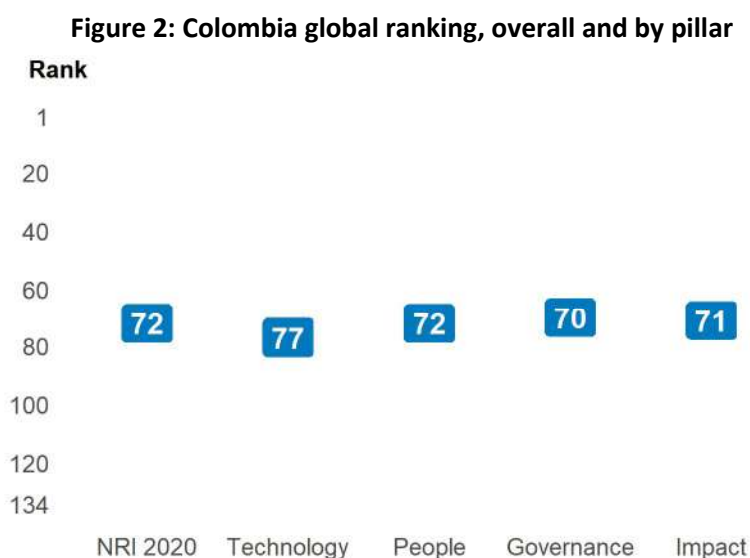
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Colombia relate to SDG Contribution, Content and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the Quality of Life, Economy and Future Technologies sub-pillars.

Table 1: Colombia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	52	Trust	73
Content	63	Inclusion	74
Regulation	65	Access	75
Governments	69	Quality of Life	79
Individuals	72	Economy	83
Businesses	73	Future Technologies	94

NRI score and income

Figure 3 shows the position of Colombia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Colombia is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
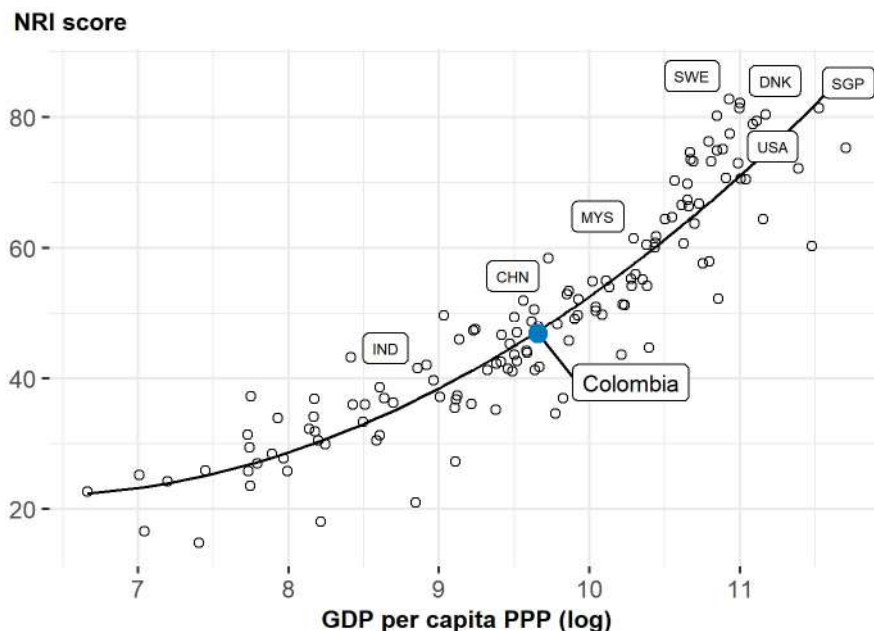
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Colombia belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

Upper-middle-income countries
Colombia is ranked 21st in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: governance and impact. At the sub-pillar level, it outperforms upper-middle-income countries in six of the twelve sub-pillars: Access, Governments, Regulation, Inclusion, Quality of Life and SDG Contribution.

The Americas
Colombia is ranked 10th within The Americas (Figure 4, right panel). It has a score above the regional average in two of the four pillars: people and governance. With regard to sub-pillars, it outperforms the average in The Americas in four of the twelve sub-pillars: Access, Governments, Regulation and Inclusion.

Figure 4: Performance of Colombia against its income group and region, overall and by pillar
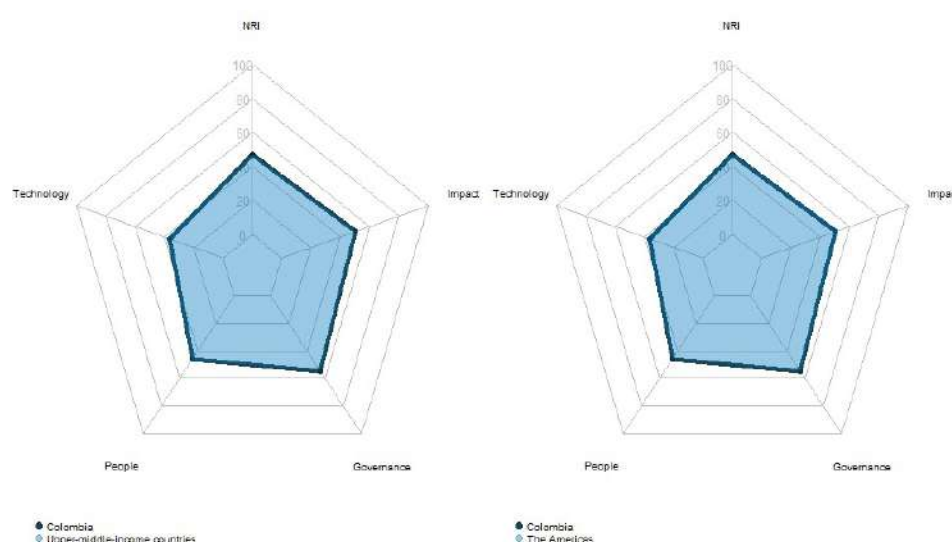
Table 2: Colombia scores vs. averages of its income group and region, overall and by pillar

Dimension	Colombia	Upper-middle-income countries	The Americas
NRI	46.81	47.39	47.67
Technology	36.44	38.42	38.26
People	45.78	46.66	45.24
Governance	54.76	54.31	54.59
Impact	50.27	50.17	52.61

Strongest and weakest indicators

The indicators where Colombia performs particularly well include e-commerce legislation, Gender gap in Internet use, and SDG 7: Affordable and Clean Energy (Table 3). By contrast, the economy's weakest indicators include Professionals, Income inequality, and Rural gap in use of digital payments.

Table 3: Top-ranked and bottom-ranked indicators of Colombia

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Socioeconomic gap in use of digital payments	84
Gender gap in Internet use	8	Mobile apps development	86
SDG 7: Affordable and Clean Energy	10	Online access to financial account	86
International Internet bandwidth	17	ICT skills	89
Publication and use of open data	24	Mobile tariffs	91
Use of virtual social networks	27	Active mobile-broadband subscriptions	98
E-Participation	27	R&D expenditure by governments and higher education	100
Happiness	35	Rural gap in use of digital payments	108
SDG 5: Gender Equality	36	Income inequality	112
4G mobile network coverage	38	Professionals	118

NRI 2020 At-A-Glance: Colombia

Network Readiness Index   **Rank: 72 (out of 134)**   **Score: 46.81**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	77	36.44
1st sub-pillar: Access	75	59.74
2nd sub-pillar: Content	63	28.89
3rd sub-pillar: Future Technologies	94	20.68
B. People pillar	72	45.78
1st sub-pillar: Individuals	72	53.99
2nd sub-pillar: Businesses	73	40.59
3rd sub-pillar: Governments	69	42.77

Pillar/sub-pillar	Rank	Score
C. Governance pillar	70	54.76
1st sub-pillar: Trust	73	35.36
2nd sub-pillar: Regulation	65	66.69
3rd sub-pillar: Inclusion	74	62.25
D. Impact pillar	71	50.27
1st sub-pillar: Economy	83	20.25
2nd sub-pillar: Quality of Life	79	62.37
3rd sub-pillar: SDG Contribution	52	68.20

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	77	36.44
1st sub-pillar: Access	75	59.74
1.1.1 Mobile tariffs	91	49.55
1.1.2 Handset prices	56	49.24
1.1.3 Internet access	82	49.82
1.1.4 4G mobile network coverage	38	98.00
1.1.5 Fixed-broadband subscriptions	69	53.44
1.1.6 International Internet bandwidth	17	75.08
1.1.7 Internet access in schools	45	43.05
2nd sub-pillar: Content	63	28.89
1.2.1 GitHub commits	59	4.40
1.2.2 Wikipedia edits	68	43.36
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	86	54.02
3rd sub-pillar: Future Technologies	94	20.68
1.3.1 Adoption of emerging technologies	67	46.99
1.3.2 Investment in emerging technologies	67	38.85
1.3.3 ICT PCT patent applications	59	3.02
1.3.4 Computer software spending	75	14.34
1.3.5 Robot density	62	0.19
B. People pillar	72	45.78
1st sub-pillar: Individuals	72	53.99
2.1.1 Internet users	78	61.45
2.1.2 Active mobile-broadband subscriptions	98	19.65
2.1.3 Use of virtual social networks	27	69.07
2.1.4 Tertiary enrollment	51	40.14
2.1.5 Adult literacy rate	48	93.71
2.1.6 ICT skills	89	39.91
2nd sub-pillar: Businesses	73	40.59
2.2.1 Firms with website	42	67.70
2.2.2 Ease of doing business	63	70.45
2.2.3 Professionals	118	4.49
2.2.4 Technicians and associate professionals	56	37.56
2.2.5 Business use of digital tools	64	60.64
2.2.6 R&D expenditure by businesses	63	2.71
3rd sub-pillar: Governments	69	42.77
2.3.1 Government online services	48	75.76
2.3.2 Publication and use of open data	24	51.65
2.3.3 Government promotion of investment in emerging tech	64	38.11
2.3.4 R&D expenditure by governments and higher education	100	5.56

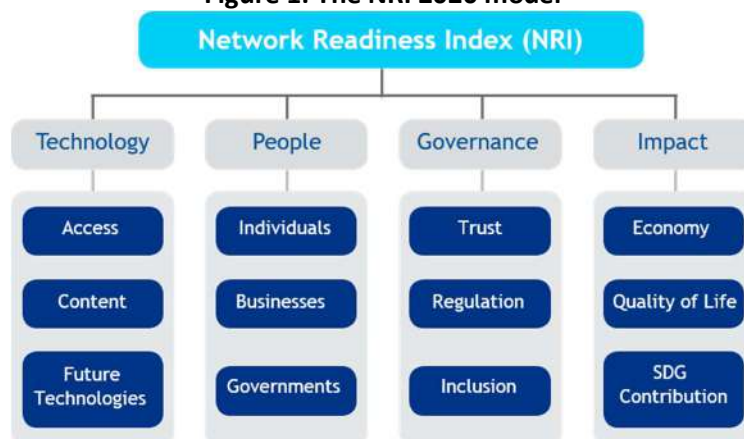| Indicator	Rank	Score
C. Governance pillar	70	54.76
1st sub-pillar: Trust	73	35.36
3.1.1 Secure Internet servers	64	53.15
3.1.2 Cybersecurity	75	60.35
3.1.3 Online access to financial account	86	17.15
3.1.4 Internet shopping	73	10.78
2nd sub-pillar: Regulation	65	66.69
3.2.1 Regulatory quality	54	58.63
3.2.2 ICT regulatory environment	84	78.77
3.2.3 Legal framework's adaptability to emerging technologies	69	39.33
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	52	56.70
3rd sub-pillar: Inclusion	74	62.25
3.3.1 E-Participation	27	86.42
3.3.2 Socioeconomic gap in use of digital payments	84	55.86
3.3.3 Availability of local online content	78	53.85
3.3.4 Gender gap in Internet use	8	69.45
3.3.5 Rural gap in use of digital payments	108	45.66
D. Impact pillar	71	50.27
1st sub-pillar: Economy	83	20.25
4.1.1 Medium and high-tech industry	66	28.92
4.1.2 High-tech exports	63	13.77
4.1.3 PCT patent applications	56	0.79
4.1.4 Labor productivity per employee	76	20.73
4.1.5 Prevalence of gig economy	80	37.01
2nd sub-pillar: Quality of Life	79	62.37
4.2.1 Happiness	35	71.89
4.2.2 Freedom to make life choices	66	75.91
4.2.3 Income inequality	112	32.47
4.2.4 Healthy life expectancy at birth	52	69.19
3rd sub-pillar: SDG Contribution	52	68.20
4.3.1 SDG 3: Good Health and Well-Being	39	78.69
4.3.2 SDG 4: Quality Education	69	24.72
4.3.3 SDG 5: Gender Equality	36	80.75
4.3.4 SDG 7: Affordable and Clean Energy	10	92.05
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* Confidential data

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Network Readiness Index 2020 Costa Rica

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
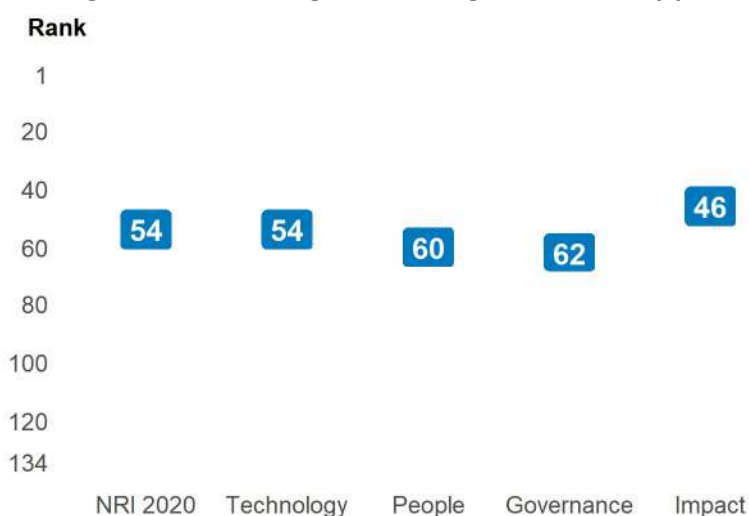
Figure 1: The NRI 2020 model

Global NRI position of Costa Rica

Costa Rica ranks 54th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Costa Rica global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Costa Rica relate to Individuals, Quality of Life and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the Inclusion, Trust and Governments sub-pillars.

Table 1: Costa Rica rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	30	Businesses	59
Quality of Life	37	Economy	61
Regulation	42	Access	67
Future Technologies	43	Inclusion	67
SDG Contribution	49	Trust	78
Content	50	Governments	85

NRI score and income

Figure 3 shows the position of Costa Rica in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Costa Rica is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
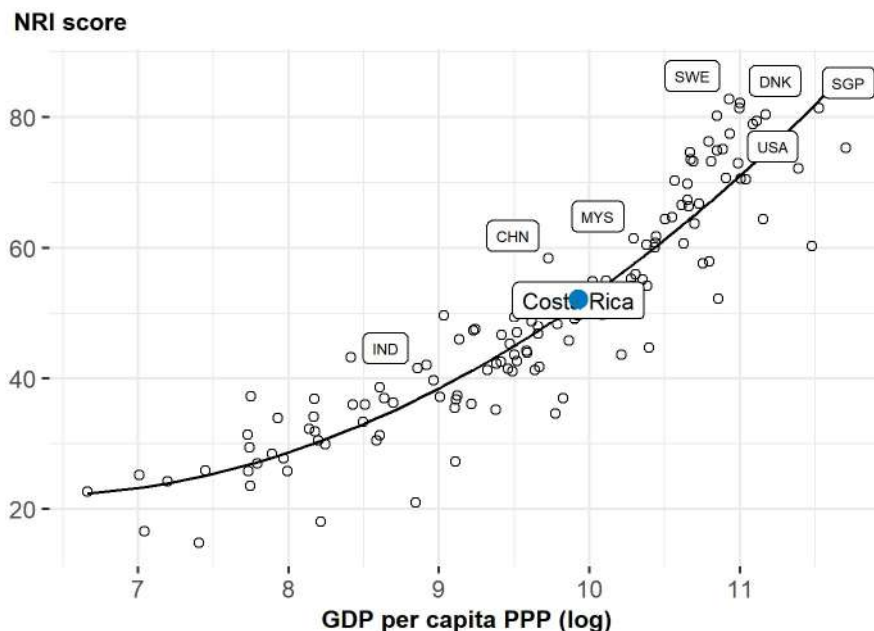
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Costa Rica belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region
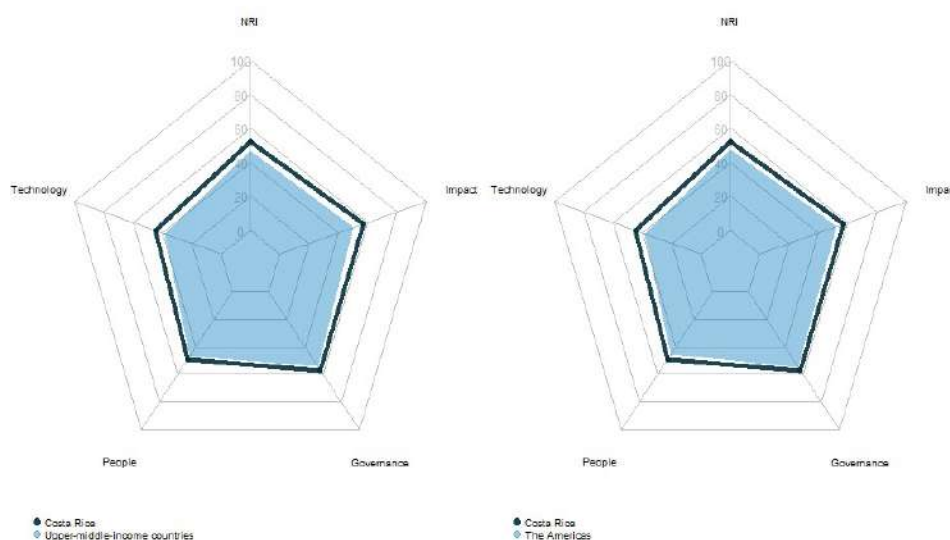
Upper-middle-income countries
Costa Rica is ranked 7th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in ten of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

The Americas
Costa Rica is ranked 5th within The Americas (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in The Americas in ten of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Costa Rica against its income group and region, overall and by pillar

Table 2: Costa Rica scores vs. averages of its income group and region, overall and by pillar

Dimension	Costa Rica	Upper-middle-income countries	The Americas
NRI	52.15	47.39	47.67
Technology	44.64	38.42	38.26
People	49.59	46.66	45.24
Governance	57.13	54.31	54.59
Impact	57.24	50.17	52.61

Strongest and weakest indicators

The indicators where Costa Rica performs particularly well include e-commerce legislation, Gender gap in Internet use, and Freedom to make life choices (Table 3). By contrast, the economy's weakest indicators include Cybersecurity, Income inequality, and Rural gap in use of digital payments.

Table 3: Top-ranked and bottom-ranked indicators of Costa Rica

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Ease of doing business	69
Gender gap in Internet use	10	Publication and use of open data	70
Freedom to make life choices	12	Government online services	71
SDG 7: Affordable and Clean Energy	16	Government promotion of investment in emerging technologies	73
Use of virtual social networks	17	E-Participation	76
Happiness	17	Medium and high-tech industry	77
Privacy protection by law content	20	Fixed-broadband subscriptions	88
High-tech exports	24	Rural gap in use of digital payments	98
Healthy life expectancy at birth	28	Income inequality	109
International Internet bandwidth	32	Cybersecurity	111

NRI 2020 At-A-Glance: Costa Rica

Network Readiness Index Rank: 54 (out of 134) Score: 52.15

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	54	44.64	C. Governance pillar	62	57.13
1st sub-pillar: Access	67	63.69	1st sub-pillar: Trust	78	33.24
2nd sub-pillar: Content	50	35.98	2nd sub-pillar: Regulation	42	74.88
3rd sub-pillar: Future Technologies	43	34.25	3rd sub-pillar: Inclusion	67	63.28
B. People pillar	60	49.59	D. Impact pillar	46	57.24
1st sub-pillar: Individuals	30	65.70	1st sub-pillar: Economy	61	28.01
2nd sub-pillar: Businesses	59	46.34	2nd sub-pillar: Quality of Life	37	74.78
3rd sub-pillar: Governments	85	36.75	3rd sub-pillar: SDG Contribution	49	68.94

The Network Readiness Index in detail

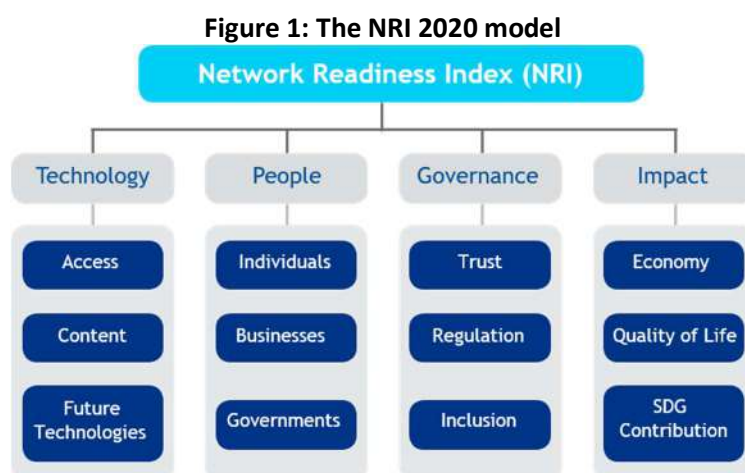| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	54	44.64	**C. Governance pillar**	62	57.13
1st sub-pillar: Access	67	63.69	*1st sub-pillar: Trust*	78	33.24
1.1.1 Mobile tariffs	35	74.54	3.1.1 Secure Internet servers	62	57.28
1.1.2 Handset prices	51	52.49	3.1.2 Cybersecurity	111	23.08
1.1.3 Internet access	57	73.01	3.1.3 Online access to financial account	65	29.47
1.1.4 4G mobile network coverage	69	89.90	3.1.4 Internet shopping	55	23.13
1.1.5 Fixed-broadband subscriptions	88	23.71	*2nd sub-pillar: Regulation*	42	74.88
1.1.6 International Internet bandwidth	32	72.96	3.2.1 Regulatory quality	47	61.97
1.1.7 Internet access in schools	39	59.24	3.2.2 ICT regulatory environment	61	85.72
2nd sub-pillar: Content	50	35.98	3.2.3 Legal framework's adaptability to emerging technologies	60	43.34
1.2.1 GitHub commits	47	10.05	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	52	57.36	3.2.5 Privacy protection by law content	20	83.34
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	67	63.28
1.2.4 Mobile apps development	50	69.46	3.3.1 E-Participation	76	64.20
3rd sub-pillar: Future Technologies	43	34.25	3.3.2 Socioeconomic gap in use of digital payments	59	70.91
1.3.1 Adoption of emerging technologies	43	57.76	3.3.3 Availability of local online content	67	60.19
1.3.2 Investment in emerging technologies	48	48.38	3.3.4 Gender gap in Internet use	10	68.61
1.3.3 ICT PCT patent applications	52	6.78	3.3.5 Rural gap in use of digital payments	98	52.52
1.3.4 Computer software spending	47	24.10	**D. Impact pillar**	46	57.24
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	61	28.01
B. People pillar	60	49.59	4.1.1 Medium and high-tech industry	77	26.40
1st sub-pillar: Individuals	30	65.70	4.1.2 High-tech exports	24	35.00
2.1.1 Internet users	55	73.64	4.1.3 PCT patent applications	48	1.08
2.1.2 Active mobile-broadband subscriptions	32	37.89	4.1.4 Labor productivity per employee	56	29.51
2.1.3 Use of virtual social networks	17	73.20	4.1.5 Prevalence of gig economy	51	48.05
2.1.4 Tertiary enrollment	52	40.05	*2nd sub-pillar: Quality of Life*	37	74.78
2.1.5 Adult literacy rate	32	97.28	4.2.1 Happiness	17	84.61
2.1.6 ICT skills	32	72.12	4.2.2 Freedom to make life choices	12	93.80
2nd sub-pillar: Businesses	59	46.34	4.2.3 Income inequality	109	38.66
2.2.1 Firms with website	62	51.66	4.2.4 Healthy life expectancy at birth	28	82.05
2.2.2 Ease of doing business	69	69.00	*3rd sub-pillar: SDG Contribution*	49	68.94
2.2.3 Professionals	64	25.53	4.3.1 SDG 3: Good Health and Well-Being	34	80.33
2.2.4 Technicians and associate professionals	34	55.11	4.3.2 SDG 4: Quality Education	63	29.00
2.2.5 Business use of digital tools	37	73.40	4.3.3 SDG 5: Gender Equality	51	77.66
2.2.6 R&D expenditure by businesses	59	3.33	4.3.4 SDG 7: Affordable and Clean Energy	16	90.10
3rd sub-pillar: Governments	85	36.75	.	.	.
2.3.1 Government online services	71	67.28			
2.3.2 Publication and use of open data	70	19.87			
2.3.3 Government promotion of investment in emerging tech	73	34.44			
2.3.4 R&D expenditure by governments and higher education	65	25.40			

* Confidential data

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Network Readiness Index 2020 Côte d'Ivoire

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Côte d'Ivoire

Côte d'Ivoire ranks 115th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Côte d'Ivoire global ranking, overall and by pillar
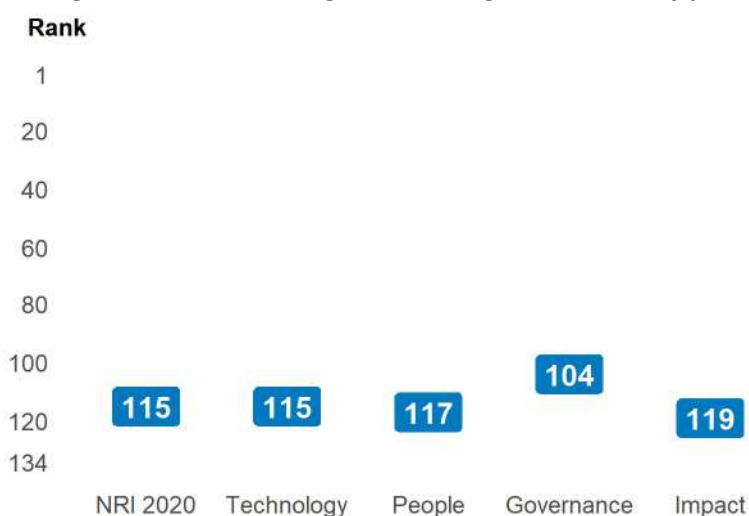
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Côte d'Ivoire relate to Regulation, Future Technologies and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Inclusion, SDG Contribution and Content sub-pillars.

Table 1: Côte d'Ivoire rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	86	Governments	110
Future Technologies	89	Individuals	112
Economy	91	Quality of Life	116
Trust	99	Inclusion	118
Businesses	107	SDG Contribution	121
Access	108	Content	127

NRI score and income

Figure 3 shows the position of Côte d'Ivoire in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Côte d'Ivoire is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
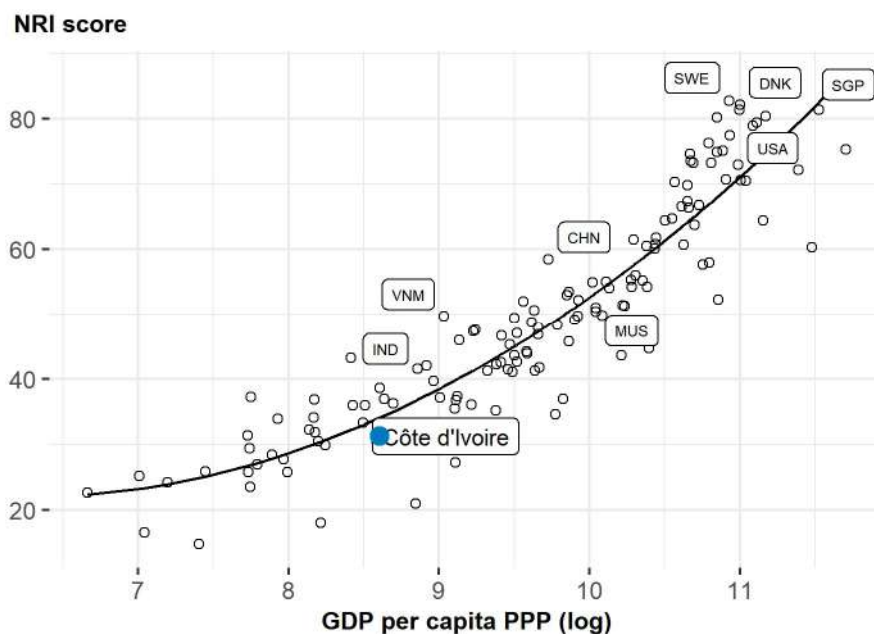
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Côte d'Ivoire belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries
Côte d'Ivoire is ranked 27th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in one of the twelve sub-pillars: Regulation.

Africa
Côte d'Ivoire is ranked 13th within Africa (Figure 4, right panel). It has a score above the regional average in two of the four pillars: nri.score, people and governance. With regard to sub-pillars, it outperforms the average in Africa in eight of the twelve sub-pillars: Access, Future Technologies, Individuals, Businesses, Trust, Regulation, Economy and Quality of Life.

Figure 4: Performance of Côte d'Ivoire against its income group and region, overall and by pillar
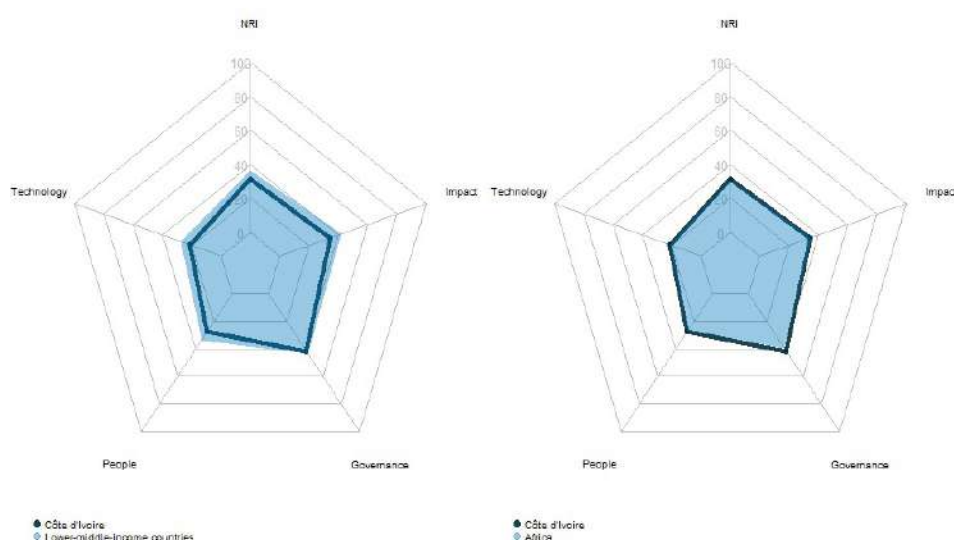
Table 2: Côte d'Ivoire scores vs. averages of its income group and region, overall and by pillar

Dimension	Côte d'Ivoire	Lower-middle-income countries	Africa
NRI	31.23	36.72	30.62
Technology	21.41	27.72	21.47
People	27.60	33.88	26.75
Governance	41.55	43.15	39.31
Impact	34.35	42.15	34.94

Strongest and weakest indicators

The indicators where Côte d'Ivoire performs particularly well include e-commerce legislation, Government promotion of investment in emerging technologies, and Prevalence of gig economy (Table 3). By contrast, the economy's weakest indicators include Healthy life expectancy at birth, SDG 5: Gender Equality, and Mobile apps development.

Table 3: Top-ranked and bottom-ranked indicators of Côte d'Ivoire

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Internet access	116
Government promotion of investment in emerging technologies	57	International Internet bandwidth	117
Prevalence of gig economy	63	ICT regulatory environment	118
Business use of digital tools	70	GitHub commits	119
High-tech exports	70	Computer software spending	119
Socioeconomic gap in use of digital payments	71	Firms with website	120
Online access to financial account	74	Labor productivity per employee	120
Happiness	81	Mobile apps development	129
Legal framework's adaptability to emerging technologies	83	Healthy life expectancy at birth	131
Regulatory quality	84	SDG 5: Gender Equality	131

NRI 2020 At-A-Glance: Côte d'Ivoire

Network Readiness Index   Rank: 115 (out of 134)   Score: 31.23

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	115	21.41	C. Governance pillar	104	41.55
1st sub-pillar: Access	108	35.24	1st sub-pillar: Trust	99	26.72
2nd sub-pillar: Content	127	6.63	2nd sub-pillar: Regulation	86	59.25
3rd sub-pillar: Future Technologies	89	22.37	3rd sub-pillar: Inclusion	118	38.70
B. People pillar	117	27.60	D. Impact pillar	119	34.35
1st sub-pillar: Individuals	112	27.39	1st sub-pillar: Economy	91	18.77
2nd sub-pillar: Businesses	107	30.06	2nd sub-pillar: Quality of Life	116	43.88
3rd sub-pillar: Governments	110	25.36	3rd sub-pillar: SDG Contribution	121	40.39

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	115	21.41	**C. Governance pillar**	104	41.55
1st sub-pillar: Access	108	35.24	*1st sub-pillar: Trust*	99	26.72
1.1.1 Mobile tariffs	97	48.05	3.1.1 Secure Internet servers	113	30.35
1.1.2 Handset prices	97	32.38	3.1.2 Cybersecurity	86	48.54
1.1.3 Internet access	116	15.62	3.1.3 Online access to financial account	74	23.87
1.1.4 4G mobile network coverage	101	55.00	3.1.4 Internet shopping	99	4.12
1.1.5 Fixed-broadband subscriptions	106	6.15	*2nd sub-pillar: Regulation*	86	59.25
1.1.6 International Internet bandwidth	117	54.23	3.2.1 Regulatory quality	84	47.21
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	118	58.88
2nd sub-pillar: Content	127	6.63	3.2.3 Legal framework's adaptability to emerging technologies	83	30.90
1.2.1 GitHub commits	119	0.16	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	115	8.12	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	118	38.70
1.2.4 Mobile apps development	129	17.97	3.3.1 E-Participation	113	38.28
3rd sub-pillar: Future Technologies	89	22.37	3.3.2 Socioeconomic gap in use of digital payments	71	62.90
1.3.1 Adoption of emerging technologies	88	37.49	3.3.3 Availability of local online content	110	33.20
1.3.2 Investment in emerging technologies	99	28.47	3.3.4 Gender gap in Internet use	86	4.57
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	90	54.56
1.3.4 Computer software spending	119	1.15	**D. Impact pillar**	119	34.35
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	91	18.77
B. People pillar	117	27.60	4.1.1 Medium and high-tech industry	90	18.92
1st sub-pillar: Individuals	112	27.39	4.1.2 High-tech exports	70	12.90
2.1.1 Internet users	95	45.53	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	85	23.42	4.1.4 Labor productivity per employee	120	0.32
2.1.3 Use of virtual social networks	110	17.53	4.1.5 Prevalence of gig economy	63	42.96
2.1.4 Tertiary enrollment	110	6.27	*2nd sub-pillar: Quality of Life*	116	43.88
2.1.5 Adult literacy rate	103	32.00	4.2.1 Happiness	81	53.05
2.1.6 ICT skills	90	39.57	4.2.2 Freedom to make life choices	96	61.34
2nd sub-pillar: Businesses	107	30.06	4.2.3 Income inequality	86	55.41
2.2.1 Firms with website	120	9.98	4.2.4 Healthy life expectancy at birth	131	5.71
2.2.2 Ease of doing business	96	53.87	*3rd sub-pillar: SDG Contribution*	121	40.39
2.2.3 Professionals	110	10.78	4.3.1 SDG 3: Good Health and Well-Being	112	31.15
2.2.4 Technicians and associate professionals	97	17.96	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	70	57.73	4.3.3 SDG 5: Gender Equality	131	16.65
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	105	64.38
3rd sub-pillar: Governments	110	25.36	.	.	.
2.3.1 Government online services	111	43.63			
2.3.2 Publication and use of open data	90	11.48			
2.3.3 Government promotion of investment in emerging tech	57	39.78			
2.3.4 R&D expenditure by governments and higher education	98	6.55			

* Confidential data

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Network Readiness Index 2020 Croatia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
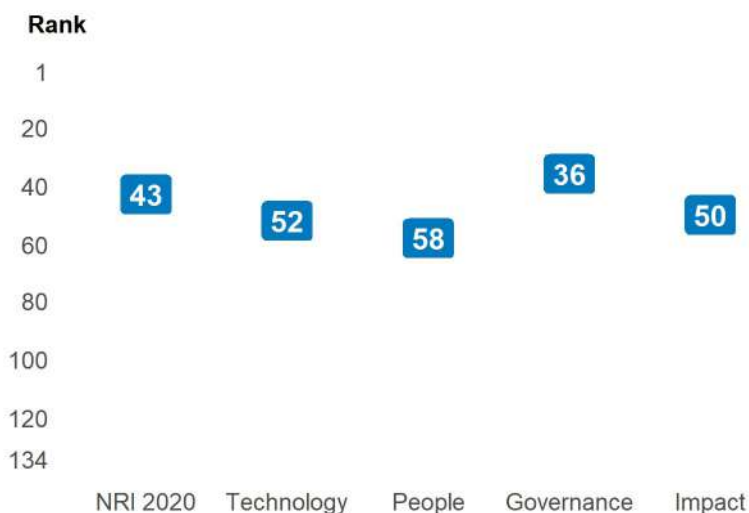
Figure 1: The NRI 2020 model
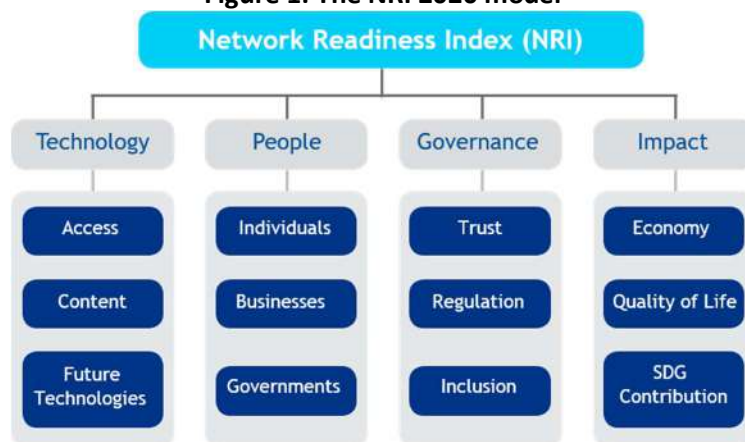
Global NRI position of Croatia

Croatia ranks 43rd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Croatia global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Croatia relate to Inclusion, Content and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Economy, Governments and Future Technologies sub-pillars.

Table 1: Croatia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Inclusion	33	Access	49
Content	38	Quality of Life	53
Trust	38	Individuals	62
Regulation	38	Economy	65
SDG Contribution	38	Governments	77
Businesses	43	Future Technologies	118

NRI score and income

Figure 3 shows the position of Croatia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Croatia is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
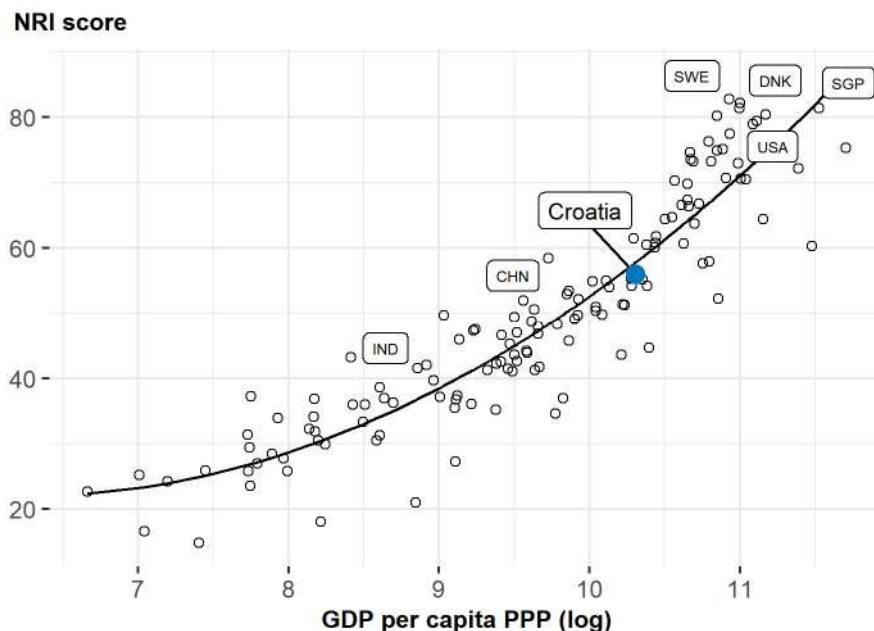
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Croatia belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Croatia is ranked 41st in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it trails high-income countries in all of them.

Europe
Croatia is ranked 29th within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in one of the twelve sub-pillars: Inclusion.

Figure 4: Performance of Croatia against its income group and region, overall and by pillar

Table 2: Croatia scores vs. averages of its income group and region, overall and by pillar

Dimension	Croatia	High-income countries	Europe
NRI	55.94	66.82	64.21
Technology	45.34	62.51	59.93
People	49.96	62.72	59.89
Governance	72.04	75.41	72.98
Impact	56.41	66.63	64.04

Strongest and weakest indicators

The indicators where Croatia performs particularly well include e-commerce legislation, Privacy protection by law content, and Rural gap in use of digital payments (Table 3). By contrast, the economy's weakest indicators include Investment in emerging technologies, Government promotion of investment in emerging technologies, and Prevalence of gig economy.

Table 3: Top-ranked and bottom-ranked indicators of Croatia

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Use of virtual social networks	74
Privacy protection by law content	6	ICT PCT patent applications	75
Rural gap in use of digital payments	6	Legal framework's adaptability to emerging technologies	79
ICT regulatory environment	11	Business use of digital tools	83
Adult literacy rate	16	Freedom to make life choices	93
International Internet bandwidth	20	ICT skills	96
Income inequality	20	Computer software spending	99
E-Participation	23	Prevalence of gig economy	103
Technicians and associate professionals	25	Government promotion of investment in emerging technologies	106
Secure Internet servers	25	Investment in emerging technologies	107

NRI 2020 At-A-Glance: Croatia

Network Readiness Index   Rank: 43 (out of 134)   Score: 55.94

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	52	45.34	C. Governance pillar	36	72.04
1st sub-pillar: Access	49	74.74	1st sub-pillar: Trust	38	63.01
2nd sub-pillar: Content	38	44.80	2nd sub-pillar: Regulation	38	77.22
3rd sub-pillar: Future Technologies	118	16.47	3rd sub-pillar: Inclusion	33	75.89
B. People pillar	58	49.96	D. Impact pillar	50	56.41
1st sub-pillar: Individuals	62	56.53	1st sub-pillar: Economy	65	25.55
2nd sub-pillar: Businesses	43	53.43	2nd sub-pillar: Quality of Life	53	69.83
3rd sub-pillar: Governments	77	39.91	3rd sub-pillar: SDG Contribution	38	73.87

The Network Readiness Index in detail

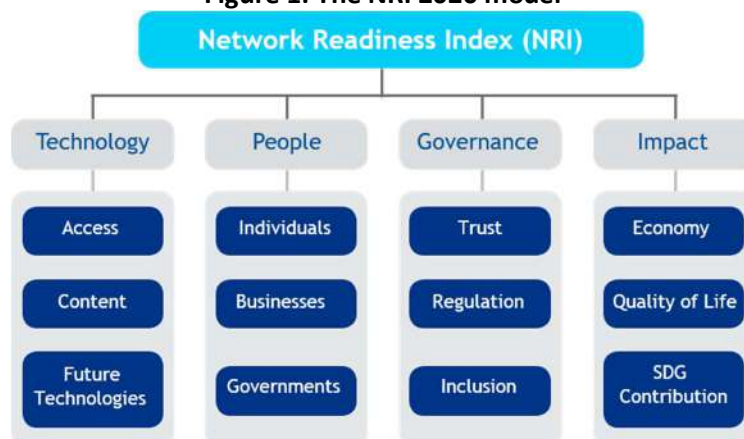| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	52	45.34	**C. Governance pillar**	36	72.04
1st sub-pillar: Access	49	74.74	*1st sub-pillar: Trust*	38	63.01
1.1.1 Mobile tariffs	44	70.84	3.1.1 Secure Internet servers	25	80.05
1.1.2 Handset prices	61	46.85	3.1.2 Cybersecurity	26	90.14
1.1.3 Internet access	42	81.47	3.1.3 Online access to financial account	40	43.89
1.1.4 4G mobile network coverage	35	98.50	3.1.4 Internet shopping	38	37.96
1.1.5 Fixed-broadband subscriptions	53	76.31	*2nd sub-pillar: Regulation*	38	77.22
1.1.6 International Internet bandwidth	20	74.45	3.2.1 Regulatory quality	49	61.27
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	11	96.14
2nd sub-pillar: Content	38	44.80	3.2.3 Legal framework's adaptability to emerging technologies	79	33.24
1.2.1 GitHub commits	35	21.73	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	40	68.23	3.2.5 Privacy protection by law content	6	95.45
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	33	75.89
1.2.4 Mobile apps development	41	74.70	3.3.1 E-Participation	23	88.89
3rd sub-pillar: Future Technologies	118	16.47	3.3.2 Socioeconomic gap in use of digital payments	28	86.57
1.3.1 Adoption of emerging technologies	57	49.87	3.3.3 Availability of local online content	55	65.84
1.3.2 Investment in emerging technologies	107	25.34	3.3.4 Gender gap in Internet use	63	57.70
1.3.3 ICT PCT patent applications	75	0.60	3.3.5 Rural gap in use of digital payments	6	80.46
1.3.4 Computer software spending	99	4.55	**D. Impact pillar**	50	56.41
1.3.5 Robot density	46	2.01	*1st sub-pillar: Economy*	65	25.55
B. People pillar	58	49.96	4.1.1 Medium and high-tech industry	46	39.18
1st sub-pillar: Individuals	62	56.53	4.1.2 High-tech exports	55	16.85
2.1.1 Internet users	58	72.20	4.1.3 PCT patent applications	43	2.34
2.1.2 Active mobile-broadband subscriptions	60	30.68	4.1.4 Labor productivity per employee	42	44.45
2.1.3 Use of virtual social networks	74	50.52	4.1.5 Prevalence of gig economy	103	24.91
2.1.4 Tertiary enrollment	34	49.38	*2nd sub-pillar: Quality of Life*	53	69.83
2.1.5 Adult literacy rate	16	98.91	4.2.1 Happiness	72	57.64
2.1.6 ICT skills	96	37.51	4.2.2 Freedom to make life choices	93	61.95
2nd sub-pillar: Businesses	43	53.43	4.2.3 Income inequality	20	84.02
2.2.1 Firms with website	29	75.93	4.2.4 Healthy life expectancy at birth	33	75.70
2.2.2 Ease of doing business	50	76.75	*3rd sub-pillar: SDG Contribution*	38	73.87
2.2.3 Professionals	34	43.54	4.3.1 SDG 3: Good Health and Well-Being	67	70.49
2.2.4 Technicians and associate professionals	25	61.01	4.3.2 SDG 4: Quality Education	39	52.24
2.2.5 Business use of digital tools	83	52.68	4.3.3 SDG 5: Gender Equality	33	81.52
2.2.6 R&D expenditure by businesses	40	10.69	4.3.4 SDG 7: Affordable and Clean Energy	49	82.80
3rd sub-pillar: Governments	77	39.91	.	.	.
2.3.1 Government online services	51	74.54			
2.3.2 Publication and use of open data	58	26.75			
2.3.3 Government promotion of investment in emerging tech	106	18.29			
2.3.4 R&D expenditure by governments and higher education	46	40.07			

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Network Readiness Index 2020 Cyprus

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
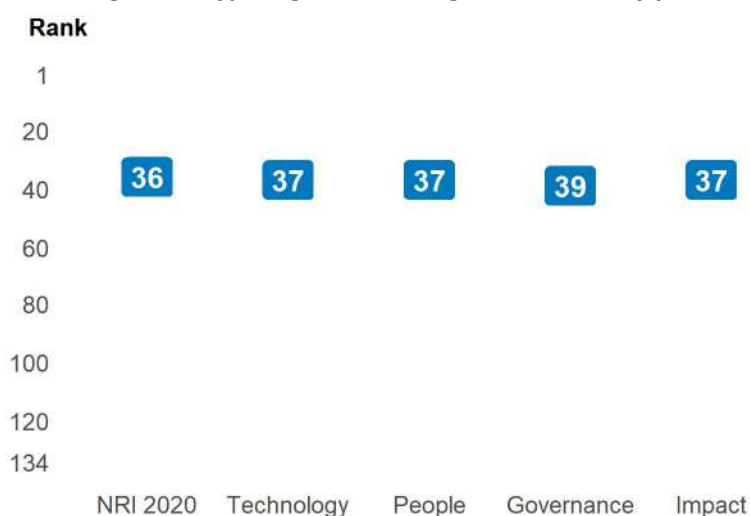
Figure 1: The NRI 2020 model

Global NRI position of Cyprus

Cyprus ranks 36th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology People and Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Cyprus global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Cyprus relate to Individuals, Inclusion and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Economy, Governments and Future Technologies sub-pillars.

Table 1: Cyprus rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	13	Trust	44
Inclusion	24	Businesses	45
Content	29	Access	47
Regulation	31	Economy	50
SDG Contribution	33	Governments	51
Quality of Life	34	Future Technologies	61

NRI score and income

Figure 3 shows the position of Cyprus in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Cyprus is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
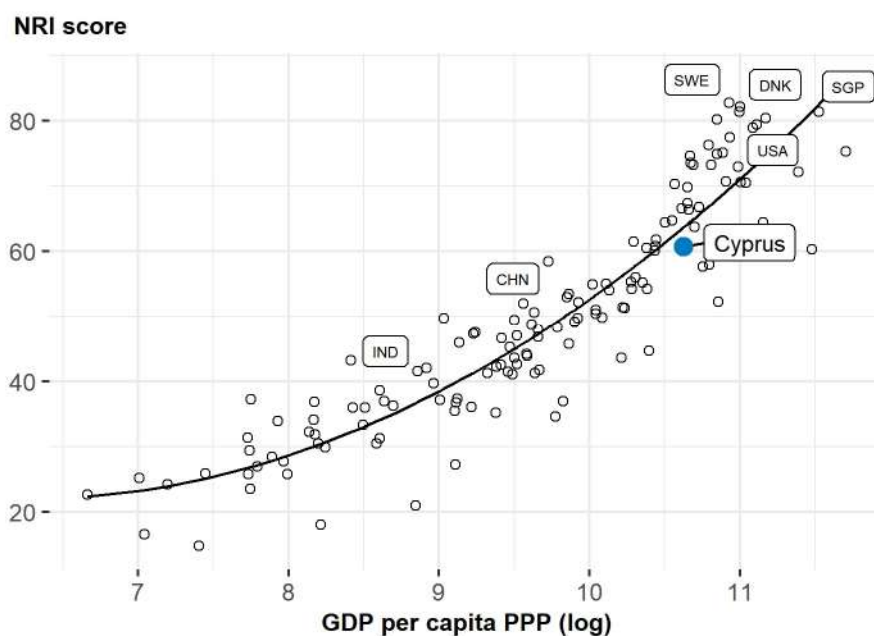
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Cyprus belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Cyprus is ranked 35th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in three of the twelve sub-pillars: Individuals, Inclusion and SDG Contribution.

Europe
Cyprus is ranked 26th within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in four of the twelve sub-pillars: Individuals, Regulation, Inclusion and SDG Contribution.

Figure 4: Performance of Cyprus against its income group and region, overall and by pillar

Table 2: Cyprus scores vs. averages of its income group and region, overall and by pillar

Dimension	Cyprus	High-income countries	Europe
NRI	60.67	66.82	64.21
Technology	52.89	62.51	59.93
People	57.33	62.72	59.89
Governance	71.16	75.41	72.98
Impact	61.31	66.63	64.04

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Strongest and weakest indicators

The indicators where Cyprus performs particularly well include e-commerce legislation, Healthy life expectancy at birth, and Use of virtual social networks (Table 3). By contrast, the economy's weakest indicators include Investment in emerging technologies, Freedom to make life choices, and Government promotion of investment in emerging technologies.

Table 3: Top-ranked and bottom-ranked indicators of Cyprus

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Medium and high-tech industry	62
Healthy life expectancy at birth	6	Business use of digital tools	66
Use of virtual social networks	7	R&D expenditure by governments and higher education	66
Privacy protection by law content	9	Computer software spending	71
International Internet bandwidth	11	Adoption of emerging technologies	72
Mobile apps development	12	Mobile tariffs	75
E-Participation	14	Prevalence of gig economy	86
Gender gap in Internet use	18	Government promotion of investment in emerging technologies	87
Internet domain registrations	19	Investment in emerging technologies	92
Government online services	20	Freedom to make life choices	92

NRI 2020 At-A-Glance: Cyprus

Network Readiness Index | Rank: 36 (out of 134) | Score: 60.67

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	37	52.89	C. Governance pillar	39	71.16
1st sub-pillar: Access	47	75.04	1st sub-pillar: Trust	44	56.32
2nd sub-pillar: Content	29	54.98	2nd sub-pillar: Regulation	31	79.79
3rd sub-pillar: Future Technologies	61	28.63	3rd sub-pillar: Inclusion	24	77.36
B. People pillar	37	57.33	D. Impact pillar	37	61.31
1st sub-pillar: Individuals	13	72.71	1st sub-pillar: Economy	50	31.85
2nd sub-pillar: Businesses	45	51.97	2nd sub-pillar: Quality of Life	34	75.41
3rd sub-pillar: Governments	51	47.30	3rd sub-pillar: SDG Contribution	33	76.67

The Network Readiness Index in detail

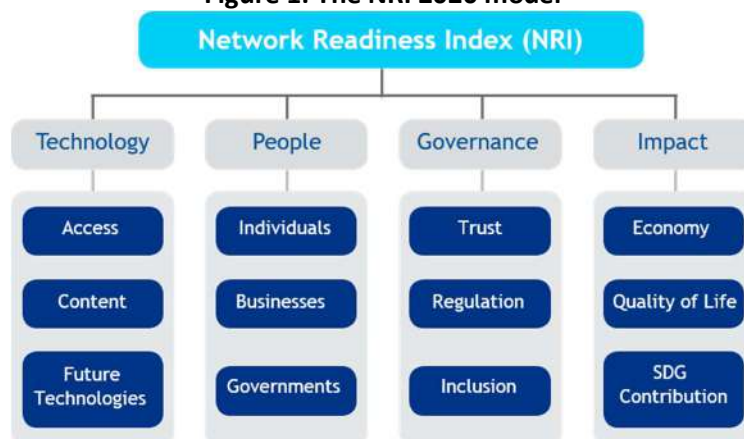| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	37	52.89	**C. Governance pillar**	39	71.16
1st sub-pillar: Access	47	75.04	*1st sub-pillar: Trust*	44	56.32
1.1.1 Mobile tariffs	75	57.37	3.1.1 Secure Internet servers	41	71.93
1.1.2 Handset prices	43	56.98	3.1.2 Cybersecurity	57	69.77
1.1.3 Internet access	31	86.13	3.1.3 Online access to financial account	44	42.11
1.1.4 4G mobile network coverage	44	97.53	3.1.4 Internet shopping	36	41.45
1.1.5 Fixed-broadband subscriptions	58	72.66	*2nd sub-pillar: Regulation*	31	79.79
1.1.6 International Internet bandwidth	11	79.59	3.2.1 Regulatory quality	32	73.82
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	56	86.49
2nd sub-pillar: Content	29	54.98	3.2.3 Legal framework's adaptability to emerging technologies	49	48.15
1.2.1 GitHub commits	39	14.04	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	35	72.39	3.2.5 Privacy protection by law content	9	90.50
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	24	77.36
1.2.4 Mobile apps development	12	89.13	3.3.1 E-Participation	14	95.06
3rd sub-pillar: Future Technologies	61	28.63	3.3.2 Socioeconomic gap in use of digital payments	37	82.14
1.3.1 Adoption of emerging technologies	72	44.07	3.3.3 Availability of local online content	43	72.24
1.3.2 Investment in emerging technologies	92	31.37	3.3.4 Gender gap in Internet use	18	67.33
1.3.3 ICT PCT patent applications	34	23.65	3.3.5 Rural gap in use of digital payments	56	70.01
1.3.4 Computer software spending	71	15.46	**D. Impact pillar**	37	61.31
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	50	31.85
B. People pillar	37	57.33	4.1.1 Medium and high-tech industry	62	32.27
1st sub-pillar: Individuals	13	72.71	4.1.2 High-tech exports	22	37.22
2.1.1 Internet users	29	84.31	4.1.3 PCT patent applications	39	2.88
2.1.2 Active mobile-broadband subscriptions	21	43.58	4.1.4 Labor productivity per employee	32	51.43
2.1.3 Use of virtual social networks	7	83.51	4.1.5 Prevalence of gig economy	86	35.44
2.1.4 Tertiary enrollment	24	55.32	*2nd sub-pillar: Quality of Life*	34	75.41
2.1.5 Adult literacy rate	24	98.33	4.2.1 Happiness	45	67.69
2.1.6 ICT skills	33	71.23	4.2.2 Freedom to make life choices	92	62.08
2nd sub-pillar: Businesses	45	51.97	4.2.3 Income inequality	23	81.44
2.2.1 Firms with website	36	71.98	4.2.4 Healthy life expectancy at birth	6	90.41
2.2.2 Ease of doing business	53	76.27	*3rd sub-pillar: SDG Contribution*	33	76.67
2.2.3 Professionals	26	46.00	4.3.1 SDG 3: Good Health and Well-Being	30	81.97
2.2.4 Technicians and associate professionals	37	53.04	4.3.2 SDG 4: Quality Education	44	47.16
2.2.5 Business use of digital tools	66	59.38	4.3.3 SDG 5: Gender Equality	44	79.67
2.2.6 R&D expenditure by businesses	52	5.16	4.3.4 SDG 7: Affordable and Clean Energy	31	86.71
3rd sub-pillar: Governments	51	47.30	.	.	.
2.3.1 Government online services	20	86.67			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	87	30.46			
2.3.4 R&D expenditure by governments and higher education	66	24.78			

* Confidential data

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Network Readiness Index 2020 Czech Republic

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
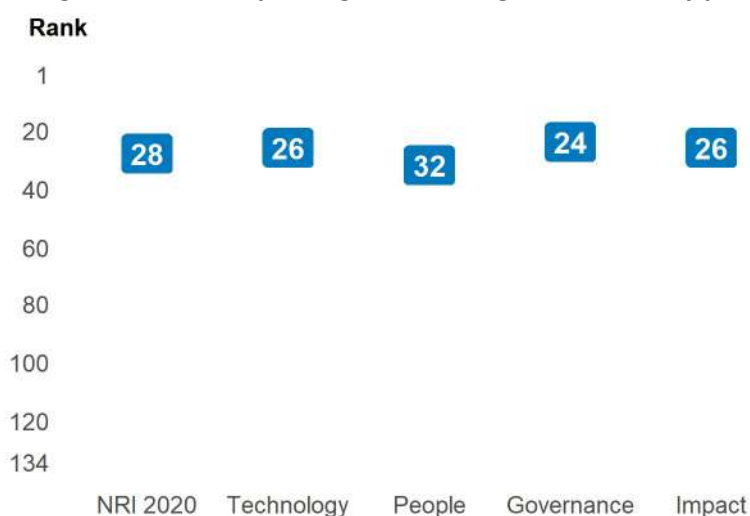
Figure 1: The NRI 2020 model

Global NRI position of Czech Republic

Czech Republic ranks 28th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Czech Republic global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Czech Republic relate to Quality of Life, Content and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Governments, Inclusion and Individuals sub-pillars.

Table 1: Czech Republic rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	18	Future Technologies	32
Content	20	SDG Contribution	32
Trust	22	Access	33
Businesses	24	Governments	33
Regulation	24	Inclusion	41
Economy	31	Individuals	61

NRI score and income

Figure 3 shows the position of Czech Republic in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Czech Republic is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
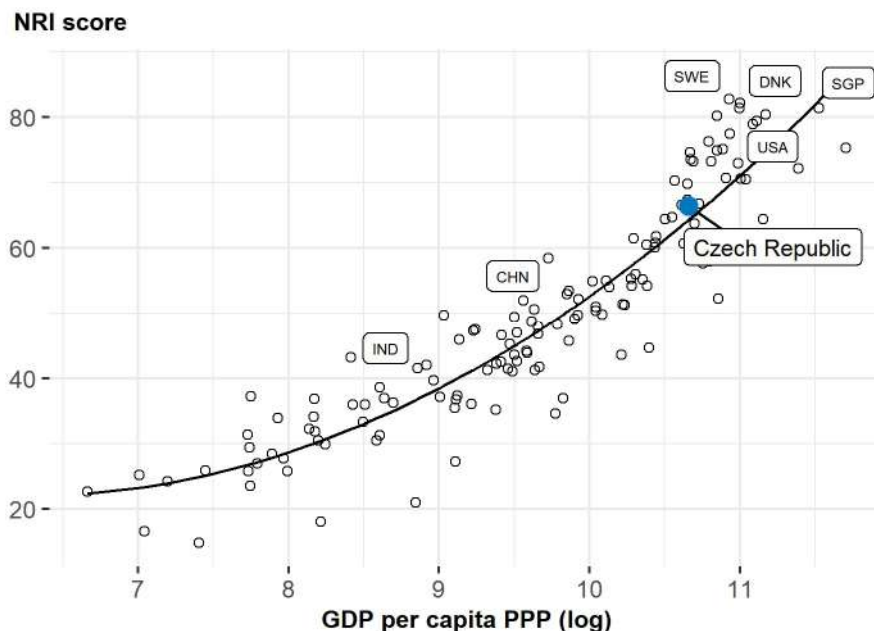
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Czech Republic belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Czech Republic is ranked 28th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: technology, governance and impact. At the sub-pillar level, it outperforms high-income countries in six of the twelve sub-pillars: Content, Businesses, Trust, Regulation, Quality of Life and SDG Contribution.

Europe
Czech Republic is ranked 20th within Europe (Figure 4, right panel). It has a score above the regional average in three of the four pillars: nri.score, technology, governance and impact. With regard to sub-pillars, it outperforms the average in Europe in nine of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Trust, Regulation, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Czech Republic against its income group and region, overall and by pillar

Table 2: Czech Republic scores vs. averages of its income group and region, overall and by pillar

Dimension	Czech Republic	High-income countries	Europe
NRI	66.33	66.82	64.21
Technology	62.90	62.51	59.93
People	59.30	62.72	59.89
Governance	75.92	75.41	72.98
Impact	67.22	66.63	64.04

Strongest and weakest indicators

The indicators where Czech Republic performs particularly well include e-commerce legislation, Income inequality, and Medium and high-tech industry (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, Freedom to make life choices, and Cybersecurity.

Table 3: Top-ranked and bottom-ranked indicators of Czech Republic

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Prevalence of gig economy	53
Income inequality	2	Rural gap in use of digital payments	55
Medium and high-tech industry	11	Gender gap in Internet use	59
4G mobile network coverage	12	International Internet bandwidth	60
Firms with website	12	Government online services	60
Secure Internet servers	12	E-Participation	64
Online access to financial account	12	Use of virtual social networks	68
Wikipedia edits	13	Cybersecurity	73
Technicians and associate professionals	13	Freedom to make life choices	76
Happiness	16	SDG 7: Affordable and Clean Energy	84

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NRI 2020 At-A-Glance: Czech Republic

Network Readiness Index   Rank: 28 (out of 134)   Score: 66.33

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	26	62.90	C. Governance pillar	24	75.92
1st sub-pillar: Access	33	80.34	1st sub-pillar: Trust	22	73.25
2nd sub-pillar: Content	20	64.33	2nd sub-pillar: Regulation	24	82.07
3rd sub-pillar: Future Technologies	32	44.04	3rd sub-pillar: Inclusion	41	72.44
B. People pillar	32	59.30	D. Impact pillar	26	67.22
1st sub-pillar: Individuals	61	56.54	1st sub-pillar: Economy	31	42.06
2nd sub-pillar: Businesses	24	64.94	2nd sub-pillar: Quality of Life	18	82.69
3rd sub-pillar: Governments	33	56.43	3rd sub-pillar: SDG Contribution	32	76.90

The Network Readiness Index in detail

| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	26	62.90	**C. Governance pillar**	24	75.92
1st sub-pillar: Access	33	80.34	*1st sub-pillar: Trust*	22	73.25
1.1.1 Mobile tariffs	27	79.73	3.1.1 Secure Internet servers	12	87.27
1.1.2 Handset prices	29	64.40	3.1.2 Cybersecurity	73	60.78
1.1.3 Internet access	45	80.43	3.1.3 Online access to financial account	12	75.65
1.1.4 4G mobile network coverage	12	99.80	3.1.4 Internet shopping	19	69.31
1.1.5 Fixed-broadband subscriptions	34	88.76	*2nd sub-pillar: Regulation*	24	82.07
1.1.6 International Internet bandwidth	60	68.91	3.2.1 Regulatory quality	23	79.20
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	33	90.35
2nd sub-pillar: Content	20	64.33	3.2.3 Legal framework's adaptability to emerging technologies	33	59.08
1.2.1 GitHub commits	18	49.05	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	13	85.14	3.2.5 Privacy protection by law content	23	81.72
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	41	72.44
1.2.4 Mobile apps development	29	81.91	3.3.1 E-Participation	64	71.61
3rd sub-pillar: Future Technologies	32	44.04	3.3.2 Socioeconomic gap in use of digital payments	50	76.14
1.3.1 Adoption of emerging technologies	24	72.11	3.3.3 Availability of local online content	18	86.28
1.3.2 Investment in emerging technologies	36	55.17	3.3.4 Gender gap in Internet use	59	58.09
1.3.3 ICT PCT patent applications	32	25.85	3.3.5 Rural gap in use of digital payments	55	70.07
1.3.4 Computer software spending	36	27.00	**D. Impact pillar**	26	67.22
1.3.5 Robot density	20	40.05	*1st sub-pillar: Economy*	31	42.06
B. People pillar	32	59.30	4.1.1 Medium and high-tech industry	11	66.96
1st sub-pillar: Individuals	61	56.54	4.1.2 High-tech exports	20	39.23
2.1.1 Internet users	37	80.45	4.1.3 PCT patent applications	32	5.43
2.1.2 Active mobile-broadband subscriptions	45	34.19	4.1.4 Labor productivity per employee	33	51.02
2.1.3 Use of virtual social networks	68	52.58	4.1.5 Prevalence of gig economy	53	47.65
2.1.4 Tertiary enrollment	40	46.59	*2nd sub-pillar: Quality of Life*	18	82.69
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	16	85.33
2.1.6 ICT skills	39	68.87	4.2.2 Freedom to make life choices	76	70.59
2nd sub-pillar: Businesses	24	64.94	4.2.3 Income inequality	2	98.20
2.2.1 Firms with website	12	85.69	4.2.4 Healthy life expectancy at birth	32	76.66
2.2.2 Ease of doing business	40	81.56	*3rd sub-pillar: SDG Contribution*	32	76.90
2.2.3 Professionals	41	38.85	4.3.1 SDG 3: Good Health and Well-Being	39	78.69
2.2.4 Technicians and associate professionals	13	74.12	4.3.2 SDG 4: Quality Education	20	65.48
2.2.5 Business use of digital tools	26	80.65	4.3.3 SDG 5: Gender Equality	45	79.64
2.2.6 R&D expenditure by businesses	18	28.76	4.3.4 SDG 7: Affordable and Clean Energy	84	73.05
3rd sub-pillar: Governments	33	56.43	.	.	.
2.3.1 Government online services	60	71.51			
2.3.2 Publication and use of open data	31	44.44			
2.3.3 Government promotion of investment in emerging tech	39	49.33			
2.3.4 R&D expenditure by governments and higher education	19	60.45			

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Network Readiness Index 2020 Democratic Republic of the Congo

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model
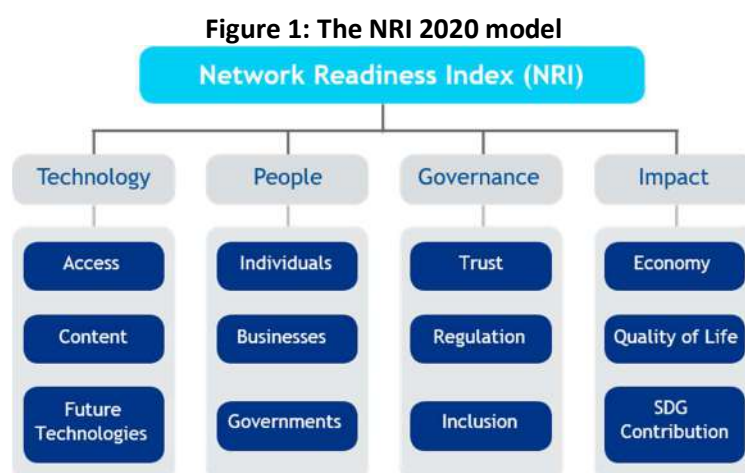
Global NRI position of Democratic Republic of the Congo

DR Congo ranks 133rd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People and Governance. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: DR Congo global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of DR Congo relate to Future Technologies, Quality of Life and Individuals, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Content and SDG Contribution sub-pillars.

Table 1: DR Congo rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	121	Trust	131
Quality of Life	121	Regulation	132
Individuals	125	Businesses	133
Governments	128	Access	134
Inclusion	129	Content	134
Economy	130	SDG Contribution	134

NRI score and income

Figure 3 shows the position of DR Congo in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, DR Congo is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
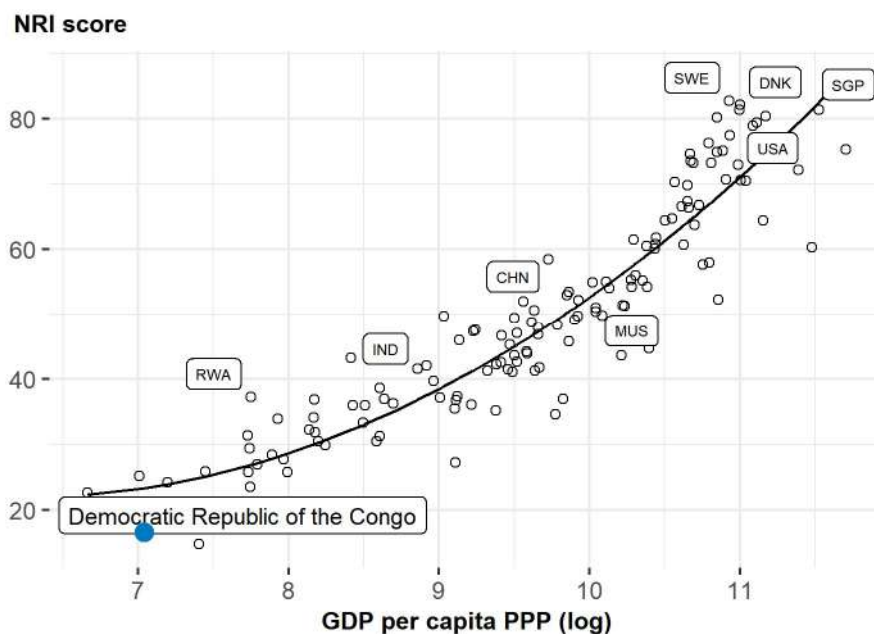
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Democratic Republic of the Congo belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Mauritius (MUS).

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Performance against its income group and region

Low-income countries
Democratic Republic of the Congo is ranked 14th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it trails low-income countries in all of them.

Africa
Democratic Republic of the Congo is ranked 30th within Africa (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of DR Congo against its income group and region, overall and by pillar
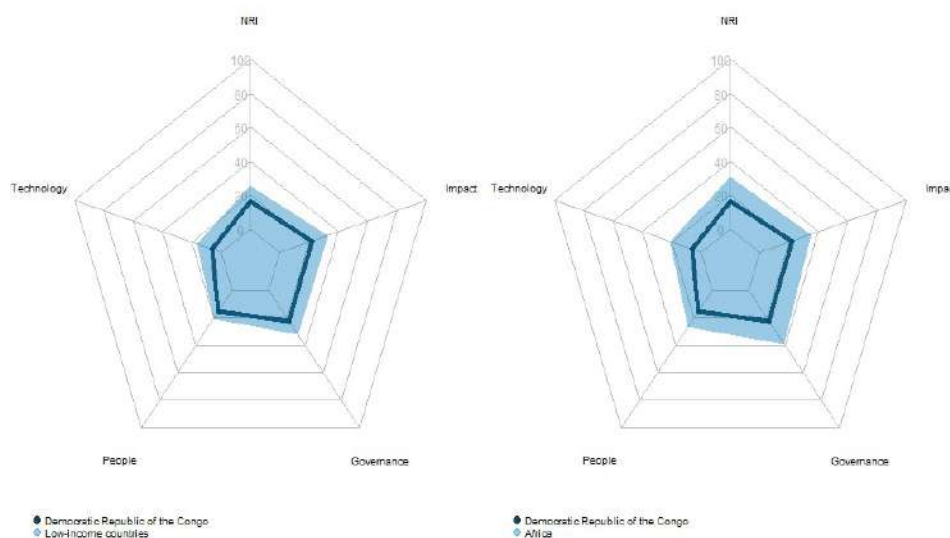
Table 2: DR Congo scores vs. averages of its income group and region, overall and by pillar

Dimension	DR Congo	Low-income countries	Africa
NRI	16.60	25.61	30.62
Technology	6.45	16.33	21.47
People	15.44	20.61	26.75
Governance	22.29	32.58	39.31
Impact	22.23	32.92	34.94

Strongest and weakest indicators

The indicators where DR Congo performs particularly well include R&D expenditure by governments and higher education, Online access to financial account, and Internet access in schools (Table 3). By contrast, the economy's weakest indicators include International Internet bandwidth, GitHub commits, Mobile tariffs, Internet access, Mobile apps development, and Cybersecurity.

Table 3: Top-ranked and bottom-ranked indicators of DR Congo

Strongest indicators	Rank	Weakest indicators	Rank
R&D expenditure by governments and higher education	52	Internet users	132
Online access to financial account	57	Use of virtual social networks	132
Internet access in schools	71	Government online services	132
ICT regulatory environment	83	Secure Internet servers	132
Adult literacy rate	84	Mobile tariffs	133
Technicians and associate professionals	85	Internet access	133
Publication and use of open data	87	Mobile apps development	133
Socioeconomic gap in use of digital payments	88	Cybersecurity	133
Income inequality	88	International Internet bandwidth	134
Freedom to make life choices	111	GitHub commits	134

NRI 2020 At-A-Glance: DR Congo

Network Readiness Index   Rank: 133 (out of 134)   Score: 16.60

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	134	6.45	C. Governance pillar	132	22.29
1st sub-pillar: Access	134	3.87	1st sub-pillar: Trust	131	11.36
2nd sub-pillar: Content	134	0.01	2nd sub-pillar: Regulation	132	26.74
3rd sub-pillar: Future Technologies	121	15.48	3rd sub-pillar: Inclusion	129	28.78
B. People pillar	132	15.44	D. Impact pillar	133	22.23
1st sub-pillar: Individuals	125	16.44	1st sub-pillar: Economy	130	7.49
2nd sub-pillar: Businesses	133	13.37	2nd sub-pillar: Quality of Life	121	40.43
3rd sub-pillar: Governments	128	16.51	3rd sub-pillar: SDG Contribution	134	18.77

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	134	6.45	**C. Governance pillar**	132	22.29
1st sub-pillar: Access	134	3.87	*1st sub-pillar: Trust*	131	11.36
1.1.1 Mobile tariffs	133	0.00	3.1.1 Secure Internet servers	132	9.62
1.1.2 Handset prices	116	20.27	3.1.2 Cybersecurity	133	0.00
1.1.3 Internet access	133	2.94	3.1.3 Online access to financial account	57	33.51
1.1.4 4G mobile network coverage	130	0.00	3.1.4 Internet shopping	115	2.31
1.1.5 Fixed-broadband subscriptions	NA	NA	*2nd sub-pillar: Regulation*	132	26.74
1.1.6 International Internet bandwidth	134	0.00	3.2.1 Regulatory quality	131	18.95
1.1.7 Internet access in schools	71	0.00	3.2.2 ICT regulatory environment	83	79.15
2nd sub-pillar: Content	134	0.01	3.2.3 Legal framework's adaptability to emerging technologies	123	8.86
1.2.1 GitHub commits	134	0.00	3.2.4 e-commerce legislation	131	0.00
1.2.2 Wikipedia edits	NA	NA	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	129	28.78
1.2.4 Mobile apps development	133	0.03	3.3.1 E-Participation	131	17.29
3rd sub-pillar: Future Technologies	121	15.48	3.3.2 Socioeconomic gap in use of digital payments	88	54.09
1.3.1 Adoption of emerging technologies	124	13.47	3.3.3 Availability of local online content	131	10.40
1.3.2 Investment in emerging technologies	122	17.50	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	117	33.34
1.3.4 Computer software spending	NA	NA	**D. Impact pillar**	133	22.23
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	130	7.49
B. People pillar	132	15.44	4.1.1 Medium and high-tech industry	NA	NA
1st sub-pillar: Individuals	125	16.44	4.1.2 High-tech exports	NA	NA
2.1.1 Internet users	132	6.14	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	128	4.85	4.1.4 Labor productivity per employee	118	0.88
2.1.3 Use of virtual social networks	132	1.55	4.1.5 Prevalence of gig economy	118	14.10
2.1.4 Tertiary enrollment	117	4.26	*2nd sub-pillar: Quality of Life*	121	40.43
2.1.5 Adult literacy rate	84	70.47	4.2.1 Happiness	118	31.80
2.1.6 ICT skills	131	11.36	4.2.2 Freedom to make life choices	111	56.00
2nd sub-pillar: Businesses	133	13.37	4.2.3 Income inequality	88	53.87
2.2.1 Firms with website	122	8.71	4.2.4 Healthy life expectancy at birth	124	20.05
2.2.2 Ease of doing business	NA	NA	*3rd sub-pillar: SDG Contribution*	134	18.77
2.2.3 Professionals	117	5.01	4.3.1 SDG 3: Good Health and Well-Being	125	21.31
2.2.4 Technicians and associate professionals	85	23.37	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	125	16.41	4.3.3 SDG 5: Gender Equality	123	32.77
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	131	0.00
3rd sub-pillar: Governments	128	16.51	.	.	.
2.3.1 Government online services	132	10.30			
2.3.2 Publication and use of open data	87	12.38			
2.3.3 Government promotion of investment in emerging tech	121	8.01			
2.3.4 R&D expenditure by governments and higher education	52	35.36			

* Confidential data

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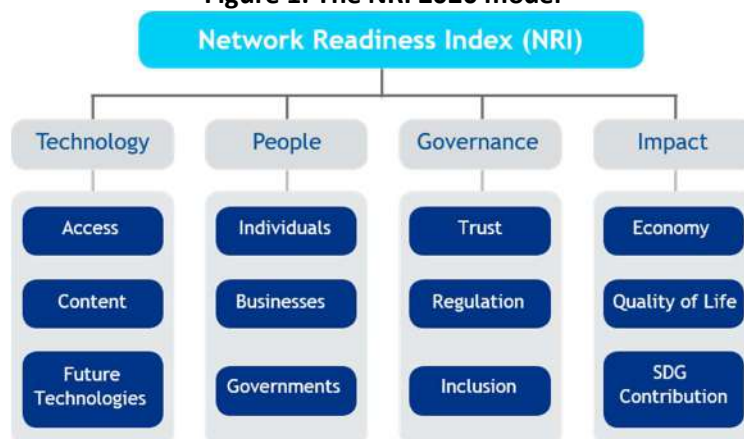
Network Readiness Index 2020 Denmark

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
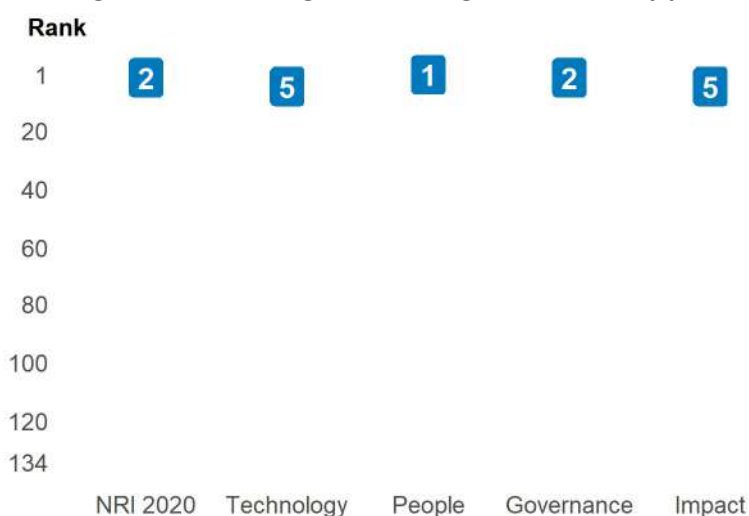
Figure 1: The NRI 2020 model

Global NRI position of Denmark

Denmark ranks 2nd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Technology and Impact.

Figure 2: Denmark global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Denmark relate to Governments, Trust and Businesses, among others (Table 1). More could be done, though, to improve the economy's performances in the Economy, Access and Inclusion sub-pillars.

Table 1: Denmark rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	1	Individuals	7
Trust	1	Regulation	8
Businesses	4	Future Technologies	9
Quality of Life	4	Economy	12
Content	5	Access	13
SDG Contribution	6	Inclusion	13

NRI score and income

Figure 3 shows the position of Denmark in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Denmark is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
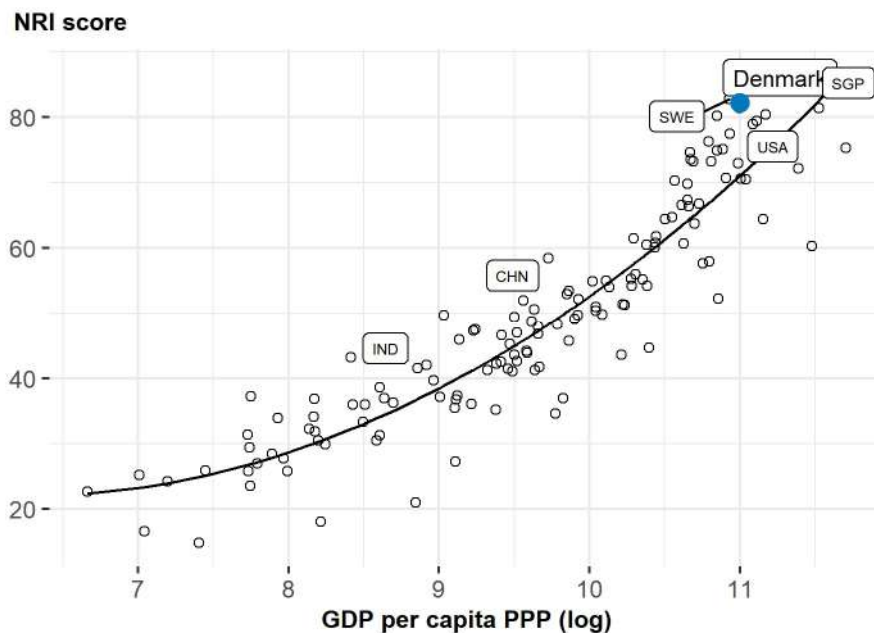
Note: SWE = Sweden (rank: 1), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Denmark belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Denmark is ranked 2nd in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it has a higher score than the average of high-income countries in all of them.

Europe
Denmark is ranked 2nd within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of Denmark against its income group and region, overall and by pillar
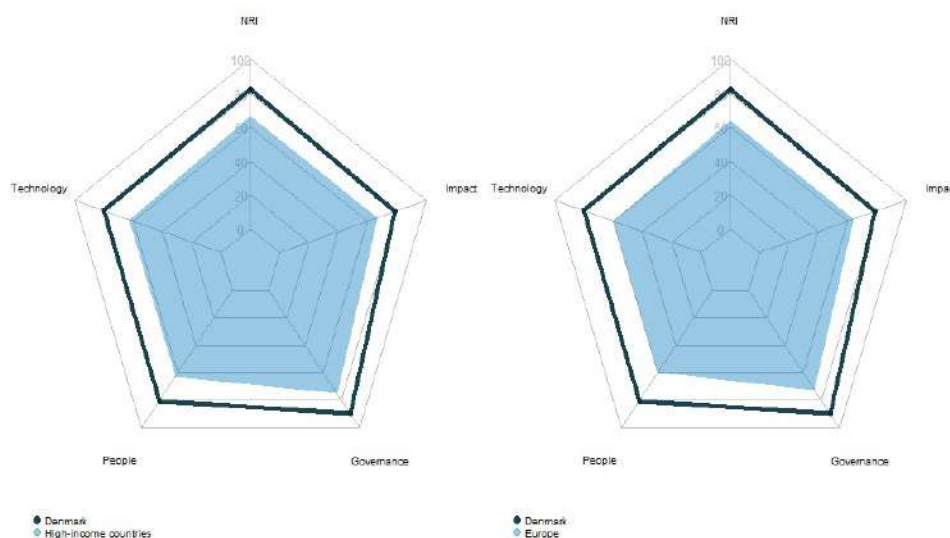
Table 2: Denmark scores vs. averages of its income group and region, overall and by pillar

Dimension	Denmark	High-income countries	Europe
NRI	82.19	66.82	64.21
Technology	79.71	62.51	59.93
People	80.81	62.72	59.89
Governance	89.80	75.41	72.98
Impact	78.45	66.63	64.04

Strongest and weakest indicators

The indicators where Denmark performs particularly well include 4G mobile network coverage, Internet access in schools, and R&D expenditure by governments and higher education (Table 3). By contrast, the economy's weakest indicators include SDG 5: Gender Equality, ICT regulatory environment, and International Internet bandwidth.

Table 3: Top-ranked and bottom-ranked indicators of Denmark

Strongest indicators	Rank	Weakest indicators	Rank
4G mobile network coverage	1	Cybersecurity	23
Internet access in schools	1	Healthy life expectancy at birth	24
R&D expenditure by governments and higher education	1	Gender gap in Internet use	26
Secure Internet servers	1	Privacy protection by law content	30
Internet shopping	1	Mobile tariffs	31
e-commerce legislation	1	Availability of local online content	33
Freedom to make life choices	1	High-tech exports	34
Firms with website	2	International Internet bandwidth	41
Online access to financial account	2	ICT regulatory environment	43
Socioeconomic gap in use of digital payments	2	SDG 5: Gender Equality	48

NRI 2020 At-A-Glance: Denmark

Network Readiness Index   Rank: 2 (out of 134)   Score: 82.19

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	5	79.71	C. Governance pillar	2	89.80
1st sub-pillar: Access	13	86.73	1st sub-pillar: Trust	1	97.17
2nd sub-pillar: Content	5	82.48	2nd sub-pillar: Regulation	8	88.61
3rd sub-pillar: Future Technologies	9	69.92	3rd sub-pillar: Inclusion	13	83.61
B. People pillar	1	80.81	D. Impact pillar	5	78.45
1st sub-pillar: Individuals	7	73.90	1st sub-pillar: Economy	12	58.05
2nd sub-pillar: Businesses	4	79.36	2nd sub-pillar: Quality of Life	4	92.99
3rd sub-pillar: Governments	1	89.16	3rd sub-pillar: SDG Contribution	6	84.32

The Network Readiness Index in detail

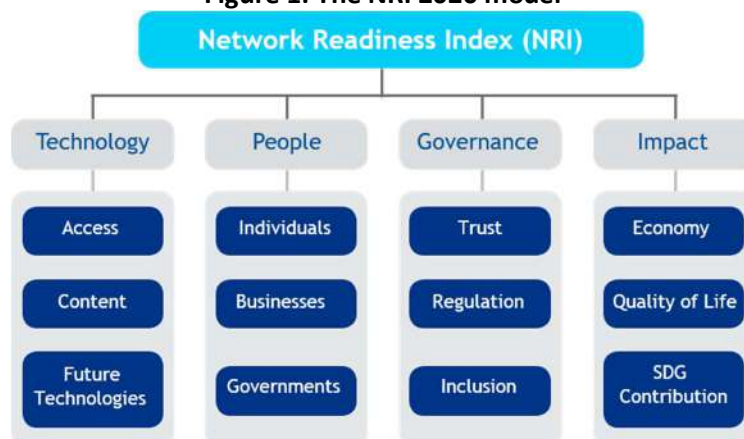| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	5	79.71	**C. Governance pillar**	2	89.80
1st sub-pillar: Access	13	86.73	*1st sub-pillar: Trust*	1	97.17
1.1.1 Mobile tariffs	31	77.33	3.1.1 Secure Internet servers	1	100.00
1.1.2 Handset prices	20	67.49	3.1.2 Cybersecurity	23	91.44
1.1.3 Internet access	8	96.99	3.1.3 Online access to financial account	2	97.24
1.1.4 4G mobile network coverage	1	100.00	3.1.4 Internet shopping	1	100.00
1.1.5 Fixed-broadband subscriptions	22	93.95	*2nd sub-pillar: Regulation*	8	88.61
1.1.6 International Internet bandwidth	41	71.35	3.2.1 Regulatory quality	13	88.35
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	43	88.81
2nd sub-pillar: Content	5	82.48	3.2.3 Legal framework's adaptability to emerging technologies	NA	NA
1.2.1 GitHub commits	7	71.76	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	17	82.34	3.2.5 Privacy protection by law content	30	77.29
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	13	83.61
1.2.4 Mobile apps development	7	92.35	3.3.1 E-Participation	9	96.30
3rd sub-pillar: Future Technologies	9	69.92	3.3.2 Socioeconomic gap in use of digital payments	2	99.79
1.3.1 Adoption of emerging technologies	13	84.22	3.3.3 Availability of local online content	33	79.08
1.3.2 Investment in emerging technologies	14	76.91	3.3.4 Gender gap in Internet use	26	66.36
1.3.3 ICT PCT patent applications	15	63.12	3.3.5 Rural gap in use of digital payments	19	76.53
1.3.4 Computer software spending	12	54.50	**D. Impact pillar**	5	78.45
1.3.5 Robot density	7	70.85	*1st sub-pillar: Economy*	12	58.05
B. People pillar	1	80.81	4.1.1 Medium and high-tech industry	8	69.29
1st sub-pillar: Individuals	7	73.90	4.1.2 High-tech exports	34	26.32
2.1.1 Internet users	6	97.93	4.1.3 PCT patent applications	8	63.69
2.1.2 Active mobile-broadband subscriptions	10	53.95	4.1.4 Labor productivity per employee	11	72.88
2.1.3 Use of virtual social networks	22	71.13	4.1.5 Prevalence of gig economy	NA	NA
2.1.4 Tertiary enrollment	18	58.77	*2nd sub-pillar: Quality of Life*	4	92.99
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	3	98.28
2.1.6 ICT skills	9	87.71	4.2.2 Freedom to make life choices	1	100.00
2nd sub-pillar: Businesses	4	79.36	4.2.3 Income inequality	15	88.40
2.2.1 Firms with website	2	98.01	4.2.4 Healthy life expectancy at birth	24	85.28
2.2.2 Ease of doing business	4	97.39	*3rd sub-pillar: SDG Contribution*	6	84.32
2.2.3 Professionals	3	67.43	4.3.1 SDG 3: Good Health and Well-Being	22	86.89
2.2.4 Technicians and associate professionals	9	77.58	4.3.2 SDG 4: Quality Education	11	69.21
2.2.5 Business use of digital tools	15	85.44	4.3.3 SDG 5: Gender Equality	48	78.78
2.2.6 R&D expenditure by businesses	9	50.33	4.3.4 SDG 7: Affordable and Clean Energy	11	91.98
3rd sub-pillar: Governments	1	89.16	.	.	.
2.3.1 Government online services	3	96.97			
2.3.2 Publication and use of open data	13	70.52			
2.3.3 Government promotion of investment in emerging tech	NA	NA			
2.3.4 R&D expenditure by governments and higher education	1	100.00			

* Confidential data

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Network Readiness Index 2020 Dominican Republic

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
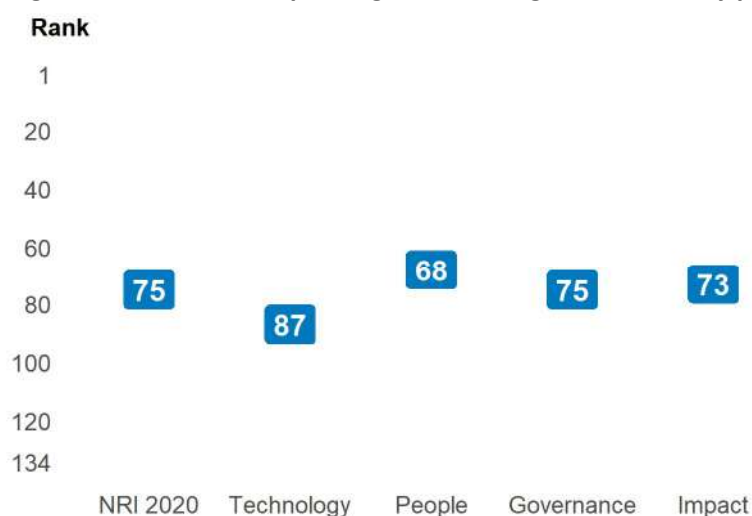
Figure 1: The NRI 2020 model

Global NRI position of Dominican Republic

Dominican Republic ranks 75th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Dominican Republic global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Dominican Republic relate to Regulation, Governments and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Content, SDG Contribution and Trust sub-pillars.

Table 1: Dominican Republic rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	50	Inclusion	75
Governments	58	Future Technologies	77
Economy	63	Access	86
Quality of Life	66	Content	86
Individuals	69	SDG Contribution	90
Businesses	75	Trust	100

NRI score and income

Figure 3 shows the position of Dominican Republic in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Dominican Republic is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
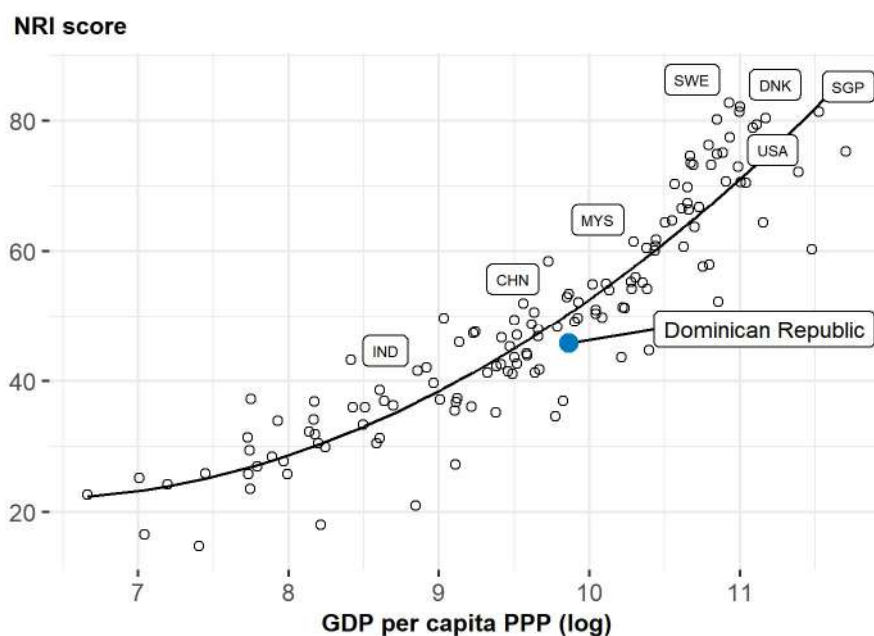
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Dominican Republic belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

Upper-middle-income countries
Dominican Republic is ranked 23rd in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: people and impact. At the sub-pillar level, it outperforms upper-middle-income countries in six of the twelve sub-pillars: Future Technologies, Governments, Regulation, Inclusion, Economy and Quality of Life.

The Americas
Dominican Republic is ranked 11th within The Americas (Figure 4, right panel). It has a score above the regional average in one of the four pillars: people. With regard to sub-pillars, it outperforms the average in The Americas in five of the twelve sub-pillars: Individuals, Governments, Regulation, Inclusion and Economy.

Figure 4: Performance of Dominican Republic against its income group and region, overall and by pillar

Table 2: Dominican Republic scores vs. averages of its income group and region, overall and by pillar

Dimension	Dominican Republic	Upper-middle-income countries	The Americas
NRI	45.77	47.39	47.67
Technology	32.78	38.42	38.26
People	47.06	46.66	45.24
Governance	53.08	54.31	54.59
Impact	50.17	50.17	52.61

Strongest and weakest indicators

The indicators where Dominican Republic performs particularly well include e-commerce legislation, SDG 7: Affordable and Clean Energy, and ICT regulatory environment (Table 3). By contrast, the economy's weakest indicators include Computer software spending, SDG 11: Sustainable Cities and Communities, and ICT skills.

Table 3: Top-ranked and bottom-ranked indicators of Dominican Republic

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Internet access	94
SDG 7: Affordable and Clean Energy	7	Mobile tariffs	96
ICT regulatory environment	8	Investment in emerging technologies	97
Gender gap in Internet use	14	Secure Internet servers	97
SDG 5: Gender Equality	16	Income inequality	97
Freedom to make life choices	42	Ease of doing business	98
Tertiary enrollment	48	Online access to financial account	99
Government online services	48	ICT skills	106
E-Participation	50	SDG 11: Sustainable Cities and Communities	107
Internet users	51	Computer software spending	116

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NRI 2020 At-A-Glance: Dominican Republic

Network Readiness Index   Rank: 75 (out of 134)   Score: 45.77

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	87	32.78	C. Governance pillar	75	53.08
1st sub-pillar: Access	86	49.37	1st sub-pillar: Trust	100	26.49
2nd sub-pillar: Content	86	22.80	2nd sub-pillar: Regulation	50	70.56
3rd sub-pillar: Future Technologies	77	26.18	3rd sub-pillar: Inclusion	75	62.20
B. People pillar	68	47.06	D. Impact pillar	73	50.17
1st sub-pillar: Individuals	69	54.24	1st sub-pillar: Economy	63	26.16
2nd sub-pillar: Businesses	75	40.41	2nd sub-pillar: Quality of Life	66	65.82
3rd sub-pillar: Governments	58	46.53	3rd sub-pillar: SDG Contribution	90	58.54

The Network Readiness Index in detail

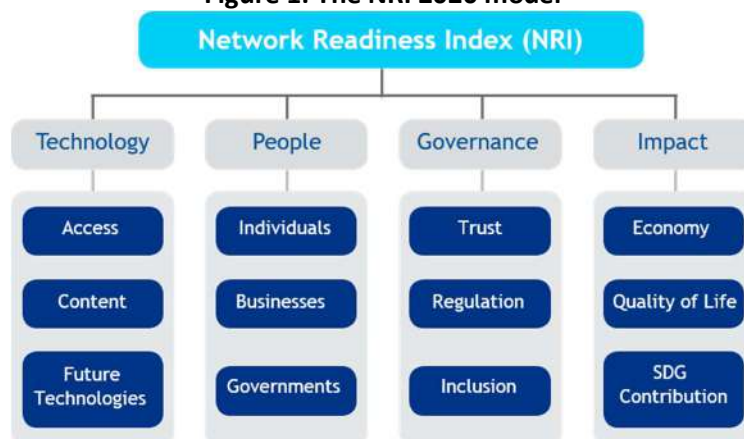| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	87	32.78	**C. Governance pillar**	75	53.08
1st sub-pillar: Access	86	49.37	*1st sub-pillar: Trust*	100	26.49
1.1.1 Mobile tariffs	96	48.79	3.1.1 Secure Internet servers	97	37.75
1.1.2 Handset prices	65	46.33	3.1.2 Cybersecurity	92	45.72
1.1.3 Internet access	94	31.43	3.1.3 Online access to financial account	99	12.98
1.1.4 4G mobile network coverage	58	93.72	3.1.4 Internet shopping	76	9.51
1.1.5 Fixed-broadband subscriptions	82	34.39	*2nd sub-pillar: Regulation*	50	70.56
1.1.6 International Internet bandwidth	71	67.74	3.2.1 Regulatory quality	77	49.71
1.1.7 Internet access in schools	54	23.16	3.2.2 ICT regulatory environment	8	96.72
2nd sub-pillar: Content	86	22.80	3.2.3 Legal framework's adaptability to emerging technologies	75	35.81
1.2.1 GitHub commits	73	2.94	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	84	33.24	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	75	62.20
1.2.4 Mobile apps development	90	53.06	3.3.1 E-Participation	50	76.54
3rd sub-pillar: Future Technologies	77	26.18	3.3.2 Socioeconomic gap in use of digital payments	93	49.80
1.3.1 Adoption of emerging technologies	62	48.00	3.3.3 Availability of local online content	68	59.97
1.3.2 Investment in emerging technologies	97	29.14	3.3.4 Gender gap in Internet use	14	67.65
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	86	57.03
1.3.4 Computer software spending	116	1.40	**D. Impact pillar**	73	50.17
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	63	26.16
B. People pillar	68	47.06	4.1.1 Medium and high-tech industry	NA	NA
1st sub-pillar: Individuals	69	54.24	4.1.2 High-tech exports	56	16.24
2.1.1 Internet users	51	74.40	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	86	23.11	4.1.4 Labor productivity per employee	71	24.79
2.1.3 Use of virtual social networks	55	58.76	4.1.5 Prevalence of gig economy	78	37.45
2.1.4 Tertiary enrollment	48	43.52	*2nd sub-pillar: Quality of Life*	66	65.82
2.1.5 Adult literacy rate	55	92.02	4.2.1 Happiness	55	65.08
2.1.6 ICT skills	106	33.61	4.2.2 Freedom to make life choices	42	85.41
2nd sub-pillar: Businesses	75	40.41	4.2.3 Income inequality	97	49.74
2.2.1 Firms with website	83	37.73	4.2.4 Healthy life expectancy at birth	81	63.03
2.2.2 Ease of doing business	98	52.63	*3rd sub-pillar: SDG Contribution*	90	58.54
2.2.3 Professionals	76	19.30	4.3.1 SDG 3: Good Health and Well-Being	54	75.41
2.2.4 Technicians and associate professionals	80	25.10	4.3.2 SDG 4: Quality Education	80	0.00
2.2.5 Business use of digital tools	52	67.26	4.3.3 SDG 5: Gender Equality	16	86.51
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	7	93.35
3rd sub-pillar: Governments	58	46.53	.	.	.
2.3.1 Government online services	48	75.76			
2.3.2 Publication and use of open data	51	32.21			
2.3.3 Government promotion of investment in emerging tech	84	31.62			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

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Network Readiness Index 2020 Ecuador

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
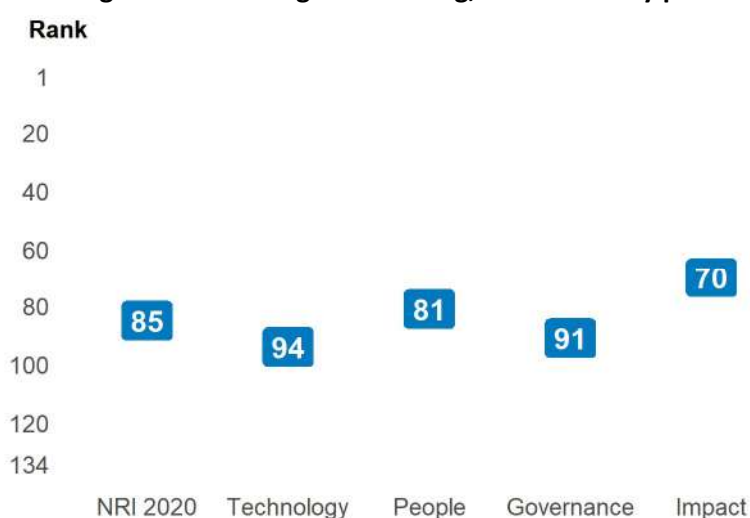
Figure 1: The NRI 2020 model

Global NRI position of Ecuador

Ecuador ranks 85th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Ecuador global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Ecuador relate to SDG Contribution, Quality of Life and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Future Technologies, Trust and Economy sub-pillars.

Table 1: Ecuador rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	34	Governments	88
Quality of Life	74	Inclusion	94
Content	77	Access	95
Regulation	81	Future Technologies	95
Individuals	82	Trust	104
Businesses	82	Economy	121

NRI score and income

Figure 3 shows the position of Ecuador in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Ecuador is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
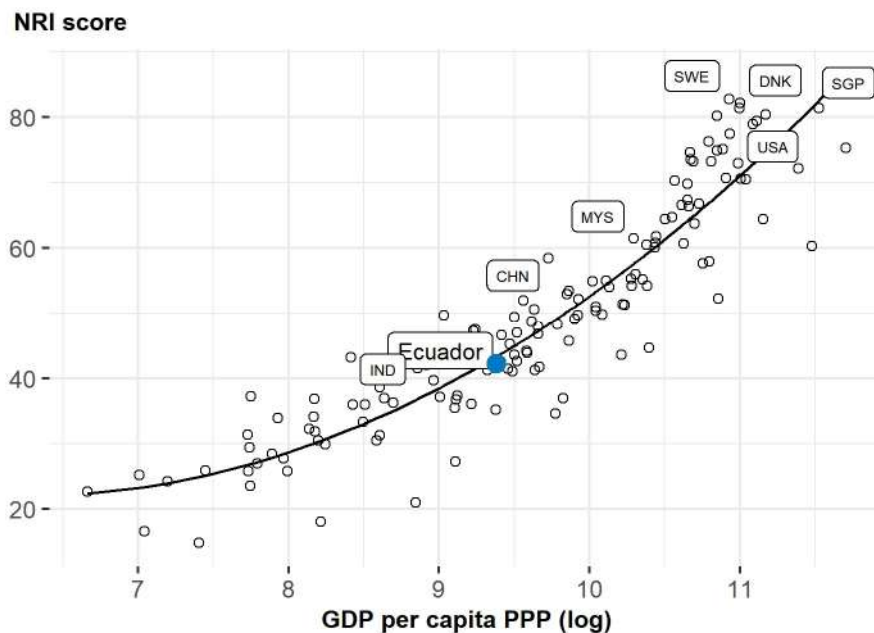
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Ecuador belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

Upper-middle-income countries
Ecuador is ranked 28th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: impact. At the sub-pillar level, it outperforms upper-middle-income countries in three of the twelve sub-pillars: Regulation, Quality of Life and SDG Contribution.

The Americas
Ecuador is ranked 15th within The Americas (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in The Americas in one of the twelve sub-pillars: SDG Contribution.

Figure 4: Performance of Ecuador against its income group and region, overall and by pillar

Table 2: Ecuador scores vs. averages of its income group and region, overall and by pillar

Dimension	Ecuador	Upper-middle-income countries	The Americas
NRI	42.20	47.39	47.67
Technology	29.71	38.42	38.26
People	41.70	46.66	45.24
Governance	46.97	54.31	54.59
Impact	50.43	50.17	52.61

Strongest and weakest indicators

The indicators where Ecuador performs particularly well include e-commerce legislation, Firms with website, and Use of virtual social networks (Table 3). By contrast, the economy's weakest indicators include International Internet bandwidth, Regulatory quality, and Socioeconomic gap in use of digital payments.

Table 3: Top-ranked and bottom-ranked indicators of Ecuador

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Availability of local online content	101
Firms with website	23	Mobile tariffs	103
Use of virtual social networks	27	Income inequality	104
Gender gap in Internet use	34	Ease of doing business	108
SDG 3: Good Health and Well-Being	34	Online access to financial account	109
SDG 7: Affordable and Clean Energy	37	Investment in emerging technologies	112
Government online services	40	Prevalence of gig economy	116
Healthy life expectancy at birth	45	Socioeconomic gap in use of digital payments	119
E-Participation	48	Regulatory quality	122
Internet access in schools	49	International Internet bandwidth	127

NRI 2020 At-A-Glance: Ecuador

Network Readiness Index   Rank: 85 (out of 134)   Score: 42.20

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	94	29.71	C. Governance pillar	91	46.97
1st sub-pillar: Access	95	43.17	1st sub-pillar: Trust	104	25.57
2nd sub-pillar: Content	77	25.36	2nd sub-pillar: Regulation	81	62.04
3rd sub-pillar: Future Technologies	95	20.58	3rd sub-pillar: Inclusion	94	53.29
B. People pillar	81	41.70	D. Impact pillar	70	50.43
1st sub-pillar: Individuals	82	51.35	1st sub-pillar: Economy	121	11.22
2nd sub-pillar: Businesses	82	37.40	2nd sub-pillar: Quality of Life	74	63.96
3rd sub-pillar: Governments	88	36.34	3rd sub-pillar: SDG Contribution	34	76.13

The Network Readiness Index in detail

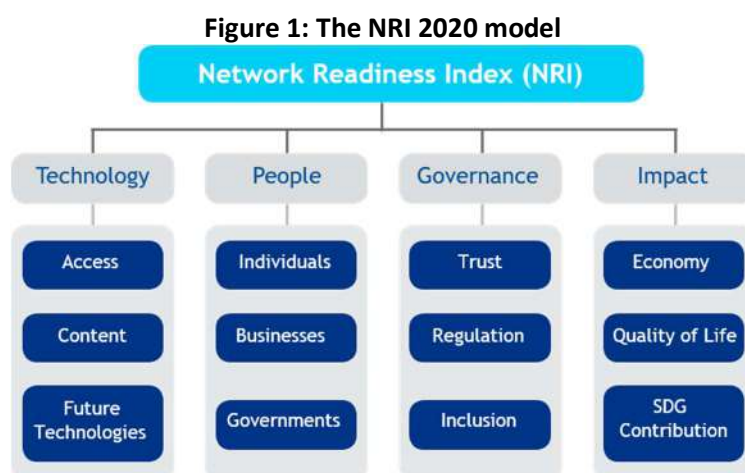| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	94	29.71	**C. Governance pillar**	91	46.97
1st sub-pillar: Access	95	43.17	*1st sub-pillar: Trust*	104	25.57
1.1.1 Mobile tariffs	103	44.80	3.1.1 Secure Internet servers	81	45.87
1.1.2 Handset prices	90	34.65	3.1.2 Cybersecurity	100	38.89
1.1.3 Internet access	88	37.03	3.1.3 Online access to financial account	109	9.80
1.1.4 4G mobile network coverage	89	70.87	3.1.4 Internet shopping	82	7.70
1.1.5 Fixed-broadband subscriptions	87	24.75	*2nd sub-pillar: Regulation*	81	62.04
1.1.6 International Internet bandwidth	127	50.81	3.2.1 Regulatory quality	122	31.81
1.1.7 Internet access in schools	49	39.28	3.2.2 ICT regulatory environment	57	86.30
2nd sub-pillar: Content	77	25.36	3.2.3 Legal framework's adaptability to emerging technologies	86	30.08
1.2.1 GitHub commits	77	2.46	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	72	40.84	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	94	53.29
1.2.4 Mobile apps development	79	56.50	3.3.1 E-Participation	48	79.01
3rd sub-pillar: Future Technologies	95	20.58	3.3.2 Socioeconomic gap in use of digital payments	119	32.57
1.3.1 Adoption of emerging technologies	82	38.94	3.3.3 Availability of local online content	101	39.20
1.3.2 Investment in emerging technologies	112	23.33	3.3.4 Gender gap in Internet use	34	63.21
1.3.3 ICT PCT patent applications	76	0.53	3.3.5 Rural gap in use of digital payments	99	52.47
1.3.4 Computer software spending	65	19.55	**D. Impact pillar**	70	50.43
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	121	11.22
B. People pillar	81	41.70	4.1.1 Medium and high-tech industry	96	15.17
1st sub-pillar: Individuals	82	51.35	4.1.2 High-tech exports	77	10.00
2.1.1 Internet users	85	56.31	4.1.3 PCT patent applications	78	0.09
2.1.2 Active mobile-broadband subscriptions	95	20.62	4.1.4 Labor productivity per employee	86	15.37
2.1.3 Use of virtual social networks	27	69.07	4.1.5 Prevalence of gig economy	116	15.46
2.1.4 Tertiary enrollment	67	32.46	*2nd sub-pillar: Quality of Life*	74	63.96
2.1.5 Adult literacy rate	60	90.80	4.2.1 Happiness	66	61.25
2.1.6 ICT skills	93	38.86	4.2.2 Freedom to make life choices	62	77.28
2nd sub-pillar: Businesses	82	37.40	4.2.3 Income inequality	104	45.36
2.2.1 Firms with website	23	79.87	4.2.4 Healthy life expectancy at birth	45	71.94
2.2.2 Ease of doing business	108	48.62	*3rd sub-pillar: SDG Contribution*	34	76.13
2.2.3 Professionals	81	17.81	4.3.1 SDG 3: Good Health and Well-Being	34	80.33
2.2.4 Technicians and associate professionals	95	18.35	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	79	54.99	4.3.3 SDG 5: Gender Equality	49	78.58
2.2.6 R&D expenditure by businesses	54	4.78	4.3.4 SDG 7: Affordable and Clean Energy	37	85.62
3rd sub-pillar: Governments	88	36.34	.	.	.
2.3.1 Government online services	40	80.61			
2.3.2 Publication and use of open data	68	21.62			
2.3.3 Government promotion of investment in emerging tech	101	21.83			
2.3.4 R&D expenditure by governments and higher education	71	21.32			

* Confidential data

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Network Readiness Index 2020 Egypt

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Egypt

Egypt ranks 84th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Egypt global ranking, overall and by pillar
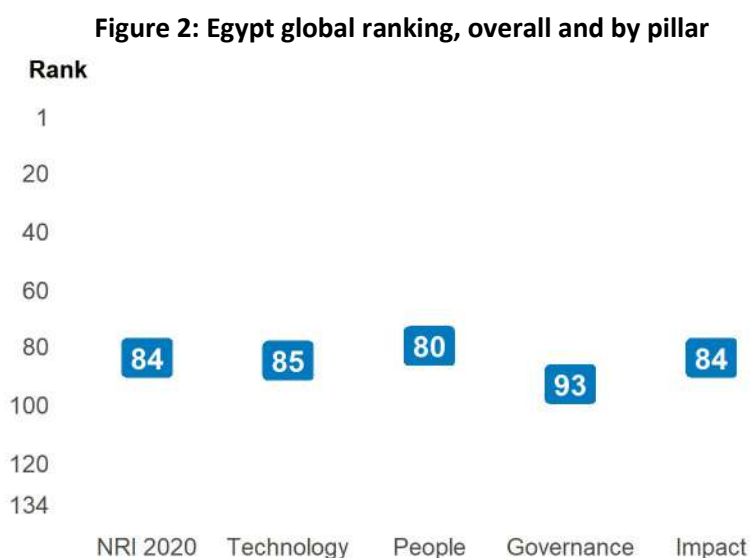
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Egypt relate to Governments, Economy and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Content, Quality of Life and Inclusion sub-pillars.

Table 1: Egypt rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	60	Regulation	88
Economy	60	Individuals	93
Future Technologies	76	SDG Contribution	93
Businesses	78	Content	96
Access	80	Quality of Life	96
Trust	85	Inclusion	102

NRI score and income

Figure 3 shows the position of Egypt in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Egypt is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
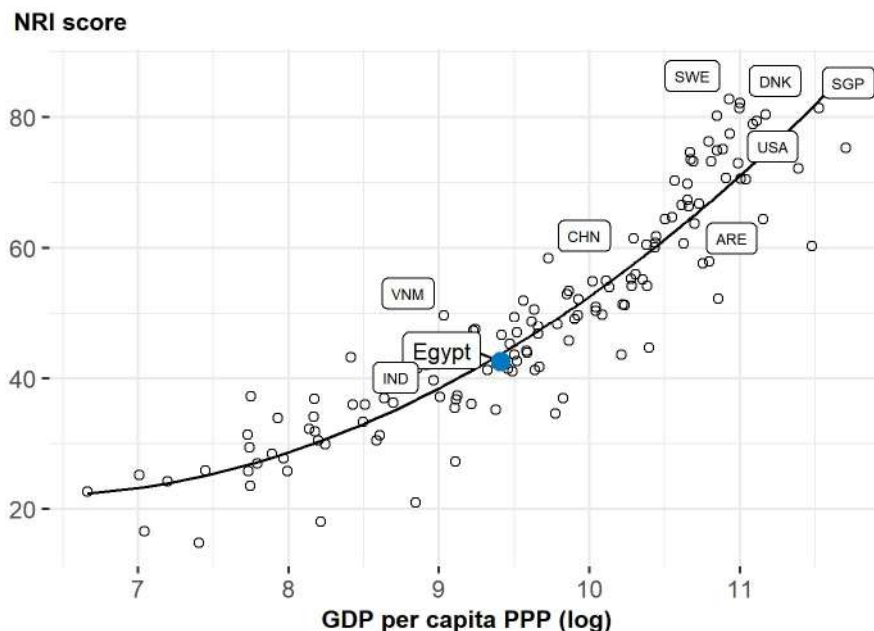
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Egypt belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Arab States-is United Arab Emirates (ARE).

Performance against its income group and region

Lower-middle-income countries
Egypt is ranked 7th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it has a higher score than the average of lower-middle-income countries in all of them.

Arab States
Egypt is ranked 8th within Arab States (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Arab States in three of the twelve sub-pillars: Governments, Regulation and SDG Contribution.

Figure 4: Performance of Egypt against its income group and region, overall and by pillar

Table 2: Egypt scores vs. averages of its income group and region, overall and by pillar

Dimension	Egypt	Lower-middle-income countries	Arab States
NRI	42.56	36.72	47.18
Technology	33.46	27.72	39.24
People	42.64	33.88	47.97
Governance	46.52	43.15	51.70
Impact	47.61	42.15	49.82

Strongest and weakest indicators

The indicators where Egypt performs particularly well include Prevalence of gig economy, R&D expenditure by governments and higher education, and Computer software spending (Table 3). By contrast, the economy's weakest indicators include Online access to financial account, Regulatory quality, Secure Internet servers, and Happiness.

Table 3: Top-ranked and bottom-ranked indicators of Egypt

Strongest indicators	Rank	Weakest indicators	Rank
Prevalence of gig economy	6	Internet domain registrations	101
R&D expenditure by governments and higher education	16	High-tech exports	101
Computer software spending	21	Internet shopping	112
Income inequality	24	SDG 5: Gender Equality	114
Cybersecurity	25	Socioeconomic gap in use of digital payments	115
Mobile tariffs	32	SDG 11: Sustainable Cities and Communities	115
Availability of local online content	34	Secure Internet servers	116
ICT skills	42	Happiness	116
SDG 7: Affordable and Clean Energy	42	Regulatory quality	120
Internet access in schools	43	Online access to financial account	121

NRI 2020 At-A-Glance: Egypt

Network Readiness Index — Rank: 84 (out of 134) — Score: 42.56

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	85	33.46	C. Governance pillar	93	46.52
1st sub-pillar: Access	80	53.81	1st sub-pillar: Trust	85	31.33
2nd sub-pillar: Content	96	20.32	2nd sub-pillar: Regulation	88	58.52
3rd sub-pillar: Future Technologies	76	26.24	3rd sub-pillar: Inclusion	102	49.70
B. People pillar	80	42.64	D. Impact pillar	84	47.61
1st sub-pillar: Individuals	93	43.30	1st sub-pillar: Economy	60	28.18
2nd sub-pillar: Businesses	78	39.28	2nd sub-pillar: Quality of Life	96	57.56
3rd sub-pillar: Governments	60	45.35	3rd sub-pillar: SDG Contribution	93	57.09

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	85	33.46	**C. Governance pillar**	93	46.52
1st sub-pillar: Access	80	53.81	*1st sub-pillar: Trust*	85	31.33
1.1.1 Mobile tariffs	32	77.03	3.1.1 Secure Internet servers	116	28.51
1.1.2 Handset prices	93	34.14	3.1.2 Cybersecurity	25	90.36
1.1.3 Internet access	80	50.91	3.1.3 Online access to financial account	121	3.38
1.1.4 4G mobile network coverage	70	89.00	3.1.4 Internet shopping	112	3.09
1.1.5 Fixed-broadband subscriptions	98	14.60	*2nd sub-pillar: Regulation*	88	58.52
1.1.6 International Internet bandwidth	88	63.40	3.2.1 Regulatory quality	120	32.32
1.1.7 Internet access in schools	43	47.58	3.2.2 ICT regulatory environment	78	80.89
2nd sub-pillar: Content	96	20.32	3.2.3 Legal framework's adaptability to emerging technologies	55	45.87
1.2.1 GitHub commits	96	1.23	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	86	32.37	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	102	49.70
1.2.4 Mobile apps development	98	47.13	3.3.1 E-Participation	97	49.38
3rd sub-pillar: Future Technologies	76	26.24	3.3.2 Socioeconomic gap in use of digital payments	115	37.66
1.3.1 Adoption of emerging technologies	48	54.92	3.3.3 Availability of local online content	34	78.50
1.3.2 Investment in emerging technologies	74	37.05	3.3.4 Gender gap in Internet use	82	29.83
1.3.3 ICT PCT patent applications	71	1.01	3.3.5 Rural gap in use of digital payments	95	53.11
1.3.4 Computer software spending	21	38.02	**D. Impact pillar**	84	47.61
1.3.5 Robot density	61	0.22	*1st sub-pillar: Economy*	60	28.18
B. People pillar	80	42.64	4.1.1 Medium and high-tech industry	93	17.62
1st sub-pillar: Individuals	93	43.30	4.1.2 High-tech exports	101	4.43
2.1.1 Internet users	94	45.64	4.1.3 PCT patent applications	76	0.12
2.1.2 Active mobile-broadband subscriptions	97	20.30	4.1.4 Labor productivity per employee	58	29.29
2.1.3 Use of virtual social networks	94	40.21	4.1.5 Prevalence of gig economy	6	89.46
2.1.4 Tertiary enrollment	77	25.29	*2nd sub-pillar: Quality of Life*	96	57.56
2.1.5 Adult literacy rate	92	62.91	4.2.1 Happiness	116	32.13
2.1.6 ICT skills	42	65.44	4.2.2 Freedom to make life choices	83	67.84
2nd sub-pillar: Businesses	78	39.28	4.2.3 Income inequality	24	81.19
2.2.1 Firms with website	65	48.99	4.2.4 Healthy life expectancy at birth	99	49.08
2.2.2 Ease of doing business	97	52.75	*3rd sub-pillar: SDG Contribution*	93	57.09
2.2.3 Professionals	57	28.28	4.3.1 SDG 3: Good Health and Well-Being	79	65.57
2.2.4 Technicians and associate professionals	59	34.36	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	48	70.60	4.3.3 SDG 5: Gender Equality	114	44.33
2.2.6 R&D expenditure by businesses	79	0.71	4.3.4 SDG 7: Affordable and Clean Energy	42	84.61
3rd sub-pillar: Governments	60	45.35	.	.	.
2.3.1 Government online services	92	55.76			
2.3.2 Publication and use of open data	83	13.89			
2.3.3 Government promotion of investment in emerging tech	43	47.93			
2.3.4 R&D expenditure by governments and higher education	16	63.81			

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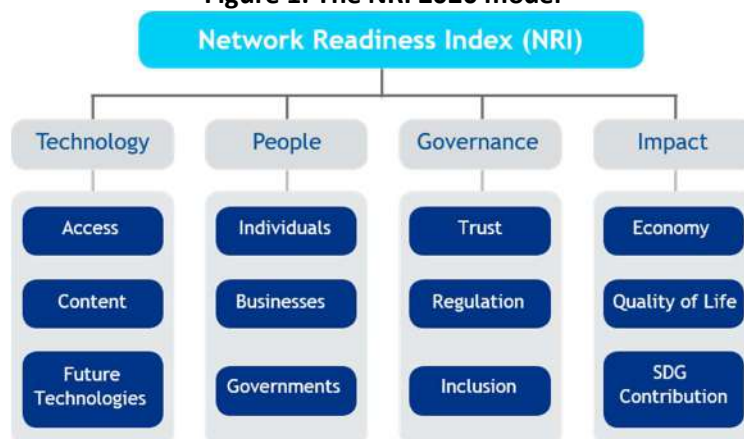
Network Readiness Index 2020 El Salvador

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
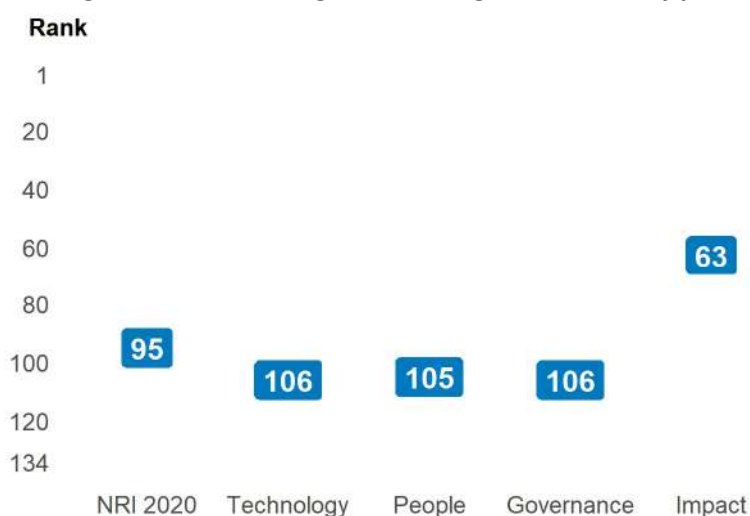
Figure 1: The NRI 2020 model

Global NRI position of El Salvador

El Salvador ranks 95th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Technology and Governance.

Figure 2: El Salvador global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of El Salvador relate to SDG Contribution, Quality of Life and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Governments, Trust and Future Technologies sub-pillars.

Table 1: El Salvador rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	45	Access	104
Quality of Life	47	Businesses	105
Content	82	Economy	112
Regulation	97	Governments	117
Individuals	98	Trust	121
Inclusion	101	Future Technologies	122

NRI score and income

Figure 3 shows the position of El Salvador in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, El Salvador is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
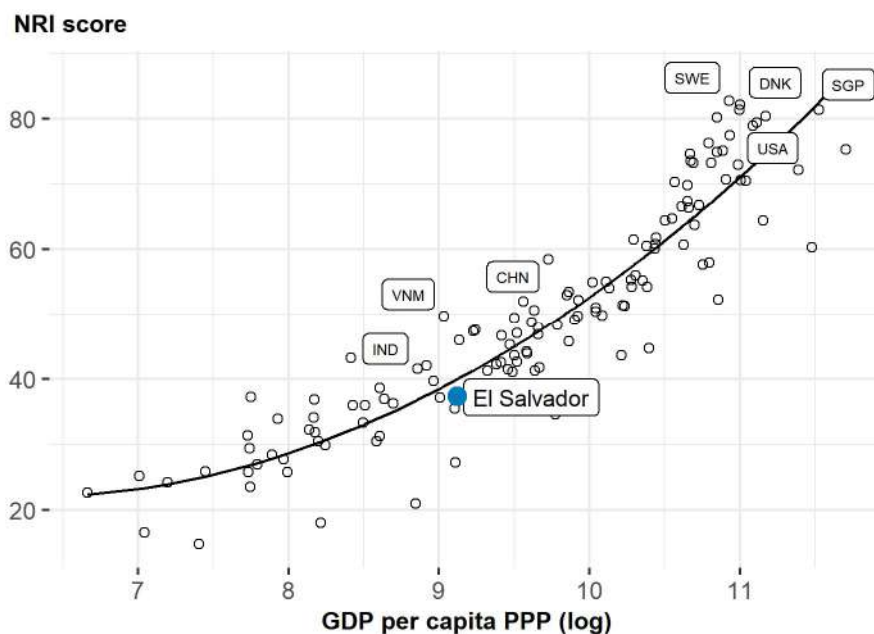
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. El Salvador belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-The Americas-is United States (USA).

2

Performance against its income group and region

Lower-middle-income countries
El Salvador is ranked 14th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: nri.score and impact. At the sub-pillar level, it outperforms lower-middle-income countries in six of the twelve sub-pillars: Content, Individuals, Regulation, Inclusion, Quality of Life and SDG Contribution.

The Americas
El Salvador is ranked 17th within The Americas (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in The Americas in two of the twelve sub-pillars: Quality of Life and SDG Contribution.

Figure 4: Performance of El Salvador against its income group and region, overall and by pillar
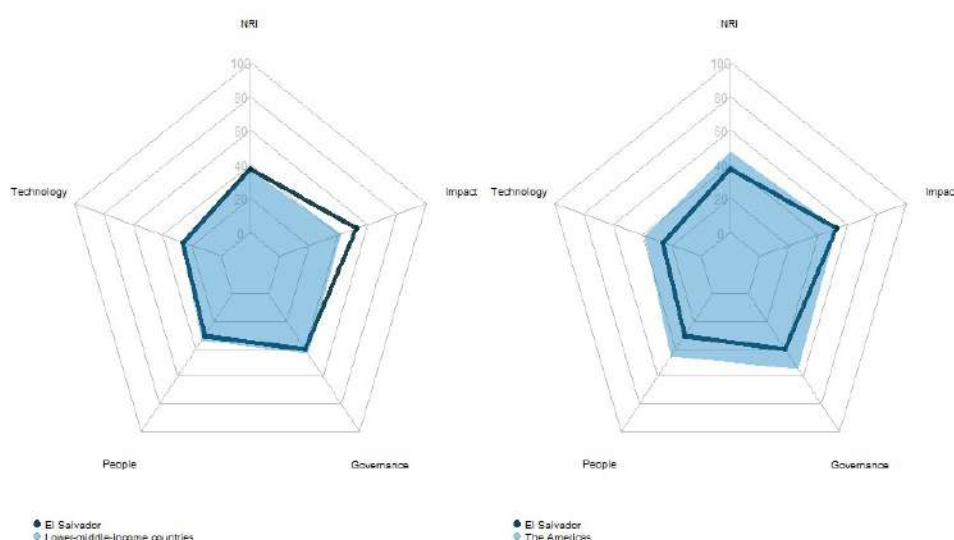
Table 2: El Salvador scores vs. averages of its income group and region, overall and by pillar

Dimension	El Salvador	Lower-middle-income countries	The Americas
NRI	37.33	36.72	47.67
Technology	25.81	27.72	38.26
People	30.62	33.88	45.24
Governance	40.55	43.15	54.59
Impact	52.35	42.15	52.61

Strongest and weakest indicators

The indicators where El Salvador performs particularly well include International Internet bandwidth, Happiness, and SDG 3: Good Health and Well-Being (Table 3). By contrast, the economy's weakest indicators include ICT skills, Government promotion of investment in emerging technologies, and Cybersecurity.

Table 3: Top-ranked and bottom-ranked indicators of El Salvador

Strongest indicators	Rank	Weakest indicators	Rank
International Internet bandwidth	23	Internet users	106
Happiness	29	Availability of local online content	107
SDG 3: Good Health and Well-Being	39	Socioeconomic gap in use of digital payments	108
Freedom to make life choices	43	Prevalence of gig economy	110
Internet access in schools	53	Internet access	115
SDG 7: Affordable and Clean Energy	54	Fixed-broadband subscriptions	115
Use of virtual social networks	55	Investment in emerging technologies	121
ICT PCT patent applications	61	ICT skills	124
SDG 5: Gender Equality	64	Government promotion of investment in emerging technologies	124
Adult literacy rate	65	Cybersecurity	124

NRI 2020 At-A-Glance: El Salvador

Network Readiness Index — Rank: 95 (out of 134) — Score: 37.33

Pillar/sub-pillar	Rank	Score
A. Technology pillar	106	25.81
1st sub-pillar: Access	104	38.13
2nd sub-pillar: Content	82	23.81
3rd sub-pillar: Future Technologies	122	15.48
B. People pillar	105	30.62
1st sub-pillar: Individuals	98	39.98
2nd sub-pillar: Businesses	105	30.44
3rd sub-pillar: Governments	117	21.43

Pillar/sub-pillar	Rank	Score
C. Governance pillar	106	40.55
1st sub-pillar: Trust	121	17.26
2nd sub-pillar: Regulation	97	54.54
3rd sub-pillar: Inclusion	101	49.84
D. Impact pillar	63	52.35
1st sub-pillar: Economy	112	13.56
2nd sub-pillar: Quality of Life	47	71.55
3rd sub-pillar: SDG Contribution	45	71.93

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	106	25.81
1st sub-pillar: Access	104	38.13
1.1.1 Mobile tariffs	104	39.95
1.1.2 Handset prices	69	43.74
1.1.3 Internet access	115	16.84
1.1.4 4G mobile network coverage	93	68.00
1.1.5 Fixed-broadband subscriptions	115	1.06
1.1.6 International Internet bandwidth	23	74.10
1.1.7 Internet access in schools	53	23.24
2nd sub-pillar: Content	82	23.81
1.2.1 GitHub commits	81	2.17
1.2.2 Wikipedia edits	79	35.57
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	81	55.93
3rd sub-pillar: Future Technologies	122	15.48
1.3.1 Adoption of emerging technologies	91	36.60
1.3.2 Investment in emerging technologies	121	18.90
1.3.3 ICT PCT patent applications	61	2.90
1.3.4 Computer software spending	104	3.50
1.3.5 Robot density	NA	NA
B. People pillar	105	30.62
1st sub-pillar: Individuals	98	39.98
2.1.1 Internet users	106	32.13
2.1.2 Active mobile-broadband subscriptions	93	21.07
2.1.3 Use of virtual social networks	55	58.76
2.1.4 Tertiary enrollment	82	21.03
2.1.5 Adult literacy rate	65	85.88
2.1.6 ICT skills	124	21.02
2nd sub-pillar: Businesses	105	30.44
2.2.1 Firms with website	81	38.31
2.2.2 Ease of doing business	85	61.94
2.2.3 Professionals	92	15.78
2.2.4 Technicians and associate professionals	100	17.07
2.2.5 Business use of digital tools	94	48.13
2.2.6 R&D expenditure by businesses	70	1.43
3rd sub-pillar: Governments	117	21.43
2.3.1 Government online services	91	56.37
2.3.2 Publication and use of open data	84	13.88
2.3.3 Government promotion of investment in emerging tech	124	5.95
2.3.4 R&D expenditure by governments and higher education	92	9.51

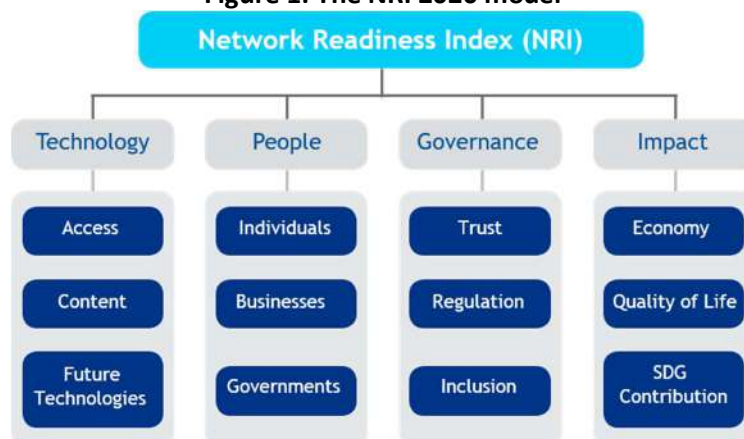| Indicator	Rank	Score
C. Governance pillar	106	40.55
1st sub-pillar: Trust	121	17.26
3.1.1 Secure Internet servers	101	36.30
3.1.2 Cybersecurity	124	12.57
3.1.3 Online access to financial account	91	16.25
3.1.4 Internet shopping	100	3.91
2nd sub-pillar: Regulation	97	54.54
3.2.1 Regulatory quality	71	50.56
3.2.2 ICT regulatory environment	94	72.40
3.2.3 Legal framework's adaptability to emerging technologies	103	20.21
3.2.4 e-commerce legislation	77	75.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	101	49.84
3.3.1 E-Participation	74	66.67
3.3.2 Socioeconomic gap in use of digital payments	108	41.00
3.3.3 Availability of local online content	107	35.79
3.3.4 Gender gap in Internet use	67	54.81
3.3.5 Rural gap in use of digital payments	102	50.94
D. Impact pillar	63	52.35
1st sub-pillar: Economy	112	13.56
4.1.1 Medium and high-tech industry	80	24.23
4.1.2 High-tech exports	79	9.71
4.1.3 PCT patent applications	80	0.04
4.1.4 Labor productivity per employee	NA	NA
4.1.5 Prevalence of gig economy	110	20.27
2nd sub-pillar: Quality of Life	47	71.55
4.2.1 Happiness	29	73.94
4.2.2 Freedom to make life choices	43	85.41
4.2.3 Income inequality	70	62.89
4.2.4 Healthy life expectancy at birth	76	63.98
3rd sub-pillar: SDG Contribution	45	71.93
4.3.1 SDG 3: Good Health and Well-Being	39	78.69
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 SDG 5: Gender Equality	64	75.02
4.3.4 SDG 7: Affordable and Clean Energy	54	81.86
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* Confidential data

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Network Readiness Index 2020 Estonia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
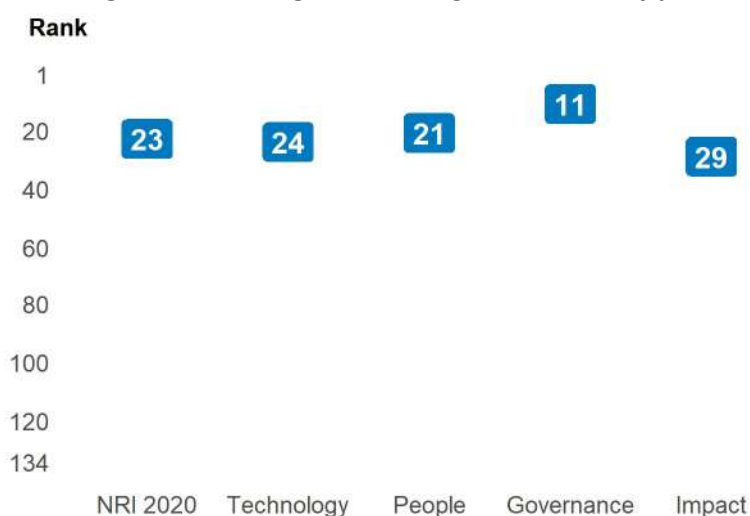
Figure 1: The NRI 2020 model

Global NRI position of Estonia

Estonia ranks 23rd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Estonia global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Estonia relate to Individuals, Inclusion and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the Quality of Life, Economy and Future Technologies sub-pillars.

Table 1: Estonia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	8	Businesses	21
Inclusion	8	Governments	23
Regulation	11	Access	26
Trust	13	Quality of Life	28
Content	17	Economy	35
SDG Contribution	19	Future Technologies	38

NRI score and income

Figure 3 shows the position of Estonia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Estonia is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
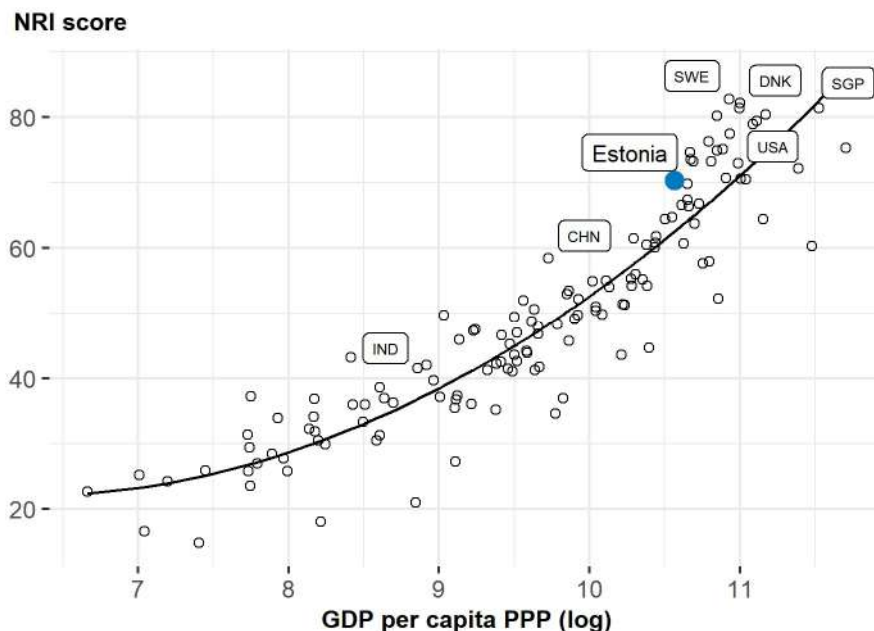
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Estonia belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Estonia is ranked 23rd in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, people and governance. At the sub-pillar level, it outperforms high-income countries in nine of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Trust, Regulation, Inclusion and SDG Contribution.

Europe
Estonia is ranked 15th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in ten of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Quality of Life and SDG Contribution.

Figure 4: Performance of Estonia against its income group and region, overall and by pillar
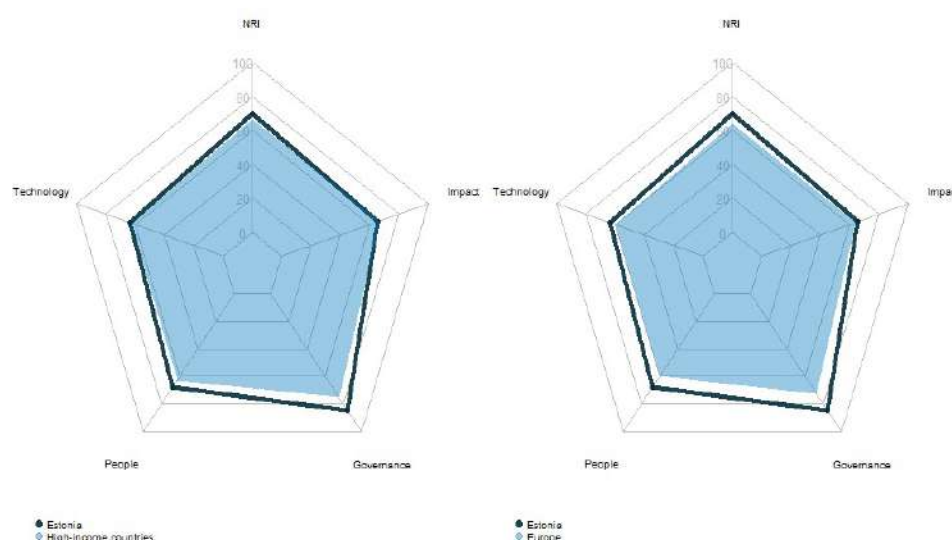
Table 2: Estonia scores vs. averages of its income group and region, overall and by pillar

Dimension	Estonia	High-income countries	Europe
NRI	70.32	66.82	64.21
Technology	63.55	62.51	59.93
People	67.59	62.72	59.89
Governance	84.93	75.41	72.98
Impact	65.20	66.63	64.04

Strongest and weakest indicators

The indicators where Estonia performs particularly well include Internet access in schools, e-commerce legislation, and E-Participation (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, Computer software spending, and Use of virtual social networks.

Table 3: Top-ranked and bottom-ranked indicators of Estonia

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	Fixed-broadband subscriptions	43
e-commerce legislation	1	Publication and use of open data	44
E-Participation	1	Handset prices	46
Wikipedia edits	2	ICT regulatory environment	46
Government online services	2	SDG 3: Good Health and Well-Being	50
Adult literacy rate	3	Happiness	52
Business use of digital tools	4	Medium and high-tech industry	53
Active mobile-broadband subscriptions	5	Use of virtual social networks	61
Cybersecurity	5	Computer software spending	81
SDG 4: Quality Education	6	SDG 7: Affordable and Clean Energy	104

NRI 2020 At-A-Glance: Estonia

Network Readiness Index   Rank: 23 (out of 134)   Score: 70.32

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	24	63.55	C. Governance pillar	11	84.93
1st sub-pillar: Access	26	82.71	1st sub-pillar: Trust	13	82.57
2nd sub-pillar: Content	17	69.53	2nd sub-pillar: Regulation	11	87.31
3rd sub-pillar: Future Technologies	38	38.40	3rd sub-pillar: Inclusion	8	84.91
B. People pillar	21	67.59	D. Impact pillar	29	65.20
1st sub-pillar: Individuals	8	73.78	1st sub-pillar: Economy	35	37.90
2nd sub-pillar: Businesses	21	66.89	2nd sub-pillar: Quality of Life	28	77.42
3rd sub-pillar: Governments	23	62.10	3rd sub-pillar: SDG Contribution	19	80.29

The Network Readiness Index in detail

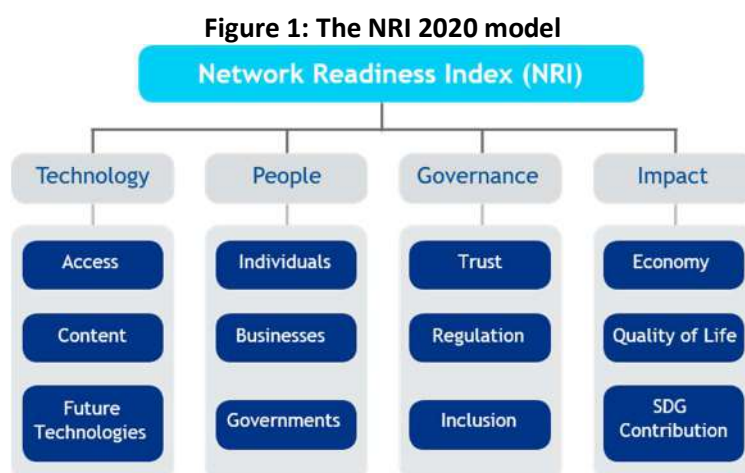| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	24	63.55	**C. Governance pillar**	11	84.93
1st sub-pillar: Access	26	82.71	*1st sub-pillar: Trust*	13	82.57
1.1.1 Mobile tariffs	33	75.27	3.1.1 Secure Internet servers	7	90.41
1.1.2 Handset prices	46	55.61	3.1.2 Cybersecurity	5	97.18
1.1.3 Internet access	17	90.46	3.1.3 Online access to financial account	8	82.82
1.1.4 4G mobile network coverage	24	99.00	3.1.4 Internet shopping	24	59.87
1.1.5 Fixed-broadband subscriptions	43	85.12	*2nd sub-pillar: Regulation*	11	87.31
1.1.6 International Internet bandwidth	28	73.48	3.2.1 Regulatory quality	17	85.83
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	46	88.03
2nd sub-pillar: Content	17	69.53	3.2.3 Legal framework's adaptability to emerging technologies	15	74.05
1.2.1 GitHub commits	11	63.17	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	2	99.44	3.2.5 Privacy protection by law content	11	88.64
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	8	84.91
1.2.4 Mobile apps development	22	85.56	3.3.1 E-Participation	1	100.00
3rd sub-pillar: Future Technologies	38	38.40	3.3.2 Socioeconomic gap in use of digital payments	16	95.47
1.3.1 Adoption of emerging technologies	22	73.19	3.3.3 Availability of local online content	19	85.94
1.3.2 Investment in emerging technologies	35	58.91	3.3.4 Gender gap in Internet use	23	66.52
1.3.3 ICT PCT patent applications	25	42.59	3.3.5 Rural gap in use of digital payments	18	76.59
1.3.4 Computer software spending	81	11.68	**D. Impact pillar**	29	65.20
1.3.5 Robot density	40	5.63	*1st sub-pillar: Economy*	35	37.90
B. People pillar	21	67.59	4.1.1 Medium and high-tech industry	53	35.38
1st sub-pillar: Individuals	8	73.78	4.1.2 High-tech exports	32	29.40
2.1.1 Internet users	19	89.38	4.1.3 PCT patent applications	26	10.38
2.1.2 Active mobile-broadband subscriptions	5	58.01	4.1.4 Labor productivity per employee	39	47.83
2.1.3 Use of virtual social networks	61	56.70	4.1.5 Prevalence of gig economy	26	66.54
2.1.4 Tertiary enrollment	30	50.68	*2nd sub-pillar: Quality of Life*	28	77.42
2.1.5 Adult literacy rate	3	99.89	4.2.1 Happiness	52	65.68
2.1.6 ICT skills	8	88.00	4.2.2 Freedom to make life choices	35	86.95
2nd sub-pillar: Businesses	21	66.89	4.2.3 Income inequality	20	84.02
2.2.1 Firms with website	16	83.22	4.2.4 Healthy life expectancy at birth	41	73.03
2.2.2 Ease of doing business	17	89.12	*3rd sub-pillar: SDG Contribution*	19	80.29
2.2.3 Professionals	18	51.96	4.3.1 SDG 3: Good Health and Well-Being	50	77.05
2.2.4 Technicians and associate professionals	22	62.92	4.3.2 SDG 4: Quality Education	6	74.47
2.2.5 Business use of digital tools	4	98.58	4.3.3 SDG 5: Gender Equality	7	90.68
2.2.6 R&D expenditure by businesses	35	15.54	4.3.4 SDG 7: Affordable and Clean Energy	104	65.82
3rd sub-pillar: Governments	23	62.10	.	.	.
2.3.1 Government online services	2	99.39			
2.3.2 Publication and use of open data	44	36.31			
2.3.3 Government promotion of investment in emerging tech	34	52.05			
2.3.4 R&D expenditure by governments and higher education	18	60.65			

* Confidential data

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Network Readiness Index 2020 Eswatini

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Eswatini

Eswatini ranks 122nd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Eswatini global ranking, overall and by pillar
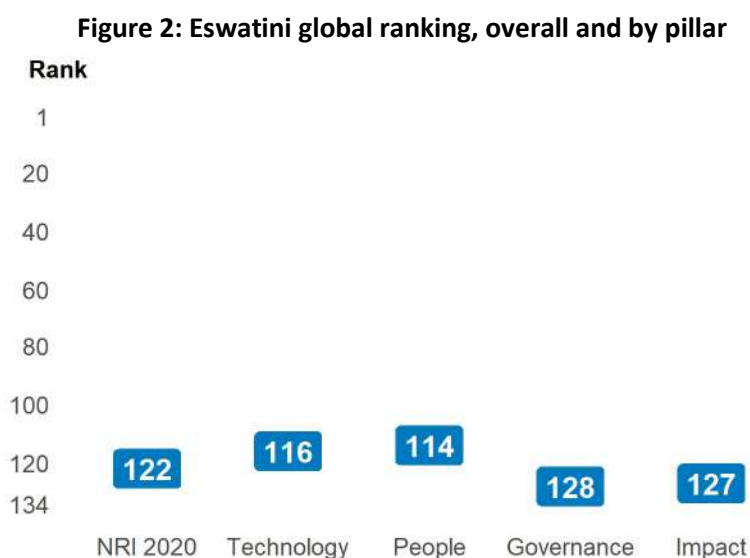
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Eswatini relate to SDG Contribution, Businesses and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Regulation, Quality of Life and Economy sub-pillars.

Table 1: Eswatini rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	74	Access	116
Businesses	97	Governments	120
Content	106	Inclusion	125
Trust	106	Regulation	133
Individuals	107	Quality of Life	133
Future Technologies	114	Economy	134

NRI score and income

Figure 3 shows the position of Eswatini in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Eswatini is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
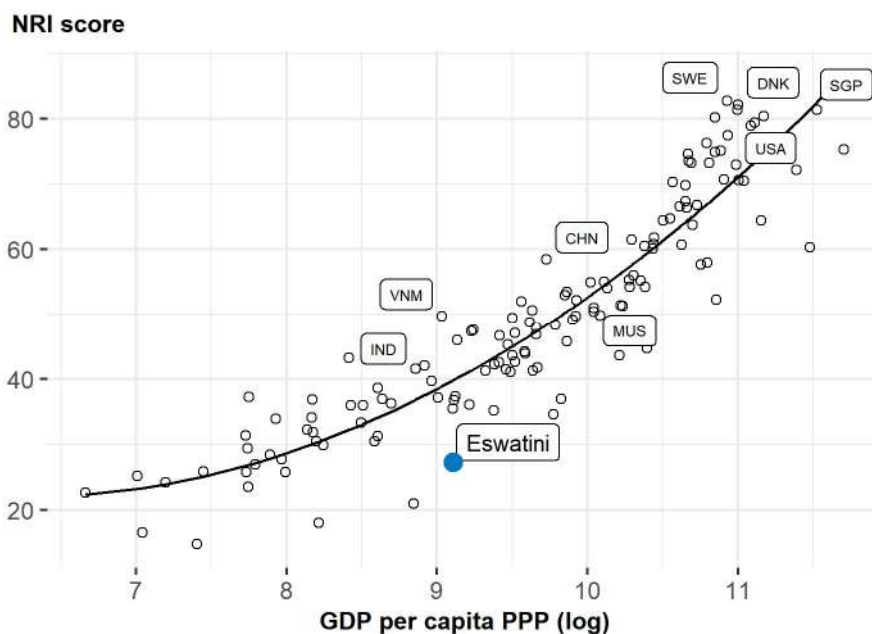
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Eswatini belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries
Eswatini is ranked 32nd in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in two of the twelve sub-pillars: Businesses and SDG Contribution.

Africa
Eswatini is ranked 20th within Africa (Figure 4, right panel). It has a score above the regional average in one of the four pillars: people. With regard to sub-pillars, it outperforms the average in Africa in five of the twelve sub-pillars: Content, Individuals, Businesses, Trust and SDG Contribution.

Figure 4: Performance of Eswatini against its income group and region, overall and by pillar
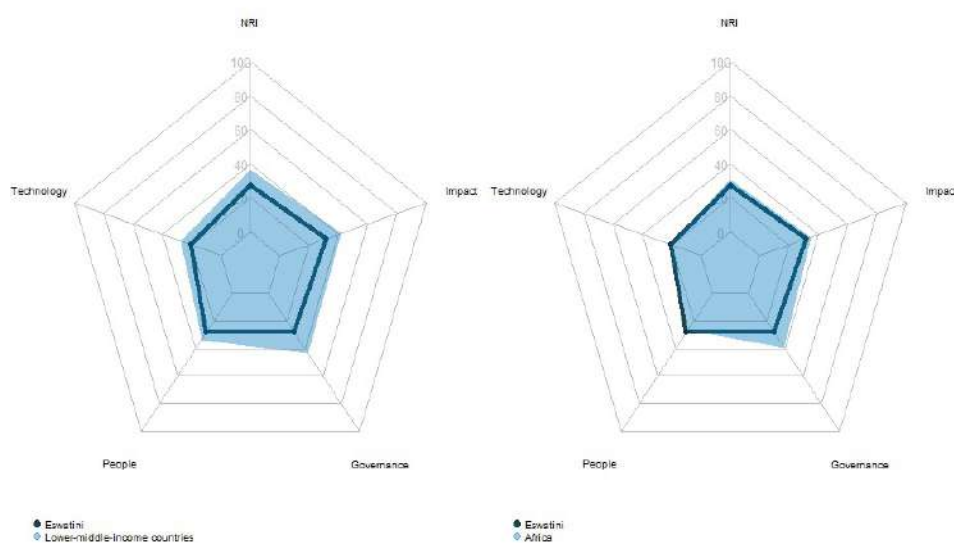
Table 2: Eswatini scores vs. averages of its income group and region, overall and by pillar

Dimension	Eswatini	Lower-middle-income countries	Africa
NRI	27.21	36.72	30.62
Technology	20.50	27.72	21.47
People	28.55	33.88	26.75
Governance	27.88	43.15	39.31
Impact	31.92	42.15	34.94

Strongest and weakest indicators

The indicators where Eswatini performs particularly well include Firms with website, SDG 7: Affordable and Clean Energy, and Professionals (Table 3). By contrast, the economy's weakest indicators include e-commerce legislation, Healthy life expectancy at birth, Investment in emerging technologies, and Freedom to make life choices.

Table 3: Top-ranked and bottom-ranked indicators of Eswatini

Strongest indicators	Rank	Weakest indicators	Rank
Firms with website	52	Cybersecurity	122
SDG 7: Affordable and Clean Energy	55	High-tech exports	122
Professionals	56	International Internet bandwidth	124
Internet access in schools	57	Medium and high-tech industry	124
GitHub commits	60	Availability of local online content	126
Adult literacy rate	67	Active mobile-broadband subscriptions	127
SDG 5: Gender Equality	79	Investment in emerging technologies	128
R&D expenditure by governments and higher education	82	Freedom to make life choices	128
SDG 11: Sustainable Cities and Communities	85	Healthy life expectancy at birth	129
R&D expenditure by businesses	90	e-commerce legislation	131

NRI 2020 At-A-Glance: Eswatini

Network Readiness Index — Rank: 122 (out of 134) — Score: 27.21

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	116	20.50	C. Governance pillar	128	27.88
1st sub-pillar: Access	116	29.17	1st sub-pillar: Trust	106	24.88
2nd sub-pillar: Content	106	15.06	2nd sub-pillar: Regulation	133	26.40
3rd sub-pillar: Future Technologies	114	17.26	3rd sub-pillar: Inclusion	125	32.35
B. People pillar	114	28.55	D. Impact pillar	127	31.92
1st sub-pillar: Individuals	107	31.98	1st sub-pillar: Economy	134	4.37
2nd sub-pillar: Businesses	97	32.67	2nd sub-pillar: Quality of Life	133	26.23
3rd sub-pillar: Governments	120	20.98	3rd sub-pillar: SDG Contribution	74	65.16

The Network Readiness Index in detail

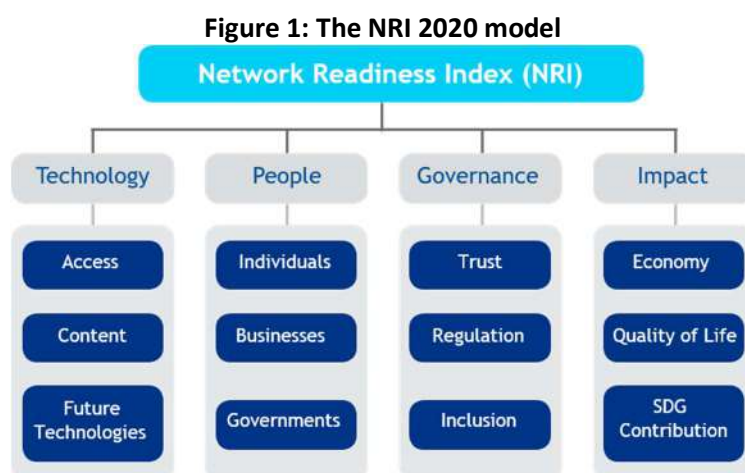| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	116	20.50	**C. Governance pillar**	128	27.88
1st sub-pillar: Access	116	29.17	*1st sub-pillar: Trust*	106	24.88
1.1.1 Mobile tariffs	107	38.10	3.1.1 Secure Internet servers	104	36.21
1.1.2 Handset prices	120	17.24	3.1.2 Cybersecurity	122	13.54
1.1.3 Internet access	98	26.80	3.1.3 Online access to financial account	NA	NA
1.1.4 4G mobile network coverage	102	54.00	3.1.4 Internet shopping	NA	NA
1.1.5 Fixed-broadband subscriptions	120	0.09	*2nd sub-pillar: Regulation*	133	26.40
1.1.6 International Internet bandwidth	124	52.40	3.2.1 Regulatory quality	107	38.11
1.1.7 Internet access in schools	57	15.59	3.2.2 ICT regulatory environment	121	55.98
2nd sub-pillar: Content	106	15.06	3.2.3 Legal framework's adaptability to emerging technologies	116	11.50
1.2.1 GitHub commits	60	4.31	3.2.4 e-commerce legislation	131	0.00
1.2.2 Wikipedia edits	NA	NA	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	125	32.35
1.2.4 Mobile apps development	106	40.25	3.3.1 E-Participation	105	43.21
3rd sub-pillar: Future Technologies	114	17.26	3.3.2 Socioeconomic gap in use of digital payments	NA	NA
1.3.1 Adoption of emerging technologies	115	22.76	3.3.3 Availability of local online content	126	21.50
1.3.2 Investment in emerging technologies	128	11.76	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	NA	NA
1.3.4 Computer software spending	NA	NA	**D. Impact pillar**	127	31.92
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	134	4.37
B. People pillar	114	28.55	4.1.1 Medium and high-tech industry	124	1.79
1st sub-pillar: Individuals	107	31.98	4.1.2 High-tech exports	122	0.52
2.1.1 Internet users	92	45.71	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	127	4.86	4.1.4 Labor productivity per employee	NA	NA
2.1.3 Use of virtual social networks	105	21.65	4.1.5 Prevalence of gig economy	121	10.79
2.1.4 Tertiary enrollment	115	4.36	*2nd sub-pillar: Quality of Life*	133	26.23
2.1.5 Adult literacy rate	67	85.12	4.2.1 Happiness	113	33.47
2.1.6 ICT skills	115	30.18	4.2.2 Freedom to make life choices	128	37.73
2nd sub-pillar: Businesses	97	32.67	4.2.3 Income inequality	118	21.65
2.2.1 Firms with website	52	61.53	4.2.4 Healthy life expectancy at birth	129	12.05
2.2.2 Ease of doing business	101	51.76	*3rd sub-pillar: SDG Contribution*	74	65.16
2.2.3 Professionals	56	28.54	4.3.1 SDG 3: Good Health and Well-Being	92	57.38
2.2.4 Technicians and associate professionals	102	16.79	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	108	37.38	4.3.3 SDG 5: Gender Equality	79	72.65
2.2.6 R&D expenditure by businesses	90	0.04	4.3.4 SDG 7: Affordable and Clean Energy	55	81.72
3rd sub-pillar: Governments	120	20.98	.	.	.
2.3.1 Government online services	106	47.27			
2.3.2 Publication and use of open data	107	0.28			
2.3.3 Government promotion of investment in emerging tech	103	20.41			
2.3.4 R&D expenditure by governments and higher education	82	15.98			

* Confidential data

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Network Readiness Index 2020 Ethiopia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Ethiopia

Ethiopia ranks 129th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Ethiopia global ranking, overall and by pillar
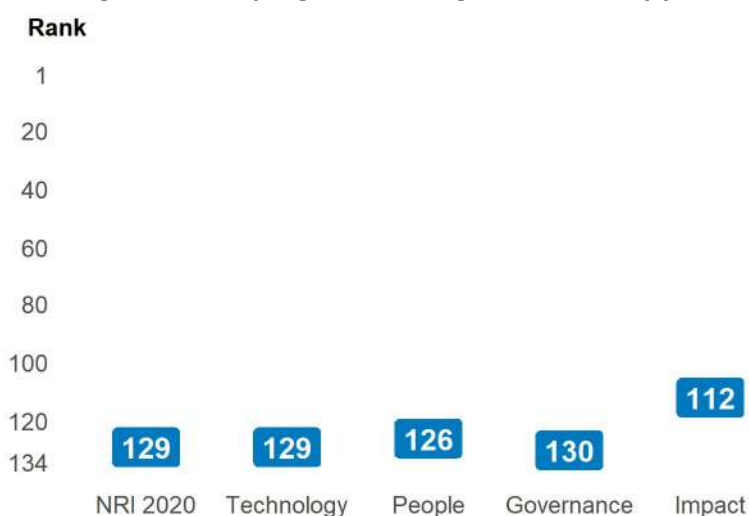
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Ethiopia relate to Economy, Quality of Life and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Content and SDG Contribution sub-pillars.

Table 1: Ethiopia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Economy	37	Access	129
Quality of Life	105	Regulation	129
Future Technologies	108	Businesses	131
Governments	109	Trust	132
Individuals	123	Content	133
Inclusion	123	SDG Contribution	133

NRI score and income

Figure 3 shows the position of Ethiopia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Ethiopia is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
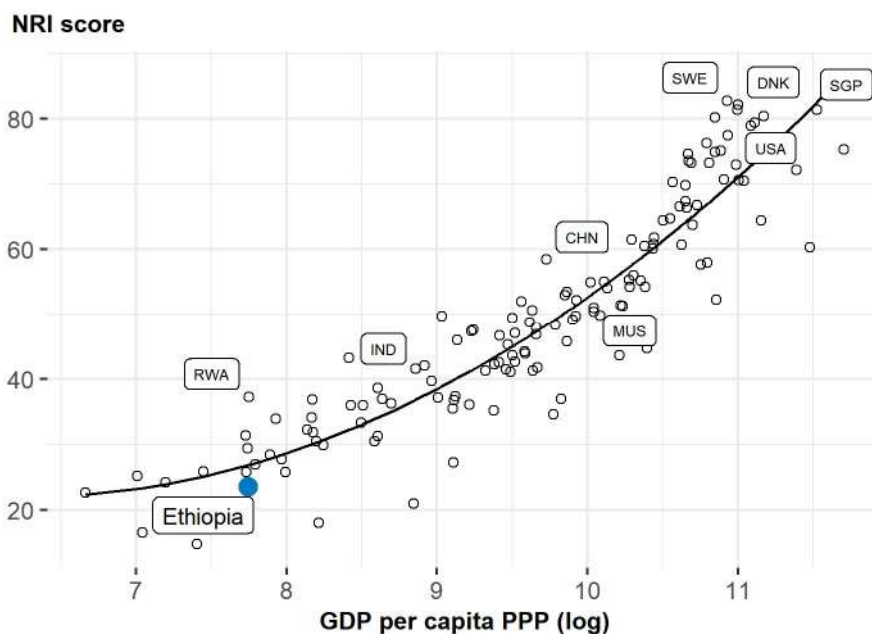
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Ethiopia belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Low-income countries
Ethiopia is ranked 11th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: impact. At the sub-pillar level, it outperforms low-income countries in four of the twelve sub-pillars: Individuals, Governments, Economy and Quality of Life.

Africa
Ethiopia is ranked 27th within Africa (Figure 4, right panel). It has a score above the regional average in one of the four pillars: impact. With regard to sub-pillars, it outperforms the average in Africa in two of the twelve sub-pillars: Economy and Quality of Life.

Figure 4: Performance of Ethiopia against its income group and region, overall and by pillar
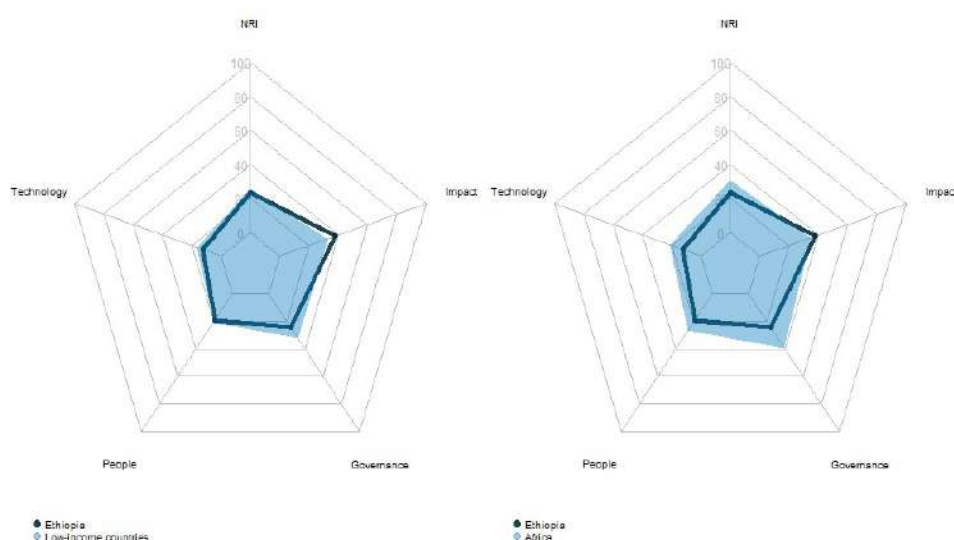
Table 2: Ethiopia scores vs. averages of its income group and region, overall and by pillar

Dimension	Ethiopia	Low-income countries	Africa
NRI	23.49	25.61	30.62
Technology	12.62	16.33	21.47
People	19.32	20.61	26.75
Governance	24.22	32.58	39.31
Impact	37.79	32.92	34.94

Strongest and weakest indicators

The indicators where Ethiopia performs particularly well include High-tech exports, Income inequality, and R&D expenditure by governments and higher education (Table 3). By contrast, the economy's weakest indicators include Secure Internet servers, International Internet bandwidth, and ICT regulatory environment.

Table 3: Top-ranked and bottom-ranked indicators of Ethiopia

Strongest indicators	Rank	Weakest indicators	Rank
High-tech exports	4	4G mobile network coverage	128
Income inequality	53	Internet domain registrations	129
R&D expenditure by governments and higher education	69	Use of virtual social networks	129
Publication and use of open data	80	SDG 3: Good Health and Well-Being	129
Medium and high-tech industry	86	SDG 7: Affordable and Clean Energy	129
R&D expenditure by businesses	87	Handset prices	130
Freedom to make life choices	90	Mobile apps development	131
Government promotion of investment in emerging technologies	91	International Internet bandwidth	132
ICT skills	95	ICT regulatory environment	132
Legal framework's adaptability to emerging technologies	95	Secure Internet servers	133

NRI 2020 At-A-Glance: Ethiopia

Network Readiness Index   Rank: 129 (out of 134)   Score: 23.49

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	129	12.62	C. Governance pillar	130	24.22
1st sub-pillar: Access	129	16.24	1st sub-pillar: Trust	132	8.47
2nd sub-pillar: Content	133	3.59	2nd sub-pillar: Regulation	129	31.44
3rd sub-pillar: Future Technologies	108	18.02	3rd sub-pillar: Inclusion	123	32.75
B. People pillar	126	19.32	D. Impact pillar	112	37.79
1st sub-pillar: Individuals	123	17.92	1st sub-pillar: Economy	37	37.33
2nd sub-pillar: Businesses	131	14.43	2nd sub-pillar: Quality of Life	105	50.26
3rd sub-pillar: Governments	109	25.61	3rd sub-pillar: SDG Contribution	133	25.77

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	129	12.62	**C. Governance pillar**	130	24.22
1st sub-pillar: Access	129	16.24	*1st sub-pillar: Trust*	132	8.47
1.1.1 Mobile tariffs	124	24.34	3.1.1 Secure Internet servers	133	4.61
1.1.2 Handset prices	130	2.68	3.1.2 Cybersecurity	104	29.25
1.1.3 Internet access	111	17.76	3.1.3 Online access to financial account	122	0.00
1.1.4 4G mobile network coverage	128	7.00	3.1.4 Internet shopping	124	0.00
1.1.5 Fixed-broadband subscriptions	110	3.08	*2nd sub-pillar: Regulation*	129	31.44
1.1.6 International Internet bandwidth	132	42.59	3.2.1 Regulatory quality	124	29.97
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	132	20.85
2nd sub-pillar: Content	133	3.59	3.2.3 Legal framework's adaptability to emerging technologies	95	24.93
1.2.1 GitHub commits	125	0.06	3.2.4 e-commerce legislation	115	50.00
1.2.2 Wikipedia edits	NA	NA	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	123	32.75
1.2.4 Mobile apps development	131	10.71	3.3.1 E-Participation	119	30.86
3rd sub-pillar: Future Technologies	108	18.02	3.3.2 Socioeconomic gap in use of digital payments	124	19.44
1.3.1 Adoption of emerging technologies	113	25.79	3.3.3 Availability of local online content	112	30.50
1.3.2 Investment in emerging technologies	101	28.27	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	103	50.20
1.3.4 Computer software spending	125	0.00	**D. Impact pillar**	112	37.79
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	37	37.33
B. People pillar	126	19.32	4.1.1 Medium and high-tech industry	86	20.30
1st sub-pillar: Individuals	123	17.92	4.1.2 High-tech exports	4	98.08
2.1.1 Internet users	120	16.45	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	125	5.64	4.1.4 Labor productivity per employee	116	1.43
2.1.3 Use of virtual social networks	129	3.61	4.1.5 Prevalence of gig economy	95	29.51
2.1.4 Tertiary enrollment	113	5.36	*2nd sub-pillar: Quality of Life*	105	50.26
2.1.5 Adult literacy rate	101	37.93	4.2.1 Happiness	122	27.64
2.1.6 ICT skills	95	38.52	4.2.2 Freedom to make life choices	90	64.37
2nd sub-pillar: Businesses	131	14.43	4.2.3 Income inequality	53	72.16
2.2.1 Firms with website	96	29.37	4.2.4 Healthy life expectancy at birth	108	36.87
2.2.2 Ease of doing business	125	31.38	*3rd sub-pillar: SDG Contribution*	133	25.77
2.2.3 Professionals	116	5.40	4.3.1 SDG 3: Good Health and Well-Being	129	18.03
2.2.4 Technicians and associate professionals	123	4.67	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	126	15.60	4.3.3 SDG 5: Gender Equality	124	32.72
2.2.6 R&D expenditure by businesses	87	0.15	4.3.4 SDG 7: Affordable and Clean Energy	129	16.33
3rd sub-pillar: Governments	109	25.61	.	.	.
2.3.1 Government online services	117	34.55			
2.3.2 Publication and use of open data	80	16.14			
2.3.3 Government promotion of investment in emerging tech	91	29.66			
2.3.4 R&D expenditure by governments and higher education	69	22.11			

* Confidential data

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Network Readiness Index 2020 Finland

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Finland

Finland ranks 6th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Technology and Impact.

Figure 2: Finland global ranking, overall and by pillar

Performance at sub-pillar level

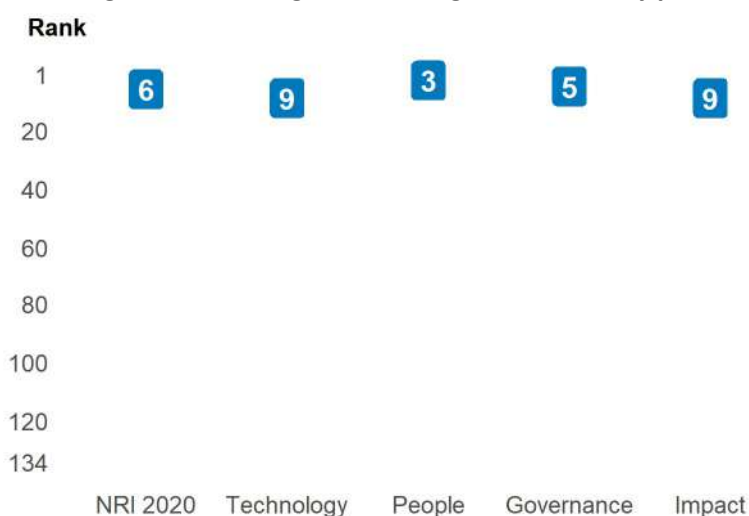When it comes to sub-pillars, the strongest showings of Finland relate to Regulation, Quality of Life and Individuals, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Economy and SDG Contribution sub-pillars.

Table 1: Finland rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	2	Trust	6
Quality of Life	3	Inclusion	9
Individuals	4	Content	11
Businesses	5	Access	15
Governments	5	Economy	17
Future Technologies	6	SDG Contribution	28

NRI score and income

Figure 3 shows the position of Finland in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Finland is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
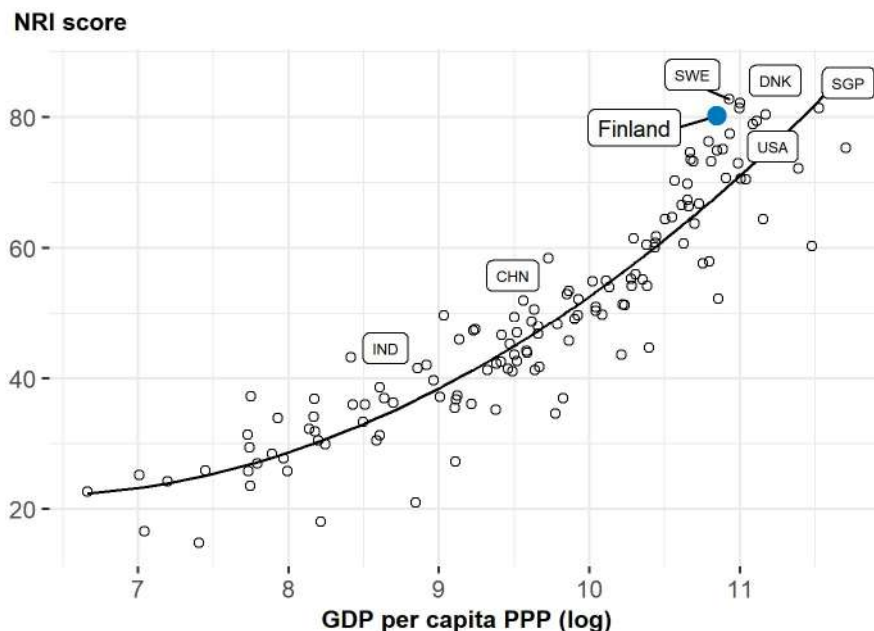
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Finland belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Finland is ranked 6th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it has a higher score than the average of high-income countries in all of them.

Europe
Finland is ranked 5th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of Finland against its income group and region, overall and by pillar
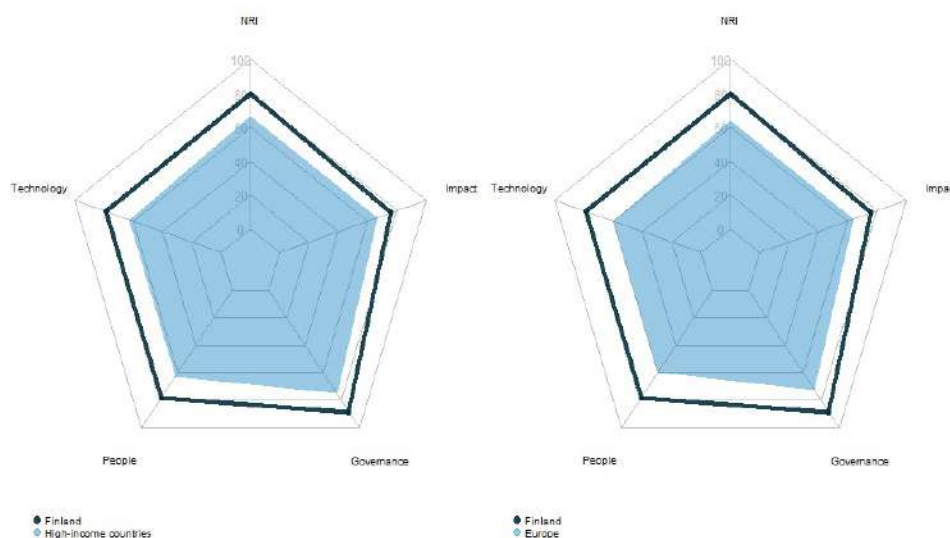
Table 2: Finland scores vs. averages of its income group and region, overall and by pillar

Dimension	Finland	High-income countries	Europe
NRI	80.16	66.82	64.21
Technology	78.24	62.51	59.93
People	78.19	62.72	59.89
Governance	88.61	75.41	72.98
Impact	75.59	66.63	64.04

Strongest and weakest indicators

The indicators where Finland performs particularly well include Internet access in schools, ICT skills, and Firms with website (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, High-tech exports, and Use of virtual social networks.

Table 3: Top-ranked and bottom-ranked indicators of Finland

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	Healthy life expectancy at birth	25
ICT skills	1	Fixed-broadband subscriptions	26
Firms with website	1	Medium and high-tech industry	27
Legal framework's adaptability to emerging technologies	1	SDG 3: Good Health and Well-Being	30
e-commerce legislation	1	SDG 5: Gender Equality	30
Happiness	1	International Internet bandwidth	44
ICT PCT patent applications	2	Gender gap in Internet use	44
Adoption of emerging technologies	3	Use of virtual social networks	52
Government online services	3	High-tech exports	54
Online access to financial account	3	SDG 7: Affordable and Clean Energy	106

NRI 2020 At-A-Glance: Finland

Network Readiness Index   Rank: 6 (out of 134)   Score: 80.16

Pillar/sub-pillar	Rank	Score
A. Technology pillar	9	78.24
1st sub-pillar: Access	15	86.55
2nd sub-pillar: Content	11	74.64
3rd sub-pillar: Future Technologies	6	73.53
B. People pillar	3	78.19
1st sub-pillar: Individuals	4	75.00
2nd sub-pillar: Businesses	5	78.84
3rd sub-pillar: Governments	5	80.73

Pillar/sub-pillar	Rank	Score
C. Governance pillar	5	88.61
1st sub-pillar: Trust	6	87.81
2nd sub-pillar: Regulation	2	93.60
3rd sub-pillar: Inclusion	9	84.42
D. Impact pillar	9	75.59
1st sub-pillar: Economy	17	54.76
2nd sub-pillar: Quality of Life	3	93.46
3rd sub-pillar: SDG Contribution	28	78.54

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	9	78.24
1st sub-pillar: Access	15	86.55
1.1.1 Mobile tariffs	22	82.27
1.1.2 Handset prices	16	70.36
1.1.3 Internet access	20	88.92
1.1.4 4G mobile network coverage	9	99.90
1.1.5 Fixed-broadband subscriptions	26	93.26
1.1.6 International Internet bandwidth	44	71.12
1.1.7 Internet access in schools	1	100.00
2nd sub-pillar: Content	11	74.64
1.2.1 GitHub commits	4	83.27
1.2.2 Wikipedia edits	6	92.98
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	23	84.79
3rd sub-pillar: Future Technologies	6	73.53
1.3.1 Adoption of emerging technologies	3	96.95
1.3.2 Investment in emerging technologies	6	87.87
1.3.3 ICT PCT patent applications	2	92.91
1.3.4 Computer software spending	17	48.39
1.3.5 Robot density	19	41.52
B. People pillar	3	78.19
1st sub-pillar: Individuals	4	75.00
2.1.1 Internet users	20	88.90
2.1.2 Active mobile-broadband subscriptions	4	61.97
2.1.3 Use of virtual social networks	52	59.79
2.1.4 Tertiary enrollment	7	64.35
2.1.5 Adult literacy rate	NA	NA
2.1.6 ICT skills	1	100.00
2nd sub-pillar: Businesses	5	78.84
2.2.1 Firms with website	1	100.00
2.2.2 Ease of doing business	19	88.35
2.2.3 Professionals	8	63.92
2.2.4 Technicians and associate professionals	7	83.80
2.2.5 Business use of digital tools	7	90.99
2.2.6 R&D expenditure by businesses	10	45.98
3rd sub-pillar: Governments	5	80.73
2.3.1 Government online services	3	96.97
2.3.2 Publication and use of open data	21	55.89
2.3.3 Government promotion of investment in emerging tech	6	83.43
2.3.4 R&D expenditure by governments and higher education	4	86.63

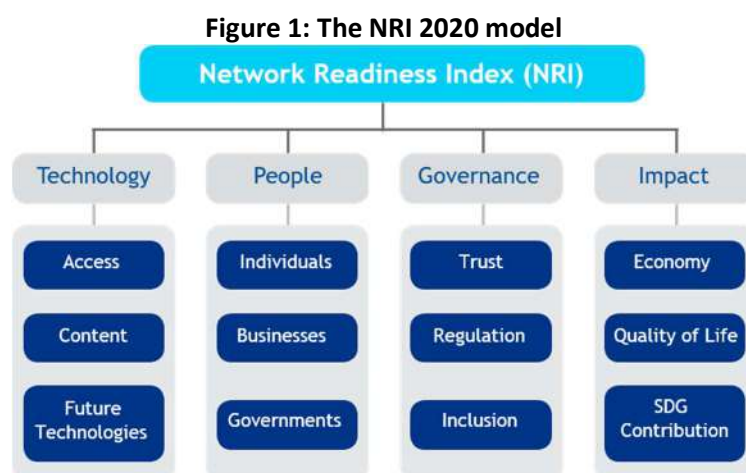| Indicator	Rank	Score
C. Governance pillar	5	88.61
1st sub-pillar: Trust	6	87.81
3.1.1 Secure Internet servers	11	87.48
3.1.2 Cybersecurity	21	91.87
3.1.3 Online access to financial account	3	93.95
3.1.4 Internet shopping	12	77.92
2nd sub-pillar: Regulation	2	93.60
3.2.1 Regulatory quality	7	90.76
3.2.2 ICT regulatory environment	23	93.83
3.2.3 Legal framework's adaptability to emerging technologies	1	100.00
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	19	83.42
3rd sub-pillar: Inclusion	9	84.42
3.3.1 E-Participation	14	95.06
3.3.2 Socioeconomic gap in use of digital payments	5	98.64
3.3.3 Availability of local online content	12	89.99
3.3.4 Gender gap in Internet use	44	61.70
3.3.5 Rural gap in use of digital payments	17	76.73
D. Impact pillar	9	75.59
1st sub-pillar: Economy	17	54.76
4.1.1 Medium and high-tech industry	27	52.82
4.1.2 High-tech exports	54	16.92
4.1.3 PCT patent applications	5	70.76
4.1.4 Labor productivity per employee	17	65.14
4.1.5 Prevalence of gig economy	22	68.15
2nd sub-pillar: Quality of Life	3	93.46
4.2.1 Happiness	1	100.00
4.2.2 Freedom to make life choices	6	97.33
4.2.3 Income inequality	9	91.75
4.2.4 Healthy life expectancy at birth	25	84.77
3rd sub-pillar: SDG Contribution	28	78.54
4.3.1 SDG 3: Good Health and Well-Being	30	81.97
4.3.2 SDG 4: Quality Education	14	68.42
4.3.3 SDG 5: Gender Equality	30	81.94
4.3.4 SDG 7: Affordable and Clean Energy	106	63.80
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* Confidential data

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Network Readiness Index 2020 France

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of France

France ranks 17th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: France global ranking, overall and by pillar
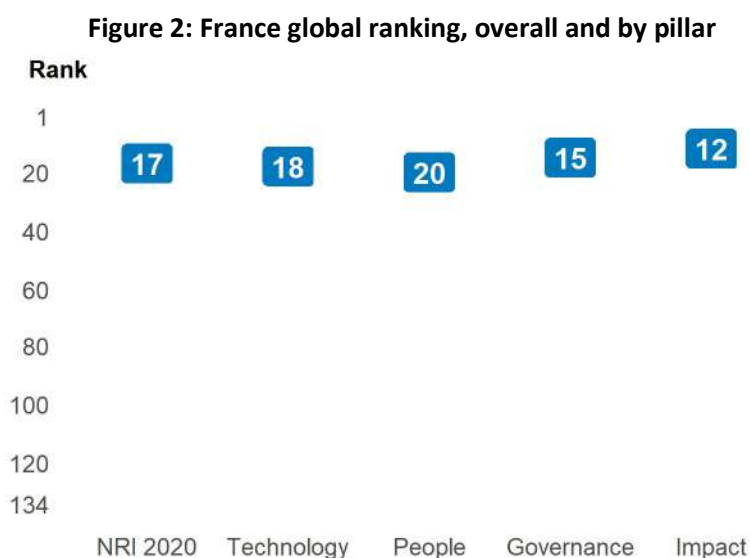
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of France relate to Governments, Regulation and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Content, SDG Contribution and Individuals sub-pillars.

Table 1: France rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	8	Businesses	18
Regulation	9	Quality of Life	20
Economy	14	Access	22
Future Technologies	16	Content	22
Trust	16	SDG Contribution	22
Inclusion	17	Individuals	60

NRI score and income

Figure 3 shows the position of France in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, France is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
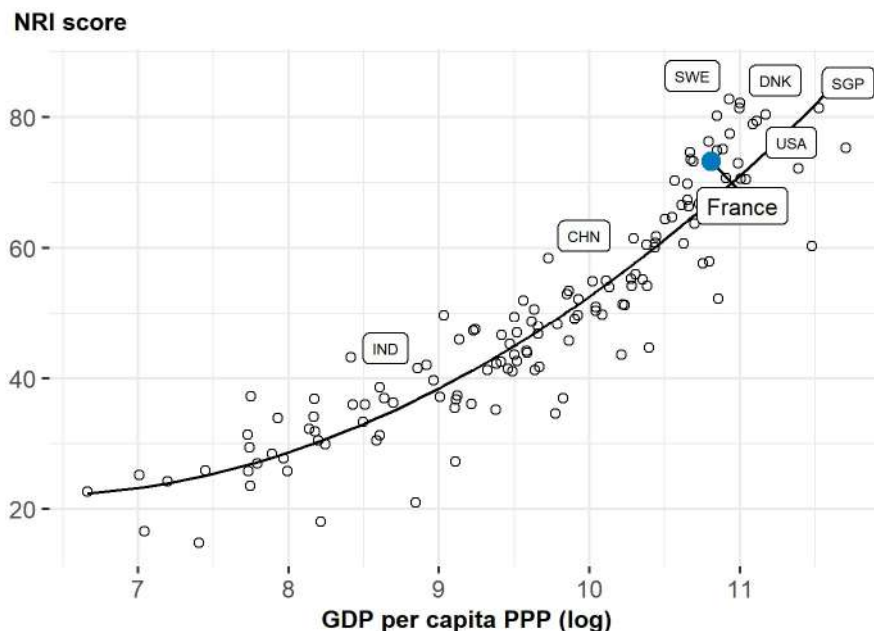
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. France belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

2

Performance against its income group and region

High-income countries
France is ranked 17th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Europe
France is ranked 10th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of France against its income group and region, overall and by pillar

Table 2: France scores vs. averages of its income group and region, overall and by pillar

Dimension	France	High-income countries	Europe
NRI	73.18	66.82	64.21
Technology	69.52	62.51	59.93
People	67.77	62.72	59.89
Governance	82.56	75.41	72.98
Impact	72.85	66.63	64.04

Strongest and weakest indicators

The indicators where France performs particularly well include e-commerce legislation, Publication and use of open data, and Cybersecurity (Table 3). By contrast, the economy's weakest indicators include International Internet bandwidth, Freedom to make life choices, and Mobile tariffs.

Table 3: Top-ranked and bottom-ranked indicators of France

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	SDG 5: Gender Equality	39
Publication and use of open data	3	Internet access	40
Cybersecurity	3	Active mobile-broadband subscriptions	40
Technicians and associate professionals	5	ICT skills	51
Healthy life expectancy at birth	5	Use of virtual social networks	52
Handset prices	7	Gender gap in Internet use	52
Legal framework's adaptability to emerging technologies	9	SDG 7: Affordable and Clean Energy	53
Privacy protection by law content	10	Mobile tariffs	61
Computer software spending	11	International Internet bandwidth	63
Government promotion of investment in emerging technologies	11	Freedom to make life choices	63

NRI 2020 At-A-Glance: France

Network Readiness Index Rank: 17 (out of 134) Score: 73.18

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	18	69.52	C. Governance pillar	15	82.56
1st sub-pillar: Access	22	84.00	1st sub-pillar: Trust	16	78.12
2nd sub-pillar: Content	22	62.38	2nd sub-pillar: Regulation	9	88.36
3rd sub-pillar: Future Technologies	16	62.17	3rd sub-pillar: Inclusion	17	81.20
B. People pillar	20	67.77	D. Impact pillar	12	72.85
1st sub-pillar: Individuals	60	57.08	1st sub-pillar: Economy	14	57.04
2nd sub-pillar: Businesses	18	67.46	2nd sub-pillar: Quality of Life	20	81.74
3rd sub-pillar: Governments	8	78.78	3rd sub-pillar: SDG Contribution	22	79.78

The Network Readiness Index in detail

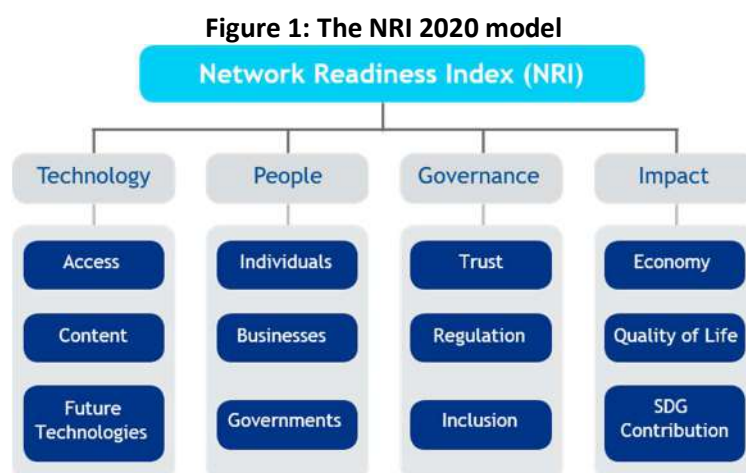| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	18	69.52	**C. Governance pillar**	15	82.56
1st sub-pillar: Access	22	84.00	*1st sub-pillar: Trust*	16	78.12
1.1.1 Mobile tariffs	61	65.09	3.1.1 Secure Internet servers	21	82.10
1.1.2 Handset prices	7	81.65	3.1.2 Cybersecurity	3	98.59
1.1.3 Internet access	40	82.32	3.1.3 Online access to financial account	21	60.62
1.1.4 4G mobile network coverage	24	99.00	3.1.4 Internet shopping	16	71.18
1.1.5 Fixed-broadband subscriptions	24	93.56	*2nd sub-pillar: Regulation*	9	88.36
1.1.6 International Internet bandwidth	63	68.39	3.2.1 Regulatory quality	27	77.25
1.1.7 Internet access in schools	27	98.00	3.2.2 ICT regulatory environment	11	96.14
2nd sub-pillar: Content	22	62.38	3.2.3 Legal framework's adaptability to emerging technologies	9	77.92
1.2.1 GitHub commits	19	48.41	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	12	85.30	3.2.5 Privacy protection by law content	10	90.47
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	17	81.20
1.2.4 Mobile apps development	27	82.63	3.3.1 E-Participation	18	90.13
3rd sub-pillar: Future Technologies	16	62.17	3.3.2 Socioeconomic gap in use of digital payments	12	96.36
1.3.1 Adoption of emerging technologies	14	83.82	3.3.3 Availability of local online content	27	83.71
1.3.2 Investment in emerging technologies	22	67.30	3.3.4 Gender gap in Internet use	52	59.65
1.3.3 ICT PCT patent applications	18	59.66	3.3.5 Rural gap in use of digital payments	22	76.15
1.3.4 Computer software spending	11	54.56	**D. Impact pillar**	12	72.85
1.3.5 Robot density	17	45.52	*1st sub-pillar: Economy*	14	57.04
B. People pillar	20	67.77	4.1.1 Medium and high-tech industry	13	63.98
1st sub-pillar: Individuals	60	57.08	4.1.2 High-tech exports	12	49.12
2.1.1 Internet users	32	81.84	4.1.3 PCT patent applications	16	31.14
2.1.2 Active mobile-broadband subscriptions	40	35.62	4.1.4 Labor productivity per employee	13	70.88
2.1.3 Use of virtual social networks	52	59.79	4.1.5 Prevalence of gig economy	20	70.10
2.1.4 Tertiary enrollment	38	47.73	*2nd sub-pillar: Quality of Life*	20	81.74
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	24	78.56
2.1.6 ICT skills	51	60.43	4.2.2 Freedom to make life choices	63	76.89
2nd sub-pillar: Businesses	18	67.46	4.2.3 Income inequality	25	80.93
2.2.1 Firms with website	35	72.02	4.2.4 Healthy life expectancy at birth	5	90.58
2.2.2 Ease of doing business	31	82.38	*3rd sub-pillar: SDG Contribution*	22	79.78
2.2.3 Professionals	28	45.85	4.3.1 SDG 3: Good Health and Well-Being	30	81.97
2.2.4 Technicians and associate professionals	5	86.43	4.3.2 SDG 4: Quality Education	24	63.95
2.2.5 Business use of digital tools	23	81.81	4.3.3 SDG 5: Gender Equality	39	80.11
2.2.6 R&D expenditure by businesses	13	36.28	4.3.4 SDG 7: Affordable and Clean Energy	53	81.94
3rd sub-pillar: Governments	8	78.78	.	.	.
2.3.1 Government online services	18	87.88			
2.3.2 Publication and use of open data	3	85.13			
2.3.3 Government promotion of investment in emerging tech	11	75.02			
2.3.4 R&D expenditure by governments and higher education	15	67.07			

* Confidential data

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Network Readiness Index 2020 Gambia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Gambia

Gambia ranks 119th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Gambia global ranking, overall and by pillar
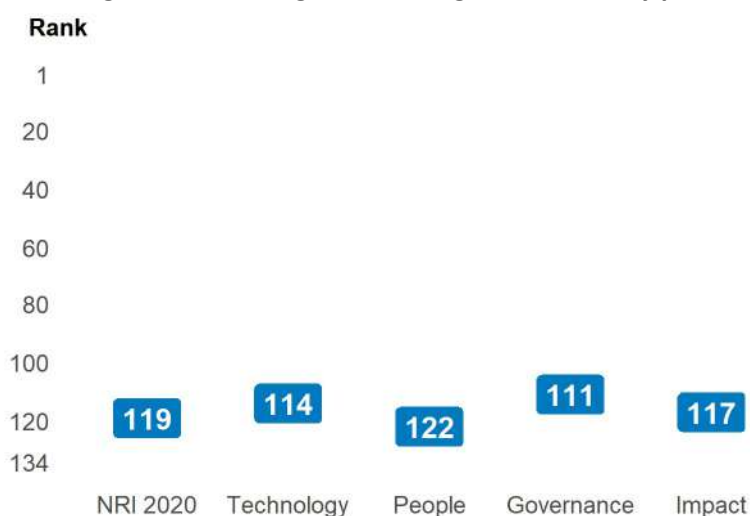
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Gambia relate to Future Technologies, Regulation and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Governments and Inclusion sub-pillars.

Table 1: Gambia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	42	SDG Contribution	119
Regulation	66	Individuals	121
Trust	97	Content	122
Businesses	106	Access	126
Economy	106	Governments	130
Quality of Life	108	Inclusion	134

NRI score and income

Figure 3 shows the position of Gambia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Gambia is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
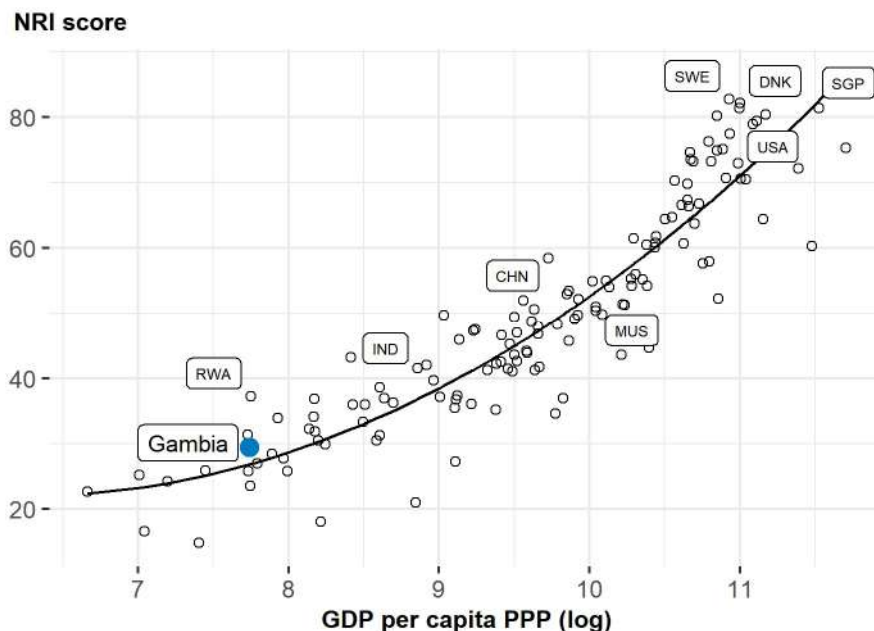
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Gambia belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Low-income countries
Gambia is ranked 4th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms low-income countries in nine of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Trust, Regulation, Quality of Life and SDG Contribution.

Africa
Gambia is ranked 17th within Africa (Figure 4, right panel). It has a score above the regional average in two of the four pillars: technology and impact. With regard to sub-pillars, it outperforms the average in Africa in five of the twelve sub-pillars: Future Technologies, Businesses, Trust, Regulation and Quality of Life.

Figure 4: Performance of Gambia against its income group and region, overall and by pillar
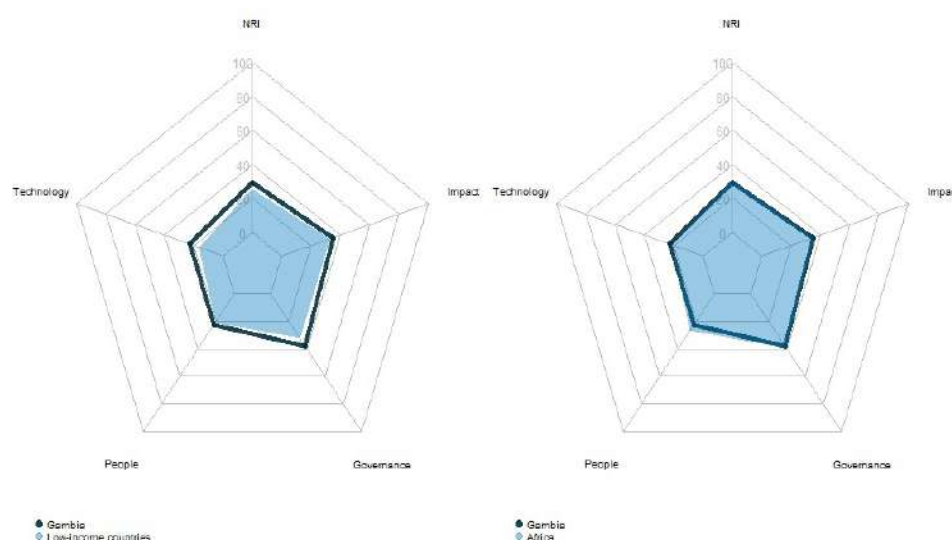
Table 2: Gambia scores vs. averages of its income group and region, overall and by pillar

Dimension	Gambia	Low-income countries	Africa
NRI	29.40	25.61	30.62
Technology	22.51	16.33	21.47
People	22.52	20.61	26.75
Governance	37.47	32.58	39.31
Impact	35.08	32.92	34.94

Strongest and weakest indicators

The indicators where Gambia performs particularly well include e-commerce legislation, Privacy protection by law content, and Income inequality (Table 3). By contrast, the economy's weakest indicators include Government online services, E-Participation, and 4G mobile network coverage.

Table 3: Top-ranked and bottom-ranked indicators of Gambia

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Mobile apps development	120
Privacy protection by law content	24	SDG 3: Good Health and Well-Being	120
Income inequality	57	Ease of doing business	122
Professionals	61	Handset prices	124
Legal framework's adaptability to emerging technologies	66	High-tech exports	125
SDG 7: Affordable and Clean Energy	69	Tertiary enrollment	126
Prevalence of gig economy	73	SDG 5: Gender Equality	126
Investment in emerging technologies	76	4G mobile network coverage	127
ICT skills	76	Government online services	133
Technicians and associate professionals	81	E-Participation	133

NRI 2020 At-A-Glance: Gambia

Network Readiness Index   Rank: 119 (out of 134)   Score: 29.40

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	114	22.51	C. Governance pillar	111	37.47
1st sub-pillar: Access	126	22.31	1st sub-pillar: Trust	97	27.15
2nd sub-pillar: Content	122	9.34	2nd sub-pillar: Regulation	66	66.47
3rd sub-pillar: Future Technologies	42	35.89	3rd sub-pillar: Inclusion	134	18.80
B. People pillar	122	22.52	D. Impact pillar	117	35.08
1st sub-pillar: Individuals	121	21.74	1st sub-pillar: Economy	106	14.78
2nd sub-pillar: Businesses	106	30.17	2nd sub-pillar: Quality of Life	108	49.03
3rd sub-pillar: Governments	130	15.65	3rd sub-pillar: SDG Contribution	119	41.42

The Network Readiness Index in detail

| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	114	22.51	**C. Governance pillar**	111	37.47
1st sub-pillar: Access	126	22.31	*1st sub-pillar: Trust*	97	27.15
1.1.1 Mobile tariffs	117	30.31	3.1.1 Secure Internet servers	118	24.83
1.1.2 Handset prices	124	13.78	3.1.2 Cybersecurity	103	29.47
1.1.3 Internet access	118	13.61	3.1.3 Online access to financial account	NA	NA
1.1.4 4G mobile network coverage	127	7.20	3.1.4 Internet shopping	NA	NA
1.1.5 Fixed-broadband subscriptions	100	9.99	*2nd sub-pillar: Regulation*	66	66.47
1.1.6 International Internet bandwidth	109	58.98	3.2.1 Regulatory quality	109	37.50
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	93	72.59
2nd sub-pillar: Content	122	9.34	3.2.3 Legal framework's adaptability to emerging technologies	66	40.81
1.2.1 GitHub commits	117	0.20	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	NA	NA	3.2.5 Privacy protection by law content	24	81.44
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	134	18.80
1.2.4 Mobile apps development	120	27.64	3.3.1 E-Participation	133	0.00
3rd sub-pillar: Future Technologies	42	35.89	3.3.2 Socioeconomic gap in use of digital payments	NA	NA
1.3.1 Adoption of emerging technologies	94	35.57	3.3.3 Availability of local online content	104	37.61
1.3.2 Investment in emerging technologies	76	36.20	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	NA	NA
1.3.4 Computer software spending	NA	NA	**D. Impact pillar**	117	35.08
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	106	14.78
B. People pillar	122	22.52	4.1.1 Medium and high-tech industry	116	4.67
1st sub-pillar: Individuals	121	21.74	4.1.2 High-tech exports	125	0.29
2.1.1 Internet users	119	17.71	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	112	13.33	4.1.4 Labor productivity per employee	NA	NA
2.1.3 Use of virtual social networks	113	14.43	4.1.5 Prevalence of gig economy	73	39.39
2.1.4 Tertiary enrollment	126	1.40	*2nd sub-pillar: Quality of Life*	108	49.03
2.1.5 Adult literacy rate	102	36.65	4.2.1 Happiness	86	48.56
2.1.6 ICT skills	76	46.90	4.2.2 Freedom to make life choices	116	51.30
2nd sub-pillar: Businesses	106	30.17	4.2.3 Income inequality	57	69.85
2.2.1 Firms with website	112	14.98	4.2.4 Healthy life expectancy at birth	118	26.42
2.2.2 Ease of doing business	122	35.48	*3rd sub-pillar: SDG Contribution*	119	41.42
2.2.3 Professionals	61	26.20	4.3.1 SDG 3: Good Health and Well-Being	120	26.23
2.2.4 Technicians and associate professionals	81	24.46	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	90	49.72	4.3.3 SDG 5: Gender Equality	126	28.75
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	69	78.54
3rd sub-pillar: Governments	130	15.65	.	.	.
2.3.1 Government online services	133	0.00			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	86	31.30			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

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Network Readiness Index 2020
Georgia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model
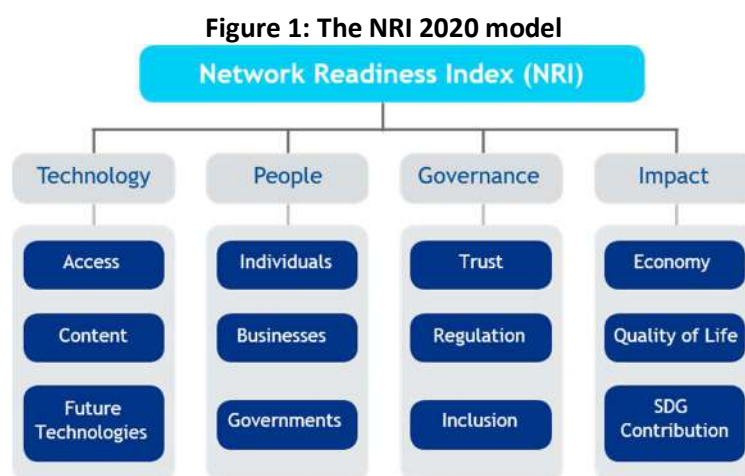
Global NRI position of Georgia

Georgia ranks 68th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Georgia global ranking, overall and by pillar
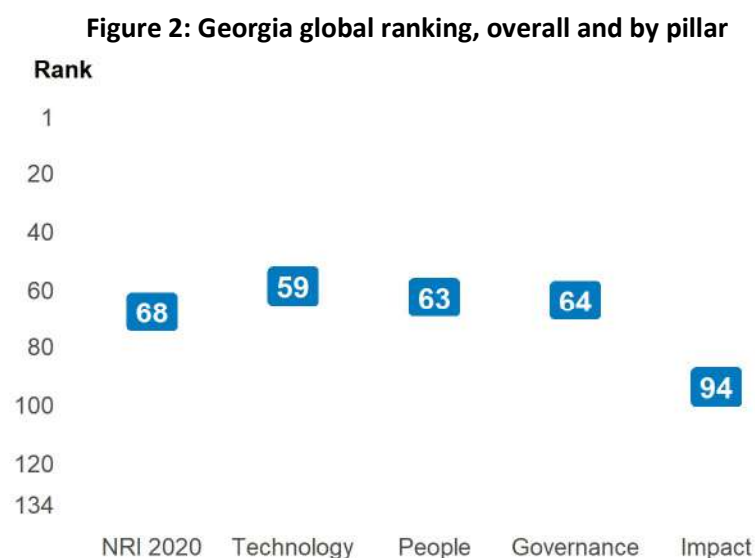
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Georgia relate to Access, Regulation and Businesses, among others (Table 1). More could be done, though, to improve the economy's performances in the Inclusion, Future Technologies and Economy sub-pillars.

Table 1: Georgia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Access	44	Governments	75
Regulation	45	Quality of Life	83
Businesses	47	SDG Contribution	85
Content	53	Inclusion	86
Trust	63	Future Technologies	125
Individuals	67	Economy	126

NRI score and income

Figure 3 shows the position of Georgia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Georgia is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
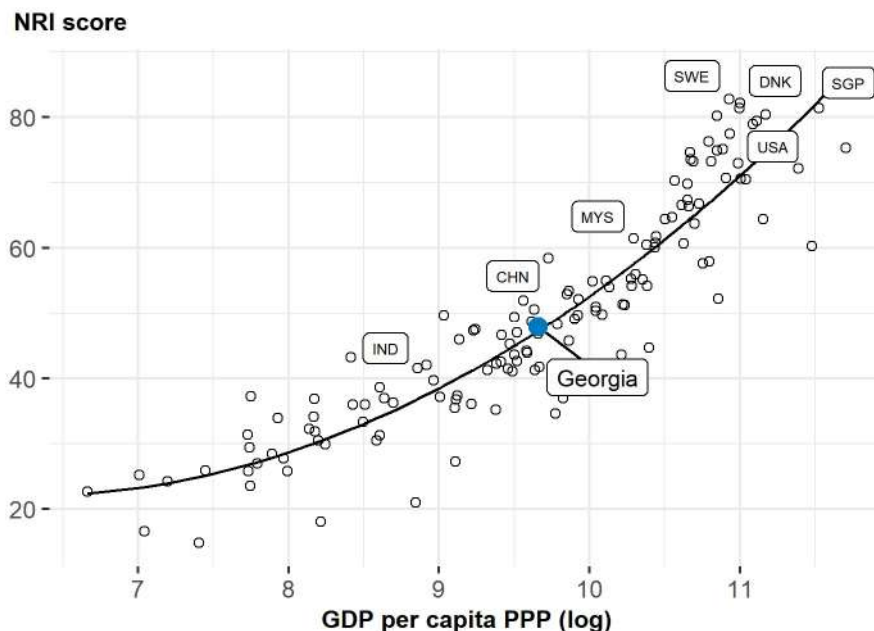
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Georgia belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Europe-is Sweden (SWE).

2

Performance against its income group and region

Upper-middle-income countries
Georgia is ranked 18th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, people and governance. At the sub-pillar level, it outperforms upper-middle-income countries in six of the twelve sub-pillars: Access, Content, Businesses, Trust, Regulation and Quality of Life.

Europe
Georgia is ranked 38th within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Georgia against its income group and region, overall and by pillar

Table 2: Georgia scores vs. averages of its income group and region, overall and by pillar

Dimension	Georgia	Upper-middle-income countries	Europe
NRI	47.95	47.39	64.21
Technology	41.73	38.42	59.93
People	48.93	46.66	59.89
Governance	57.04	54.31	72.98
Impact	44.10	50.17	64.04

Strongest and weakest indicators

The indicators where Georgia performs particularly well include Internet access in schools, Ease of doing business, and Adult literacy rate (Table 3). By contrast, the economy's weakest indicators include e-commerce legislation, Rural gap in use of digital payments, Active mobile-broadband subscriptions, and Happiness.

Table 3: Top-ranked and bottom-ranked indicators of Georgia

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	Online access to financial account	93
Ease of doing business	7	SDG 7: Affordable and Clean Energy	94
Adult literacy rate	13	Investment in emerging technologies	96
4G mobile network coverage	15	Medium and high-tech industry	98
Cybersecurity	20	High-tech exports	98
International Internet bandwidth	21	ICT skills	102
ICT regulatory environment	21	Active mobile-broadband subscriptions	104
Regulatory quality	28	Happiness	104
Use of virtual social networks	31	Rural gap in use of digital payments	107
Mobile tariffs	34	e-commerce legislation	115

NRI 2020 At-A-Glance: Georgia

Network Readiness Index   Rank: 68 (out of 134)   Score: 47.95

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	59	41.73	C. Governance pillar	64	57.04
1st sub-pillar: Access	44	76.35	1st sub-pillar: Trust	63	44.17
2nd sub-pillar: Content	53	35.18	2nd sub-pillar: Regulation	45	72.15
3rd sub-pillar: Future Technologies	125	13.65	3rd sub-pillar: Inclusion	86	54.80
B. People pillar	63	48.93	D. Impact pillar	94	44.10
1st sub-pillar: Individuals	67	54.91	1st sub-pillar: Economy	126	9.76
2nd sub-pillar: Businesses	47	51.34	2nd sub-pillar: Quality of Life	83	61.95
3rd sub-pillar: Governments	75	40.54	3rd sub-pillar: SDG Contribution	85	60.58

The Network Readiness Index in detail

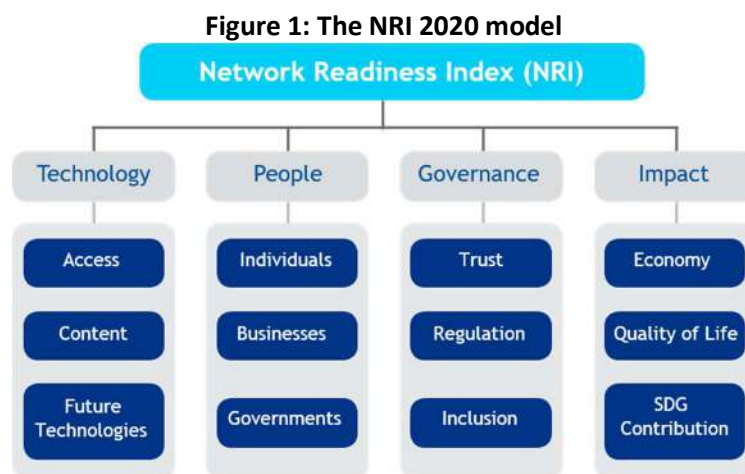| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	59	41.73	**C. Governance pillar**	64	57.04
1st sub-pillar: Access	44	76.35	*1st sub-pillar: Trust*	63	44.17
1.1.1 Mobile tariffs	34	74.78	3.1.1 Secure Internet servers	51	63.27
1.1.2 Handset prices	81	38.69	3.1.2 Cybersecurity	20	91.98
1.1.3 Internet access	66	69.44	3.1.3 Online access to financial account	93	15.90
1.1.4 4G mobile network coverage	15	99.72	3.1.4 Internet shopping	91	5.54
1.1.5 Fixed-broadband subscriptions	50	77.49	*2nd sub-pillar: Regulation*	45	72.15
1.1.6 International Internet bandwidth	21	74.35	3.2.1 Regulatory quality	28	76.14
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	21	94.41
2nd sub-pillar: Content	53	35.18	3.2.3 Legal framework's adaptability to emerging technologies	NA	NA
1.2.1 GitHub commits	92	1.48	3.2.4 e-commerce legislation	115	50.00
1.2.2 Wikipedia edits	37	69.07	3.2.5 Privacy protection by law content	42	68.03
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	86	54.80
1.2.4 Mobile apps development	59	66.74	3.3.1 E-Participation	79	62.97
3rd sub-pillar: Future Technologies	125	13.65	3.3.2 Socioeconomic gap in use of digital payments	87	54.31
1.3.1 Adoption of emerging technologies	NA	NA	3.3.3 Availability of local online content	81	51.78
1.3.2 Investment in emerging technologies	96	29.90	3.3.4 Gender gap in Internet use	62	57.81
1.3.3 ICT PCT patent applications	63	2.51	3.3.5 Rural gap in use of digital payments	107	47.13
1.3.4 Computer software spending	89	8.53	**D. Impact pillar**	94	44.10
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	126	9.76
B. People pillar	63	48.93	4.1.1 Medium and high-tech industry	98	14.46
1st sub-pillar: Individuals	67	54.91	4.1.2 High-tech exports	98	4.87
2.1.1 Internet users	77	63.21	4.1.3 PCT patent applications	61	0.59
2.1.2 Active mobile-broadband subscriptions	104	16.79	4.1.4 Labor productivity per employee	79	19.11
2.1.3 Use of virtual social networks	31	68.04	4.1.5 Prevalence of gig economy	NA	NA
2.1.4 Tertiary enrollment	42	46.47	*2nd sub-pillar: Quality of Life*	83	61.95
2.1.5 Adult literacy rate	13	99.21	4.2.1 Happiness	104	43.22
2.1.6 ICT skills	102	35.76	4.2.2 Freedom to make life choices	71	74.05
2nd sub-pillar: Businesses	47	51.34	4.2.3 Income inequality	61	68.56
2.2.1 Firms with website	68	48.41	4.2.4 Healthy life expectancy at birth	82	61.97
2.2.2 Ease of doing business	7	94.64	*3rd sub-pillar: SDG Contribution*	85	60.58
2.2.3 Professionals	52	29.88	4.3.1 SDG 3: Good Health and Well-Being	85	62.30
2.2.4 Technicians and associate professionals	65	32.43	4.3.2 SDG 4: Quality Education	66	27.22
2.2.5 Business use of digital tools	NA	NA	4.3.3 SDG 5: Gender Equality	50	78.23
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	94	68.93
3rd sub-pillar: Governments	75	40.54	.	.	.
2.3.1 Government online services	86	57.57			
2.3.2 Publication and use of open data	40	37.44			
2.3.3 Government promotion of investment in emerging tech	NA	NA			
2.3.4 R&D expenditure by governments and higher education	63	26.60			

* Confidential data

5

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Network Readiness Index 2020 Germany

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Germany

Germany ranks 9th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology and Impact. The greatest scope for improvement, meanwhile, concerns People and Governance.

Figure 2: Germany global ranking, overall and by pillar
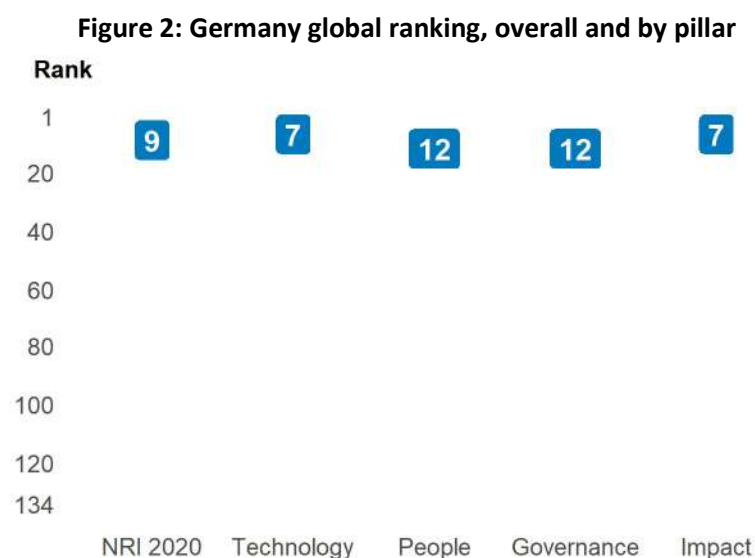
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Germany relate to Future Technologies, Businesses and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Inclusion and Individuals sub-pillars.

Table 1: Germany rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	3	SDG Contribution	12
Businesses	6	Governments	14
Regulation	7	Quality of Life	17
Economy	7	Access	27
Content	10	Inclusion	27
Trust	10	Individuals	53

NRI score and income

Figure 3 shows the position of Germany in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Germany is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
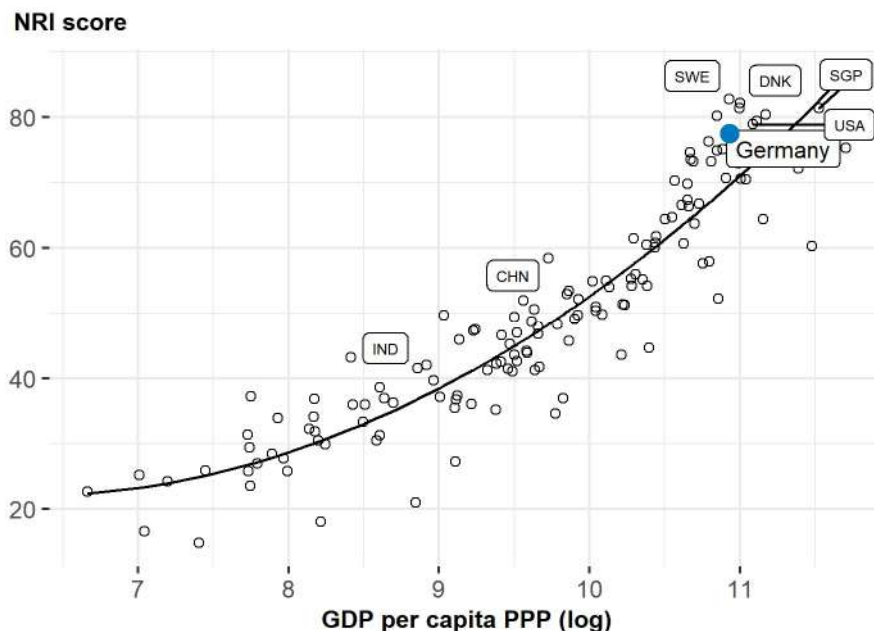
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Germany belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

2

Performance against its income group and region

High-income countries

Germany is ranked 9th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Europe

Germany is ranked 7th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Germany against its income group and region, overall and by pillar
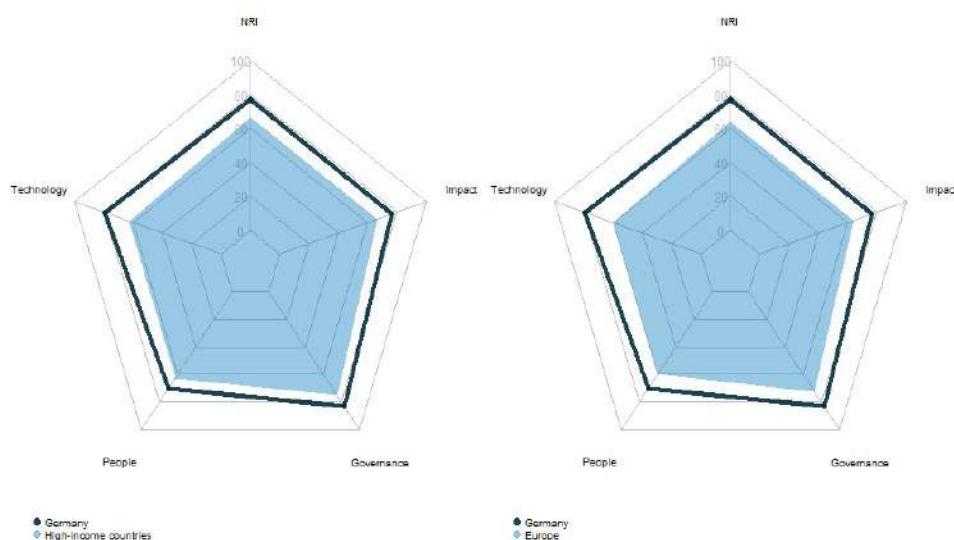
Table 2: Germany scores vs. averages of its income group and region, overall and by pillar

Dimension	Germany	High-income countries	Europe
NRI	77.48	66.82	64.21
Technology	79.18	62.51	59.93
People	70.54	62.72	59.89
Governance	83.52	75.41	72.98
Impact	76.69	66.63	64.04

Strongest and weakest indicators

The indicators where Germany performs particularly well include Robot density, Technicians and associate professionals, and e-commerce legislation (Table 3). By contrast, the economy's weakest indicators include Use of virtual social networks, Gender gap in Internet use, and SDG 5: Gender Equality.

Table 3: Top-ranked and bottom-ranked indicators of Germany

Strongest indicators	Rank	Weakest indicators	Rank
Robot density	1	SDG 7: Affordable and Clean Energy	39
Technicians and associate professionals	1	Handset prices	41
e-commerce legislation	1	4G mobile network coverage	45
Medium and high-tech industry	4	E-Participation	56
R&D expenditure by governments and higher education	6	Active mobile-broadband subscriptions	57
Internet domain registrations	7	Government online services	58
Investment in emerging technologies	7	International Internet bandwidth	64
R&D expenditure by businesses	7	SDG 5: Gender Equality	65
PCT patent applications	7	Gender gap in Internet use	66
Firms with website	8	Use of virtual social networks	85

NRI 2020 At-A-Glance: Germany

Network Readiness Index Rank: 9 (out of 134) Score: 77.48

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	7	79.18	C. Governance pillar	12	83.52
1st sub-pillar: Access	27	82.00	1st sub-pillar: Trust	10	84.48
2nd sub-pillar: Content	10	77.14	2nd sub-pillar: Regulation	7	89.01
3rd sub-pillar: Future Technologies	3	78.40	3rd sub-pillar: Inclusion	27	77.08
B. People pillar	12	70.54	D. Impact pillar	7	76.69
1st sub-pillar: Individuals	53	58.83	1st sub-pillar: Economy	7	64.09
2nd sub-pillar: Businesses	6	77.32	2nd sub-pillar: Quality of Life	17	84.14
3rd sub-pillar: Governments	14	75.47	3rd sub-pillar: SDG Contribution	12	81.84

The Network Readiness Index in detail

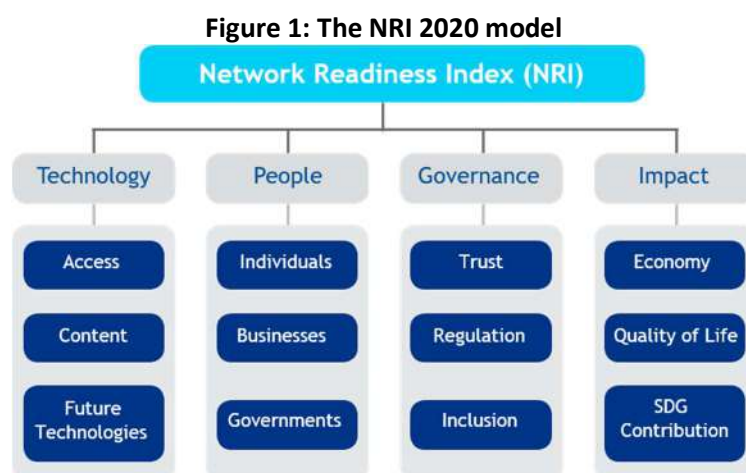| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	7	79.18	**C. Governance pillar**	12	83.52
1st sub-pillar: Access	27	82.00	*1st sub-pillar: Trust*	10	84.48
1.1.1 Mobile tariffs	11	90.26	3.1.1 Secure Internet servers	8	89.88
1.1.2 Handset prices	41	58.03	3.1.2 Cybersecurity	24	91.12
1.1.3 Internet access	18	89.87	3.1.3 Online access to financial account	14	71.20
1.1.4 4G mobile network coverage	45	97.50	3.1.4 Internet shopping	11	85.73
1.1.5 Fixed-broadband subscriptions	35	88.06	*2nd sub-pillar: Regulation*	7	89.01
1.1.6 International Internet bandwidth	64	68.29	3.2.1 Regulatory quality	12	89.94
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	16	95.56
2nd sub-pillar: Content	10	77.14	3.2.3 Legal framework's adaptability to emerging technologies	11	77.61
1.2.1 GitHub commits	15	58.66	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	11	85.62	3.2.5 Privacy protection by law content	22	81.94
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	27	77.08
1.2.4 Mobile apps development	21	85.62	3.3.1 E-Participation	56	74.07
3rd sub-pillar: Future Technologies	3	78.40	3.3.2 Socioeconomic gap in use of digital payments	13	96.12
1.3.1 Adoption of emerging technologies	9	85.48	3.3.3 Availability of local online content	25	84.39
1.3.2 Investment in emerging technologies	7	86.85	3.3.4 Gender gap in Internet use	66	55.63
1.3.3 ICT PCT patent applications	9	71.72	3.3.5 Rural gap in use of digital payments	32	75.20
1.3.4 Computer software spending	18	47.94	**D. Impact pillar**	7	76.69
1.3.5 Robot density	1	100.00	*1st sub-pillar: Economy*	7	64.09
B. People pillar	12	70.54	4.1.1 Medium and high-tech industry	4	78.58
1st sub-pillar: Individuals	53	58.83	4.1.2 High-tech exports	31	31.02
2.1.1 Internet users	16	89.78	4.1.3 PCT patent applications	7	64.46
2.1.2 Active mobile-broadband subscriptions	57	31.54	4.1.4 Labor productivity per employee	20	64.33
2.1.3 Use of virtual social networks	85	44.33	4.1.5 Prevalence of gig economy	12	82.07
2.1.4 Tertiary enrollment	29	51.13	*2nd sub-pillar: Quality of Life*	17	84.14
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	15	85.36
2.1.6 ICT skills	20	77.38	4.2.2 Freedom to make life choices	37	86.66
2nd sub-pillar: Businesses	6	77.32	4.2.3 Income inequality	28	80.15
2.2.1 Firms with website	8	91.38	4.2.4 Healthy life expectancy at birth	27	84.41
2.2.2 Ease of doing business	21	87.52	*3rd sub-pillar: SDG Contribution*	12	81.84
2.2.3 Professionals	33	43.82	4.3.1 SDG 3: Good Health and Well-Being	13	90.16
2.2.4 Technicians and associate professionals	1	100.00	4.3.2 SDG 4: Quality Education	18	65.70
2.2.5 Business use of digital tools	10	87.66	4.3.3 SDG 5: Gender Equality	65	74.59
2.2.6 R&D expenditure by businesses	7	53.53	4.3.4 SDG 7: Affordable and Clean Energy	39	85.33
3rd sub-pillar: Governments	14	75.47	.	.	.
2.3.1 Government online services	58	72.73			
2.3.2 Publication and use of open data	16	69.52			
2.3.3 Government promotion of investment in emerging tech	13	73.72			
2.3.4 R&D expenditure by governments and higher education	6	85.92			

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Network Readiness Index 2020 Ghana

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Ghana

Ghana ranks 98th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Ghana global ranking, overall and by pillar
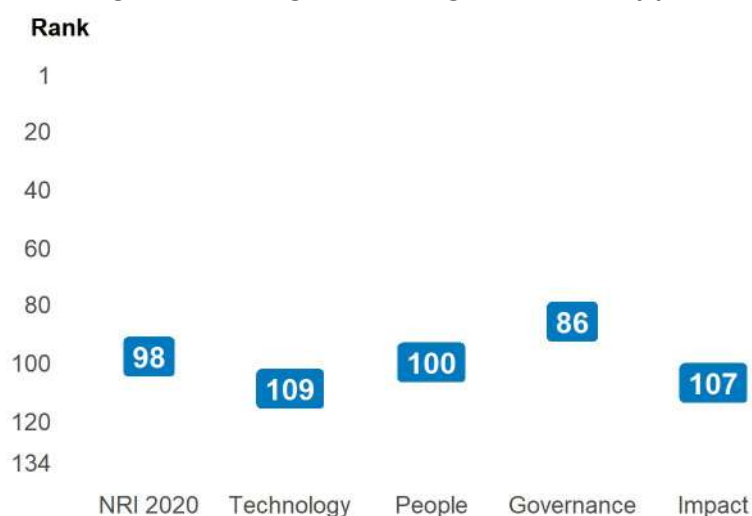
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Ghana relate to Future Technologies, Regulation and Governments, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Content and Businesses sub-pillars.

Table 1: Ghana rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	69	Individuals	101
Regulation	72	Economy	104
Governments	82	Quality of Life	106
Inclusion	84	Access	109
Trust	93	Content	112
SDG Contribution	100	Businesses	116

NRI score and income

Figure 3 shows the position of Ghana in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Ghana is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
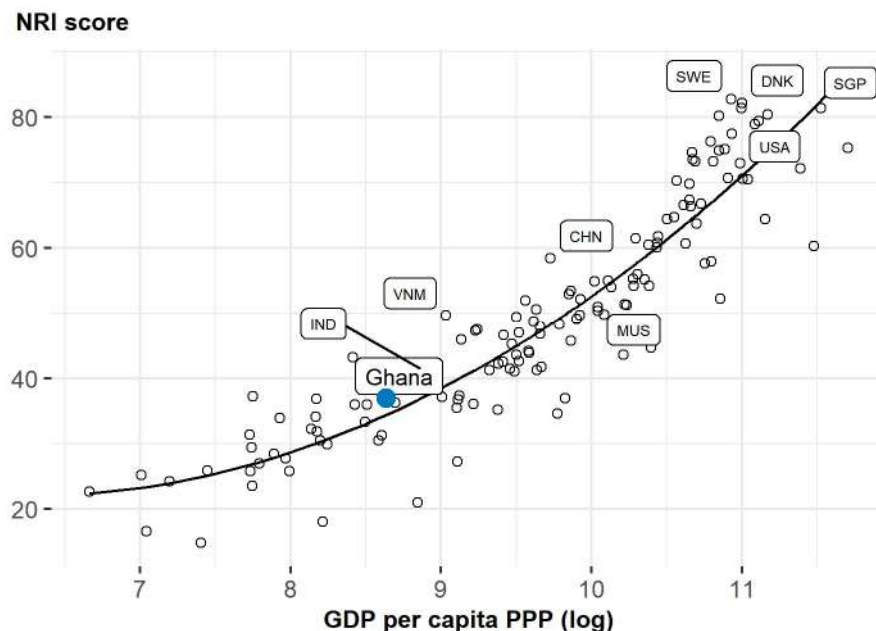
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Ghana belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries

Ghana is ranked 16th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: nri.score and governance. At the sub-pillar level, it outperforms lower-middle-income countries in six of the twelve sub-pillars: Future Technologies, Individuals, Governments, Trust, Regulation and Inclusion.

Africa

Ghana is ranked 6th within Africa (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in ten of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Governments, Trust, Regulation, Inclusion, Quality of Life and SDG Contribution.

Figure 4: Performance of Ghana against its income group and region, overall and by pillar
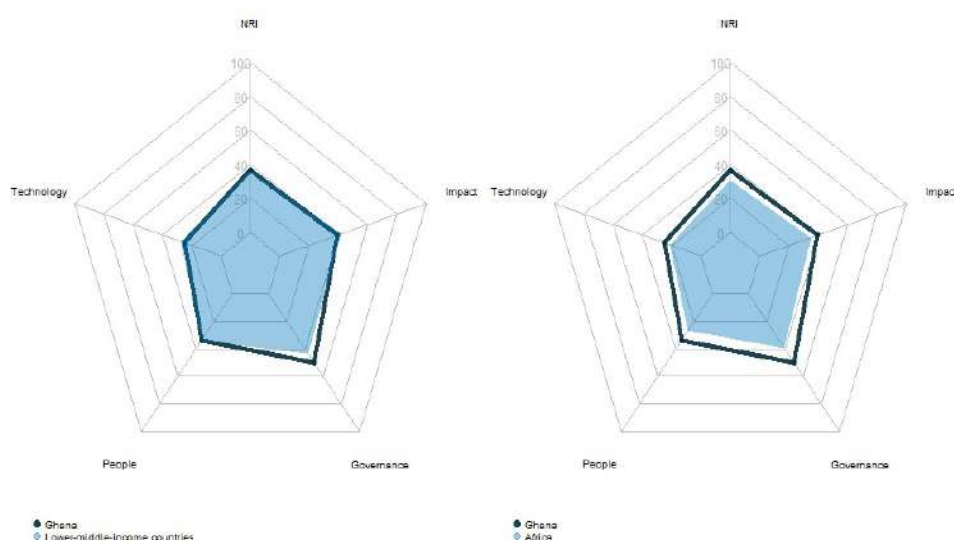
Table 2: Ghana scores vs. averages of its income group and region, overall and by pillar

Dimension	Ghana	Lower-middle-income countries	Africa
NRI	36.97	36.72	30.62
Technology	25.03	27.72	21.47
People	33.74	33.88	26.75
Governance	49.77	43.15	39.31
Impact	39.34	42.15	34.94

Strongest and weakest indicators

The indicators where Ghana performs particularly well include e-commerce legislation, SDG 7: Affordable and Clean Energy, and Active mobile-broadband subscriptions (Table 3). By contrast, the economy's weakest indicators include Medium and high-tech industry, Computer software spending, and Fixed-broadband subscriptions.

Table 3: Top-ranked and bottom-ranked indicators of Ghana

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Internet domain registrations	110
SDG 7: Affordable and Clean Energy	36	Healthy life expectancy at birth	111
Active mobile-broadband subscriptions	39	Secure Internet servers	112
ICT regulatory environment	41	SDG 3: Good Health and Well-Being	112
Investment in emerging technologies	45	4G mobile network coverage	113
Privacy protection by law content	53	Technicians and associate professionals	113
R&D expenditure by governments and higher education	54	Mobile apps development	114
High-tech exports	57	Fixed-broadband subscriptions	121
Online access to financial account	59	Computer software spending	123
Mobile tariffs	60	Medium and high-tech industry	125

NRI 2020 At-A-Glance: Ghana

Network Readiness Index — Rank: 98 (out of 134) — Score: 36.97

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	109	25.03	C. Governance pillar	86	49.77
1st sub-pillar: Access	109	34.92	1st sub-pillar: Trust	93	28.66
2nd sub-pillar: Content	112	12.78	2nd sub-pillar: Regulation	72	64.68
3rd sub-pillar: Future Technologies	69	27.39	3rd sub-pillar: Inclusion	84	55.96
B. People pillar	100	33.74	D. Impact pillar	107	39.34
1st sub-pillar: Individuals	101	37.97	1st sub-pillar: Economy	104	15.05
2nd sub-pillar: Businesses	116	26.09	2nd sub-pillar: Quality of Life	106	49.56
3rd sub-pillar: Governments	82	37.16	3rd sub-pillar: SDG Contribution	100	53.41

The Network Readiness Index in detail

| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	109	25.03	**C. Governance pillar**	86	49.77
1st sub-pillar: Access	109	34.92	*1st sub-pillar: Trust*	93	28.66
1.1.1 Mobile tariffs	60	65.34	3.1.1 Secure Internet servers	112	30.43
1.1.2 Handset prices	79	39.03	3.1.2 Cybersecurity	89	46.48
1.1.3 Internet access	89	35.37	3.1.3 Online access to financial account	59	32.31
1.1.4 4G mobile network coverage	113	34.86	3.1.4 Internet shopping	93	5.41
1.1.5 Fixed-broadband subscriptions	121	0.06	*2nd sub-pillar: Regulation*	72	64.68
1.1.6 International Internet bandwidth	104	61.35	3.2.1 Regulatory quality	78	49.65
1.1.7 Internet access in schools	63	8.41	3.2.2 ICT regulatory environment	41	89.19
2nd sub-pillar: Content	112	12.78	3.2.3 Legal framework's adaptability to emerging technologies	89	29.16
1.2.1 GitHub commits	103	0.75	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	108	14.94	3.2.5 Privacy protection by law content	53	55.38
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	84	55.96
1.2.4 Mobile apps development	114	35.12	3.3.1 E-Participation	81	61.73
3rd sub-pillar: Future Technologies	69	27.39	3.3.2 Socioeconomic gap in use of digital payments	60	70.42
1.3.1 Adoption of emerging technologies	98	32.17	3.3.3 Availability of local online content	105	37.56
1.3.2 Investment in emerging technologies	45	49.40	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	92	54.14
1.3.4 Computer software spending	123	0.62	**D. Impact pillar**	107	39.34
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	104	15.05
B. People pillar	100	33.74	4.1.1 Medium and high-tech industry	125	0.69
1st sub-pillar: Individuals	101	37.97	4.1.2 High-tech exports	57	15.65
2.1.1 Internet users	101	37.47	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	39	35.68	4.1.4 Labor productivity per employee	106	5.26
2.1.3 Use of virtual social networks	108	18.56	4.1.5 Prevalence of gig economy	74	38.59
2.1.4 Tertiary enrollment	97	10.95	*2nd sub-pillar: Quality of Life*	106	49.56
2.1.5 Adult literacy rate	80	73.04	4.2.1 Happiness	100	44.69
2.1.6 ICT skills	66	52.14	4.2.2 Freedom to make life choices	77	70.13
2nd sub-pillar: Businesses	116	26.09	4.2.3 Income inequality	96	50.26
2.2.1 Firms with website	98	27.51	4.2.4 Healthy life expectancy at birth	111	33.15
2.2.2 Ease of doing business	100	52.58	*3rd sub-pillar: SDG Contribution*	100	53.41
2.2.3 Professionals	84	17.48	4.3.1 SDG 3: Good Health and Well-Being	112	31.15
2.2.4 Technicians and associate professionals	113	10.14	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	93	48.81	4.3.3 SDG 5: Gender Equality	105	55.71
2.2.6 R&D expenditure by businesses	94	0.01	4.3.4 SDG 7: Affordable and Clean Energy	36	85.77
3rd sub-pillar: Governments	82	37.16	.	.	.
2.3.1 Government online services	79	62.43			
2.3.2 Publication and use of open data	62	25.96			
2.3.3 Government promotion of investment in emerging tech	97	26.86			
2.3.4 R&D expenditure by governments and higher education	54	33.39			

* Confidential data

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Network Readiness Index 2020 Greece

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model
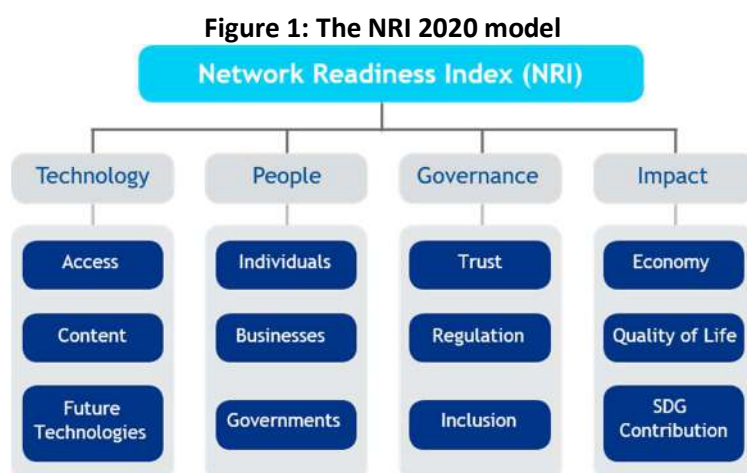
Global NRI position of Greece

Greece ranks 45th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Greece global ranking, overall and by pillar
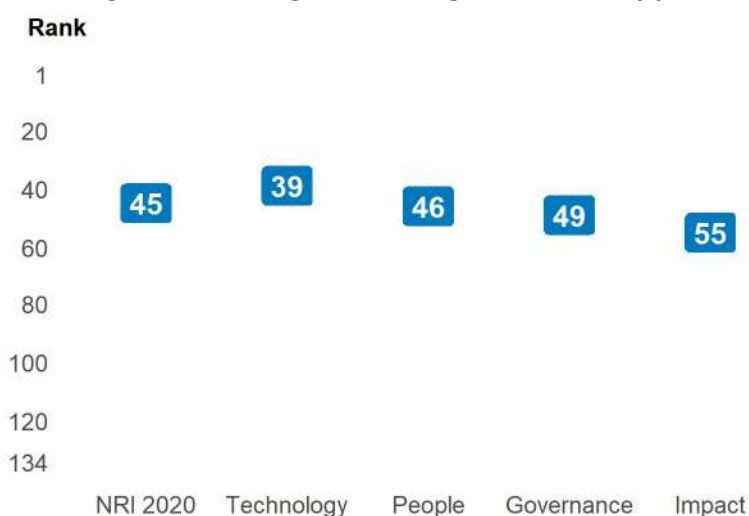
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Greece relate to Individuals, Content and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Quality of Life, Governments and Economy sub-pillars.

Table 1: Greece rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	25	Businesses	61
Content	36	Future Technologies	62
Access	37	Trust	62
SDG Contribution	42	Quality of Life	63
Regulation	44	Governments	64
Inclusion	54	Economy	67

NRI score and income

Figure 3 shows the position of Greece in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Greece is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
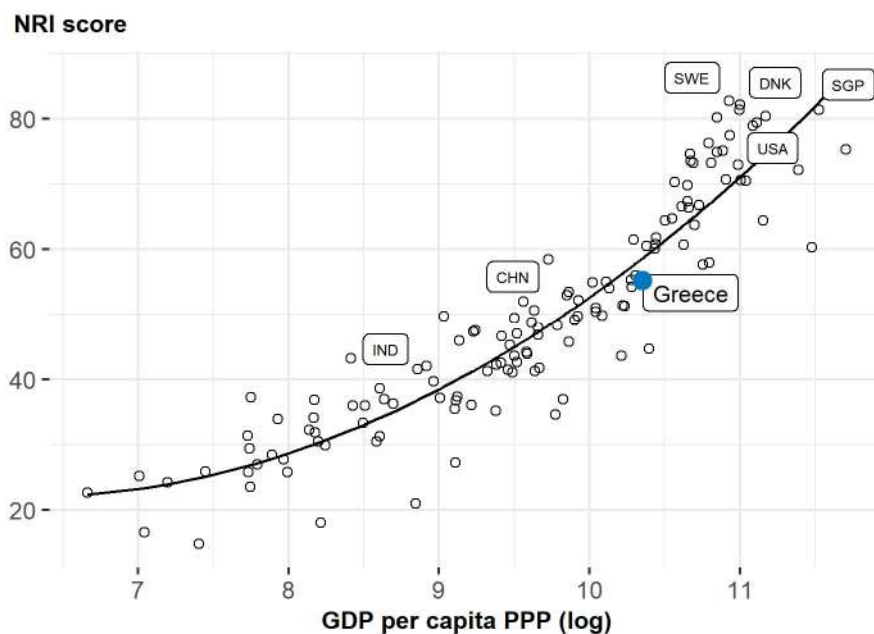
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Greece belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Greece is ranked 43rd in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in one of the twelve sub-pillars: Individuals.

Europe
Greece is ranked 30th within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in two of the twelve sub-pillars: Access and Individuals.

Figure 4: Performance of Greece against its income group and region, overall and by pillar

Table 2: Greece scores vs. averages of its income group and region, overall and by pillar

Dimension	Greece	High-income countries	Europe
NRI	55.20	66.82	64.21
Technology	51.37	62.51	59.93
People	52.95	62.72	59.89
Governance	61.80	75.41	72.98
Impact	54.67	66.63	64.04

Strongest and weakest indicators

The indicators where Greece performs particularly well include Tertiary enrollment, e-commerce legislation, and Computer software spending (Table 3). By contrast, the economy's weakest indicators include Freedom to make life choices, Investment in emerging technologies, and Government promotion of investment in emerging technologies.

Table 3: Top-ranked and bottom-ranked indicators of Greece

Strongest indicators	Rank	Weakest indicators	Rank
Tertiary enrollment	1	Online access to financial account	76
e-commerce legislation	1	Medium and high-tech industry	76
Computer software spending	13	Cybersecurity	78
Fixed-broadband subscriptions	17	Legal framework's adaptability to emerging technologies	78
Healthy life expectancy at birth	21	SDG 5: Gender Equality	78
Professionals	25	Adoption of emerging technologies	85
Handset prices	26	Prevalence of gig economy	104
Privacy protection by law content	27	Government promotion of investment in emerging technologies	107
ICT regulatory environment	28	Investment in emerging technologies	110
R&D expenditure by governments and higher education	30	Freedom to make life choices	127

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NRI 2020 At-A-Glance: Greece

Network Readiness Index   Rank: 45 (out of 134)   Score: 55.20

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	39	51.37	C. Governance pillar	49	61.80
1st sub-pillar: Access	37	78.91	1st sub-pillar: Trust	62	44.55
2nd sub-pillar: Content	36	46.79	2nd sub-pillar: Regulation	44	72.95
3rd sub-pillar: Future Technologies	62	28.42	3rd sub-pillar: Inclusion	54	67.91
B. People pillar	46	52.95	D. Impact pillar	55	54.67
1st sub-pillar: Individuals	25	68.24	1st sub-pillar: Economy	67	25.29
2nd sub-pillar: Businesses	61	46.02	2nd sub-pillar: Quality of Life	63	66.08
3rd sub-pillar: Governments	64	44.59	3rd sub-pillar: SDG Contribution	42	72.64

The Network Readiness Index in detail

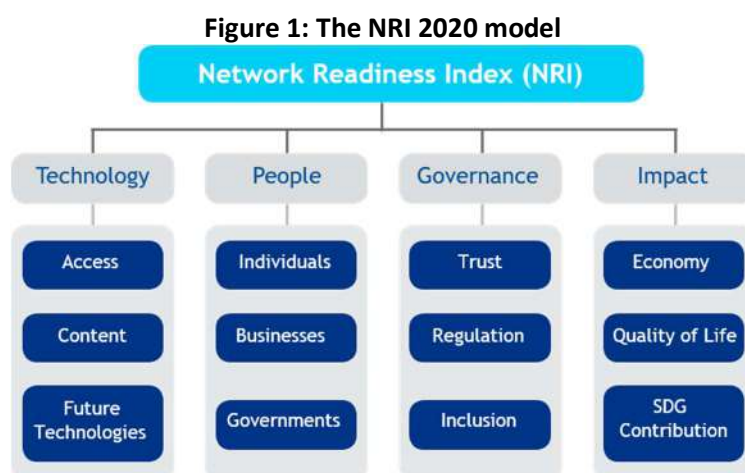| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	39	51.37	**C. Governance pillar**	49	61.80
1st sub-pillar: Access	37	78.91	*1st sub-pillar: Trust*	62	44.55
1.1.1 Mobile tariffs	48	69.95	3.1.1 Secure Internet servers	45	70.24
1.1.2 Handset prices	26	65.09	3.1.2 Cybersecurity	78	56.23
1.1.3 Internet access	63	70.88	3.1.3 Online access to financial account	76	23.33
1.1.4 4G mobile network coverage	34	98.80	3.1.4 Internet shopping	47	28.40
1.1.5 Fixed-broadband subscriptions	17	95.64	*2nd sub-pillar: Regulation*	44	72.95
1.1.6 International Internet bandwidth	31	73.10	3.2.1 Regulatory quality	56	57.91
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	28	93.05
2nd sub-pillar: Content	36	46.79	3.2.3 Legal framework's adaptability to emerging technologies	78	33.58
1.2.1 GitHub commits	36	18.23	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	31	73.44	3.2.5 Privacy protection by law content	27	80.19
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	54	67.91
1.2.4 Mobile apps development	36	77.90	3.3.1 E-Participation	49	77.78
3rd sub-pillar: Future Technologies	62	28.42	3.3.2 Socioeconomic gap in use of digital payments	45	78.80
1.3.1 Adoption of emerging technologies	85	38.50	3.3.3 Availability of local online content	63	61.34
1.3.2 Investment in emerging technologies	110	23.53	3.3.4 Gender gap in Internet use	61	57.88
1.3.3 ICT PCT patent applications	36	20.42	3.3.5 Rural gap in use of digital payments	74	63.76
1.3.4 Computer software spending	13	52.90	**D. Impact pillar**	55	54.67
1.3.5 Robot density	37	6.74	*1st sub-pillar: Economy*	67	25.29
B. People pillar	46	52.95	4.1.1 Medium and high-tech industry	76	26.53
1st sub-pillar: Individuals	25	68.24	4.1.2 High-tech exports	38	23.54
2.1.1 Internet users	57	72.47	4.1.3 PCT patent applications	37	3.17
2.1.2 Active mobile-broadband subscriptions	56	31.71	4.1.4 Labor productivity per employee	37	48.81
2.1.3 Use of virtual social networks	55	58.76	4.1.5 Prevalence of gig economy	104	24.40
2.1.4 Tertiary enrollment	1	100.00	*2nd sub-pillar: Quality of Life*	63	66.08
2.1.5 Adult literacy rate	31	97.38	4.2.1 Happiness	59	64.06
2.1.6 ICT skills	72	49.14	4.2.2 Freedom to make life choices	127	40.60
2nd sub-pillar: Businesses	61	46.02	4.2.3 Income inequality	47	73.71
2.2.1 Firms with website	55	57.81	4.2.4 Healthy life expectancy at birth	21	85.96
2.2.2 Ease of doing business	74	67.55	*3rd sub-pillar: SDG Contribution*	42	72.64
2.2.3 Professionals	25	46.57	4.3.1 SDG 3: Good Health and Well-Being	50	77.05
2.2.4 Technicians and associate professionals	61	33.96	4.3.2 SDG 4: Quality Education	43	47.42
2.2.5 Business use of digital tools	76	56.17	4.3.3 SDG 5: Gender Equality	78	72.80
2.2.6 R&D expenditure by businesses	36	14.04	4.3.4 SDG 7: Affordable and Clean Energy	41	84.68
3rd sub-pillar: Governments	64	44.59	.	.	.
2.3.1 Government online services	64	69.70			
2.3.2 Publication and use of open data	36	38.94			
2.3.3 Government promotion of investment in emerging tech	107	17.92			
2.3.4 R&D expenditure by governments and higher education	30	51.79			

* Confidential data

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Network Readiness Index 2020 Guatemala

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Guatemala

Guatemala ranks 106th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Guatemala global ranking, overall and by pillar
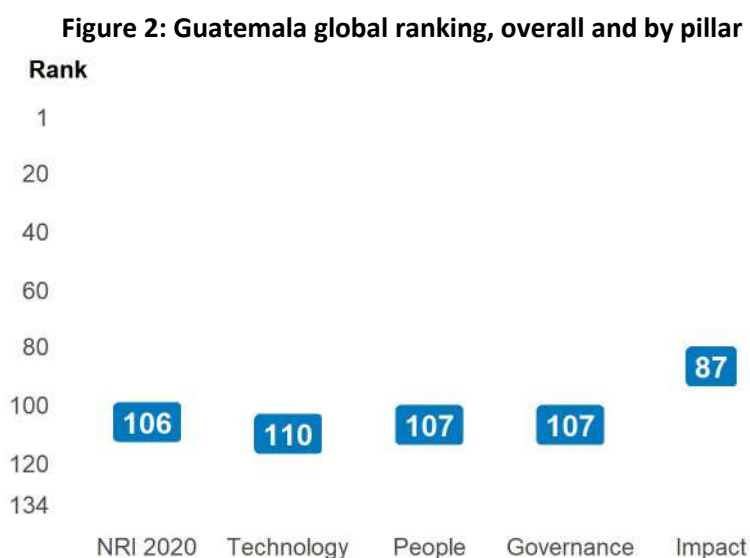
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Guatemala relate to Quality of Life, SDG Contribution and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Trust and Governments sub-pillars.

Table 1: Guatemala rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	70	Individuals	100
SDG Contribution	82	Regulation	109
Content	97	Economy	109
Future Technologies	97	Access	110
Inclusion	98	Trust	118
Businesses	99	Governments	121

NRI score and income

Figure 3 shows the position of Guatemala in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Guatemala is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
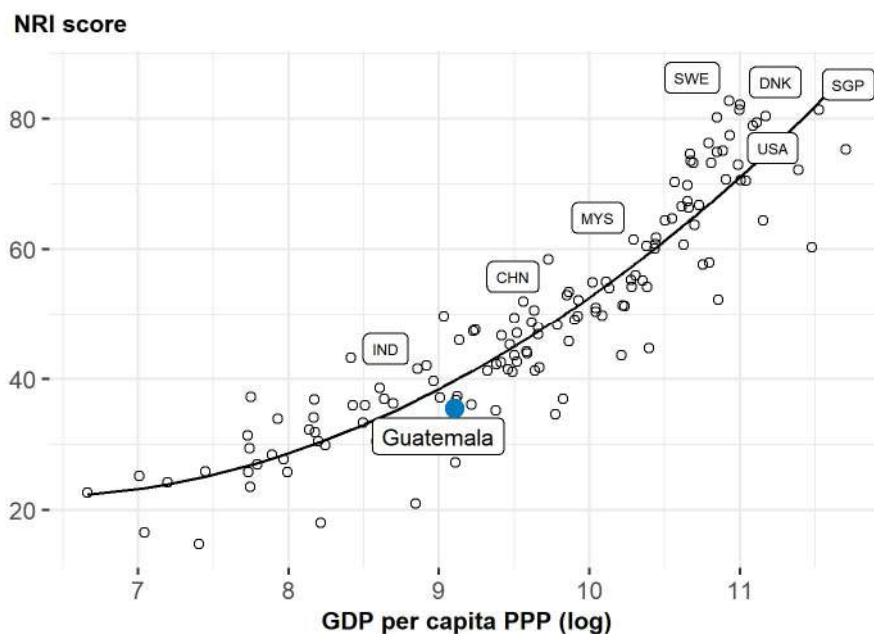
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Guatemala belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

Upper-middle-income countries
Guatemala is ranked 34th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in one of the twelve sub-pillars: Quality of Life.

The Americas
Guatemala is ranked 20th within The Americas (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Guatemala against its income group and region, overall and by pillar
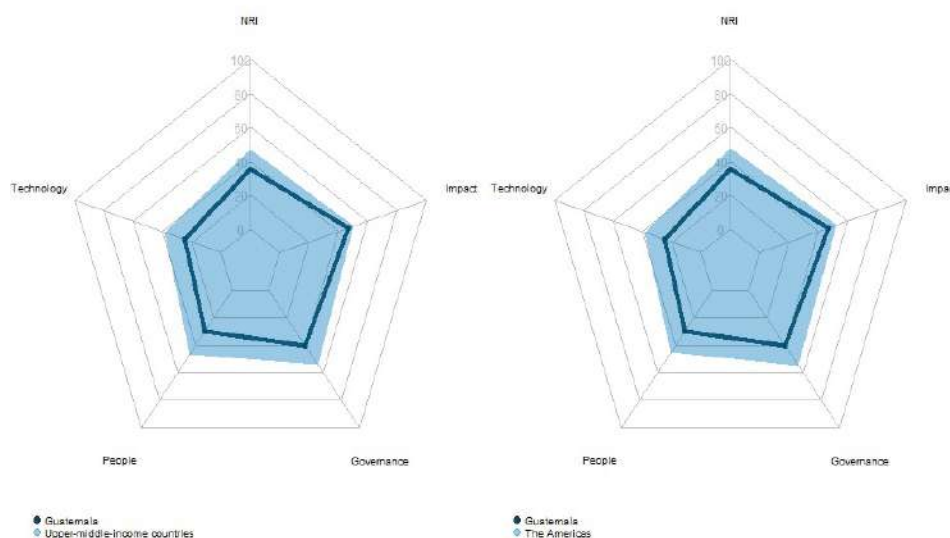
Table 2: Guatemala scores vs. averages of its income group and region, overall and by pillar

Dimension	Guatemala	Upper-middle-income countries	The Americas
NRI	35.51	47.39	47.67
Technology	24.72	38.42	38.26
People	30.17	46.66	45.24
Governance	40.26	54.31	54.59
Impact	46.90	50.17	52.61

Strongest and weakest indicators

The indicators where Guatemala performs particularly well include Freedom to make life choices, Happiness, and Firms with website (Table 3). By contrast, the economy's weakest indicators include Active mobile-broadband subscriptions, ICT regulatory environment, Computer software spending, and ICT skills.

Table 3: Top-ranked and bottom-ranked indicators of Guatemala

Strongest indicators	Rank	Weakest indicators	Rank
Freedom to make life choices	30	Technicians and associate professionals	111
Happiness	38	International Internet bandwidth	112
Firms with website	59	R&D expenditure by governments and higher education	112
Internet access in schools	62	Online access to financial account	113
Publication and use of open data	63	Mobile tariffs	118
Handset prices	64	Government promotion of investment in emerging technologies	119
Medium and high-tech industry	67	Computer software spending	120
SDG 11: Sustainable Cities and Communities	69	ICT skills	120
Internet users	71	ICT regulatory environment	125
Investment in emerging technologies	72	Active mobile-broadband subscriptions	126

NRI 2020 At-A-Glance: Guatemala

Network Readiness Index   Rank: 106 (out of 134)   Score: 35.51

Pillar/sub-pillar	Rank	Score
A. Technology pillar	110	24.72
1st sub-pillar: Access	110	34.53
2nd sub-pillar: Content	97	19.74
3rd sub-pillar: Future Technologies	97	19.91
B. People pillar	107	30.17
1st sub-pillar: Individuals	100	38.61
2nd sub-pillar: Businesses	99	31.31
3rd sub-pillar: Governments	121	20.59

Pillar/sub-pillar	Rank	Score
C. Governance pillar	107	40.26
1st sub-pillar: Trust	118	19.18
2nd sub-pillar: Regulation	109	50.49
3rd sub-pillar: Inclusion	98	51.11
D. Impact pillar	87	46.90
1st sub-pillar: Economy	109	14.30
2nd sub-pillar: Quality of Life	70	64.25
3rd sub-pillar: SDG Contribution	82	62.16

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	110	24.72
1st sub-pillar: Access	110	34.53
1.1.1 Mobile tariffs	118	29.41
1.1.2 Handset prices	64	46.42
1.1.3 Internet access	106	23.40
1.1.4 4G mobile network coverage	108	40.35
1.1.5 Fixed-broadband subscriptions	NA	NA
1.1.6 International Internet bandwidth	112	58.48
1.1.7 Internet access in schools	62	9.12
2nd sub-pillar: Content	97	19.74
1.2.1 GitHub commits	95	1.35
1.2.2 Wikipedia edits	92	26.31
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	97	48.99
3rd sub-pillar: Future Technologies	97	19.91
1.3.1 Adoption of emerging technologies	78	41.14
1.3.2 Investment in emerging technologies	72	37.54
1.3.3 ICT PCT patent applications	82	0.00
1.3.4 Computer software spending	120	0.95
1.3.5 Robot density	NA	NA
B. People pillar	107	30.17
1st sub-pillar: Individuals	100	38.61
2.1.1 Internet users	71	64.27
2.1.2 Active mobile-broadband subscriptions	126	5.08
2.1.3 Use of virtual social networks	85	44.33
2.1.4 Tertiary enrollment	92	15.44
2.1.5 Adult literacy rate	78	75.94
2.1.6 ICT skills	120	26.58
2nd sub-pillar: Businesses	99	31.31
2.2.1 Firms with website	59	56.31
2.2.2 Ease of doing business	88	57.24
2.2.3 Professionals	102	12.93
2.2.4 Technicians and associate professionals	111	10.57
2.2.5 Business use of digital tools	88	50.73
2.2.6 R&D expenditure by businesses	89	0.07
3rd sub-pillar: Governments	121	20.59
2.3.1 Government online services	102	49.70
2.3.2 Publication and use of open data	63	23.72
2.3.3 Government promotion of investment in emerging tech	119	8.94
2.3.4 R&D expenditure by governments and higher education	112	0.00

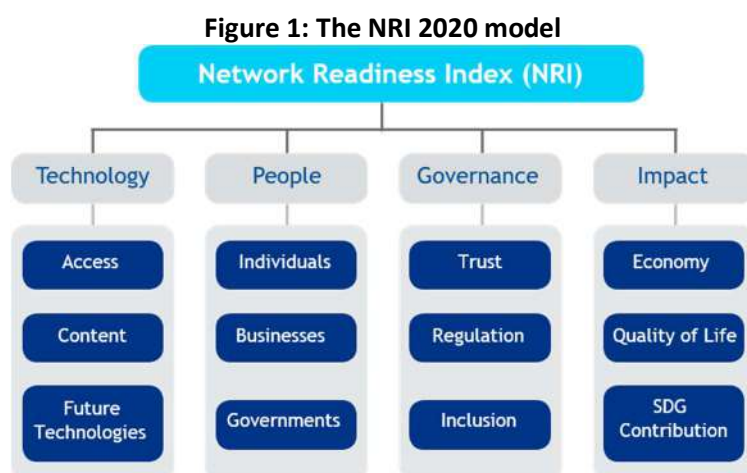| Indicator	Rank	Score
C. Governance pillar	107	40.26
1st sub-pillar: Trust	118	19.18
3.1.1 Secure Internet servers	102	36.27
3.1.2 Cybersecurity	110	26.33
3.1.3 Online access to financial account	113	7.65
3.1.4 Internet shopping	87	6.47
2nd sub-pillar: Regulation	109	50.49
3.2.1 Regulatory quality	85	47.11
3.2.2 ICT regulatory environment	125	48.85
3.2.3 Legal framework's adaptability to emerging technologies	82	30.99
3.2.4 e-commerce legislation	77	75.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	98	51.11
3.3.1 E-Participation	100	48.15
3.3.2 Socioeconomic gap in use of digital payments	89	53.69
3.3.3 Availability of local online content	102	38.74
3.3.4 Gender gap in Internet use	NA	NA
3.3.5 Rural gap in use of digital payments	73	63.86
D. Impact pillar	87	46.90
1st sub-pillar: Economy	109	14.30
4.1.1 Medium and high-tech industry	67	28.43
4.1.2 High-tech exports	82	9.32
4.1.3 PCT patent applications	83	0.03
4.1.4 Labor productivity per employee	90	12.86
4.1.5 Prevalence of gig economy	109	20.84
2nd sub-pillar: Quality of Life	70	64.25
4.2.1 Happiness	38	70.15
4.2.2 Freedom to make life choices	30	89.36
4.2.3 Income inequality	110	37.89
4.2.4 Healthy life expectancy at birth	85	59.60
3rd sub-pillar: SDG Contribution	82	62.16
4.3.1 SDG 3: Good Health and Well-Being	103	44.26
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 SDG 5: Gender Equality	88	66.15
4.3.4 SDG 7: Affordable and Clean Energy	74	76.08
.	.	.

* Confidential data

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Network Readiness Index 2020
Guinea

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Guinea

Guinea ranks 120th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Guinea global ranking, overall and by pillar
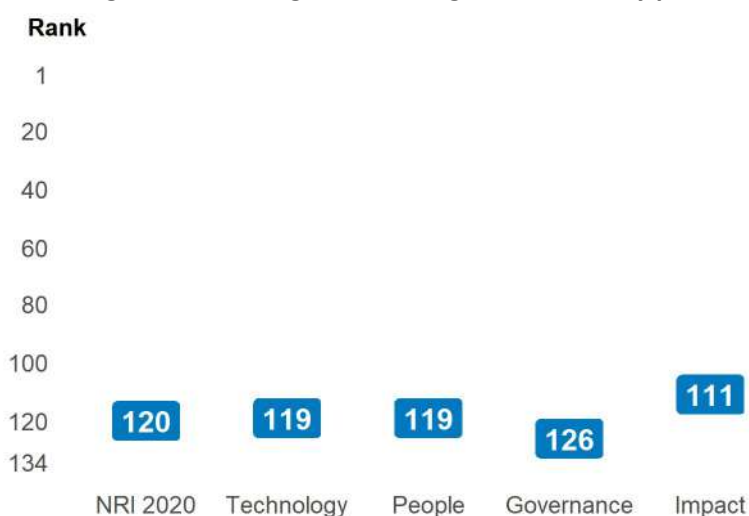
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Guinea relate to Economy, Future Technologies and Businesses, among others (Table 1). More could be done, though, to improve the economy's performances in the Inclusion, SDG Contribution and Content sub-pillars.

Table 1: Guinea rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Economy	53	Access	122
Future Technologies	65	Individuals	127
Businesses	86	Trust	128
Governments	108	Inclusion	128
Quality of Life	111	SDG Contribution	128
Regulation	112	Content	132

NRI score and income

Figure 3 shows the position of Guinea in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Guinea is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
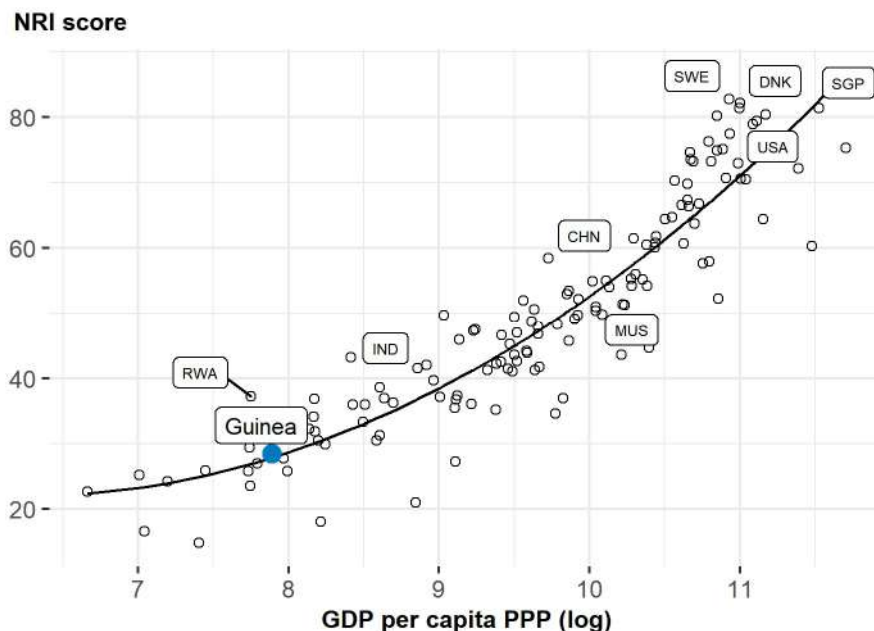
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Guinea belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Low-income countries
Guinea is ranked 5th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, people and impact. At the sub-pillar level, it outperforms low-income countries in seven of the twelve sub-pillars: Access, Future Technologies, Businesses, Governments, Regulation, Economy and Quality of Life.

Africa
Guinea is ranked 18th within Africa (Figure 4, right panel). It has a score above the regional average in one of the four pillars: impact. With regard to sub-pillars, it outperforms the average in Africa in four of the twelve sub-pillars: Future Technologies, Businesses, Economy and Quality of Life.

Figure 4: Performance of Guinea against its income group and region, overall and by pillar
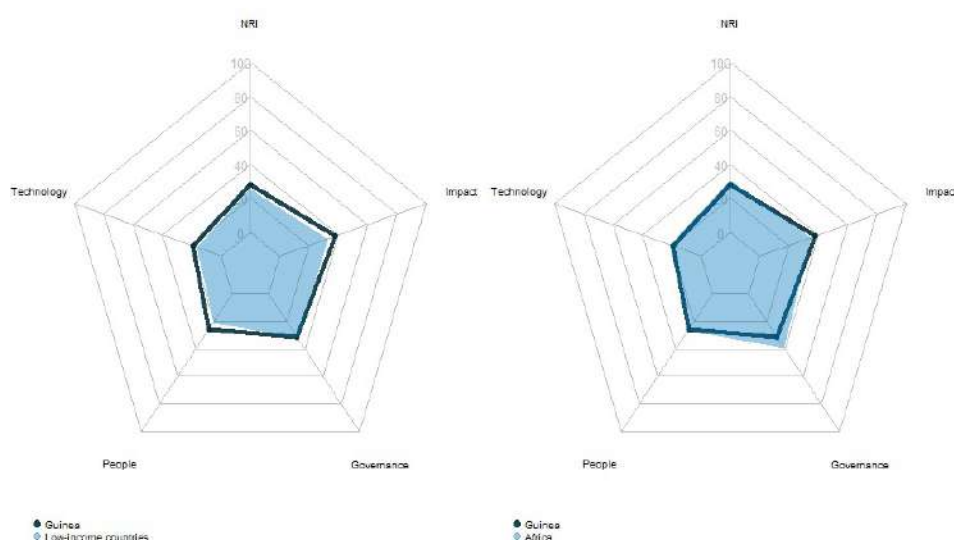
Table 2: Guinea scores vs. averages of its income group and region, overall and by pillar

Dimension	Guinea	Low-income countries	Africa
NRI	28.42	25.61	30.62
Technology	19.27	16.33	21.47
People	25.43	20.61	26.75
Governance	31.07	32.58	39.31
Impact	37.91	32.92	34.94

Strongest and weakest indicators

The indicators where Guinea performs particularly well include Prevalence of gig economy, Income inequality, and Investment in emerging technologies (Table 3). By contrast, the economy's weakest indicators include Mobile apps development, SDG 3: Good Health and Well-Being, GitHub commits, and Availability of local online content.

Table 3: Top-ranked and bottom-ranked indicators of Guinea

Strongest indicators	Rank	Weakest indicators	Rank
Prevalence of gig economy	34	Internet access	126
Income inequality	41	Healthy life expectancy at birth	126
Investment in emerging technologies	53	Internet domain registrations	127
Business use of digital tools	57	Government online services	129
Socioeconomic gap in use of digital payments	67	Secure Internet servers	129
Internet access in schools	71	SDG 5: Gender Equality	129
e-commerce legislation	77	GitHub commits	130
Government promotion of investment in emerging technologies	82	Availability of local online content	130
Online access to financial account	87	SDG 3: Good Health and Well-Being	131
Mobile tariffs	90	Mobile apps development	134

NRI 2020 At-A-Glance: Guinea

Network Readiness Index   Rank: 120 (out of 134)   Score: 28.42

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	119	19.27	C. Governance pillar	126	31.07
1st sub-pillar: Access	122	25.19	1st sub-pillar: Trust	128	13.36
2nd sub-pillar: Content	132	4.38	2nd sub-pillar: Regulation	112	48.19
3rd sub-pillar: Future Technologies	65	28.23	3rd sub-pillar: Inclusion	128	31.65
B. People pillar	119	25.43	D. Impact pillar	111	37.91
1st sub-pillar: Individuals	127	14.53	1st sub-pillar: Economy	53	31.58
2nd sub-pillar: Businesses	86	35.99	2nd sub-pillar: Quality of Life	111	47.25
3rd sub-pillar: Governments	108	25.76	3rd sub-pillar: SDG Contribution	128	34.90

The Network Readiness Index in detail

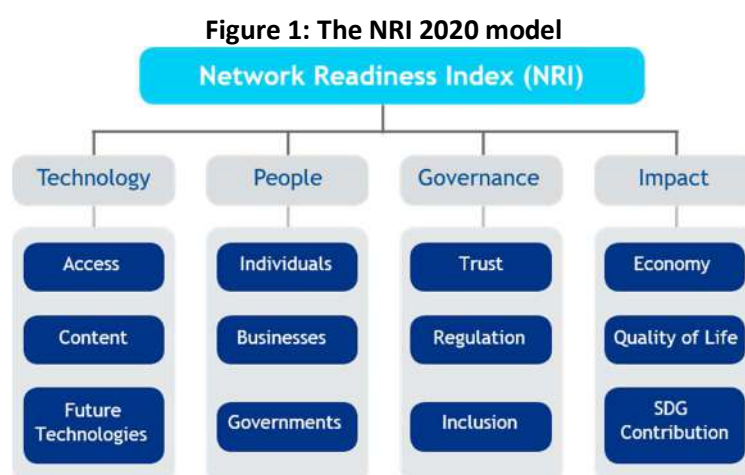| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	119	19.27	**C. Governance pillar**	126	31.07
1st sub-pillar: Access	122	25.19	*1st sub-pillar: Trust*	128	13.36
1.1.1 Mobile tariffs	90	49.79	3.1.1 Secure Internet servers	129	13.22
1.1.2 Handset prices	105	28.83	3.1.2 Cybersecurity	115	19.83
1.1.3 Internet access	126	8.69	3.1.3 Online access to financial account	87	16.91
1.1.4 4G mobile network coverage	125	10.30	3.1.4 Internet shopping	106	3.47
1.1.5 Fixed-broadband subscriptions	NA	NA	*2nd sub-pillar: Regulation*	112	48.19
1.1.6 International Internet bandwidth	121	53.52	3.2.1 Regulatory quality	116	34.28
1.1.7 Internet access in schools	71	0.00	3.2.2 ICT regulatory environment	105	66.41
2nd sub-pillar: Content	132	4.38	3.2.3 Legal framework's adaptability to emerging technologies	107	17.06
1.2.1 GitHub commits	130	0.03	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	103	17.48	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	128	31.65
1.2.4 Mobile apps development	134	0.00	3.3.1 E-Participation	124	28.39
3rd sub-pillar: Future Technologies	65	28.23	3.3.2 Socioeconomic gap in use of digital payments	67	65.68
1.3.1 Adoption of emerging technologies	93	36.01	3.3.3 Availability of local online content	130	10.64
1.3.2 Investment in emerging technologies	53	45.81	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	122	21.90
1.3.4 Computer software spending	108	2.85	**D. Impact pillar**	111	37.91
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	53	31.58
B. People pillar	119	25.43	4.1.1 Medium and high-tech industry	NA	NA
1st sub-pillar: Individuals	127	14.53	4.1.2 High-tech exports	114	1.82
2.1.1 Internet users	121	15.81	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	116	10.74	4.1.4 Labor productivity per employee	NA	NA
2.1.3 Use of virtual social networks	114	13.40	4.1.5 Prevalence of gig economy	34	61.34
2.1.4 Tertiary enrollment	104	7.91	*2nd sub-pillar: Quality of Life*	111	47.25
2.1.5 Adult literacy rate	107	12.48	4.2.1 Happiness	106	40.78
2.1.6 ICT skills	119	26.85	4.2.2 Freedom to make life choices	114	53.82
2nd sub-pillar: Businesses	86	35.99	4.2.3 Income inequality	41	75.52
2.2.1 Firms with website	118	11.03	4.2.4 Healthy life expectancy at birth	126	18.89
2.2.2 Ease of doing business	123	33.95	*3rd sub-pillar: SDG Contribution*	128	34.90
2.2.3 Professionals	NA	NA	4.3.1 SDG 3: Good Health and Well-Being	131	14.75
2.2.4 Technicians and associate professionals	NA	NA	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	57	63.00	4.3.3 SDG 5: Gender Equality	129	19.96
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	110	62.86
3rd sub-pillar: Governments	108	25.76	.	.	.
2.3.1 Government online services	129	19.39			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	82	32.13			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

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Network Readiness Index 2020 Honduras

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Honduras

Honduras ranks 102nd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Honduras global ranking, overall and by pillar
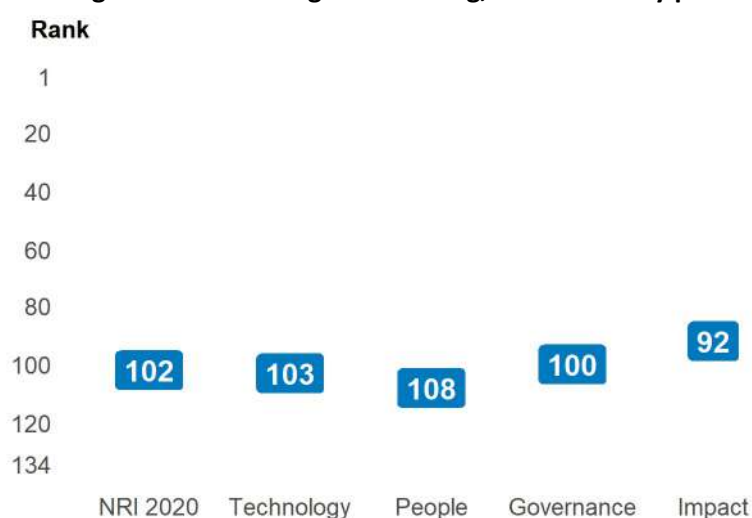
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Honduras relate to Regulation, Future Technologies and SDG Contribution, among others (Table 1). More could be done, though, to improve the economy's performances in the Governments, Trust and Economy sub-pillars.

Table 1: Honduras rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	43	Businesses	104
Future Technologies	63	Inclusion	110
SDG Contribution	65	Access	113
Quality of Life	88	Governments	115
Content	102	Trust	127
Individuals	104	Economy	132

NRI score and income

Figure 3 shows the position of Honduras in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Honduras is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
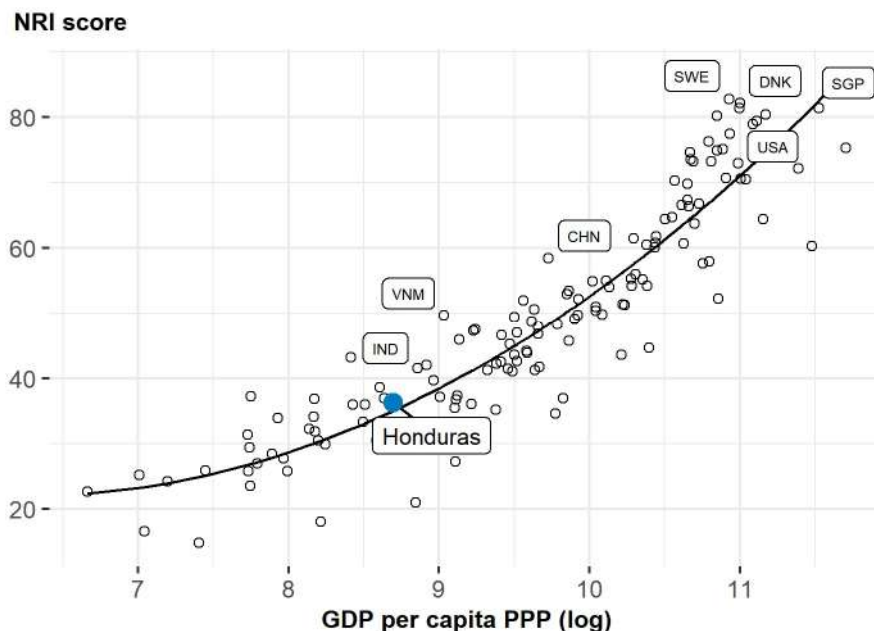
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Honduras belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

Lower-middle-income countries
Honduras is ranked 19th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: governance and impact. At the sub-pillar level, it outperforms lower-middle-income countries in four of the twelve sub-pillars: Future Technologies, Regulation, Quality of Life and SDG Contribution.

The Americas
Honduras is ranked 19th within The Americas (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in The Americas in two of the twelve sub-pillars: Future Technologies and Regulation.

Figure 4: Performance of Honduras against its income group and region, overall and by pillar
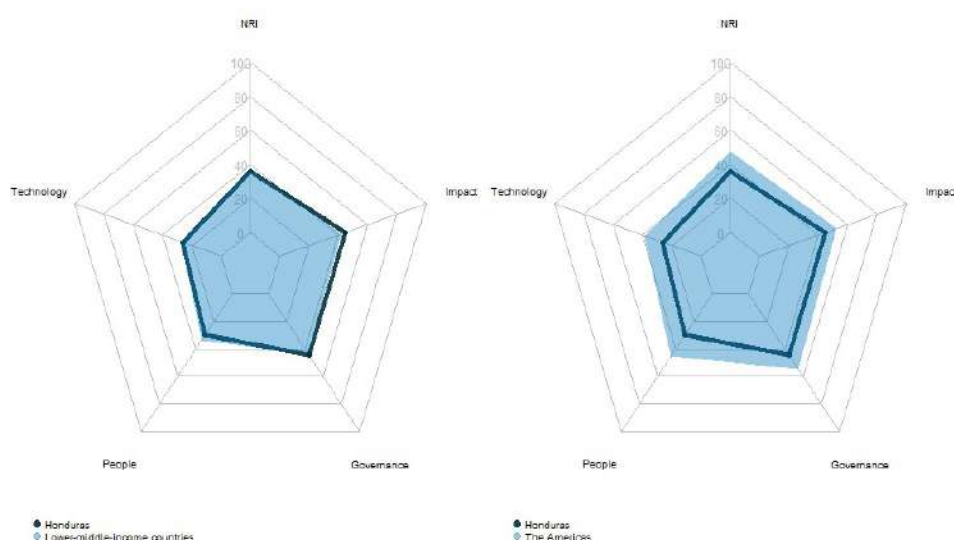
Table 2: Honduras scores vs. averages of its income group and region, overall and by pillar

Dimension	Honduras	Lower-middle-income countries	The Americas
NRI	36.23	36.72	47.67
Technology	26.02	27.72	38.26
People	30.02	33.88	45.24
Governance	44.10	43.15	54.59
Impact	44.77	42.15	52.61

Strongest and weakest indicators

The indicators where Honduras performs particularly well include e-commerce legislation, Internet access in schools, and Freedom to make life choices (Table 3). By contrast, the economy's weakest indicators include Cybersecurity, Mobile tariffs, Active mobile-broadband subscriptions, and Income inequality.

Table 3: Top-ranked and bottom-ranked indicators of Honduras

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Medium and high-tech industry	108
Internet access in schools	55	Fixed-broadband subscriptions	109
Freedom to make life choices	57	Government online services	109
Healthy life expectancy at birth	57	Ease of doing business	110
Computer software spending	60	R&D expenditure by governments and higher education	111
Happiness	61	Rural gap in use of digital payments	113
SDG 5: Gender Equality	62	Active mobile-broadband subscriptions	114
SDG 11: Sustainable Cities and Communities	68	Income inequality	114
Adult literacy rate	69	Mobile tariffs	127
International Internet bandwidth	72	Cybersecurity	131

NRI 2020 At-A-Glance: Honduras

Network Readiness Index   Rank: 102 (out of 134)   Score: 36.23

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	103	26.02	C. Governance pillar	100	44.10
1st sub-pillar: Access	113	33.07	1st sub-pillar: Trust	127	13.64
2nd sub-pillar: Content	102	16.62	2nd sub-pillar: Regulation	43	74.44
3rd sub-pillar: Future Technologies	63	28.36	3rd sub-pillar: Inclusion	110	44.20
B. People pillar	108	30.02	D. Impact pillar	92	44.77
1st sub-pillar: Individuals	104	36.65	1st sub-pillar: Economy	132	7.39
2nd sub-pillar: Businesses	104	30.76	2nd sub-pillar: Quality of Life	88	60.04
3rd sub-pillar: Governments	115	22.66	3rd sub-pillar: SDG Contribution	65	66.88

The Network Readiness Index in detail

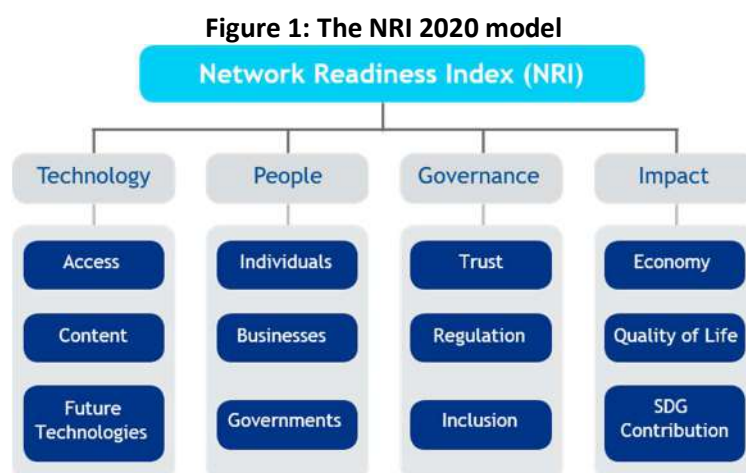| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	103	26.02	**C. Governance pillar**	100	44.10
1st sub-pillar: Access	113	33.07	*1st sub-pillar: Trust*	127	13.64
1.1.1 Mobile tariffs	127	19.07	3.1.1 Secure Internet servers	103	36.23
1.1.2 Handset prices	100	31.21	3.1.2 Cybersecurity	131	3.90
1.1.3 Internet access	99	26.28	3.1.3 Online access to financial account	108	9.92
1.1.4 4G mobile network coverage	94	67.46	3.1.4 Internet shopping	98	4.53
1.1.5 Fixed-broadband subscriptions	109	3.60	*2nd sub-pillar: Regulation*	43	74.44
1.1.6 International Internet bandwidth	72	67.69	3.2.1 Regulatory quality	102	41.09
1.1.7 Internet access in schools	55	16.14	3.2.2 ICT regulatory environment	72	82.24
2nd sub-pillar: Content	102	16.62	3.2.3 Legal framework's adaptability to emerging technologies	NA	NA
1.2.1 GitHub commits	97	1.19	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	101	18.71	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	110	44.20
1.2.4 Mobile apps development	99	46.12	3.3.1 E-Participation	102	46.91
3rd sub-pillar: Future Technologies	63	28.36	3.3.2 Socioeconomic gap in use of digital payments	97	47.39
1.3.1 Adoption of emerging technologies	NA	NA	3.3.3 Availability of local online content	97	43.45
1.3.2 Investment in emerging technologies	78	35.90	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	113	39.05
1.3.4 Computer software spending	60	20.82	**D. Impact pillar**	92	44.77
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	132	7.39
B. People pillar	108	30.02	4.1.1 Medium and high-tech industry	108	8.86
1st sub-pillar: Individuals	104	36.65	4.1.2 High-tech exports	95	5.93
2.1.1 Internet users	107	29.94	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	114	11.45	4.1.4 Labor productivity per employee	NA	NA
2.1.3 Use of virtual social networks	91	41.24	4.1.5 Prevalence of gig economy	NA	NA
2.1.4 Tertiary enrollment	87	18.66	*2nd sub-pillar: Quality of Life*	88	60.04
2.1.5 Adult literacy rate	69	83.56	4.2.1 Happiness	61	63.63
2.1.6 ICT skills	104	35.04	4.2.2 Freedom to make life choices	57	80.11
2nd sub-pillar: Businesses	104	30.76	4.2.3 Income inequality	114	28.09
2.2.1 Firms with website	79	39.47	4.2.4 Healthy life expectancy at birth	57	68.32
2.2.2 Ease of doing business	110	46.05	*3rd sub-pillar: SDG Contribution*	65	66.88
2.2.3 Professionals	107	11.63	4.3.1 SDG 3: Good Health and Well-Being	88	60.66
2.2.4 Technicians and associate professionals	78	25.90	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	NA	NA	4.3.3 SDG 5: Gender Equality	62	75.39
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	100	66.98
3rd sub-pillar: Governments	115	22.66	.	.	.
2.3.1 Government online services	109	44.85			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	NA	NA			
2.3.4 R&D expenditure by governments and higher education	111	0.46			

* Confidential data

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Network Readiness Index 2020 Hong Kong (China)

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Hong Kong (China)

Hong Kong (China) ranks 22nd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Hong Kong (China) global ranking, overall and by pillar
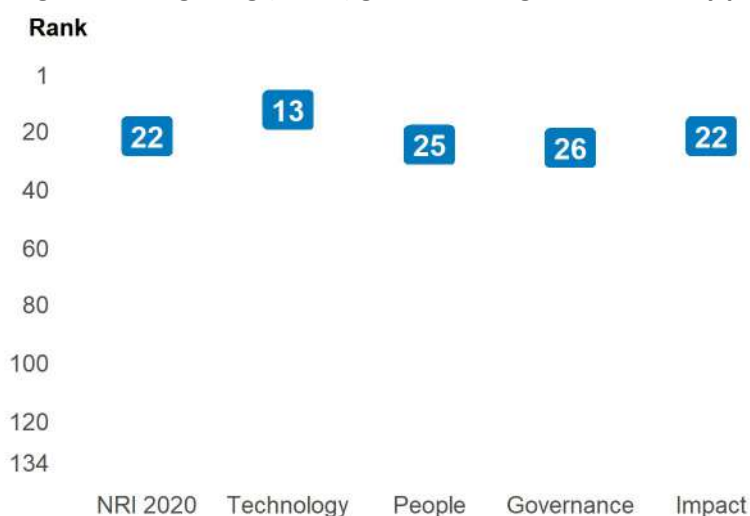
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Hong Kong (China) relate to SDG Contribution, Economy and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Inclusion, Trust and Quality of Life sub-pillars.

Table 1: Hong Kong (China) rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	3	Content	18
Economy	6	Governments	26
Access	9	Businesses	32
Future Technologies	12	Inclusion	32
Individuals	15	Trust	35
Regulation	15	Quality of Life	92

NRI score and income

Figure 3 shows the position of Hong Kong (China) in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Hong Kong (China) is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
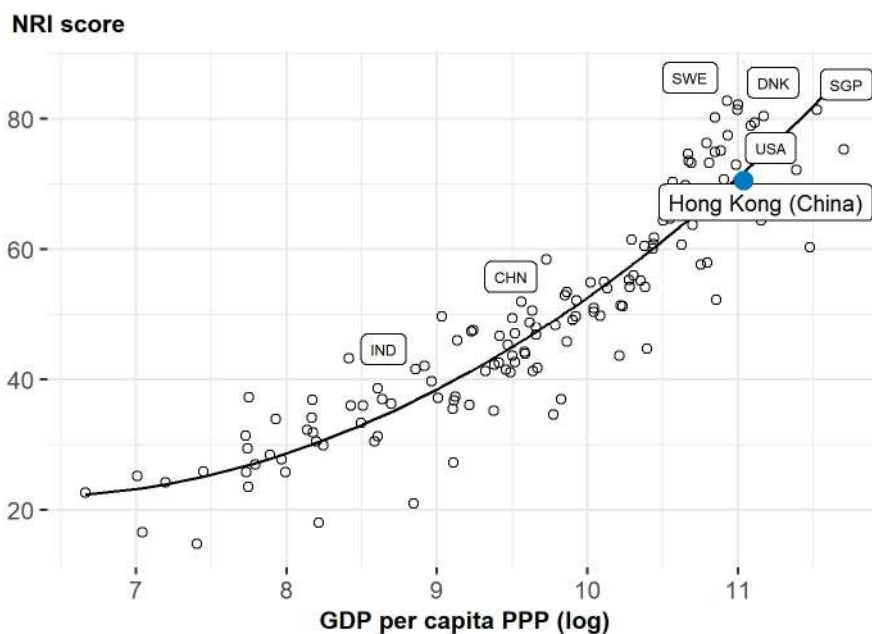
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Hong Kong (China) belongs to the group of high-income economies, where the best performer is Sweden (SWE). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

High-income economies
Hong Kong (China) is ranked 22nd in the group of high-income economies (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income economies in eight of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Governments, Regulation, Economy and SDG Contribution.

Asia & Pacific
Hong Kong (China) is ranked 6th within Asia & Pacific (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Asia & Pacific in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Economy and SDG Contribution.

Figure 4: Performance of Hong Kong (China) against its income group and region, overall and by pillar

Table 2: Hong Kong (China) scores vs. averages of its income group and region, overall and by pillar

Dimension	Hong Kong (China)	High-income economies	Asia & Pacific
NRI	70.52	66.82	52.76
Technology	72.84	62.51	45.33
People	63.76	62.72	49.64
Governance	75.55	75.41	59.20
Impact	69.94	66.63	56.86

Strongest and weakest indicators

The indicators where Hong Kong (China) performs particularly well include Regulatory quality, High-tech exports, and SDG 7: Affordable and Clean Energy (Table 3). By contrast, the economy's weakest indicators include Freedom to make life choices, Professionals, and SDG 5: Gender Equality.

Table 3: Top-ranked and bottom-ranked indicators of Hong Kong (China)

Strongest indicators	Rank	Weakest indicators	Rank
Regulatory quality	1	Fixed-broadband subscriptions	44
High-tech exports	1	Socioeconomic gap in use of digital payments	44
SDG 7: Affordable and Clean Energy	1	Internet access	46
International Internet bandwidth	2	Gender gap in Internet use	47
Mobile apps development	3	Rural gap in use of digital payments	54
Ease of doing business	3	ICT regulatory environment	66
SDG 4: Quality Education	3	Happiness	70
Robot density	6	SDG 5: Gender Equality	76
Technicians and associate professionals	6	Professionals	82
Availability of local online content	7	Freedom to make life choices	99

NRI 2020 At-A-Glance: Hong Kong (China)

Network Readiness Index   Rank: 22 (out of 134)   Score: 70.52

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	13	72.84	C. Governance pillar	26	75.55
1st sub-pillar: Access	9	88.55	1st sub-pillar: Trust	35	64.98
2nd sub-pillar: Content	18	64.79	2nd sub-pillar: Regulation	15	85.72
3rd sub-pillar: Future Technologies	12	65.17	3rd sub-pillar: Inclusion	32	75.96
B. People pillar	25	63.76	D. Impact pillar	22	69.94
1st sub-pillar: Individuals	15	72.14	1st sub-pillar: Economy	6	64.79
2nd sub-pillar: Businesses	32	58.45	2nd sub-pillar: Quality of Life	92	59.07
3rd sub-pillar: Governments	26	60.69	3rd sub-pillar: SDG Contribution	3	85.96

The Network Readiness Index in detail

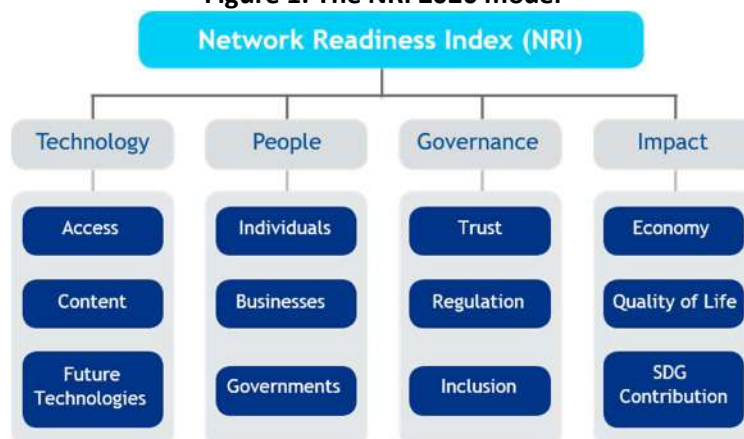| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	13	72.84	**C. Governance pillar**	26	75.55
1st sub-pillar: Access	9	88.55	*1st sub-pillar: Trust*	35	64.98
1.1.1 Mobile tariffs	9	91.69	3.1.1 Secure Internet servers	10	87.86
1.1.2 Handset prices	23	66.04	3.1.2 Cybersecurity	NA	NA
1.1.3 Internet access	46	80.13	3.1.3 Online access to financial account	29	52.51
1.1.4 4G mobile network coverage	24	99.00	3.1.4 Internet shopping	30	54.55
1.1.5 Fixed-broadband subscriptions	44	83.86	*2nd sub-pillar: Regulation*	15	85.72
1.1.6 International Internet bandwidth	2	99.90	3.2.1 Regulatory quality	1	100.00
1.1.7 Internet access in schools	25	99.22	3.2.2 ICT regulatory environment	66	84.36
2nd sub-pillar: Content	18	64.79	3.2.3 Legal framework's adaptability to emerging technologies	16	72.79
1.2.1 GitHub commits	32	26.97	3.2.4 e-commerce legislation	NA	NA
1.2.2 Wikipedia edits	10	86.96	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	32	75.96
1.2.4 Mobile apps development	3	96.38	3.3.1 E-Participation	NA	NA
3rd sub-pillar: Future Technologies	12	65.17	3.3.2 Socioeconomic gap in use of digital payments	44	79.28
1.3.1 Adoption of emerging technologies	19	76.65	3.3.3 Availability of local online content	7	93.10
1.3.2 Investment in emerging technologies	15	74.83	3.3.4 Gender gap in Internet use	47	61.23
1.3.3 ICT PCT patent applications	10	69.94	3.3.5 Rural gap in use of digital payments	54	70.25
1.3.4 Computer software spending	27	31.90	**D. Impact pillar**	22	69.94
1.3.5 Robot density	6	72.54	*1st sub-pillar: Economy*	6	64.79
B. People pillar	25	63.76	4.1.1 Medium and high-tech industry	37	47.67
1st sub-pillar: Individuals	15	72.14	4.1.2 High-tech exports	1	100.00
2.1.1 Internet users	18	89.45	4.1.3 PCT patent applications	18	27.78
2.1.2 Active mobile-broadband subscriptions	8	54.20	4.1.4 Labor productivity per employee	9	76.01
2.1.3 Use of virtual social networks	12	78.35	4.1.5 Prevalence of gig economy	17	72.50
2.1.4 Tertiary enrollment	23	56.05	*2nd sub-pillar: Quality of Life*	92	59.07
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	70	58.30
2.1.6 ICT skills	16	82.65	4.2.2 Freedom to make life choices	99	59.84
2nd sub-pillar: Businesses	32	58.45	4.2.3 Income inequality	NA	NA
2.2.1 Firms with website	NA	NA	4.2.4 Healthy life expectancy at birth	NA	NA
2.2.2 Ease of doing business	3	97.44	*3rd sub-pillar: SDG Contribution*	3	85.96
2.2.3 Professionals	82	17.79	4.3.1 SDG 3: Good Health and Well-Being	NA	NA
2.2.4 Technicians and associate professionals	6	85.56	4.3.2 SDG 4: Quality Education	3	84.89
2.2.5 Business use of digital tools	24	81.61	4.3.3 SDG 5: Gender Equality	76	73.00
2.2.6 R&D expenditure by businesses	42	9.87	4.3.4 SDG 7: Affordable and Clean Energy	1	100.00
3rd sub-pillar: Governments	26	60.69	.	.	.
2.3.1 Government online services	NA	NA			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	8	78.59			
2.3.4 R&D expenditure by governments and higher education	43	42.78			

* Confidential data

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Network Readiness Index 2020 Hungary

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
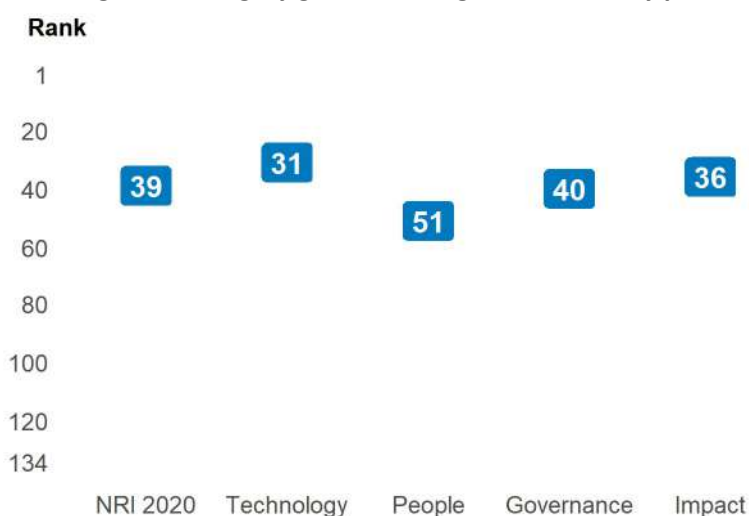
Figure 1: The NRI 2020 model

Global NRI position of Hungary

Hungary ranks 39th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Hungary global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Hungary relate to Access, Regulation and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, Inclusion and Governments sub-pillars.

Table 1: Hungary rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Access	21	Businesses	41
Regulation	23	Future Technologies	44
Content	32	Quality of Life	46
SDG Contribution	35	Individuals	59
Economy	36	Inclusion	59
Trust	39	Governments	66

NRI score and income

Figure 3 shows the position of Hungary in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Hungary is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
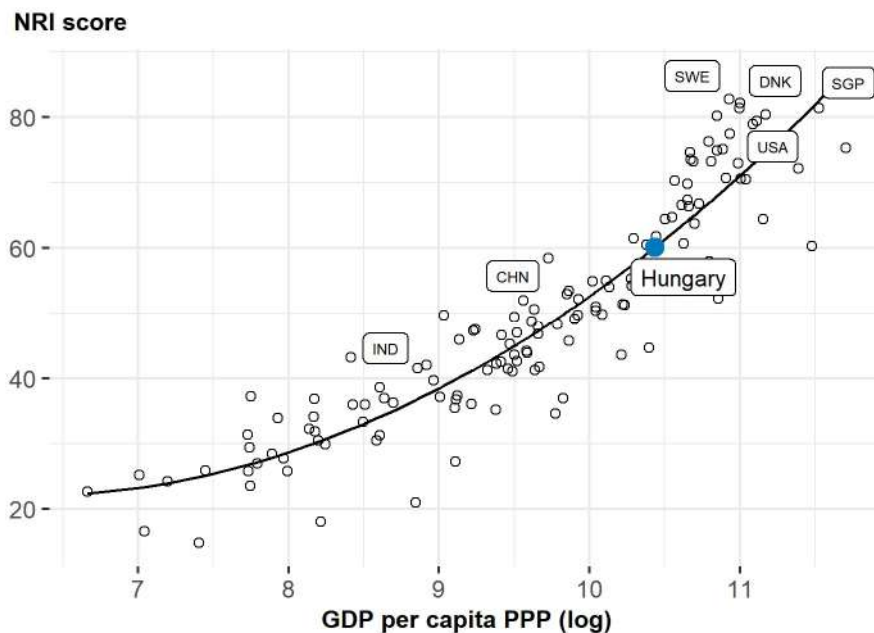
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Hungary belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Hungary is ranked 38th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in two of the twelve sub-pillars: Access and Regulation.

Europe
Hungary is ranked 28th within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in three of the twelve sub-pillars: Access, Regulation and SDG Contribution.

Figure 4: Performance of Hungary against its income group and region, overall and by pillar

Table 2: Hungary scores vs. averages of its income group and region, overall and by pillar

Dimension	Hungary	High-income countries	Europe
NRI	60.05	66.82	64.21
Technology	56.43	62.51	59.93
People	51.81	62.72	59.89
Governance	70.16	75.41	72.98
Impact	61.79	66.63	64.04

Strongest and weakest indicators

The indicators where Hungary performs particularly well include Internet access in schools, e-commerce legislation, and ICT regulatory environment (Table 3). By contrast, the economy's weakest indicators include Investment in emerging technologies, Prevalence of gig economy, and Rural gap in use of digital payments.

Table 3: Top-ranked and bottom-ranked indicators of Hungary

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	Tertiary enrollment	63
e-commerce legislation	1	SDG 7: Affordable and Clean Energy	63
ICT regulatory environment	2	Publication and use of open data	64
Medium and high-tech industry	5	E-Participation	74
Privacy protection by law content	7	Freedom to make life choices	74
Adult literacy rate	17	Active mobile-broadband subscriptions	78
Wikipedia edits	18	ICT skills	80
4G mobile network coverage	22	Rural gap in use of digital payments	88
R&D expenditure by businesses	22	Prevalence of gig economy	98
Income inequality	22	Investment in emerging technologies	100

NRI 2020 At-A-Glance: Hungary

Network Readiness Index   Rank: 39 (out of 134)   Score: 60.05

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	31	56.43	C. Governance pillar	40	70.16
1st sub-pillar: Access	21	84.18	1st sub-pillar: Trust	39	62.24
2nd sub-pillar: Content	32	52.04	2nd sub-pillar: Regulation	23	82.71
3rd sub-pillar: Future Technologies	44	33.06	3rd sub-pillar: Inclusion	59	65.55
B. People pillar	51	51.81	D. Impact pillar	36	61.79
1st sub-pillar: Individuals	59	57.09	1st sub-pillar: Economy	36	37.55
2nd sub-pillar: Businesses	41	54.67	2nd sub-pillar: Quality of Life	46	72.23
3rd sub-pillar: Governments	66	43.68	3rd sub-pillar: SDG Contribution	35	75.59

The Network Readiness Index in detail

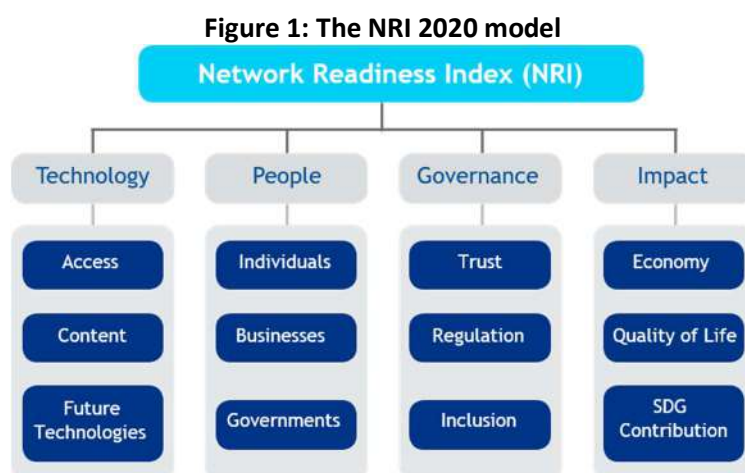| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	31	56.43	**C. Governance pillar**	40	70.16
1st sub-pillar: Access	21	84.18	*1st sub-pillar: Trust*	39	62.24
1.1.1 Mobile tariffs	23	81.93	3.1.1 Secure Internet servers	23	81.19
1.1.2 Handset prices	35	62.46	3.1.2 Cybersecurity	33	87.11
1.1.3 Internet access	38	83.26	3.1.3 Online access to financial account	41	43.79
1.1.4 4G mobile network coverage	22	99.20	3.1.4 Internet shopping	39	36.86
1.1.5 Fixed-broadband subscriptions	25	93.29	*2nd sub-pillar: Regulation*	23	82.71
1.1.6 International Internet bandwidth	59	69.09	3.2.1 Regulatory quality	41	64.68
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	2	99.62
2nd sub-pillar: Content	32	52.04	3.2.3 Legal framework's adaptability to emerging technologies	37	54.01
1.2.1 GitHub commits	33	23.88	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	18	82.02	3.2.5 Privacy protection by law content	7	95.22
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	59	65.55
1.2.4 Mobile apps development	38	76.43	3.3.1 E-Participation	74	66.67
3rd sub-pillar: Future Technologies	44	33.06	3.3.2 Socioeconomic gap in use of digital payments	41	79.36
1.3.1 Adoption of emerging technologies	63	47.82	3.3.3 Availability of local online content	57	65.42
1.3.2 Investment in emerging technologies	100	28.34	3.3.4 Gender gap in Internet use	49	60.87
1.3.3 ICT PCT patent applications	27	37.47	3.3.5 Rural gap in use of digital payments	88	55.43
1.3.4 Computer software spending	38	26.73	**D. Impact pillar**	36	61.79
1.3.5 Robot density	23	24.95	*1st sub-pillar: Economy*	36	37.55
B. People pillar	51	51.81	4.1.1 Medium and high-tech industry	5	76.36
1st sub-pillar: Individuals	59	57.09	4.1.2 High-tech exports	25	33.23
2.1.1 Internet users	50	75.69	4.1.3 PCT patent applications	30	6.42
2.1.2 Active mobile-broadband subscriptions	78	25.95	4.1.4 Labor productivity per employee	44	42.95
2.1.3 Use of virtual social networks	47	61.86	4.1.5 Prevalence of gig economy	98	28.80
2.1.4 Tertiary enrollment	63	35.11	*2nd sub-pillar: Quality of Life*	46	72.23
2.1.5 Adult literacy rate	17	98.87	4.2.1 Happiness	56	65.01
2.1.6 ICT skills	80	45.07	4.2.2 Freedom to make life choices	74	71.93
2nd sub-pillar: Businesses	41	54.67	4.2.3 Income inequality	22	83.51
2.2.1 Firms with website	53	61.49	4.2.4 Healthy life expectancy at birth	54	68.48
2.2.2 Ease of doing business	51	76.39	*3rd sub-pillar: SDG Contribution*	35	75.59
2.2.3 Professionals	39	40.43	4.3.1 SDG 3: Good Health and Well-Being	54	75.41
2.2.4 Technicians and associate professionals	23	62.51	4.3.2 SDG 4: Quality Education	35	58.58
2.2.5 Business use of digital tools	61	61.99	4.3.3 SDG 5: Gender Equality	42	79.92
2.2.6 R&D expenditure by businesses	22	25.19	4.3.4 SDG 7: Affordable and Clean Energy	63	80.20
3rd sub-pillar: Governments	66	43.68	.	.	.
2.3.1 Government online services	54	73.94			
2.3.2 Publication and use of open data	64	23.30			
2.3.3 Government promotion of investment in emerging tech	46	46.68			
2.3.4 R&D expenditure by governments and higher education	58	30.79			

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Network Readiness Index 2020
Iceland

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Iceland

Iceland ranks 21st out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Iceland global ranking, overall and by pillar
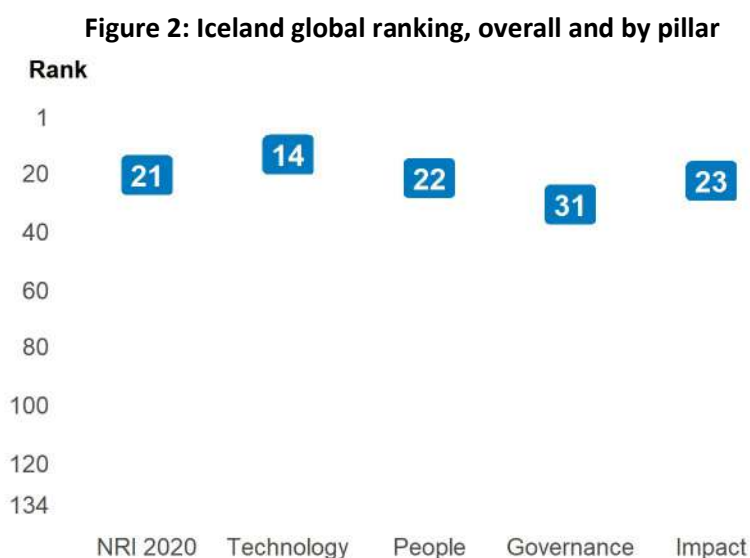
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Iceland relate to Quality of Life, Individuals and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Regulation, Inclusion and SDG Contribution sub-pillars.

Table 1: Iceland rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	1	Governments	28
Individuals	3	Economy	28
Content	4	Future Technologies	31
Access	7	Regulation	37
Businesses	17	Inclusion	39
Trust	26	SDG Contribution	71

NRI score and income

Figure 3 shows the position of Iceland in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Iceland is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
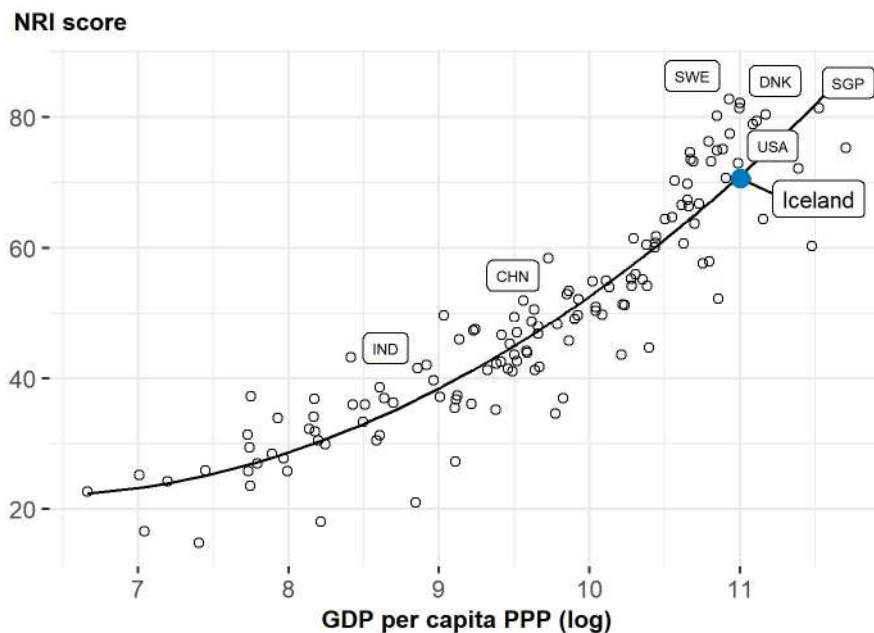
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Iceland belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Iceland is ranked 21st in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, people and impact. At the sub-pillar level, it outperforms high-income countries in six of the twelve sub-pillars: Access, Content, Individuals, Businesses, Economy and Quality of Life.

Europe
Iceland is ranked 14th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in ten of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Inclusion, Economy and Quality of Life.

Figure 4: Performance of Iceland against its income group and region, overall and by pillar
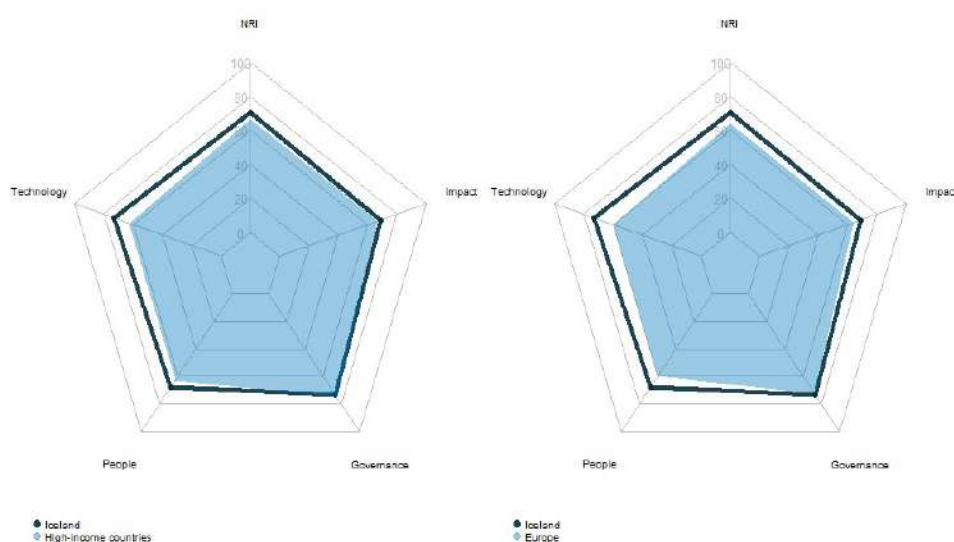
Table 2: Iceland scores vs. averages of its income group and region, overall and by pillar

Dimension	Iceland	High-income countries	Europe
NRI	70.55	66.82	64.21
Technology	72.76	62.51	59.93
People	67.49	62.72	59.89
Governance	73.45	75.41	72.98
Impact	68.50	66.63	64.04

Strongest and weakest indicators

The indicators where Iceland performs particularly well include ICT skills, Freedom to make life choices, and Fixed-broadband subscriptions (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, Medium and high-tech industry, and Cybersecurity.

Table 3: Top-ranked and bottom-ranked indicators of Iceland

Strongest indicators	Rank	Weakest indicators	Rank
ICT skills	2	Robot density	39
Freedom to make life choices	2	Government online services	42
Fixed-broadband subscriptions	3	Government promotion of investment in emerging technologies	45
Internet domain registrations	3	E-Participation	50
Internet users	3	ICT regulatory environment	51
Happiness	4	SDG 5: Gender Equality	70
Internet access	5	e-commerce legislation	77
International Internet bandwidth	5	Cybersecurity	87
Income inequality	7	Medium and high-tech industry	95
Wikipedia edits	8	SDG 7: Affordable and Clean Energy	130

NRI 2020 At-A-Glance: Iceland

Network Readiness Index Rank: 21 (out of 134) Score: 70.55

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	14	72.76	C. Governance pillar	31	73.45
1st sub-pillar: Access	7	88.85	1st sub-pillar: Trust	26	68.44
2nd sub-pillar: Content	4	85.04	2nd sub-pillar: Regulation	37	77.29
3rd sub-pillar: Future Technologies	31	44.40	3rd sub-pillar: Inclusion	39	74.62
B. People pillar	22	67.49	D. Impact pillar	23	68.50
1st sub-pillar: Individuals	3	75.76	1st sub-pillar: Economy	28	45.37
2nd sub-pillar: Businesses	17	68.24	2nd sub-pillar: Quality of Life	1	94.29
3rd sub-pillar: Governments	28	58.47	3rd sub-pillar: SDG Contribution	71	65.84

The Network Readiness Index in detail

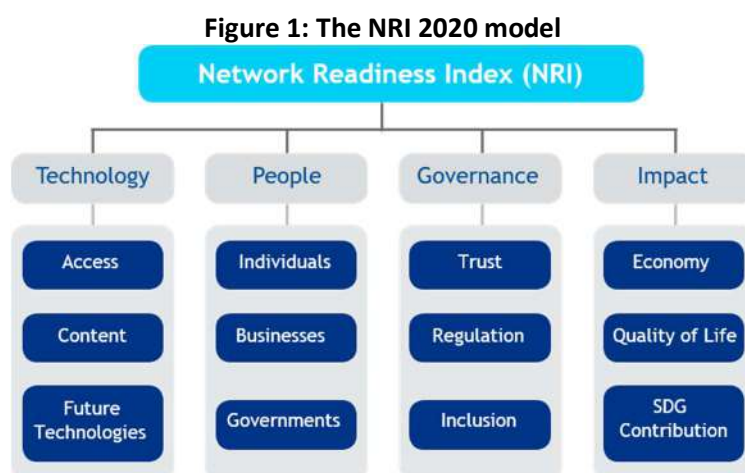| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	14	72.76	**C. Governance pillar**	31	73.45
1st sub-pillar: Access	7	88.85	*1st sub-pillar: Trust*	26	68.44
1.1.1 Mobile tariffs	24	80.30	3.1.1 Secure Internet servers	9	89.11
1.1.2 Handset prices	10	75.04	3.1.2 Cybersecurity	87	47.78
1.1.3 Internet access	5	97.85	3.1.3 Online access to financial account	NA	NA
1.1.4 4G mobile network coverage	36	98.20	3.1.4 Internet shopping	NA	NA
1.1.5 Fixed-broadband subscriptions	3	99.46	*2nd sub-pillar: Regulation*	37	77.29
1.1.6 International Internet bandwidth	5	82.23	3.2.1 Regulatory quality	19	82.64
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	51	86.88
2nd sub-pillar: Content	4	85.04	3.2.3 Legal framework's adaptability to emerging technologies	24	64.65
1.2.1 GitHub commits	12	62.66	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	8	88.41	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	39	74.62
1.2.4 Mobile apps development	11	89.69	3.3.1 E-Participation	50	76.54
3rd sub-pillar: Future Technologies	31	44.40	3.3.2 Socioeconomic gap in use of digital payments	NA	NA
1.3.1 Adoption of emerging technologies	16	78.69	3.3.3 Availability of local online content	32	79.20
1.3.2 Investment in emerging technologies	25	65.70	3.3.4 Gender gap in Internet use	13	68.13
1.3.3 ICT PCT patent applications	24	44.03	3.3.5 Rural gap in use of digital payments	NA	NA
1.3.4 Computer software spending	35	27.50	**D. Impact pillar**	23	68.50
1.3.5 Robot density	39	6.06	*1st sub-pillar: Economy*	28	45.37
B. People pillar	22	67.49	4.1.1 Medium and high-tech industry	95	16.42
1st sub-pillar: Individuals	3	75.76	4.1.2 High-tech exports	14	44.48
2.1.1 Internet users	3	99.34	4.1.3 PCT patent applications	15	35.94
2.1.2 Active mobile-broadband subscriptions	15	49.38	4.1.4 Labor productivity per employee	18	64.73
2.1.3 Use of virtual social networks	8	82.47	4.1.5 Prevalence of gig economy	28	65.25
2.1.4 Tertiary enrollment	26	52.31	*2nd sub-pillar: Quality of Life*	1	94.29
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	4	95.13
2.1.6 ICT skills	2	95.31	4.2.2 Freedom to make life choices	2	99.35
2nd sub-pillar: Businesses	17	68.24	4.2.3 Income inequality	7	93.30
2.2.1 Firms with website	15	84.83	4.2.4 Healthy life expectancy at birth	10	89.40
2.2.2 Ease of doing business	25	86.20	*3rd sub-pillar: SDG Contribution*	71	65.84
2.2.3 Professionals	9	63.78	4.3.1 SDG 3: Good Health and Well-Being	10	91.80
2.2.4 Technicians and associate professionals	31	55.77	4.3.2 SDG 4: Quality Education	25	63.87
2.2.5 Business use of digital tools	18	83.67	4.3.3 SDG 5: Gender Equality	70	73.91
2.2.6 R&D expenditure by businesses	15	35.17	4.3.4 SDG 7: Affordable and Clean Energy	130	6.50
3rd sub-pillar: Governments	28	58.47	.	.	.
2.3.1 Government online services	42	78.79			
2.3.2 Publication and use of open data	37	38.87			
2.3.3 Government promotion of investment in emerging tech	45	47.15			
2.3.4 R&D expenditure by governments and higher education	13	69.07			

* Confidential data

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Network Readiness Index 2020 India

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of India

India ranks 88th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: India global ranking, overall and by pillar
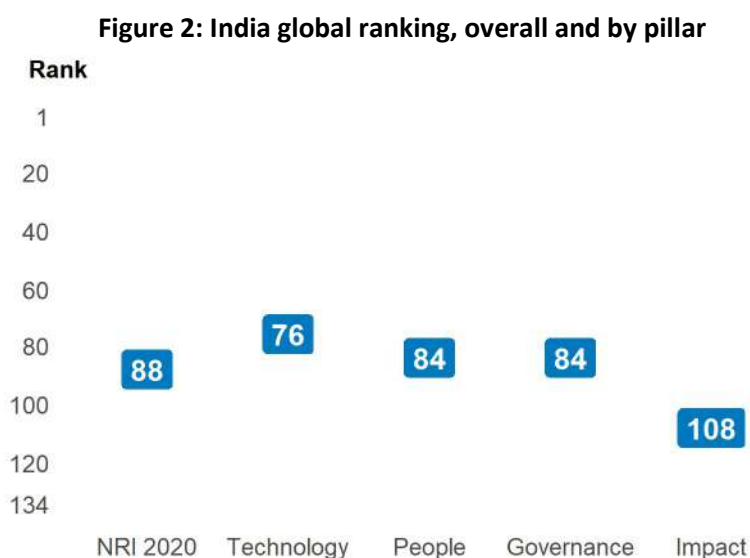
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of India relate to Governments, Future Technologies and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, Quality of Life and SDG Contribution sub-pillars.

Table 1: India rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	45	Businesses	92
Future Technologies	59	Content	95
Economy	70	Regulation	96
Inclusion	71	Individuals	103
Access	74	Quality of Life	104
Trust	77	SDG Contribution	117

NRI score and income

Figure 3 shows the position of India in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, India is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
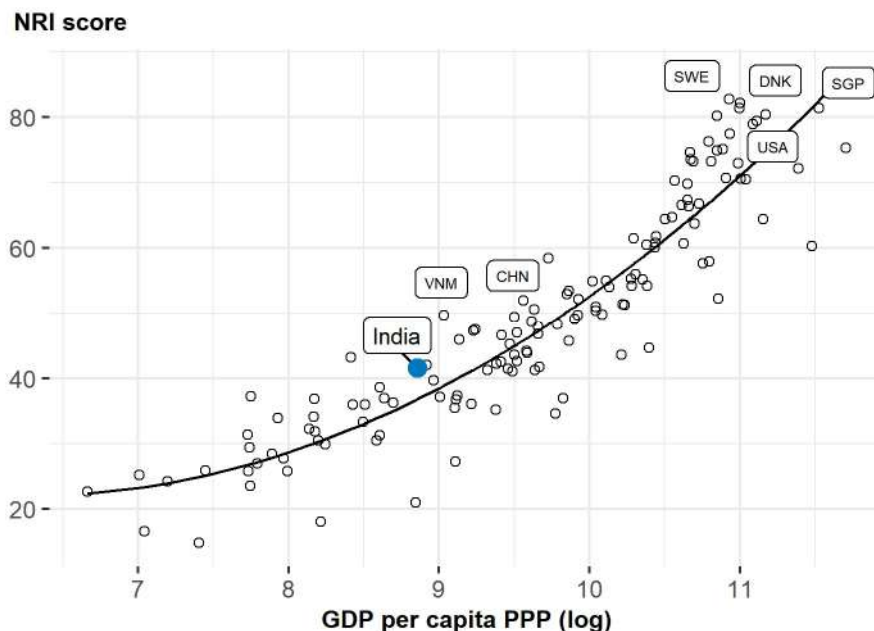
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40). USA is ranked 8th. India belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Lower-middle-income countries
India is ranked 9th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, people and governance. At the sub-pillar level, it outperforms lower-middle-income countries in nine of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion and Economy.

Asia & Pacific
India is ranked 15th within Asia & Pacific (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of India against its income group and region, overall and by pillar

Table 2: India scores vs. averages of its income group and region, overall and by pillar

Dimension	India	Lower-middle-income countries	Asia & Pacific
NRI	41.57	36.72	52.76
Technology	36.58	27.72	45.33
People	40.15	33.88	49.64
Governance	50.45	43.15	59.20
Impact	39.08	42.15	56.86

Strongest and weakest indicators

The indicators where India performs particularly well include Government online services, Investment in emerging technologies, and E-Participation (Table 3). By contrast, the economy's weakest indicators include Happiness, SDG 5: Gender Equality, and SDG 11: Sustainable Cities and Communities.

Table 3: Top-ranked and bottom-ranked indicators of India

Strongest indicators	Rank	Weakest indicators	Rank
Government online services	24	Healthy life expectancy at birth	102
Investment in emerging technologies	27	Internet users	103
E-Participation	29	Use of virtual social networks	103
Publication and use of open data	33	SDG 3: Good Health and Well-Being	103
Medium and high-tech industry	33	Active mobile-broadband subscriptions	111
Mobile tariffs	38	Professionals	111
Freedom to make life choices	45	Online access to financial account	116
ICT PCT patent applications	49	SDG 11: Sustainable Cities and Communities	124
Cybersecurity	49	SDG 5: Gender Equality	127
Robot density	52	Happiness	132

NRI 2020 At-A-Glance: India

Network Readiness Index   Rank: 88 (out of 134)   Score: 41.57

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	76	36.58	C. Governance pillar	84	50.45
1st sub-pillar: Access	74	59.96	1st sub-pillar: Trust	77	33.56
2nd sub-pillar: Content	95	20.66	2nd sub-pillar: Regulation	96	54.95
3rd sub-pillar: Future Technologies	59	29.13	3rd sub-pillar: Inclusion	71	62.83
B. People pillar	84	40.15	D. Impact pillar	108	39.08
1st sub-pillar: Individuals	103	36.67	1st sub-pillar: Economy	70	23.46
2nd sub-pillar: Businesses	92	34.58	2nd sub-pillar: Quality of Life	104	50.94
3rd sub-pillar: Governments	45	49.21	3rd sub-pillar: SDG Contribution	117	42.84

The Network Readiness Index in detail

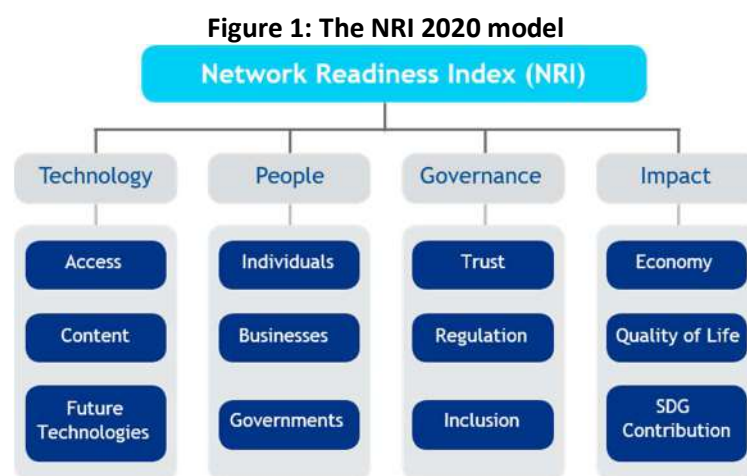| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	76	36.58	**C. Governance pillar**	84	50.45
1st sub-pillar: Access	74	59.96	*1st sub-pillar: Trust*	77	33.56
1.1.1 Mobile tariffs	38	74.13	3.1.1 Secure Internet servers	74	47.60
1.1.2 Handset prices	55	49.67	3.1.2 Cybersecurity	49	77.03
1.1.3 Internet access	100	25.18	3.1.3 Online access to financial account	116	5.99
1.1.4 4G mobile network coverage	55	94.00	3.1.4 Internet shopping	102	3.63
1.1.5 Fixed-broadband subscriptions	70	53.11	*2nd sub-pillar: Regulation*	96	54.95
1.1.6 International Internet bandwidth	87	63.66	3.2.1 Regulatory quality	83	47.37
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	88	74.71
2nd sub-pillar: Content	95	20.66	3.2.3 Legal framework's adaptability to emerging technologies	63	42.78
1.2.1 GitHub commits	85	1.89	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	97	24.24	3.2.5 Privacy protection by law content	64	34.87
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	71	62.83
1.2.4 Mobile apps development	82	55.66	3.3.1 E-Participation	29	85.18
3rd sub-pillar: Future Technologies	59	29.13	3.3.2 Socioeconomic gap in use of digital payments	91	50.15
1.3.1 Adoption of emerging technologies	53	51.54	3.3.3 Availability of local online content	72	58.20
1.3.2 Investment in emerging technologies	27	64.29	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	49	8.94	3.3.5 Rural gap in use of digital payments	83	57.80
1.3.4 Computer software spending	64	19.79	**D. Impact pillar**	108	39.08
1.3.5 Robot density	52	1.09	*1st sub-pillar: Economy*	70	23.46
B. People pillar	84	40.15	4.1.1 Medium and high-tech industry	33	49.44
1st sub-pillar: Individuals	103	36.67	4.1.2 High-tech exports	53	17.07
2.1.1 Internet users	103	32.78	4.1.3 PCT patent applications	63	0.52
2.1.2 Active mobile-broadband subscriptions	111	13.65	4.1.4 Labor productivity per employee	93	10.70
2.1.3 Use of virtual social networks	103	27.84	4.1.5 Prevalence of gig economy	70	39.56
2.1.4 Tertiary enrollment	84	20.06	*2nd sub-pillar: Quality of Life*	104	50.94
2.1.5 Adult literacy rate	88	67.04	4.2.1 Happiness	132	10.92
2.1.6 ICT skills	56	58.68	4.2.2 Freedom to make life choices	45	85.09
2nd sub-pillar: Businesses	92	34.58	4.2.3 Income inequality	68	64.95
2.2.1 Firms with website	71	45.74	4.2.4 Healthy life expectancy at birth	102	42.82
2.2.2 Ease of doing business	61	72.19	*3rd sub-pillar: SDG Contribution*	117	42.84
2.2.3 Professionals	111	9.33	4.3.1 SDG 3: Good Health and Well-Being	103	44.26
2.2.4 Technicians and associate professionals	101	16.80	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	67	58.48	4.3.3 SDG 5: Gender Equality	127	27.58
2.2.6 R&D expenditure by businesses	53	4.94	4.3.4 SDG 7: Affordable and Clean Energy	68	78.68
3rd sub-pillar: Governments	45	49.21	.	.	.
2.3.1 Government online services	24	84.84			
2.3.2 Publication and use of open data	33	42.80			
2.3.3 Government promotion of investment in emerging tech	69	35.62			
2.3.4 R&D expenditure by governments and higher education	53	33.56			

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Network Readiness Index 2020 Indonesia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Indonesia

Indonesia ranks 73rd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Indonesia global ranking, overall and by pillar
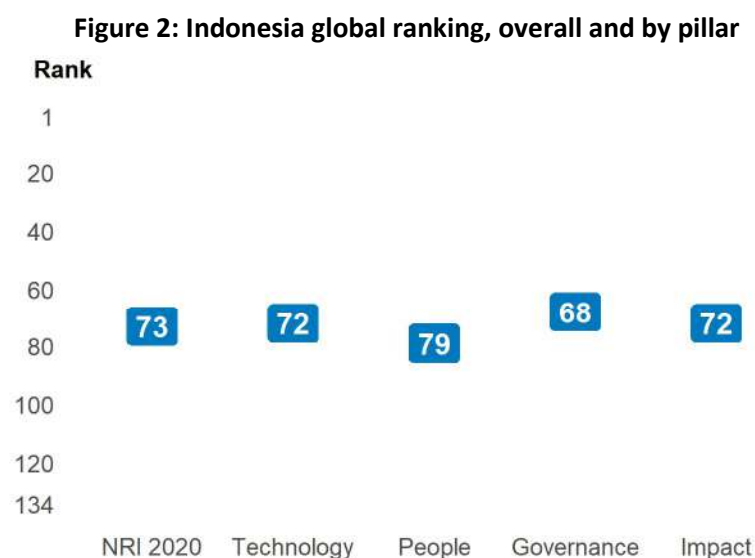
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Indonesia relate to Future Technologies, Governments and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Content and Businesses sub-pillars.

Table 1: Indonesia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	52	Inclusion	80
Governments	53	Individuals	81
Economy	57	Quality of Life	82
Trust	66	SDG Contribution	89
Access	68	Content	92
Regulation	80	Businesses	102

NRI score and income

Figure 3 shows the position of Indonesia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Indonesia is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
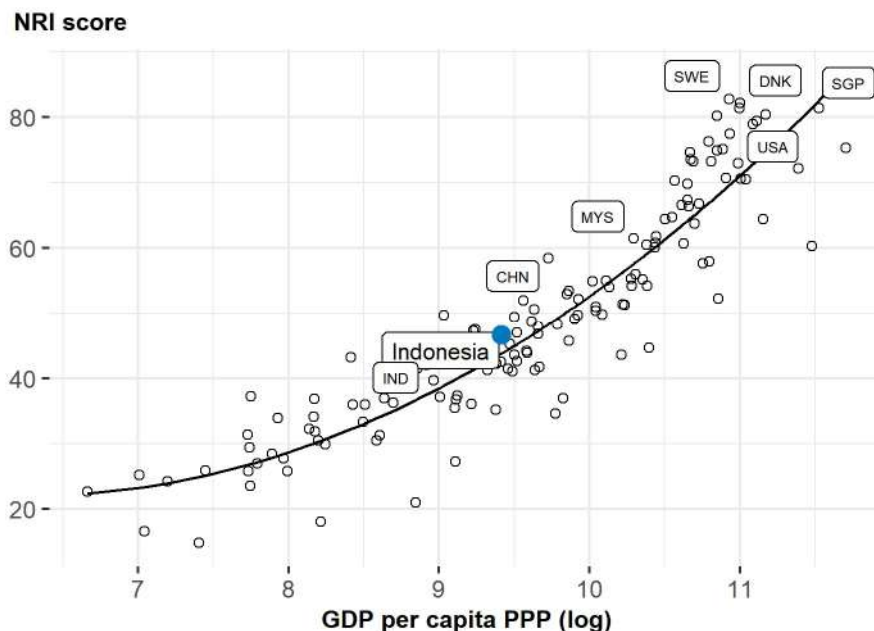
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Indonesia belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Upper-middle-income countries
Indonesia is ranked 22nd in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: governance and impact. At the sub-pillar level, it outperforms upper-middle-income countries in seven of the twelve sub-pillars: Access, Future Technologies, Governments, Trust, Regulation, Economy and Quality of Life.

Asia & Pacific
Indonesia is ranked 11th within Asia & Pacific (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Indonesia against its income group and region, overall and by pillar

Table 2: Indonesia scores vs. averages of its income group and region, overall and by pillar

Dimension	Indonesia	Upper-middle-income countries	Asia & Pacific
NRI	46.71	47.39	52.76
Technology	38.38	38.42	45.33
People	43.26	46.66	49.64
Governance	54.99	54.31	59.20
Impact	50.20	50.17	56.86

Strongest and weakest indicators

The indicators where Indonesia performs particularly well include e-commerce legislation, Prevalence of gig economy, and Government promotion of investment in emerging technologies (Table 3). By contrast, the economy's weakest indicators include Firms with website, Technicians and associate professionals, and Socioeconomic gap in use of digital payments.

Table 3: Top-ranked and bottom-ranked indicators of Indonesia

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	SDG 5: Gender Equality	93
Prevalence of gig economy	16	Online access to financial account	94
Government promotion of investment in emerging technologies	24	ICT regulatory environment	95
Investment in emerging technologies	28	Healthy life expectancy at birth	97
Computer software spending	32	Professionals	99
SDG 7: Affordable and Clean Energy	33	Internet users	100
Business use of digital tools	35	SDG 3: Good Health and Well-Being	101
Legal framework's adaptability to emerging technologies	36	Socioeconomic gap in use of digital payments	105
Publication and use of open data	38	Technicians and associate professionals	106
Medium and high-tech industry	40	Firms with website	115

NRI 2020 At-A-Glance: Indonesia

Network Readiness Index   Rank: 73 (out of 134)   Score: 46.71

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	72	38.38	C. Governance pillar	68	54.99
1st sub-pillar: Access	68	63.24	1st sub-pillar: Trust	66	42.52
2nd sub-pillar: Content	92	21.31	2nd sub-pillar: Regulation	80	62.08
3rd sub-pillar: Future Technologies	52	30.61	3rd sub-pillar: Inclusion	80	60.38
B. People pillar	79	43.26	D. Impact pillar	72	50.20
1st sub-pillar: Individuals	81	52.06	1st sub-pillar: Economy	57	29.70
2nd sub-pillar: Businesses	102	30.84	2nd sub-pillar: Quality of Life	82	62.11
3rd sub-pillar: Governments	53	46.88	3rd sub-pillar: SDG Contribution	89	58.80

The Network Readiness Index in detail

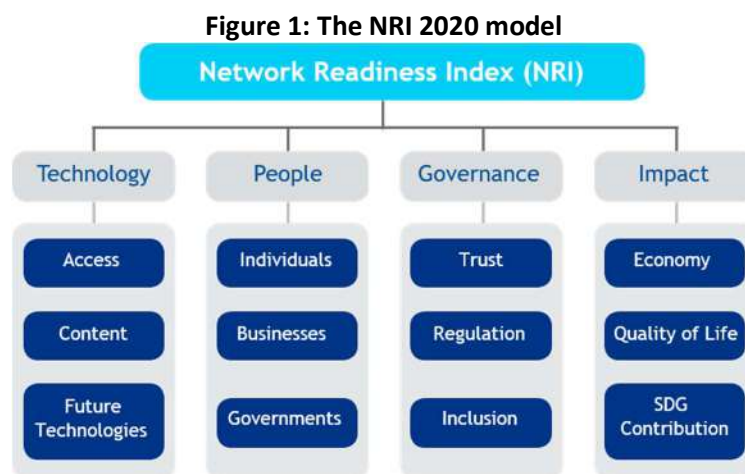| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	72	38.38	**C. Governance pillar**	68	54.99
1st sub-pillar: Access	68	63.24	*1st sub-pillar: Trust*	66	42.52
1.1.1 Mobile tariffs	64	63.58	3.1.1 Secure Internet servers	60	59.28
1.1.2 Handset prices	72	42.05	3.1.2 Cybersecurity	43	83.21
1.1.3 Internet access	70	66.13	3.1.3 Online access to financial account	94	14.96
1.1.4 4G mobile network coverage	62	92.70	3.1.4 Internet shopping	69	12.64
1.1.5 Fixed-broadband subscriptions	73	48.04	*2nd sub-pillar: Regulation*	80	62.08
1.1.6 International Internet bandwidth	76	66.91	3.2.1 Regulatory quality	76	49.84
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	95	71.24
2nd sub-pillar: Content	92	21.31	3.2.3 Legal framework's adaptability to emerging technologies	36	55.08
1.2.1 GitHub commits	88	1.68	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	91	27.98	3.2.5 Privacy protection by law content	65	34.22
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	80	60.38
1.2.4 Mobile apps development	85	54.47	3.3.1 E-Participation	56	74.07
3rd sub-pillar: Future Technologies	52	30.61	3.3.2 Socioeconomic gap in use of digital payments	105	41.34
1.3.1 Adoption of emerging technologies	41	59.47	3.3.3 Availability of local online content	45	70.21
1.3.2 Investment in emerging technologies	28	62.78	3.3.4 Gender gap in Internet use	78	46.95
1.3.3 ICT PCT patent applications	81	0.06	3.3.5 Rural gap in use of digital payments	60	69.30
1.3.4 Computer software spending	32	29.17	**D. Impact pillar**	72	50.20
1.3.5 Robot density	47	1.56	*1st sub-pillar: Economy*	57	29.70
B. People pillar	79	43.26	4.1.1 Medium and high-tech industry	40	44.72
1st sub-pillar: Individuals	81	52.06	4.1.2 High-tech exports	60	15.19
2.1.1 Internet users	100	38.28	4.1.3 PCT patent applications	86	0.01
2.1.2 Active mobile-broadband subscriptions	50	33.85	4.1.4 Labor productivity per employee	85	15.38
2.1.3 Use of virtual social networks	55	58.76	4.1.5 Prevalence of gig economy	16	73.20
2.1.4 Tertiary enrollment	74	26.14	*2nd sub-pillar: Quality of Life*	82	62.11
2.1.5 Adult literacy rate	43	94.44	4.2.1 Happiness	83	52.15
2.1.6 ICT skills	49	60.88	4.2.2 Freedom to make life choices	49	83.45
2nd sub-pillar: Businesses	102	30.84	4.2.3 Income inequality	72	61.86
2.2.1 Firms with website	115	12.77	4.2.4 Healthy life expectancy at birth	97	50.97
2.2.2 Ease of doing business	68	69.60	*3rd sub-pillar: SDG Contribution*	89	58.80
2.2.3 Professionals	99	13.78	4.3.1 SDG 3: Good Health and Well-Being	101	47.54
2.2.4 Technicians and associate professionals	106	12.63	4.3.2 SDG 4: Quality Education	72	20.12
2.2.5 Business use of digital tools	35	75.86	4.3.3 SDG 5: Gender Equality	93	64.22
2.2.6 R&D expenditure by businesses	81	0.42	4.3.4 SDG 7: Affordable and Clean Energy	33	86.20
3rd sub-pillar: Governments	53	46.88	.	.	.
2.3.1 Government online services	71	67.28			
2.3.2 Publication and use of open data	38	38.35			
2.3.3 Government promotion of investment in emerging tech	24	60.62			
2.3.4 R&D expenditure by governments and higher education	72	21.25			

* Confidential data

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Network Readiness Index 2020 Iran

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Iran

Iran ranks 79th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Iran global ranking, overall and by pillar
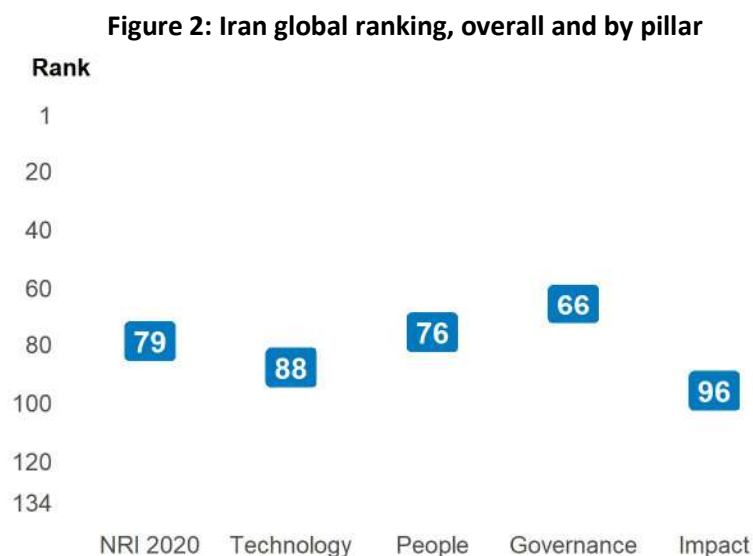
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Iran relate to Governments, Trust and Inclusion, among others (Table 1). More could be done, though, to improve the economy's performances in the Quality of Life, Regulation and Future Technologies sub-pillars.

Table 1: Iran rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	46	Access	82
Trust	47	SDG Contribution	95
Inclusion	69	Businesses	98
Economy	73	Quality of Life	101
Individuals	78	Regulation	102
Content	80	Future Technologies	107

NRI score and income

Figure 3 shows the position of Iran in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Iran is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
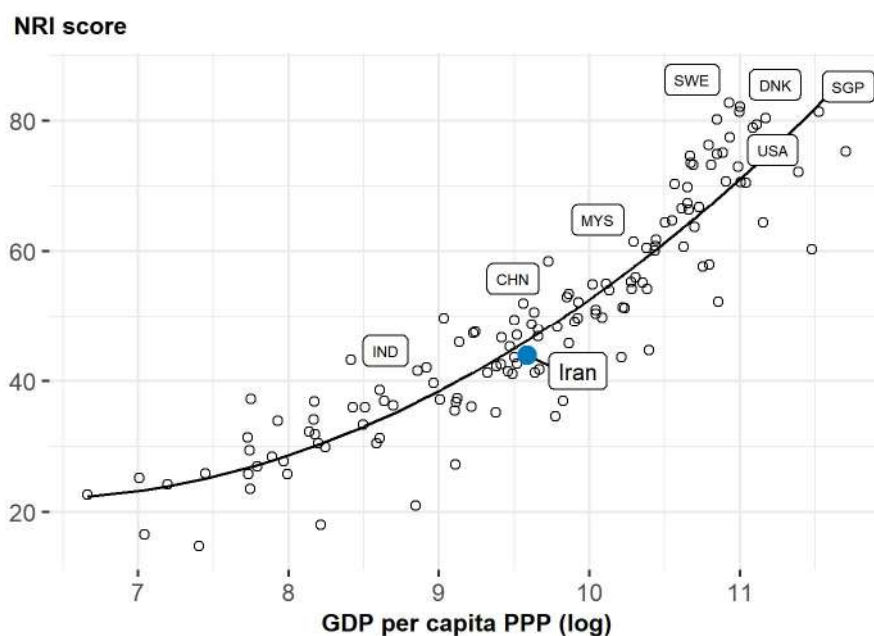
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Iran belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Upper-middle-income countries
Iran is ranked 26th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: governance. At the sub-pillar level, it outperforms upper-middle-income countries in three of the twelve sub-pillars: Governments, Trust and Inclusion.

Asia & Pacific
Iran is ranked 13th within Asia & Pacific (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Asia & Pacific in one of the twelve sub-pillars: Trust.

Figure 4: Performance of Iran against its income group and region, overall and by pillar

Table 2: Iran scores vs. averages of its income group and region, overall and by pillar

Dimension	Iran	Upper-middle-income countries	Asia & Pacific
NRI	43.91	47.39	52.76
Technology	31.70	38.42	45.33
People	44.68	46.66	49.64
Governance	55.79	54.31	59.20
Impact	43.49	50.17	56.86

Strongest and weakest indicators

The indicators where Iran performs particularly well include Rural gap in use of digital payments, Socioeconomic gap in use of digital payments, and Medium and high-tech industry (Table 3). By contrast, the economy's weakest indicators include Regulatory quality, Freedom to make life choices, and SDG 5: Gender Equality.

Table 3: Top-ranked and bottom-ranked indicators of Iran

Strongest indicators	Rank	Weakest indicators	Rank
Rural gap in use of digital payments	12	Prevalence of gig economy	100
Socioeconomic gap in use of digital payments	18	Investment in emerging technologies	102
Medium and high-tech industry	19	Mobile apps development	103
R&D expenditure by governments and higher education	25	E-Participation	104
Tertiary enrollment	32	Ease of doing business	107
Online access to financial account	33	High-tech exports	109
Internet shopping	41	SDG 7: Affordable and Clean Energy	111
Internet access	47	SDG 5: Gender Equality	116
R&D expenditure by businesses	51	Freedom to make life choices	126
Mobile tariffs	55	Regulatory quality	130

NRI 2020 At-A-Glance: Iran

Network Readiness Index   Rank: 79 (out of 134)   Score: 43.91

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	88	31.70	C. Governance pillar	66	55.79
1st sub-pillar: Access	82	52.36	1st sub-pillar: Trust	47	51.92
2nd sub-pillar: Content	80	24.50	2nd sub-pillar: Regulation	102	52.45
3rd sub-pillar: Future Technologies	107	18.24	3rd sub-pillar: Inclusion	69	62.99
B. People pillar	76	44.68	D. Impact pillar	96	43.49
1st sub-pillar: Individuals	78	52.47	1st sub-pillar: Economy	73	22.79
2nd sub-pillar: Businesses	98	32.39	2nd sub-pillar: Quality of Life	101	52.13
3rd sub-pillar: Governments	46	49.18	3rd sub-pillar: SDG Contribution	95	55.56

The Network Readiness Index in detail

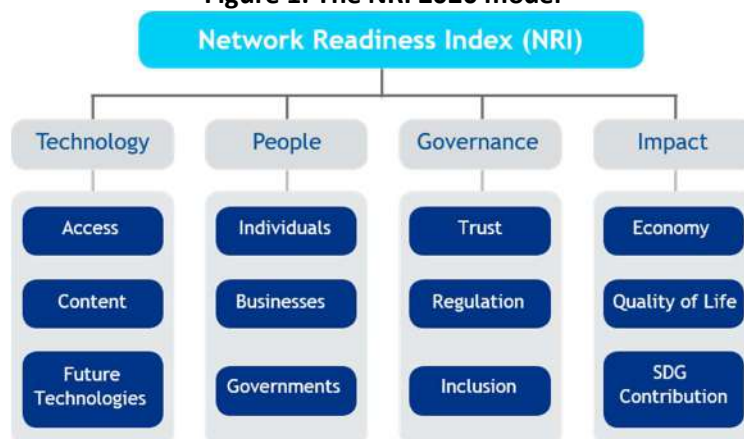| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	88	31.70	**C. Governance pillar**	66	55.79
1st sub-pillar: Access	82	52.36	*1st sub-pillar: Trust*	47	51.92
1.1.1 Mobile tariffs	55	67.55	3.1.1 Secure Internet servers	63	55.40
1.1.2 Handset prices	83	37.40	3.1.2 Cybersecurity	63	68.58
1.1.3 Internet access	47	79.51	3.1.3 Online access to financial account	33	50.73
1.1.4 4G mobile network coverage	71	88.02	3.1.4 Internet shopping	41	32.95
1.1.5 Fixed-broadband subscriptions	92	20.27	*2nd sub-pillar: Regulation*	102	52.45
1.1.6 International Internet bandwidth	90	63.23	3.2.1 Regulatory quality	130	22.86
1.1.7 Internet access in schools	61	10.55	3.2.2 ICT regulatory environment	72	82.24
2nd sub-pillar: Content	80	24.50	3.2.3 Legal framework's adaptability to emerging technologies	88	29.70
1.2.1 GitHub commits	91	1.48	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	58	48.11	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	69	62.99
1.2.4 Mobile apps development	103	43.84	3.3.1 E-Participation	104	44.45
3rd sub-pillar: Future Technologies	107	18.24	3.3.2 Socioeconomic gap in use of digital payments	18	95.17
1.3.1 Adoption of emerging technologies	81	39.26	3.3.3 Availability of local online content	92	47.81
1.3.2 Investment in emerging technologies	102	27.77	3.3.4 Gender gap in Internet use	75	48.78
1.3.3 ICT PCT patent applications	62	2.79	3.3.5 Rural gap in use of digital payments	12	78.75
1.3.4 Computer software spending	58	21.24	**D. Impact pillar**	96	43.49
1.3.5 Robot density	65	0.12	*1st sub-pillar: Economy*	73	22.79
B. People pillar	76	44.68	4.1.1 Medium and high-tech industry	19	57.67
1st sub-pillar: Individuals	78	52.47	4.1.2 High-tech exports	109	2.54
2.1.1 Internet users	66	69.43	4.1.3 PCT patent applications	65	0.40
2.1.2 Active mobile-broadband subscriptions	77	26.11	4.1.4 Labor productivity per employee	69	25.79
2.1.3 Use of virtual social networks	96	39.18	4.1.5 Prevalence of gig economy	100	27.55
2.1.4 Tertiary enrollment	32	49.56	*2nd sub-pillar: Quality of Life*	101	52.13
2.1.5 Adult literacy rate	74	81.42	4.2.1 Happiness	95	45.46
2.1.6 ICT skills	73	49.10	4.2.2 Freedom to make life choices	126	42.25
2nd sub-pillar: Businesses	98	32.39	4.2.3 Income inequality	81	57.22
2.2.1 Firms with website	NA	NA	4.2.4 Healthy life expectancy at birth	78	63.58
2.2.2 Ease of doing business	107	50.08	*3rd sub-pillar: SDG Contribution*	95	55.56
2.2.3 Professionals	62	26.13	4.3.1 SDG 3: Good Health and Well-Being	65	72.13
2.2.4 Technicians and associate professionals	83	23.66	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	73	56.75	4.3.3 SDG 5: Gender Equality	116	42.87
2.2.6 R&D expenditure by businesses	51	5.32	4.3.4 SDG 7: Affordable and Clean Energy	111	60.55
3rd sub-pillar: Governments	46	49.18	.	.	.
2.3.1 Government online services	86	57.57			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	75	33.90			
2.3.4 R&D expenditure by governments and higher education	25	56.05			

* Confidential data

5

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Network Readiness Index 2020 Ireland

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
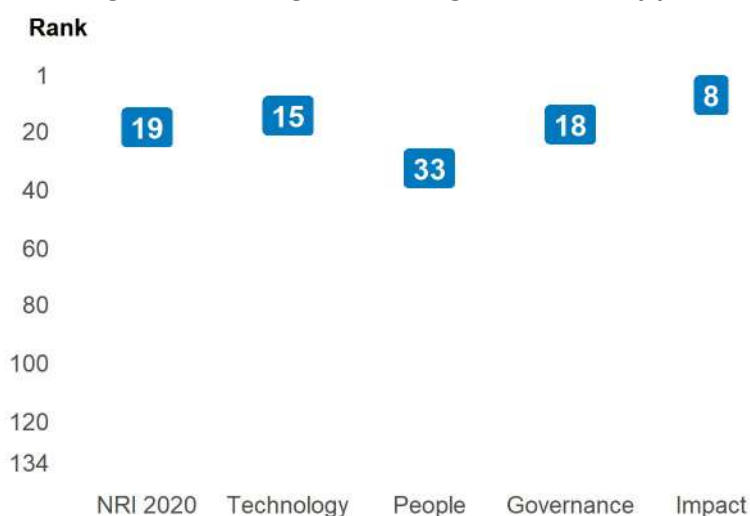
Figure 1: The NRI 2020 model

Global NRI position of Ireland

Ireland ranks 19th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Ireland global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Ireland relate to Economy, SDG Contribution and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Individuals and Governments sub-pillars.

Table 1: Ireland rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Economy	10	Future Technologies	19
SDG Contribution	10	Trust	19
Access	11	Inclusion	19
Regulation	12	Businesses	28
Content	16	Individuals	35
Quality of Life	16	Governments	40

NRI score and income

Figure 3 shows the position of Ireland in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Ireland is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
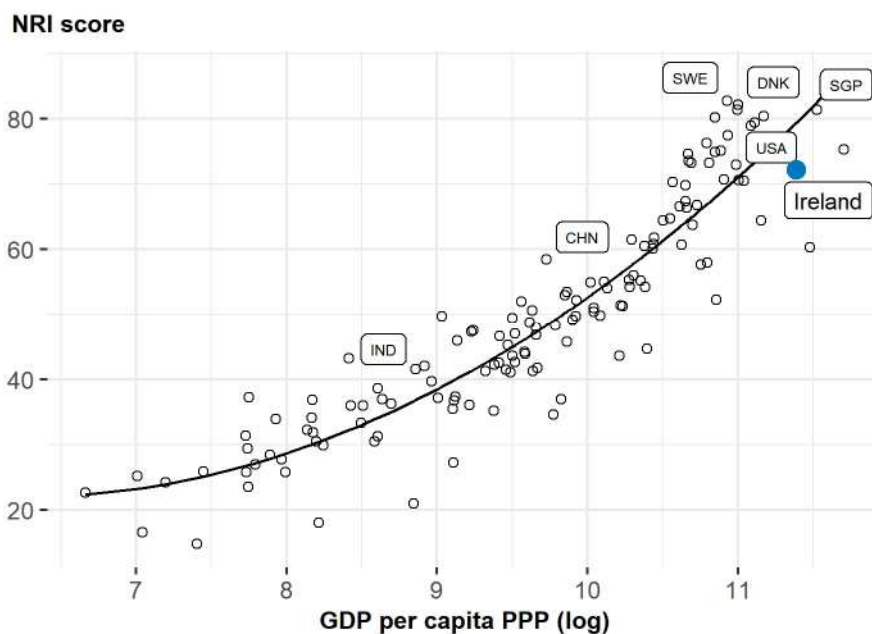
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Ireland belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

**Performance against its income group and region**

High-income countries
Ireland is ranked 19th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, governance and impact. At the sub-pillar level, it outperforms high-income countries in ten of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Europe
Ireland is ranked 12th within Europe (Figure 4, right panel). It has a score above the regional average in three of the four pillars: nri.score, technology, governance and impact. With regard to sub-pillars, it outperforms the average in Europe in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Ireland against its income group and region, overall and by pillar
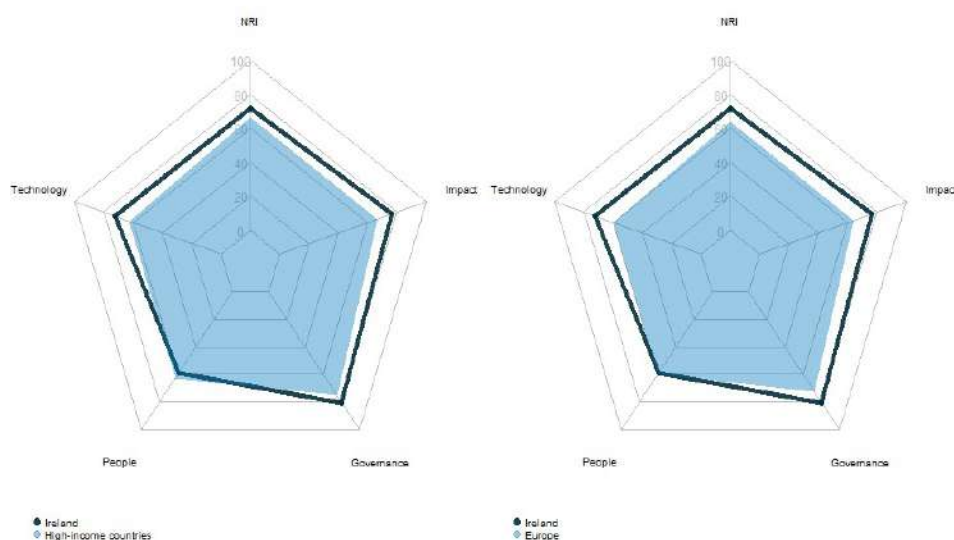
Table 2: Ireland scores vs. averages of its income group and region, overall and by pillar

Dimension	Ireland	High-income countries	Europe
NRI	72.13	66.82	64.21
Technology	72.10	62.51	59.93
People	59.17	62.72	59.89
Governance	80.71	75.41	72.98
Impact	76.54	66.63	64.04

Strongest and weakest indicators

The indicators where Ireland performs particularly well include e-commerce legislation, Computer software spending, and ICT regulatory environment (Table 3). By contrast, the economy's weakest indicators include 4G mobile network coverage, R&D expenditure by governments and higher education, and SDG 5: Gender Equality.

Table 3: Top-ranked and bottom-ranked indicators of Ireland

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	SDG 3: Good Health and Well-Being	39
Computer software spending	2	Use of virtual social networks	40
ICT regulatory environment	2	Cybersecurity	40
Labor productivity per employee	2	Technicians and associate professionals	41
Handset prices	3	Business use of digital tools	42
SDG 7: Affordable and Clean Energy	3	International Internet bandwidth	45
Mobile tariffs	4	Government online services	46
Mobile apps development	4	SDG 5: Gender Equality	55
Secure Internet servers	6	R&D expenditure by governments and higher education	62
Gender gap in Internet use	6	4G mobile network coverage	67

NRI 2020 At-A-Glance: Ireland

Network Readiness Index   Rank: 19 (out of 134)   Score: 72.13

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	15	72.10	C. Governance pillar	18	80.71
1st sub-pillar: Access	11	87.61	1st sub-pillar: Trust	19	75.69
2nd sub-pillar: Content	16	69.79	2nd sub-pillar: Regulation	12	86.58
3rd sub-pillar: Future Technologies	19	58.89	3rd sub-pillar: Inclusion	19	79.84
B. People pillar	33	59.17	D. Impact pillar	8	76.54
1st sub-pillar: Individuals	35	64.34	1st sub-pillar: Economy	10	61.38
2nd sub-pillar: Businesses	28	61.07	2nd sub-pillar: Quality of Life	16	85.44
3rd sub-pillar: Governments	40	52.11	3rd sub-pillar: SDG Contribution	10	82.81

The Network Readiness Index in detail

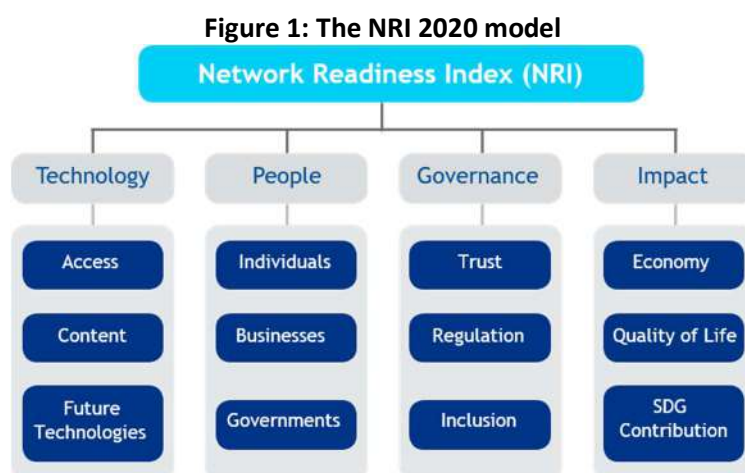| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	15	72.10	**C. Governance pillar**	18	80.71
1st sub-pillar: Access	11	87.61	*1st sub-pillar: Trust*	19	75.69
1.1.1 Mobile tariffs	4	97.63	3.1.1 Secure Internet servers	6	91.48
1.1.2 Handset prices	3	90.84	3.1.2 Cybersecurity	40	84.07
1.1.3 Internet access	19	89.06	3.1.3 Online access to financial account	32	50.93
1.1.4 4G mobile network coverage	67	90.00	3.1.4 Internet shopping	13	76.29
1.1.5 Fixed-broadband subscriptions	39	87.40	*2nd sub-pillar: Regulation*	12	86.58
1.1.6 International Internet bandwidth	45	70.71	3.2.1 Regulatory quality	15	86.55
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	2	99.62
2nd sub-pillar: Content	16	69.79	3.2.3 Legal framework's adaptability to emerging technologies	32	60.15
1.2.1 GitHub commits	14	60.58	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	28	77.98	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	19	79.84
1.2.4 Mobile apps development	4	95.51	3.3.1 E-Participation	29	85.18
3rd sub-pillar: Future Technologies	19	58.89	3.3.2 Socioeconomic gap in use of digital payments	24	90.83
1.3.1 Adoption of emerging technologies	26	71.34	3.3.3 Availability of local online content	37	77.00
1.3.2 Investment in emerging technologies	18	70.53	3.3.4 Gender gap in Internet use	6	71.73
1.3.3 ICT PCT patent applications	12	68.82	3.3.5 Rural gap in use of digital payments	37	74.48
1.3.4 Computer software spending	2	71.61	**D. Impact pillar**	8	76.54
1.3.5 Robot density	32	12.16	*1st sub-pillar: Economy*	10	61.38
B. People pillar	33	59.17	4.1.1 Medium and high-tech industry	7	69.46
1st sub-pillar: Individuals	35	64.34	4.1.2 High-tech exports	13	46.77
2.1.1 Internet users	28	84.40	4.1.3 PCT patent applications	19	26.10
2.1.2 Active mobile-broadband subscriptions	26	40.55	4.1.4 Labor productivity per employee	2	99.90
2.1.3 Use of virtual social networks	40	64.95	4.1.5 Prevalence of gig economy	30	64.67
2.1.4 Tertiary enrollment	22	56.68	*2nd sub-pillar: Quality of Life*	16	85.44
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	9	89.67
2.1.6 ICT skills	25	75.12	4.2.2 Freedom to make life choices	33	87.96
2nd sub-pillar: Businesses	28	61.07	4.2.3 Income inequality	33	77.84
2.2.1 Firms with website	21	80.32	4.2.4 Healthy life expectancy at birth	19	86.29
2.2.2 Ease of doing business	23	87.28	*3rd sub-pillar: SDG Contribution*	10	82.81
2.2.3 Professionals	13	58.49	4.3.1 SDG 3: Good Health and Well-Being	39	78.69
2.2.4 Technicians and associate professionals	41	48.87	4.3.2 SDG 4: Quality Education	19	65.54
2.2.5 Business use of digital tools	42	72.69	4.3.3 SDG 5: Gender Equality	55	76.91
2.2.6 R&D expenditure by businesses	28	18.78	4.3.4 SDG 7: Affordable and Clean Energy	3	96.97
3rd sub-pillar: Governments	40	52.11	.	.	.
2.3.1 Government online services	46	76.37			
2.3.2 Publication and use of open data	26	47.44			
2.3.3 Government promotion of investment in emerging tech	26	57.98			
2.3.4 R&D expenditure by governments and higher education	62	26.66			

* Confidential data

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Network Readiness Index 2020 Israel

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Israel

Israel ranks 24th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Israel global ranking, overall and by pillar
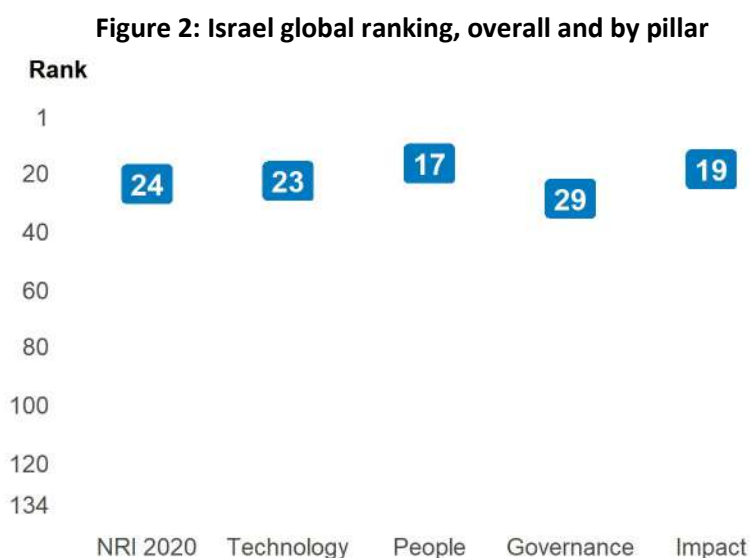
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Israel relate to Businesses, Economy and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Inclusion, Quality of Life and Access sub-pillars.

Table 1: Israel rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Businesses	7	Individuals	29
Economy	9	SDG Contribution	29
Future Technologies	15	Trust	33
Governments	19	Inclusion	35
Content	24	Quality of Life	39
Regulation	25	Access	53

NRI score and income

Figure 3 shows the position of Israel in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Israel is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
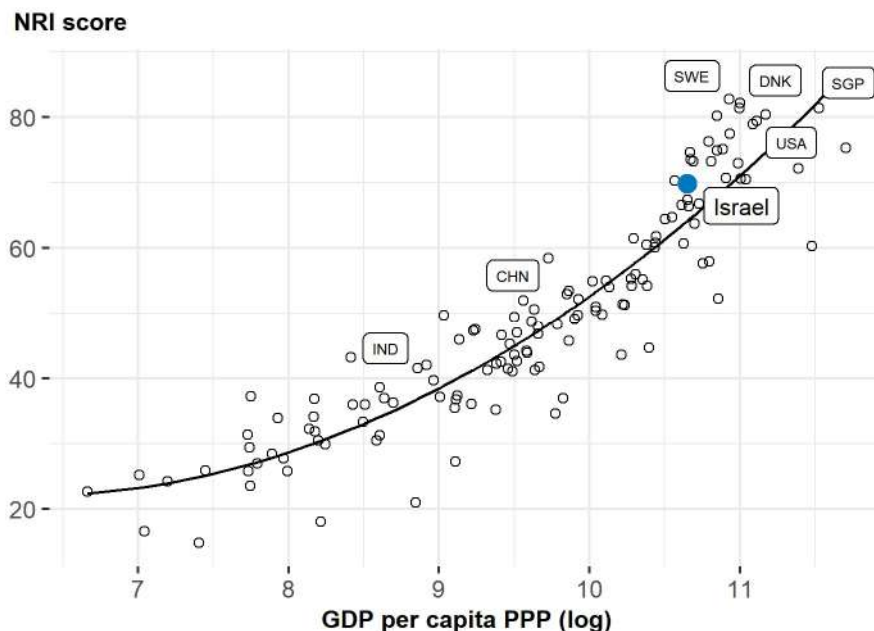
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Israel belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Israel is ranked 24th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, people and impact. At the sub-pillar level, it outperforms high-income countries in seven of the twelve sub-pillars: Content, Future Technologies, Businesses, Governments, Regulation, Economy and SDG Contribution.

Europe
Israel is ranked 16th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in ten of the twelve sub-pillars: Content, Future Technologies, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Economy and SDG Contribution.

Figure 4: Performance of Israel against its income group and region, overall and by pillar

Table 2: Israel scores vs. averages of its income group and region, overall and by pillar

Dimension	Israel	High-income countries	Europe
NRI	69.81	66.82	64.21
Technology	64.38	62.51	59.93
People	69.14	62.72	59.89
Governance	74.60	75.41	72.98
Impact	71.12	66.63	64.04

Strongest and weakest indicators

The indicators where Israel performs particularly well include R&D expenditure by businesses, e-commerce legislation, and Investment in emerging technologies (Table 3). By contrast, the economy's weakest indicators include Freedom to make life choices, ICT regulatory environment, and Fixed-broadband subscriptions.

Table 3: Top-ranked and bottom-ranked indicators of Israel

Strongest indicators	Rank	Weakest indicators	Rank
R&D expenditure by businesses	1	Computer software spending	57
e-commerce legislation	1	SDG 5: Gender Equality	59
Investment in emerging technologies	2	International Internet bandwidth	61
Wikipedia edits	3	E-Participation	65
Adoption of emerging technologies	4	Rural gap in use of digital payments	69
Availability of local online content	4	Income inequality	72
ICT PCT patent applications	5	4G mobile network coverage	77
Business use of digital tools	5	Fixed-broadband subscriptions	78
Government promotion of investment in emerging technologies	5	ICT regulatory environment	98
ICT skills	6	Freedom to make life choices	102

NRI 2020 At-A-Glance: Israel

Network Readiness Index   Rank: 24 (out of 134)   Score: 69.81

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	23	64.38	C. Governance pillar	29	74.60
1st sub-pillar: Access	53	72.11	1st sub-pillar: Trust	33	67.09
2nd sub-pillar: Content	24	58.24	2nd sub-pillar: Regulation	25	81.71
3rd sub-pillar: Future Technologies	15	62.78	3rd sub-pillar: Inclusion	35	75.01
B. People pillar	17	69.14	D. Impact pillar	19	71.12
1st sub-pillar: Individuals	29	65.84	1st sub-pillar: Economy	9	62.00
2nd sub-pillar: Businesses	7	77.22	2nd sub-pillar: Quality of Life	39	73.41
3rd sub-pillar: Governments	19	64.37	3rd sub-pillar: SDG Contribution	29	77.95

The Network Readiness Index in detail

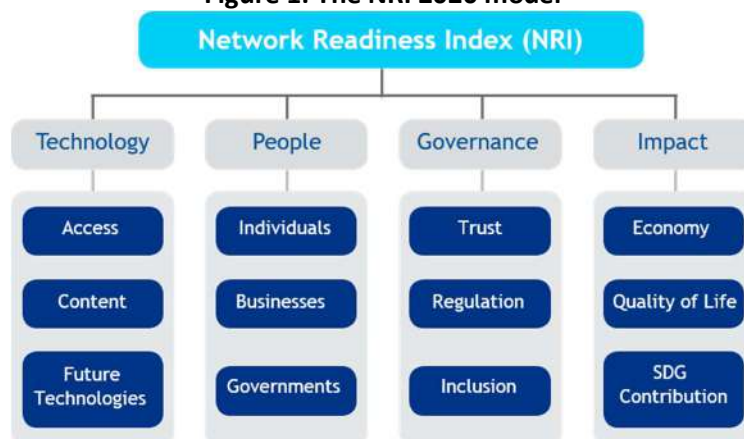| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	23	64.38	**C. Governance pillar**	29	74.60
1st sub-pillar: Access	53	72.11	*1st sub-pillar: Trust*	33	67.09
1.1.1 Mobile tariffs	13	88.73	3.1.1 Secure Internet servers	37	74.34
1.1.2 Handset prices	30	64.37	3.1.2 Cybersecurity	41	83.97
1.1.3 Internet access	56	73.99	3.1.3 Online access to financial account	25	58.49
1.1.4 4G mobile network coverage	77	82.00	3.1.4 Internet shopping	33	51.57
1.1.5 Fixed-broadband subscriptions	78	42.00	*2nd sub-pillar: Regulation*	25	81.71
1.1.6 International Internet bandwidth	61	68.69	3.2.1 Regulatory quality	24	78.89
1.1.7 Internet access in schools	33	85.00	3.2.2 ICT regulatory environment	98	70.08
2nd sub-pillar: Content	24	58.24	3.2.3 Legal framework's adaptability to emerging technologies	6	85.12
1.2.1 GitHub commits	29	29.61	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	3	94.66	3.2.5 Privacy protection by law content	35	74.44
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	35	75.01
1.2.4 Mobile apps development	8	91.79	3.3.1 E-Participation	65	70.37
3rd sub-pillar: Future Technologies	15	62.78	3.3.2 Socioeconomic gap in use of digital payments	38	81.31
1.3.1 Adoption of emerging technologies	4	96.84	3.3.3 Availability of local online content	4	95.79
1.3.2 Investment in emerging technologies	2	96.21	3.3.4 Gender gap in Internet use	42	62.00
1.3.3 ICT PCT patent applications	5	85.83	3.3.5 Rural gap in use of digital payments	69	65.55
1.3.4 Computer software spending	57	21.36	**D. Impact pillar**	19	71.12
1.3.5 Robot density	30	13.65	*1st sub-pillar: Economy*	9	62.00
B. People pillar	17	69.14	4.1.1 Medium and high-tech industry	24	54.12
1st sub-pillar: Individuals	29	65.84	4.1.2 High-tech exports	17	43.26
2.1.1 Internet users	33	81.37	4.1.3 PCT patent applications	6	69.05
2.1.2 Active mobile-broadband subscriptions	24	41.52	4.1.4 Labor productivity per employee	27	55.13
2.1.3 Use of virtual social networks	24	70.10	4.1.5 Prevalence of gig economy	7	88.42
2.1.4 Tertiary enrollment	43	46.05	*2nd sub-pillar: Quality of Life*	39	73.41
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	19	83.23
2.1.6 ICT skills	6	90.16	4.2.2 Freedom to make life choices	102	59.47
2nd sub-pillar: Businesses	7	77.22	4.2.3 Income inequality	72	61.86
2.2.1 Firms with website	44	66.99	4.2.4 Healthy life expectancy at birth	13	89.09
2.2.2 Ease of doing business	34	82.15	*3rd sub-pillar: SDG Contribution*	29	77.95
2.2.3 Professionals	10	62.24	4.3.1 SDG 3: Good Health and Well-Being	18	88.52
2.2.4 Technicians and associate professionals	33	55.43	4.3.2 SDG 4: Quality Education	40	51.80
2.2.5 Business use of digital tools	5	96.50	4.3.3 SDG 5: Gender Equality	59	75.78
2.2.6 R&D expenditure by businesses	1	100.00	4.3.4 SDG 7: Affordable and Clean Energy	34	86.13
3rd sub-pillar: Governments	19	64.37	.	.	.
2.3.1 Government online services	54	73.94			
2.3.2 Publication and use of open data	28	46.26			
2.3.3 Government promotion of investment in emerging tech	5	83.60			
2.3.4 R&D expenditure by governments and higher education	27	53.68			

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Network Readiness Index 2020 Italy

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
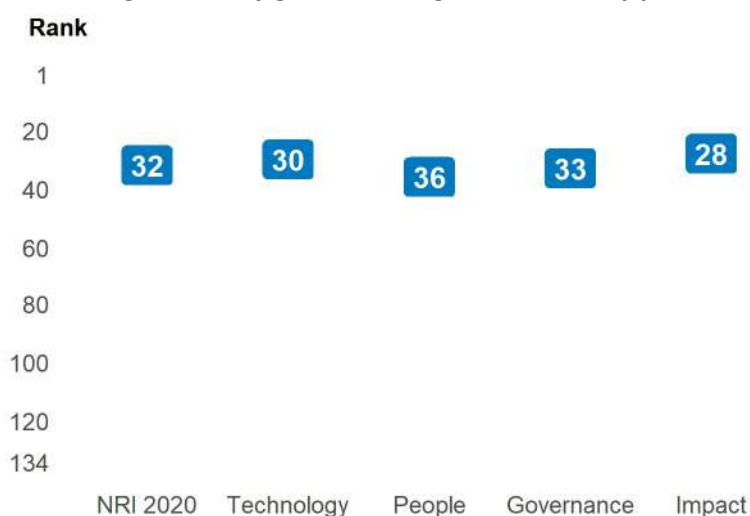
Figure 1: The NRI 2020 model

Global NRI position of Italy

Italy ranks 32nd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Italy global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Italy relate to Future Technologies, SDG Contribution and Inclusion, among others (Table 1). More could be done, though, to improve the economy's performances in the Quality of Life, Individuals and Access sub-pillars.

Table 1: Italy rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	21	Governments	36
SDG Contribution	21	Businesses	37
Inclusion	29	Regulation	39
Economy	30	Quality of Life	42
Trust	34	Individuals	44
Content	35	Access	45

NRI score and income

Figure 3 shows the position of Italy in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Italy is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
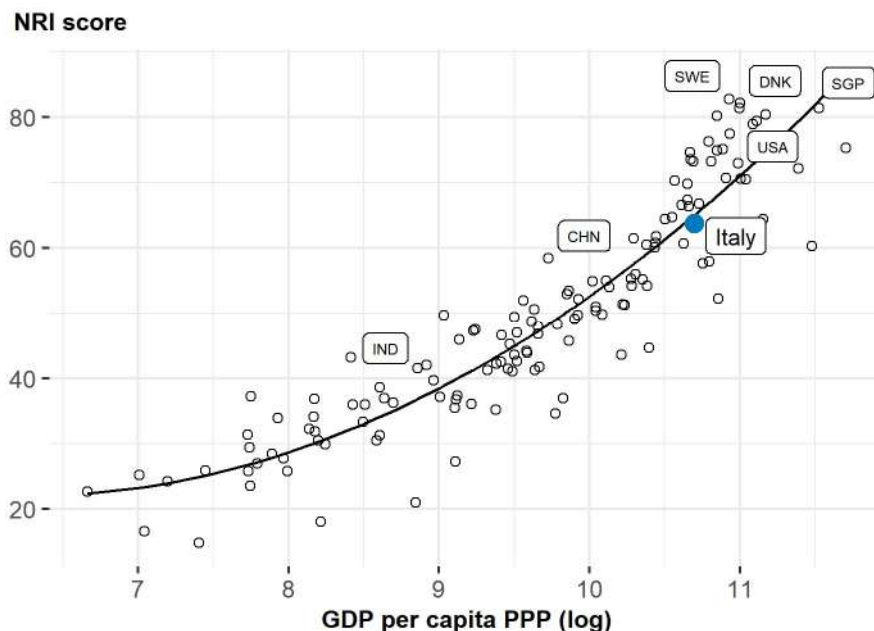
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Italy belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Italy is ranked 32nd in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in two of the twelve sub-pillars: Future Technologies and SDG Contribution.

Europe
Italy is ranked 23rd within Europe (Figure 4, right panel). It has a score above the regional average in two of the four pillars: governance and impact. With regard to sub-pillars, it outperforms the average in Europe in five of the twelve sub-pillars: Future Technologies, Trust, Inclusion, Economy and SDG Contribution.

Figure 4: Performance of Italy against its income group and region, overall and by pillar

Table 2: Italy scores vs. averages of its income group and region, overall and by pillar

Dimension	Italy	High-income countries	Europe
NRI	63.69	66.82	64.21
Technology	58.55	62.51	59.93
People	57.63	62.72	59.89
Governance	73.25	75.41	72.98
Impact	65.31	66.63	64.04

Strongest and weakest indicators

The indicators where Italy performs particularly well include ICT regulatory environment, e-commerce legislation, and Rural gap in use of digital payments (Table 3). By contrast, the economy's weakest indicators include Freedom to make life choices, International Internet bandwidth, and Online access to financial account.

Table 3: Top-ranked and bottom-ranked indicators of Italy

Strongest indicators	Rank	Weakest indicators	Rank
ICT regulatory environment	1	Business use of digital tools	60
e-commerce legislation	1	Investment in emerging technologies	61
Rural gap in use of digital payments	8	Internet access	62
Healthy life expectancy at birth	8	SDG 5: Gender Equality	67
Robot density	9	Government promotion of investment in emerging technologies	68
Technicians and associate professionals	10	Gender gap in Internet use	68
Computer software spending	14	ICT skills	69
Mobile tariffs	15	Online access to financial account	70
Adult literacy rate	15	International Internet bandwidth	80
Internet shopping	17	Freedom to make life choices	108

NRI 2020 At-A-Glance: Italy

Network Readiness Index — Rank: 32 (out of 134) — Score: 63.69

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	30	58.55	C. Governance pillar	33	73.25
1st sub-pillar: Access	45	75.92	1st sub-pillar: Trust	34	65.95
2nd sub-pillar: Content	35	49.04	2nd sub-pillar: Regulation	39	77.06
3rd sub-pillar: Future Technologies	21	50.69	3rd sub-pillar: Inclusion	29	76.75
B. People pillar	36	57.63	D. Impact pillar	28	65.31
1st sub-pillar: Individuals	44	60.57	1st sub-pillar: Economy	30	43.18
2nd sub-pillar: Businesses	37	57.49	2nd sub-pillar: Quality of Life	42	72.59
3rd sub-pillar: Governments	36	54.82	3rd sub-pillar: SDG Contribution	21	80.16

The Network Readiness Index in detail

| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	30	58.55	**C. Governance pillar**	33	73.25
1st sub-pillar: Access	45	75.92	*1st sub-pillar: Trust*	34	65.95
1.1.1 Mobile tariffs	15	86.45	3.1.1 Secure Internet servers	35	76.82
1.1.2 Handset prices	24	65.86	3.1.2 Cybersecurity	27	89.82
1.1.3 Internet access	62	71.62	3.1.3 Online access to financial account	70	26.71
1.1.4 4G mobile network coverage	24	99.00	3.1.4 Internet shopping	17	70.45
1.1.5 Fixed-broadband subscriptions	56	73.12	*2nd sub-pillar: Regulation*	39	77.06
1.1.6 International Internet bandwidth	80	65.38	3.2.1 Regulatory quality	40	66.20
1.1.7 Internet access in schools	37	70.00	3.2.2 ICT regulatory environment	1	100.00
2nd sub-pillar: Content	35	49.04	3.2.3 Legal framework's adaptability to emerging technologies	39	51.95
1.2.1 GitHub commits	46	12.39	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	30	77.03	3.2.5 Privacy protection by law content	44	67.13
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	29	76.75
1.2.4 Mobile apps development	30	80.99	3.3.1 E-Participation	41	81.48
3rd sub-pillar: Future Technologies	21	50.69	3.3.2 Socioeconomic gap in use of digital payments	22	92.79
1.3.1 Adoption of emerging technologies	32	65.18	3.3.3 Availability of local online content	40	74.99
1.3.2 Investment in emerging technologies	61	41.08	3.3.4 Gender gap in Internet use	68	54.74
1.3.3 ICT PCT patent applications	28	35.51	3.3.5 Rural gap in use of digital payments	8	79.77
1.3.4 Computer software spending	14	52.55	**D. Impact pillar**	28	65.31
1.3.5 Robot density	9	59.11	*1st sub-pillar: Economy*	30	43.18
B. People pillar	36	57.63	4.1.1 Medium and high-tech industry	22	54.80
1st sub-pillar: Individuals	44	60.57	4.1.2 High-tech exports	58	15.35
2.1.1 Internet users	53	73.95	4.1.3 PCT patent applications	24	16.52
2.1.2 Active mobile-broadband subscriptions	36	36.80	4.1.4 Labor productivity per employee	19	64.73
2.1.3 Use of virtual social networks	59	57.73	4.1.5 Prevalence of gig economy	31	64.53
2.1.4 Tertiary enrollment	45	45.01	*2nd sub-pillar: Quality of Life*	42	72.59
2.1.5 Adult literacy rate	15	98.95	4.2.1 Happiness	31	73.76
2.1.6 ICT skills	69	51.01	4.2.2 Freedom to make life choices	108	56.89
2nd sub-pillar: Businesses	37	57.49	4.2.3 Income inequality	57	69.85
2.2.1 Firms with website	33	72.66	4.2.4 Healthy life expectancy at birth	8	89.87
2.2.2 Ease of doing business	56	75.39	*3rd sub-pillar: SDG Contribution*	21	80.16
2.2.3 Professionals	44	36.91	4.3.1 SDG 3: Good Health and Well-Being	18	88.52
2.2.4 Technicians and associate professionals	10	75.97	4.3.2 SDG 4: Quality Education	30	60.64
2.2.5 Business use of digital tools	60	62.78	4.3.3 SDG 5: Gender Equality	67	74.33
2.2.6 R&D expenditure by businesses	23	21.22	4.3.4 SDG 7: Affordable and Clean Energy	19	89.23
3rd sub-pillar: Governments	36	54.82	.	.	.
2.3.1 Government online services	36	82.42			
2.3.2 Publication and use of open data	20	55.93			
2.3.3 Government promotion of investment in emerging tech	68	35.87			
2.3.4 R&D expenditure by governments and higher education	40	45.06			

* Confidential data

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Network Readiness Index 2020 Jamaica

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model
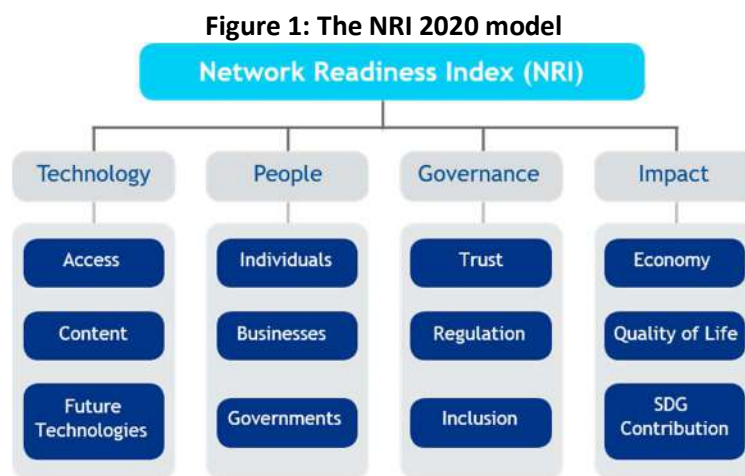
Global NRI position of Jamaica

Jamaica ranks 70th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Jamaica global ranking, overall and by pillar
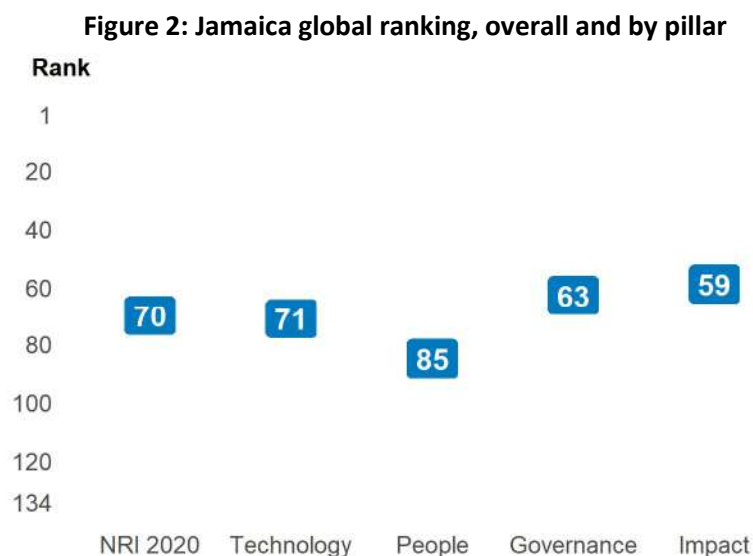
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Jamaica relate to SDG Contribution, Quality of Life and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Governments, Individuals and Economy sub-pillars.

Table 1: Jamaica rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	43	Businesses	71
Quality of Life	48	Regulation	71
Future Technologies	64	Content	85
Inclusion	64	Governments	89
Access	66	Individuals	92
Trust	67	Economy	98

NRI score and income

Figure 3 shows the position of Jamaica in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Jamaica is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
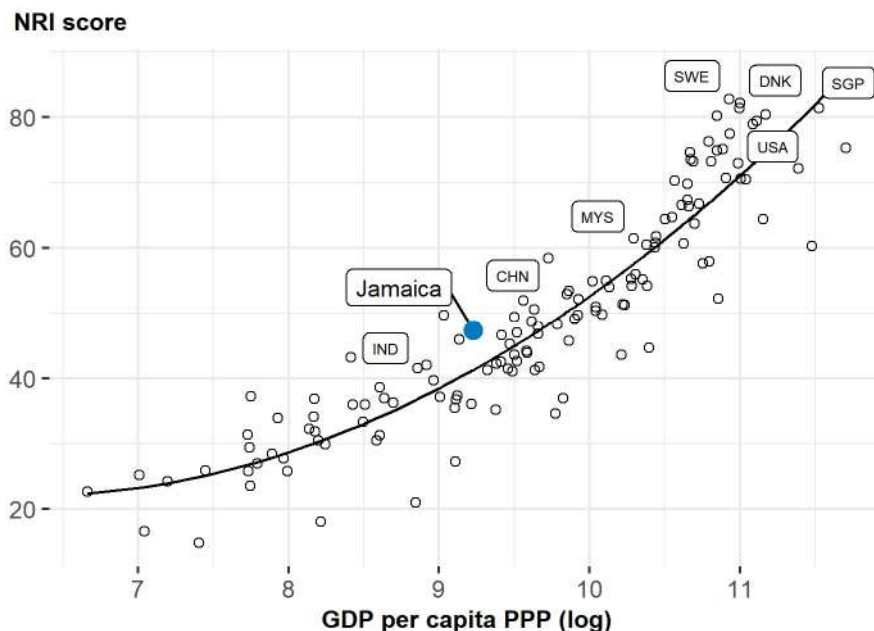
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Jamaica belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

Upper-middle-income countries
Jamaica is ranked 20th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: technology, governance and impact. At the sub-pillar level, it outperforms upper-middle-income countries in seven of the twelve sub-pillars: Access, Future Technologies, Trust, Regulation, Inclusion, Quality of Life and SDG Contribution.

The Americas
Jamaica is ranked 9th within The Americas (Figure 4, right panel). It has a score above the regional average in three of the four pillars: technology, governance and impact. With regard to sub-pillars, it outperforms the average in The Americas in six of the twelve sub-pillars: Access, Future Technologies, Trust, Inclusion, Quality of Life and SDG Contribution.

Figure 4: Performance of Jamaica against its income group and region, overall and by pillar

Table 2: Jamaica scores vs. averages of its income group and region, overall and by pillar

Dimension	Jamaica	Upper-middle-income countries	The Americas
NRI	47.36	47.39	47.67
Technology	38.48	38.42	38.26
People	40.06	46.66	45.24
Governance	57.11	54.31	54.59
Impact	53.77	50.17	52.61

Strongest and weakest indicators

The indicators where Jamaica performs particularly well include e-commerce legislation, Gender gap in Internet use, and Rural gap in use of digital payments (Table 3). By contrast, the economy's weakest indicators include Government online services, E-Participation, and High-tech exports.

Table 3: Top-ranked and bottom-ranked indicators of Jamaica

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Mobile apps development	91
Gender gap in Internet use	2	Labor productivity per employee	91
Rural gap in use of digital payments	9	Firms with website	93
Computer software spending	26	Cybersecurity	94
Internet access in schools	34	Secure Internet servers	96
SDG 5: Gender Equality	38	Legal framework's adaptability to emerging technologies	98
Publication and use of open data	42	Active mobile-broadband subscriptions	100
SDG 11: Sustainable Cities and Communities	49	High-tech exports	106
Freedom to make life choices	50	E-Participation	114
Healthy life expectancy at birth	53	Government online services	116

NRI 2020 At-A-Glance: Jamaica

Network Readiness Index

Rank: 70 (out of 134)   Score: 47.36

Pillar/sub-pillar	Rank	Score
A. Technology pillar	71	38.48
1st sub-pillar: Access	66	64.01
2nd sub-pillar: Content	85	23.13
3rd sub-pillar: Future Technologies	64	28.30
B. People pillar	85	40.06
1st sub-pillar: Individuals	92	43.62
2nd sub-pillar: Businesses	71	40.70
3rd sub-pillar: Governments	89	35.85

Pillar/sub-pillar	Rank	Score
C. Governance pillar	63	57.11
1st sub-pillar: Trust	67	41.46
2nd sub-pillar: Regulation	71	64.92
3rd sub-pillar: Inclusion	64	64.95
D. Impact pillar	59	53.77
1st sub-pillar: Economy	98	17.49
2nd sub-pillar: Quality of Life	48	71.35
3rd sub-pillar: SDG Contribution	43	72.48

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	71	38.48
1st sub-pillar: Access	66	64.01
1.1.1 Mobile tariffs	73	59.04
1.1.2 Handset prices	71	42.46
1.1.3 Internet access	78	52.76
1.1.4 4G mobile network coverage	87	73.00
1.1.5 Fixed-broadband subscriptions	62	68.63
1.1.6 International Internet bandwidth	68	67.88
1.1.7 Internet access in schools	34	84.31
2nd sub-pillar: Content	85	23.13
1.2.1 GitHub commits	74	2.86
1.2.2 Wikipedia edits	80	35.20
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	91	52.96
3rd sub-pillar: Future Technologies	64	28.30
1.3.1 Adoption of emerging technologies	75	43.00
1.3.2 Investment in emerging technologies	71	38.07
1.3.3 ICT PCT patent applications	82	0.00
1.3.4 Computer software spending	26	32.12
1.3.5 Robot density	NA	NA
B. People pillar	85	40.06
1st sub-pillar: Individuals	92	43.62
2.1.1 Internet users	88	54.04
2.1.2 Active mobile-broadband subscriptions	100	19.19
2.1.3 Use of virtual social networks	87	43.30
2.1.4 Tertiary enrollment	86	19.37
2.1.5 Adult literacy rate	68	84.71
2.1.6 ICT skills	88	41.12
2nd sub-pillar: Businesses	71	40.70
2.2.1 Firms with website	93	31.23
2.2.2 Ease of doing business	66	69.78
2.2.3 Professionals	74	21.07
2.2.4 Technicians and associate professionals	84	23.57
2.2.5 Business use of digital tools	69	57.87
2.2.6 R&D expenditure by businesses	NA	NA
3rd sub-pillar: Governments	89	35.85
2.3.1 Government online services	116	36.97
2.3.2 Publication and use of open data	42	36.95
2.3.3 Government promotion of investment in emerging tech	77	33.63
2.3.4 R&D expenditure by governments and higher education	NA	NA

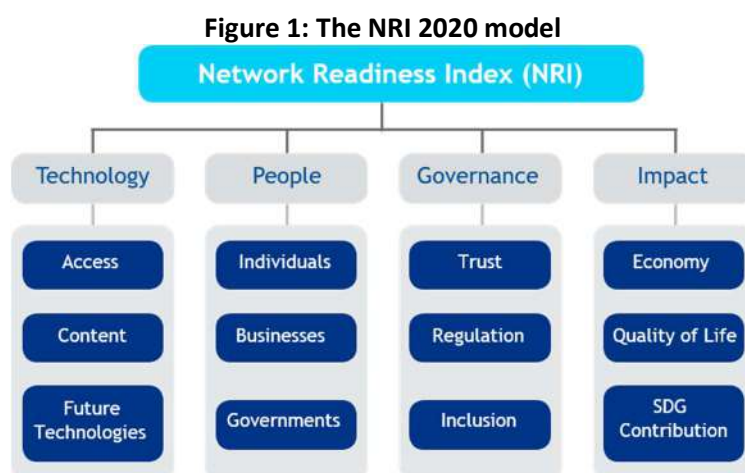| Indicator	Rank	Score
C. Governance pillar	63	57.11
1st sub-pillar: Trust	67	41.46
3.1.1 Secure Internet servers	96	39.70
3.1.2 Cybersecurity	94	43.23
3.1.3 Online access to financial account	NA	NA
3.1.4 Internet shopping	NA	NA
2nd sub-pillar: Regulation	71	64.92
3.2.1 Regulatory quality	58	57.55
3.2.2 ICT regulatory environment	86	78.19
3.2.3 Legal framework's adaptability to emerging technologies	98	23.96
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	64	64.95
3.3.1 E-Participation	114	34.56
3.3.2 Socioeconomic gap in use of digital payments	82	57.26
3.3.3 Availability of local online content	65	60.38
3.3.4 Gender gap in Internet use	2	92.90
3.3.5 Rural gap in use of digital payments	9	79.63
D. Impact pillar	59	53.77
1st sub-pillar: Economy	98	17.49
4.1.1 Medium and high-tech industry	81	23.77
4.1.2 High-tech exports	106	3.99
4.1.3 PCT patent applications	77	0.09
4.1.4 Labor productivity per employee	91	12.67
4.1.5 Prevalence of gig economy	56	46.94
2nd sub-pillar: Quality of Life	48	71.35
4.2.1 Happiness	64	62.83
4.2.2 Freedom to make life choices	50	82.57
4.2.3 Income inequality	NA	NA
4.2.4 Healthy life expectancy at birth	53	68.64
3rd sub-pillar: SDG Contribution	43	72.48
4.3.1 SDG 3: Good Health and Well-Being	88	60.66
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 SDG 5: Gender Equality	38	80.66
4.3.4 SDG 7: Affordable and Clean Energy	82	73.48
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* Confidential data

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Network Readiness Index 2020
Japan

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Japan

Japan ranks 15th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Japan global ranking, overall and by pillar
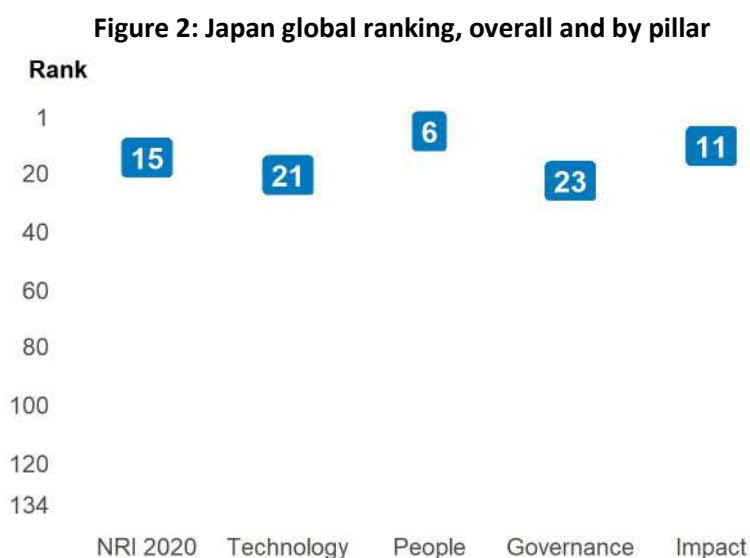
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Japan relate to Businesses, Future Technologies and SDG Contribution, among others (Table 1). More could be done, though, to improve the economy's performances in the Quality of Life, Access and Content sub-pillars.

Table 1: Japan rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Businesses	1	Individuals	17
Future Technologies	4	Regulation	27
SDG Contribution	7	Trust	29
Inclusion	10	Quality of Life	29
Economy	11	Access	36
Governments	16	Content	40

NRI score and income

Figure 3 shows the position of Japan in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Japan is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
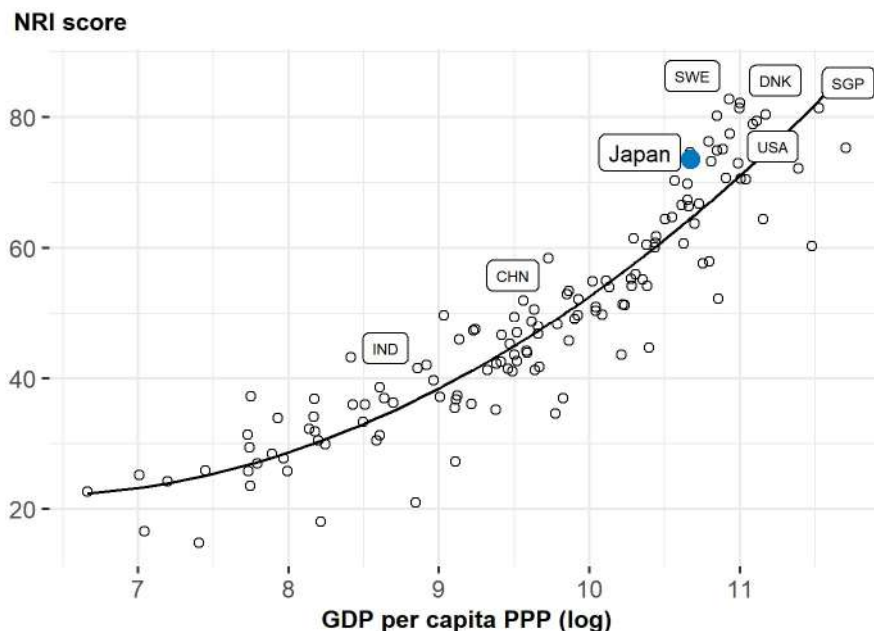
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Japan belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

High-income countries
Japan is ranked 15th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in eight of the twelve sub-pillars: Future Technologies, Individuals, Businesses, Governments, Regulation, Inclusion, Economy and SDG Contribution.

Asia & Pacific
Japan is ranked 4th within Asia & Pacific (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of Japan against its income group and region, overall and by pillar

Table 2: Japan scores vs. averages of its income group and region, overall and by pillar

Dimension	Japan	High-income countries	Asia & Pacific
NRI	73.54	66.82	52.76
Technology	65.55	62.51	45.33
People	76.79	62.72	49.64
Governance	77.53	75.41	59.20
Impact	74.29	66.63	56.86

Strongest and weakest indicators

The indicators where Japan performs particularly well include e-commerce legislation, PCT patent applications, and Active mobile-broadband subscriptions (Table 3). By contrast, the economy's weakest indicators include ICT regulatory environment, International Internet bandwidth, and Mobile tariffs.

Table 3: Top-ranked and bottom-ranked indicators of Japan

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Online access to financial account	49
PCT patent applications	1	Prevalence of gig economy	49
Active mobile-broadband subscriptions	2	SDG 5: Gender Equality	52
Technicians and associate professionals	2	ICT skills	55
Availability of local online content	2	Gender gap in Internet use	60
Healthy life expectancy at birth	2	Happiness	62
Internet access	3	Freedom to make life choices	73
Firms with website	3	Mobile tariffs	83
R&D expenditure by businesses	3	International Internet bandwidth	84
ICT PCT patent applications	4	ICT regulatory environment	95

NRI 2020 At-A-Glance: Japan

Network Readiness Index Rank: 15 (out of 134) Score: 73.54

Pillar/sub-pillar	Rank	Score
A. Technology pillar	21	65.55
1st sub-pillar: Access	36	79.62
2nd sub-pillar: Content	40	42.10
3rd sub-pillar: Future Technologies	4	74.93
B. People pillar	6	76.79
1st sub-pillar: Individuals	17	70.82
2nd sub-pillar: Businesses	1	85.66
3rd sub-pillar: Governments	16	73.90

Pillar/sub-pillar	Rank	Score
C. Governance pillar	23	77.53
1st sub-pillar: Trust	29	67.66
2nd sub-pillar: Regulation	27	80.60
3rd sub-pillar: Inclusion	10	84.33
D. Impact pillar	11	74.29
1st sub-pillar: Economy	11	61.20
2nd sub-pillar: Quality of Life	29	77.38
3rd sub-pillar: SDG Contribution	7	84.29

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	21	65.55
1st sub-pillar: Access	36	79.62
1.1.1 Mobile tariffs	83	53.59
1.1.2 Handset prices	13	71.50
1.1.3 Internet access	3	98.53
1.1.4 4G mobile network coverage	24	99.00
1.1.5 Fixed-broadband subscriptions	33	91.19
1.1.6 International Internet bandwidth	84	63.89
1.1.7 Internet access in schools	NA	NA
2nd sub-pillar: Content	40	42.10
1.2.1 GitHub commits	40	14.00
1.2.2 Wikipedia edits	48	63.41
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	31	80.31
3rd sub-pillar: Future Technologies	4	74.93
1.3.1 Adoption of emerging technologies	10	85.26
1.3.2 Investment in emerging technologies	9	79.99
1.3.3 ICT PCT patent applications	4	88.14
1.3.4 Computer software spending	46	24.50
1.3.5 Robot density	4	96.78
B. People pillar	6	76.79
1st sub-pillar: Individuals	17	70.82
2.1.1 Internet users	27	84.47
2.1.2 Active mobile-broadband subscriptions	2	75.16
2.1.3 Use of virtual social networks	40	64.95
2.1.4 Tertiary enrollment	NA	NA
2.1.5 Adult literacy rate	NA	NA
2.1.6 ICT skills	55	58.68
2nd sub-pillar: Businesses	1	85.66
2.2.1 Firms with website	3	96.24
2.2.2 Ease of doing business	28	84.49
2.2.3 Professionals	NA	NA
2.2.4 Technicians and associate professionals	2	99.01
2.2.5 Business use of digital tools	17	83.87
2.2.6 R&D expenditure by businesses	3	64.69
3rd sub-pillar: Governments	16	73.90
2.3.1 Government online services	12	90.30
2.3.2 Publication and use of open data	8	75.16
2.3.3 Government promotion of investment in emerging tech	15	71.92
2.3.4 R&D expenditure by governments and higher education	20	58.23

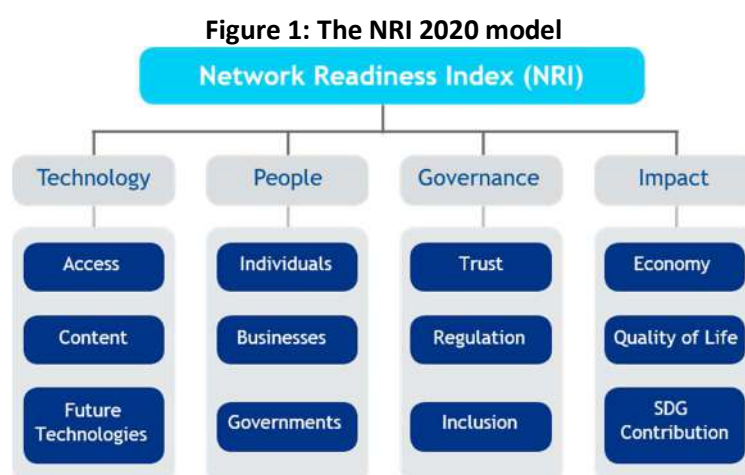| Indicator	Rank	Score
C. Governance pillar	23	77.53
1st sub-pillar: Trust	29	67.66
3.1.1 Secure Internet servers	33	78.49
3.1.2 Cybersecurity	15	94.47
3.1.3 Online access to financial account	49	38.84
3.1.4 Internet shopping	26	58.85
2nd sub-pillar: Regulation	27	80.60
3.2.1 Regulatory quality	22	80.69
3.2.2 ICT regulatory environment	95	71.24
3.2.3 Legal framework's adaptability to emerging technologies	27	63.37
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	13	87.72
3rd sub-pillar: Inclusion	10	84.33
3.3.1 E-Participation	4	98.77
3.3.2 Socioeconomic gap in use of digital payments	14	95.69
3.3.3 Availability of local online content	2	97.51
3.3.4 Gender gap in Internet use	60	57.98
3.3.5 Rural gap in use of digital payments	48	71.73
D. Impact pillar	11	74.29
1st sub-pillar: Economy	11	61.20
4.1.1 Medium and high-tech industry	6	71.85
4.1.2 High-tech exports	27	32.18
4.1.3 PCT patent applications	1	100.00
4.1.4 Labor productivity per employee	36	49.00
4.1.5 Prevalence of gig economy	49	52.99
2nd sub-pillar: Quality of Life	29	77.38
4.2.1 Happiness	62	63.19
4.2.2 Freedom to make life choices	73	73.36
4.2.3 Income inequality	36	77.58
4.2.4 Healthy life expectancy at birth	2	95.40
3rd sub-pillar: SDG Contribution	7	84.29
4.3.1 SDG 3: Good Health and Well-Being	13	90.16
4.3.2 SDG 4: Quality Education	4	75.81
4.3.3 SDG 5: Gender Equality	52	77.44
4.3.4 SDG 7: Affordable and Clean Energy	43	84.47
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Network Readiness Index 2020 Jordan

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Jordan

Jordan ranks 69th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Jordan global ranking, overall and by pillar
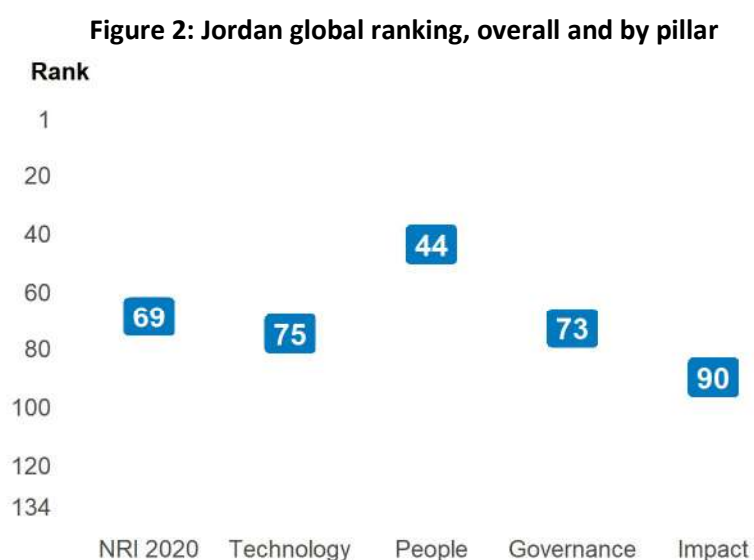
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Jordan relate to Businesses, Future Technologies and Individuals, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Governments and SDG Contribution sub-pillars.

Table 1: Jordan rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Businesses	14	Regulation	69
Future Technologies	54	Access	81
Individuals	55	Quality of Life	91
Inclusion	63	Trust	92
Economy	66	Governments	96
Content	67	SDG Contribution	101

NRI score and income

Figure 3 shows the position of Jordan in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Jordan is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
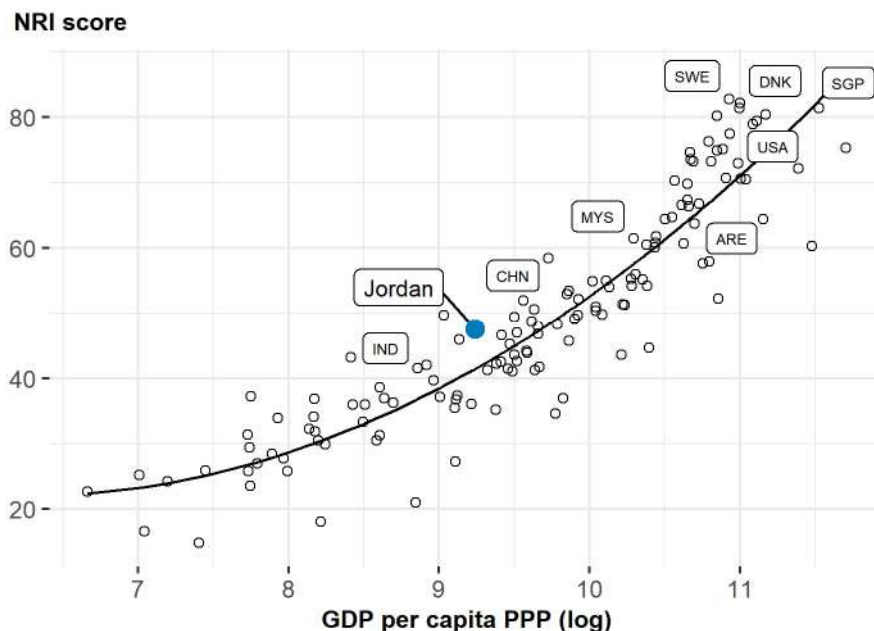
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Jordan belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Arab States-is United Arab Emirates (ARE).

Performance against its income group and region

Upper-middle-income countries
Jordan is ranked 19th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: nri.score and people. At the sub-pillar level, it outperforms upper-middle-income countries in six of the twelve sub-pillars: Future Technologies, Individuals, Businesses, Regulation, Inclusion and Economy.

Arab States
Jordan is ranked 7th within Arab States (Figure 4, right panel). It has a score above the regional average in two of the four pillars: nri.score, people and governance. With regard to sub-pillars, it outperforms the average in Arab States in five of the twelve sub-pillars: Content, Future Technologies, Businesses, Regulation and Inclusion.

Figure 4: Performance of Jordan against its income group and region, overall and by pillar
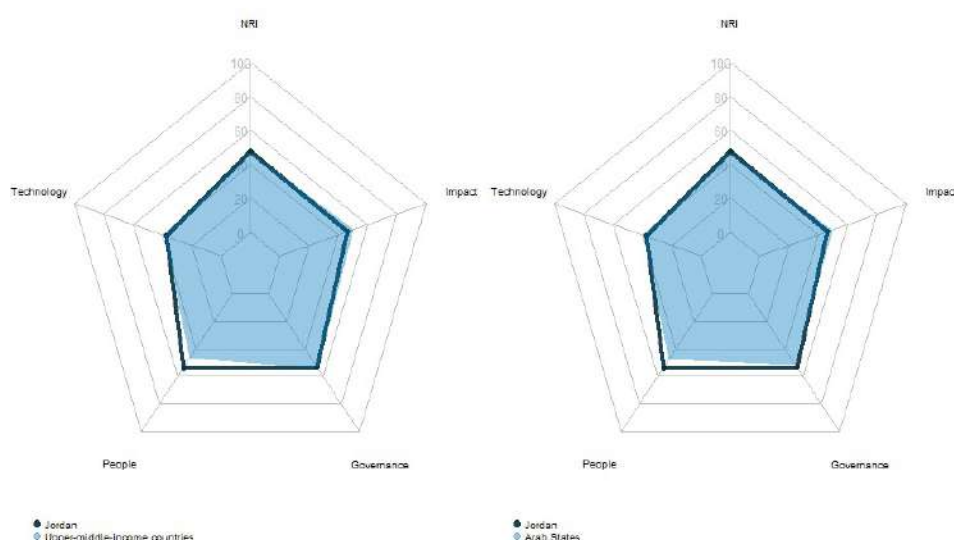
Table 2: Jordan scores vs. averages of its income group and region, overall and by pillar

Dimension	Jordan	Upper-middle-income countries	Arab States
NRI	47.50	47.39	47.18
Technology	37.23	38.42	39.24
People	53.67	46.66	47.97
Governance	53.13	54.31	51.70
Impact	45.99	50.17	49.82

Strongest and weakest indicators

The indicators where Jordan performs particularly well include Rural gap in use of digital payments, Firms with website, and Adult literacy rate (Table 3). By contrast, the economy's weakest indicators include Government online services, E-Participation, and SDG 5: Gender Equality.

Table 3: Top-ranked and bottom-ranked indicators of Jordan

Strongest indicators	Rank	Weakest indicators	Rank
Rural gap in use of digital payments	1	High-tech exports	96
Firms with website	26	SDG 11: Sustainable Cities and Communities	96
Adult literacy rate	28	Secure Internet servers	99
ICT skills	30	Freedom to make life choices	100
Prevalence of gig economy	38	Mobile tariffs	108
Internet access	39	Online access to financial account	111
SDG 3: Good Health and Well-Being	39	Happiness	111
Income inequality	41	Government online services	119
Availability of local online content	42	E-Participation	119
Investment in emerging technologies	46	SDG 5: Gender Equality	119

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NRI 2020 At-A-Glance: Jordan

Network Readiness Index   Rank: 69 (out of 134)   Score: 47.50

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	75	37.23	C. Governance pillar	73	53.13
1st sub-pillar: Access	81	52.99	1st sub-pillar: Trust	92	28.77
2nd sub-pillar: Content	67	28.27	2nd sub-pillar: Regulation	69	65.63
3rd sub-pillar: Future Technologies	54	30.43	3rd sub-pillar: Inclusion	63	64.98
B. People pillar	44	53.67	D. Impact pillar	90	45.99
1st sub-pillar: Individuals	55	58.55	1st sub-pillar: Economy	66	25.51
2nd sub-pillar: Businesses	14	71.45	2nd sub-pillar: Quality of Life	91	59.21
3rd sub-pillar: Governments	96	31.01	3rd sub-pillar: SDG Contribution	101	53.25

The Network Readiness Index in detail

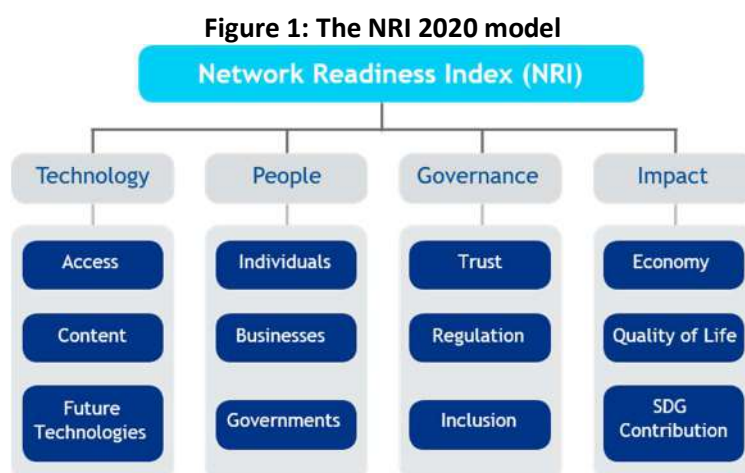| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	75	37.23	**C. Governance pillar**	73	53.13
1st sub-pillar: Access	81	52.99	*1st sub-pillar: Trust*	92	28.77
1.1.1 Mobile tariffs	108	36.63	3.1.1 Secure Internet servers	99	37.39
1.1.2 Handset prices	87	36.15	3.1.2 Cybersecurity	76	59.37
1.1.3 Internet access	39	82.83	3.1.3 Online access to financial account	111	9.24
1.1.4 4G mobile network coverage	67	90.00	3.1.4 Internet shopping	78	9.08
1.1.5 Fixed-broadband subscriptions	77	44.83	*2nd sub-pillar: Regulation*	69	65.63
1.1.6 International Internet bandwidth	70	67.77	3.2.1 Regulatory quality	65	53.25
1.1.7 Internet access in schools	58	12.74	3.2.2 ICT regulatory environment	64	85.14
2nd sub-pillar: Content	67	28.27	3.2.3 Legal framework's adaptability to emerging technologies	46	49.14
1.2.1 GitHub commits	90	1.52	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	62	45.81	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	63	64.98
1.2.4 Mobile apps development	66	63.29	3.3.1 E-Participation	119	30.86
3rd sub-pillar: Future Technologies	54	30.43	3.3.2 Socioeconomic gap in use of digital payments	86	54.62
1.3.1 Adoption of emerging technologies	59	49.03	3.3.3 Availability of local online content	42	74.42
1.3.2 Investment in emerging technologies	46	49.20	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	82	0.00	3.3.5 Rural gap in use of digital payments	1	100.00
1.3.4 Computer software spending	50	23.48	**D. Impact pillar**	90	45.99
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	66	25.51
B. People pillar	44	53.67	4.1.1 Medium and high-tech industry	58	33.44
1st sub-pillar: Individuals	55	58.55	4.1.2 High-tech exports	96	5.47
2.1.1 Internet users	69	66.12	4.1.3 PCT patent applications	72	0.27
2.1.2 Active mobile-broadband subscriptions	48	34.00	4.1.4 Labor productivity per employee	63	28.12
2.1.3 Use of virtual social networks	63	55.67	4.1.5 Prevalence of gig economy	38	60.24
2.1.4 Tertiary enrollment	79	24.74	*2nd sub-pillar: Quality of Life*	91	59.21
2.1.5 Adult literacy rate	28	97.75	4.2.1 Happiness	111	34.58
2.1.6 ICT skills	30	73.05	4.2.2 Freedom to make life choices	100	59.65
2nd sub-pillar: Businesses	14	71.45	4.2.3 Income inequality	41	75.52
2.2.1 Firms with website	26	78.48	4.2.4 Healthy life expectancy at birth	61	67.11
2.2.2 Ease of doing business	70	68.53	*3rd sub-pillar: SDG Contribution*	101	53.25
2.2.3 Professionals	NA	NA	4.3.1 SDG 3: Good Health and Well-Being	39	78.69
2.2.4 Technicians and associate professionals	NA	NA	4.3.2 SDG 4: Quality Education	65	28.04
2.2.5 Business use of digital tools	51	67.36	4.3.3 SDG 5: Gender Equality	119	40.95
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	73	76.73
3rd sub-pillar: Governments	96	31.01	.	.	.
2.3.1 Government online services	119	33.94			
2.3.2 Publication and use of open data	86	12.58			
2.3.3 Government promotion of investment in emerging tech	47	46.50			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

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Network Readiness Index 2020 Kazakhstan

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Kazakhstan

Kazakhstan ranks 56th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Kazakhstan global ranking, overall and by pillar
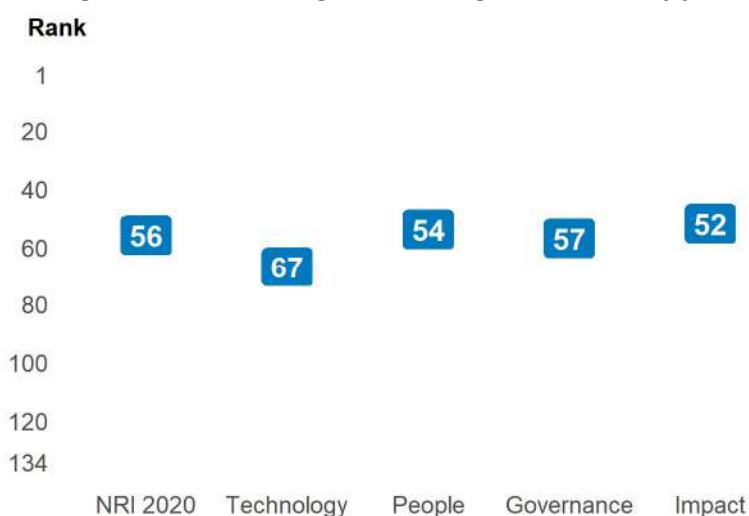
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Kazakhstan relate to Quality of Life, Individuals and Inclusion, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Regulation and Future Technologies sub-pillars.

Table 1: Kazakhstan rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	36	Economy	59
Individuals	43	Governments	61
Inclusion	48	Content	74
Trust	51	SDG Contribution	77
Access	52	Regulation	95
Businesses	54	Future Technologies	102

NRI score and income

Figure 3 shows the position of Kazakhstan in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Kazakhstan is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
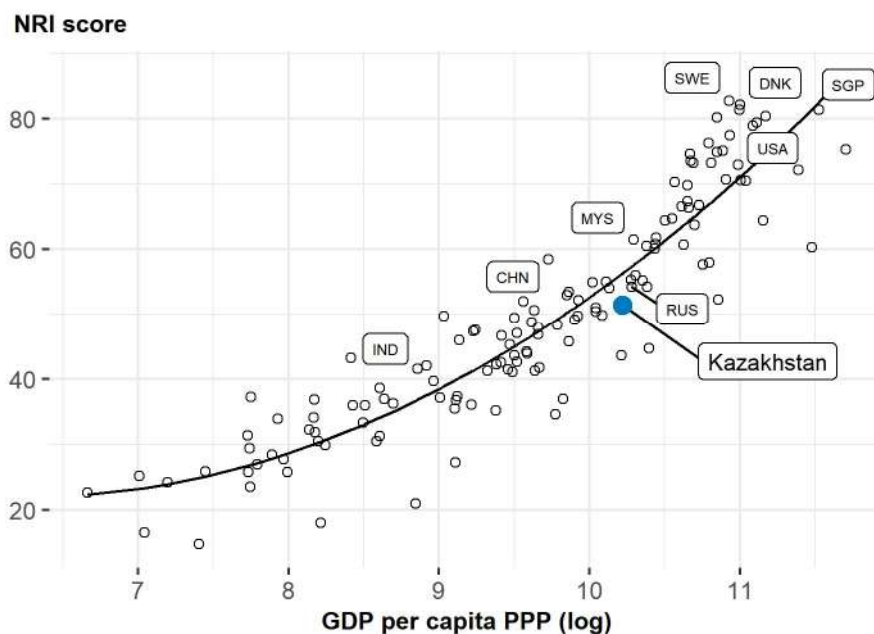
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Kazakhstan belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-CIS-is Russia (RUS).

2

Performance against its income group and region
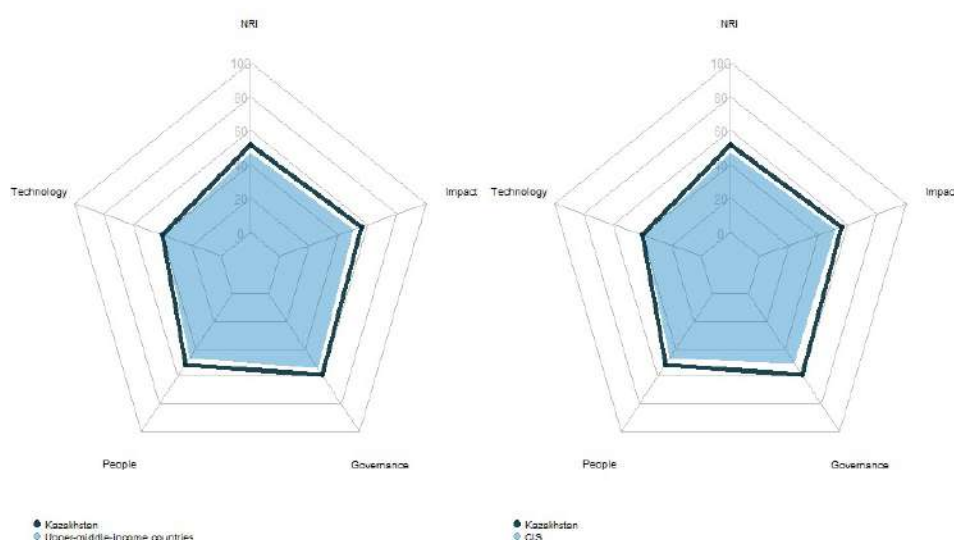
Upper-middle-income countries
Kazakhstan is ranked 9th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in eight of the twelve sub-pillars: Access, Individuals, Businesses, Governments, Trust, Inclusion, Economy and Quality of Life.

CIS
Kazakhstan is ranked 3rd within CIS (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in CIS in ten of the twelve sub-pillars: Access, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Kazakhstan against its income group and region, overall and by pillar

Table 2: Kazakhstan scores vs. averages of its income group and region, overall and by pillar

Dimension	Kazakhstan	Upper-middle-income countries	CIS
NRI	51.38	47.39	46.88
Technology	39.64	38.42	38.47
People	51.33	46.66	47.10
Governance	58.55	54.31	50.71
Impact	56.01	50.17	51.26

Strongest and weakest indicators

The indicators where Kazakhstan performs particularly well include Mobile tariffs, Adult literacy rate, and Government online services (Table 3). By contrast, the economy's weakest indicators include ICT regulatory environment, SDG 7: Affordable and Clean Energy, and Computer software spending.

Table 3: Top-ranked and bottom-ranked indicators of Kazakhstan

Strongest indicators	Rank	Weakest indicators	Rank
Mobile tariffs	5	Internet domain registrations	79
Adult literacy rate	7	Business use of digital tools	80
Government online services	11	4G mobile network coverage	83
High-tech exports	11	Adoption of emerging technologies	84
Income inequality	11	Healthy life expectancy at birth	91
SDG 5: Gender Equality	22	Medium and high-tech industry	92
Ease of doing business	24	R&D expenditure by governments and higher education	108
Internet access	25	Computer software spending	118
Government promotion of investment in emerging technologies	25	SDG 7: Affordable and Clean Energy	119
E-Participation	26	ICT regulatory environment	124

NRI 2020 At-A-Glance: Kazakhstan

Network Readiness Index   Rank: 56 (out of 134)   Score: 51.38

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	67	39.64	C. Governance pillar	57	58.55
1st sub-pillar: Access	52	72.60	1st sub-pillar: Trust	51	49.87
2nd sub-pillar: Content	74	26.82	2nd sub-pillar: Regulation	95	55.55
3rd sub-pillar: Future Technologies	102	19.48	3rd sub-pillar: Inclusion	48	70.22
B. People pillar	54	51.33	D. Impact pillar	52	56.01
1st sub-pillar: Individuals	43	61.66	1st sub-pillar: Economy	59	28.81
2nd sub-pillar: Businesses	54	47.02	2nd sub-pillar: Quality of Life	36	74.92
3rd sub-pillar: Governments	61	45.30	3rd sub-pillar: SDG Contribution	77	64.30

The Network Readiness Index in detail

| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	67	39.64	**C. Governance pillar**	57	58.55
1st sub-pillar: Access	52	72.60	*1st sub-pillar: Trust*	51	49.87
1.1.1 Mobile tariffs	5	96.57	3.1.1 Secure Internet servers	55	61.97
1.1.2 Handset prices	45	55.88	3.1.2 Cybersecurity	42	83.42
1.1.3 Internet access	25	87.55	3.1.3 Online access to financial account	53	35.30
1.1.4 4G mobile network coverage	83	75.30	3.1.4 Internet shopping	60	18.79
1.1.5 Fixed-broadband subscriptions	72	51.83	*2nd sub-pillar: Regulation*	95	55.55
1.1.6 International Internet bandwidth	62	68.45	3.2.1 Regulatory quality	62	54.51
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	124	49.81
2nd sub-pillar: Content	74	26.82	3.2.3 Legal framework's adaptability to emerging technologies	62	42.88
1.2.1 GitHub commits	63	4.05	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	69	42.51	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	48	70.22
1.2.4 Mobile apps development	74	58.47	3.3.1 E-Participation	26	87.66
3rd sub-pillar: Future Technologies	102	19.48	3.3.2 Socioeconomic gap in use of digital payments	64	68.23
1.3.1 Adoption of emerging technologies	84	38.60	3.3.3 Availability of local online content	70	59.91
1.3.2 Investment in emerging technologies	75	37.04	3.3.4 Gender gap in Internet use	40	62.14
1.3.3 ICT PCT patent applications	70	1.08	3.3.5 Rural gap in use of digital payments	44	73.16
1.3.4 Computer software spending	118	1.22	**D. Impact pillar**	52	56.01
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	59	28.81
B. People pillar	54	51.33	4.1.1 Medium and high-tech industry	92	17.90
1st sub-pillar: Individuals	43	61.66	4.1.2 High-tech exports	11	53.48
2.1.1 Internet users	45	78.61	4.1.3 PCT patent applications	66	0.38
2.1.2 Active mobile-broadband subscriptions	63	29.92	4.1.4 Labor productivity per employee	51	34.63
2.1.3 Use of virtual social networks	74	50.52	4.1.5 Prevalence of gig economy	77	37.65
2.1.4 Tertiary enrollment	46	44.87	*2nd sub-pillar: Quality of Life*	36	74.92
2.1.5 Adult literacy rate	7	99.75	4.2.1 Happiness	36	70.35
2.1.6 ICT skills	41	66.29	4.2.2 Freedom to make life choices	54	81.16
2nd sub-pillar: Businesses	54	47.02	4.2.3 Income inequality	11	91.49
2.2.1 Firms with website	69	47.48	4.2.4 Healthy life expectancy at birth	91	56.69
2.2.2 Ease of doing business	24	87.25	*3rd sub-pillar: SDG Contribution*	77	64.30
2.2.3 Professionals	37	41.08	4.3.1 SDG 3: Good Health and Well-Being	39	78.69
2.2.4 Technicians and associate professionals	38	51.58	4.3.2 SDG 4: Quality Education	53	36.82
2.2.5 Business use of digital tools	80	53.36	4.3.3 SDG 5: Gender Equality	22	84.90
2.2.6 R&D expenditure by businesses	72	1.34	4.3.4 SDG 7: Affordable and Clean Energy	119	51.81
3rd sub-pillar: Governments	61	45.30	.	.	.
2.3.1 Government online services	11	92.12			
2.3.2 Publication and use of open data	61	26.10			
2.3.3 Government promotion of investment in emerging tech	25	59.95			
2.3.4 R&D expenditure by governments and higher education	108	3.05			

* Confidential data

5

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Network Readiness Index 2020 Kenya

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model
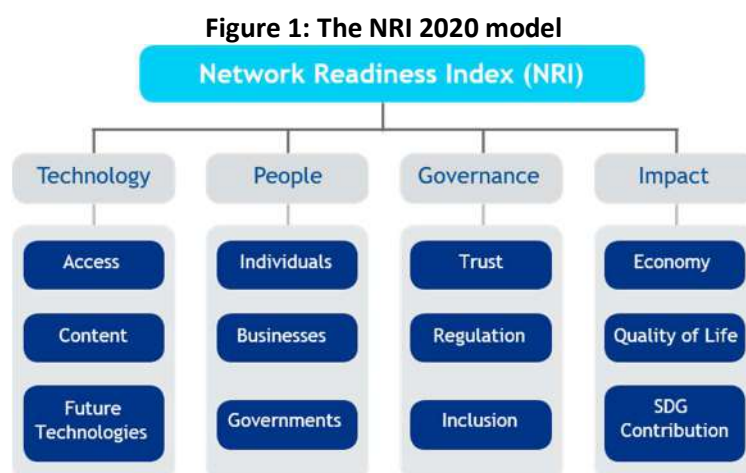
Global NRI position of Kenya

Kenya ranks 82nd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Kenya global ranking, overall and by pillar
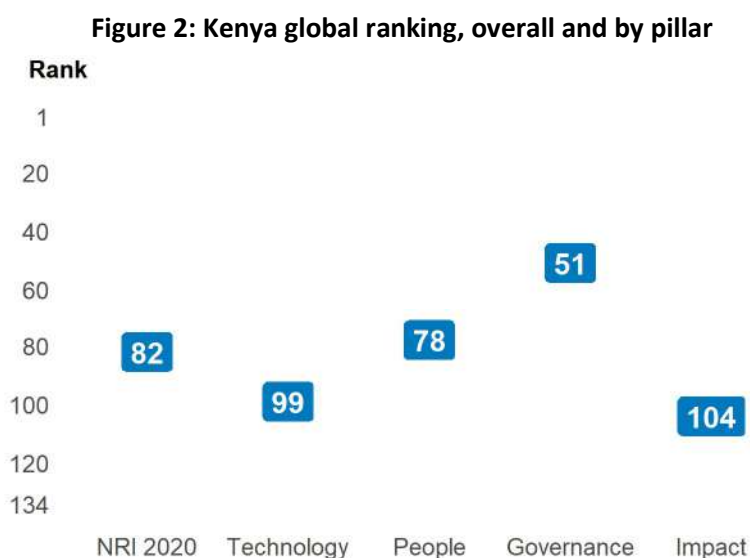
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Kenya relate to Governments, Future Technologies and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, SDG Contribution and Content sub-pillars.

Table 1: Kenya rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	41	Economy	94
Future Technologies	49	Quality of Life	100
Trust	50	Access	101
Businesses	51	Individuals	106
Regulation	58	SDG Contribution	108
Inclusion	65	Content	115

NRI score and income

Figure 3 shows the position of Kenya in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Kenya is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
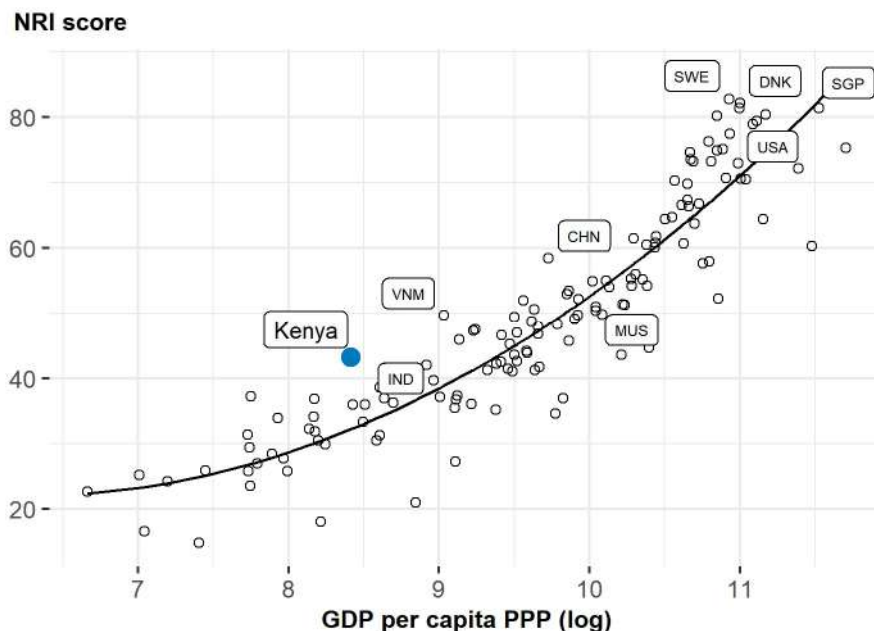
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Kenya belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries
Kenya is ranked 5th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: nri.score, people and governance. At the sub-pillar level, it outperforms lower-middle-income countries in six of the twelve sub-pillars: Future Technologies, Businesses, Governments, Trust, Regulation and Inclusion.

Africa
Kenya is ranked 3rd within Africa (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of Kenya against its income group and region, overall and by pillar
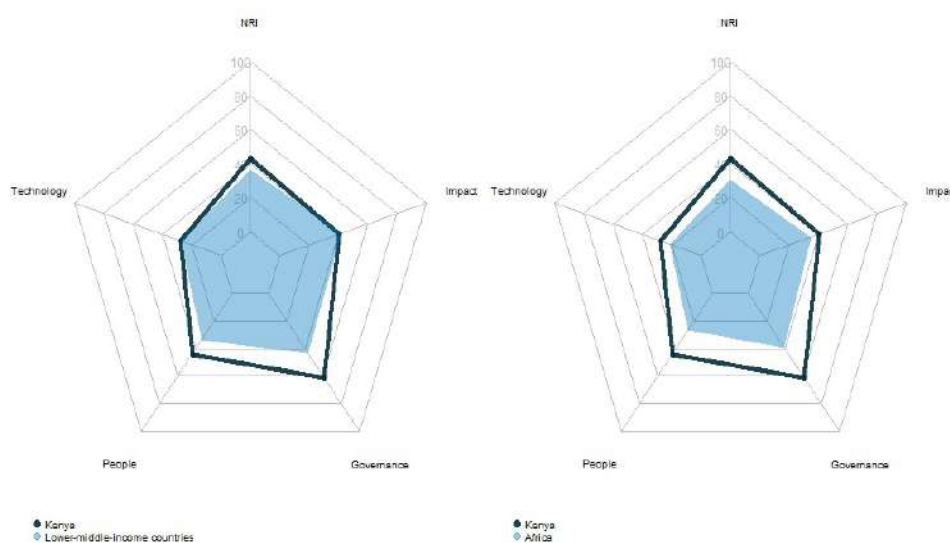
Table 2: Kenya scores vs. averages of its income group and region, overall and by pillar

Dimension	Kenya	Lower-middle-income countries	Africa
NRI	43.22	36.72	30.62
Technology	27.26	27.72	21.47
People	44.01	33.88	26.75
Governance	60.99	43.15	39.31
Impact	40.62	42.15	34.94

Strongest and weakest indicators

The indicators where Kenya performs particularly well include e-commerce legislation, International Internet bandwidth, and Online access to financial account (Table 3). By contrast, the economy's weakest indicators include Fixed-broadband subscriptions, Internet users, and Wikipedia edits.

Table 3: Top-ranked and bottom-ranked indicators of Kenya

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Tertiary enrollment	105
International Internet bandwidth	7	Labor productivity per employee	105
Online access to financial account	18	Active mobile-broadband subscriptions	107
R&D expenditure by governments and higher education	23	Happiness	110
Rural gap in use of digital payments	27	4G mobile network coverage	111
Investment in emerging technologies	32	Use of virtual social networks	111
Publication and use of open data	35	SDG 7: Affordable and Clean Energy	114
Business use of digital tools	38	Wikipedia edits	120
Prevalence of gig economy	40	Fixed-broadband subscriptions	122
ICT regulatory environment	44	Internet users	122

NRI 2020 At-A-Glance: Kenya

Network Readiness Index   Rank: 82 (out of 134)   Score: 43.22

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	99	27.26	C. Governance pillar	51	60.99
1st sub-pillar: Access	101	38.61	1st sub-pillar: Trust	50	50.59
2nd sub-pillar: Content	115	11.97	2nd sub-pillar: Regulation	58	68.20
3rd sub-pillar: Future Technologies	49	31.19	3rd sub-pillar: Inclusion	65	64.17
B. People pillar	78	44.01	D. Impact pillar	104	40.62
1st sub-pillar: Individuals	106	32.11	1st sub-pillar: Economy	94	18.12
2nd sub-pillar: Businesses	51	48.63	2nd sub-pillar: Quality of Life	100	53.01
3rd sub-pillar: Governments	41	51.30	3rd sub-pillar: SDG Contribution	108	50.74

The Network Readiness Index in detail

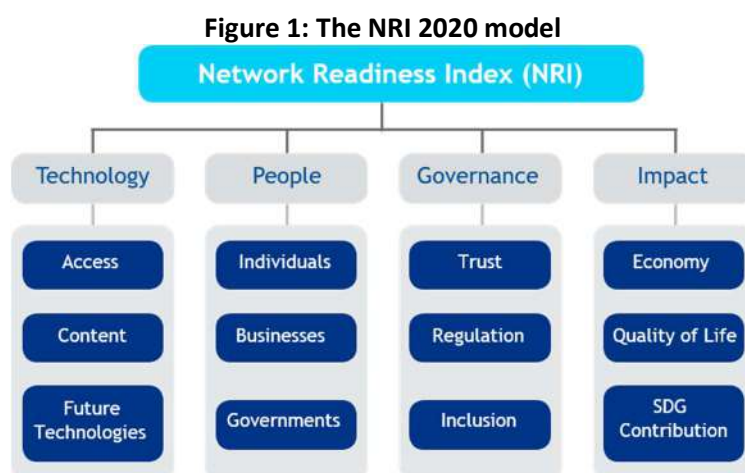| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	99	27.26	**C. Governance pillar**	51	60.99
1st sub-pillar: Access	101	38.61	*1st sub-pillar: Trust*	50	50.59
1.1.1 Mobile tariffs	95	49.30	3.1.1 Secure Internet servers	86	44.01
1.1.2 Handset prices	94	33.14	3.1.2 Cybersecurity	45	80.17
1.1.3 Internet access	91	33.47	3.1.3 Online access to financial account	18	66.35
1.1.4 4G mobile network coverage	111	35.00	3.1.4 Internet shopping	70	11.83
1.1.5 Fixed-broadband subscriptions	122	0.00	*2nd sub-pillar: Regulation*	58	68.20
1.1.6 International Internet bandwidth	7	80.73	3.2.1 Regulatory quality	88	46.42
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	44	88.61
2nd sub-pillar: Content	115	11.97	3.2.3 Legal framework's adaptability to emerging technologies	74	37.75
1.2.1 GitHub commits	76	2.57	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	120	0.12	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	65	64.17
1.2.4 Mobile apps development	102	44.28	3.3.1 E-Participation	86	58.02
3rd sub-pillar: Future Technologies	49	31.19	3.3.2 Socioeconomic gap in use of digital payments	57	71.74
1.3.1 Adoption of emerging technologies	55	50.77	3.3.3 Availability of local online content	86	51.38
1.3.2 Investment in emerging technologies	32	60.12	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	72	1.00	3.3.5 Rural gap in use of digital payments	27	75.56
1.3.4 Computer software spending	78	12.89	**D. Impact pillar**	104	40.62
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	94	18.12
B. People pillar	78	44.01	4.1.1 Medium and high-tech industry	89	18.97
1st sub-pillar: Individuals	106	32.11	4.1.2 High-tech exports	92	6.86
2.1.1 Internet users	122	15.64	4.1.3 PCT patent applications	82	0.04
2.1.2 Active mobile-broadband subscriptions	107	15.43	4.1.4 Labor productivity per employee	105	5.63
2.1.3 Use of virtual social networks	111	15.46	4.1.5 Prevalence of gig economy	40	59.10
2.1.4 Tertiary enrollment	105	7.84	*2nd sub-pillar: Quality of Life*	100	53.01
2.1.5 Adult literacy rate	76	76.26	4.2.1 Happiness	110	37.85
2.1.6 ICT skills	46	62.03	4.2.2 Freedom to make life choices	67	75.28
2nd sub-pillar: Businesses	51	48.63	4.2.3 Income inequality	81	57.22
2.2.1 Firms with website	74	43.88	4.2.4 Healthy life expectancy at birth	103	41.68
2.2.2 Ease of doing business	55	76.03	*3rd sub-pillar: SDG Contribution*	108	50.74
2.2.3 Professionals	NA	NA	4.3.1 SDG 3: Good Health and Well-Being	103	44.26
2.2.4 Technicians and associate professionals	NA	NA	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	38	72.88	4.3.3 SDG 5: Gender Equality	98	62.89
2.2.6 R&D expenditure by businesses	68	1.73	4.3.4 SDG 7: Affordable and Clean Energy	114	55.56
3rd sub-pillar: Governments	41	51.30	.	.	.
2.3.1 Government online services	74	66.67			
2.3.2 Publication and use of open data	35	40.42			
2.3.3 Government promotion of investment in emerging tech	56	40.90			
2.3.4 R&D expenditure by governments and higher education	23	57.21			

* Confidential data

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Network Readiness Index 2020 Kuwait

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Kuwait

Kuwait ranks 53rd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Kuwait global ranking, overall and by pillar
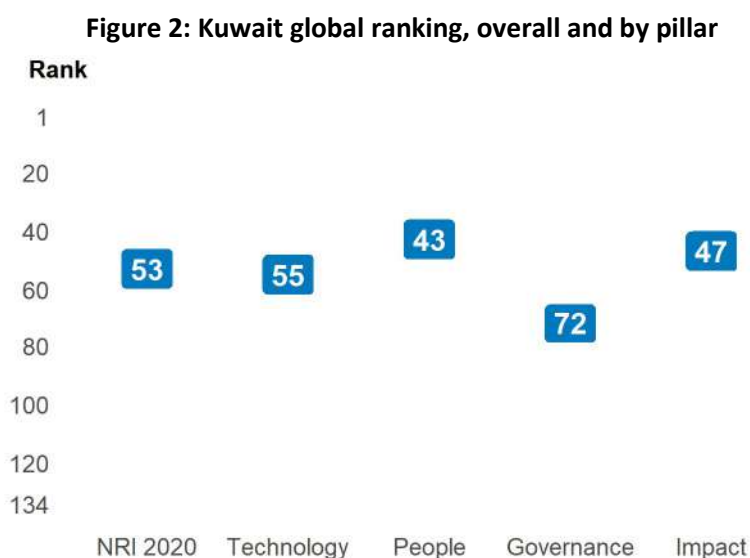
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Kuwait relate to Individuals, Access and Quality of Life, among others (Table 1). More could be done, though, to improve the economy's performances in the Inclusion, Future Technologies and Regulation sub-pillars.

Table 1: Kuwait rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	11	Content	64
Access	34	Trust	65
Quality of Life	44	Governments	70
SDG Contribution	54	Inclusion	73
Economy	55	Future Technologies	83
Businesses	57	Regulation	94

NRI score and income

Figure 3 shows the position of Kuwait in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Kuwait is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
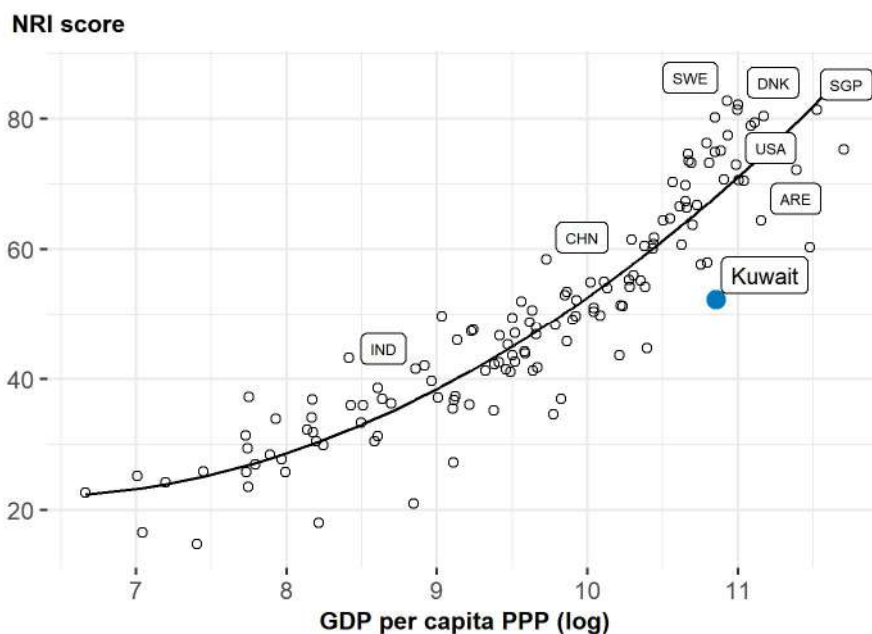
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Kuwait belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Arab States-is United Arab Emirates (ARE).

Performance against its income group and region

High-income countries
Kuwait is ranked 47th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in one of the twelve sub-pillars: Individuals.

Arab States
Kuwait is ranked 6th within Arab States (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Arab States in ten of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Trust, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Kuwait against its income group and region, overall and by pillar

Table 2: Kuwait scores vs. averages of its income group and region, overall and by pillar

Dimension	Kuwait	High-income countries	Arab States
NRI	52.27	66.82	47.18
Technology	44.34	62.51	39.24
People	53.82	62.72	47.97
Governance	53.70	75.41	51.70
Impact	57.23	66.63	49.82

Strongest and weakest indicators

The indicators where Kuwait performs particularly well include Internet access, 4G mobile network coverage, and Use of virtual social networks (Table 3). By contrast, the economy's weakest indicators include Rural gap in use of digital payments, ICT regulatory environment, and SDG 11: Sustainable Cities and Communities.

Table 3: Top-ranked and bottom-ranked indicators of Kuwait

Strongest indicators	Rank	Weakest indicators	Rank
Internet access	1	Adoption of emerging technologies	76
4G mobile network coverage	1	Wikipedia edits	77
Use of virtual social networks	1	Ease of doing business	78
e-commerce legislation	1	GitHub commits	89
Internet users	2	High-tech exports	89
Active mobile-broadband subscriptions	11	SDG 7: Affordable and Clean Energy	89
Handset prices	18	R&D expenditure by governments and higher education	105
E-Participation	18	SDG 11: Sustainable Cities and Communities	112
Gender gap in Internet use	19	ICT regulatory environment	116
SDG 5: Gender Equality	21	Rural gap in use of digital payments	126

NRI 2020 At-A-Glance: Kuwait

Network Readiness Index   Rank: 53 (out of 134)   Score: 52.27

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	55	44.34	C. Governance pillar	72	53.70
1st sub-pillar: Access	34	79.83	1st sub-pillar: Trust	65	43.15
2nd sub-pillar: Content	64	28.62	2nd sub-pillar: Regulation	94	55.61
3rd sub-pillar: Future Technologies	83	24.58	3rd sub-pillar: Inclusion	73	62.33
B. People pillar	43	53.82	D. Impact pillar	47	57.23
1st sub-pillar: Individuals	11	72.99	1st sub-pillar: Economy	55	31.27
2nd sub-pillar: Businesses	57	46.55	2nd sub-pillar: Quality of Life	44	72.51
3rd sub-pillar: Governments	70	41.94	3rd sub-pillar: SDG Contribution	54	67.92

The Network Readiness Index in detail

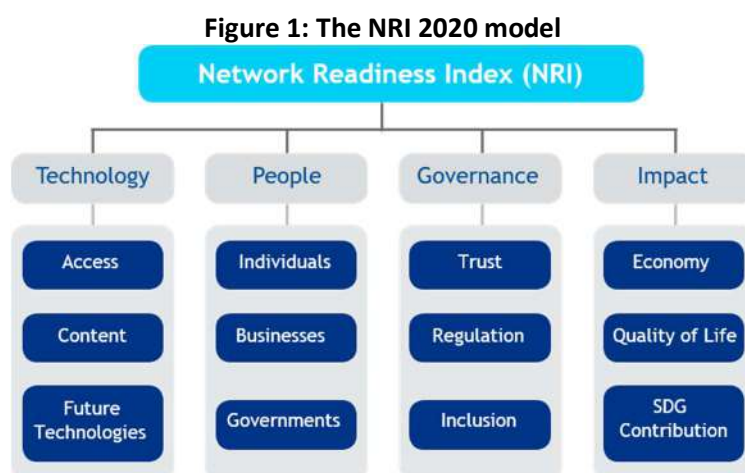| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	55	44.34	**C. Governance pillar**	72	53.70
1st sub-pillar: Access	34	79.83	*1st sub-pillar: Trust*	65	43.15
1.1.1 Mobile tariffs	45	70.35	3.1.1 Secure Internet servers	72	48.54
1.1.2 Handset prices	18	69.57	3.1.2 Cybersecurity	69	64.14
1.1.3 Internet access	1	100.00	3.1.3 Online access to financial account	56	34.02
1.1.4 4G mobile network coverage	1	100.00	3.1.4 Internet shopping	51	25.89
1.1.5 Fixed-broadband subscriptions	64	67.67	*2nd sub-pillar: Regulation*	94	55.61
1.1.6 International Internet bandwidth	40	71.36	3.2.1 Regulatory quality	70	50.63
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	116	60.23
2nd sub-pillar: Content	64	28.62	3.2.3 Legal framework's adaptability to emerging technologies	71	38.64
1.2.1 GitHub commits	89	1.54	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	77	39.20	3.2.5 Privacy protection by law content	69	28.56
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	73	62.33
1.2.4 Mobile apps development	52	69.08	3.3.1 E-Participation	18	90.13
3rd sub-pillar: Future Technologies	83	24.58	3.3.2 Socioeconomic gap in use of digital payments	46	78.29
1.3.1 Adoption of emerging technologies	76	42.95	3.3.3 Availability of local online content	47	68.48
1.3.2 Investment in emerging technologies	57	42.57	3.3.4 Gender gap in Internet use	19	67.24
1.3.3 ICT PCT patent applications	55	5.05	3.3.5 Rural gap in use of digital payments	126	7.53
1.3.4 Computer software spending	25	32.28	**D. Impact pillar**	47	57.23
1.3.5 Robot density	68	0.04	*1st sub-pillar: Economy*	55	31.27
B. People pillar	43	53.82	4.1.1 Medium and high-tech industry	51	37.25
1st sub-pillar: Individuals	11	72.99	4.1.2 High-tech exports	89	7.81
2.1.1 Internet users	2	99.95	4.1.3 PCT patent applications	67	0.38
2.1.2 Active mobile-broadband subscriptions	11	51.57	4.1.4 Labor productivity per employee	28	54.98
2.1.3 Use of virtual social networks	1	100.00	4.1.5 Prevalence of gig economy	45	55.93
2.1.4 Tertiary enrollment	55	39.43	*2nd sub-pillar: Quality of Life*	44	72.51
2.1.5 Adult literacy rate	42	94.96	4.2.1 Happiness	47	67.09
2.1.6 ICT skills	67	52.03	4.2.2 Freedom to make life choices	48	83.69
2nd sub-pillar: Businesses	57	46.55	4.2.3 Income inequality	NA	NA
2.2.1 Firms with website	NA	NA	4.2.4 Healthy life expectancy at birth	63	66.75
2.2.2 Ease of doing business	78	65.75	*3rd sub-pillar: SDG Contribution*	54	67.92
2.2.3 Professionals	65	24.87	4.3.1 SDG 3: Good Health and Well-Being	39	78.69
2.2.4 Technicians and associate professionals	69	31.82	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	56	63.75	4.3.3 SDG 5: Gender Equality	21	85.12
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	89	72.11
3rd sub-pillar: Governments	70	41.94	.	.	.
2.3.1 Government online services	31	83.64			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	61	38.68			
2.3.4 R&D expenditure by governments and higher education	105	3.50			

* Confidential data

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Network Readiness Index 2020 Kyrgyzstan

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Kyrgyzstan

Kyrgyzstan ranks 94th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Kyrgyzstan global ranking, overall and by pillar

1

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Kyrgyzstan relate to Quality of Life, Inclusion and Individuals, among others (Table 1). More could be done, though, to improve the economy's performances in the Governments, Trust and Future Technologies sub-pillars.

Table 1: Kyrgyzstan rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	35	SDG Contribution	103
Inclusion	70	Regulation	106
Individuals	88	Economy	110
Businesses	90	Governments	113
Access	92	Trust	113
Content	98	Future Technologies	124

NRI score and income

Figure 3 shows the position of Kyrgyzstan in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Kyrgyzstan is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
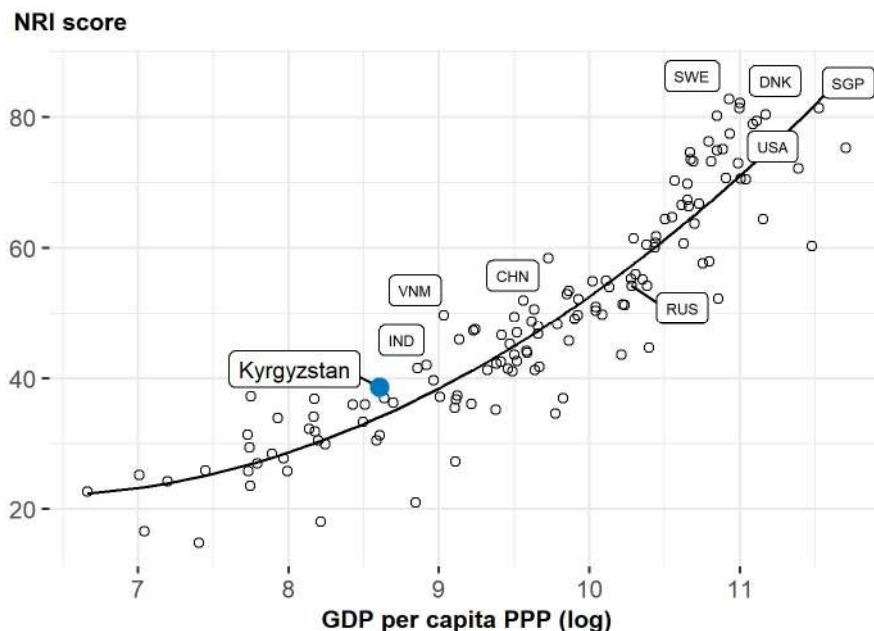
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Kyrgyzstan belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-CIS-is Russia (RUS).

Performance against its income group and region

Lower-middle-income countries

Kyrgyzstan is ranked 13th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, people, governance and impact. At the sub-pillar level, it outperforms lower-middle-income countries in six of the twelve sub-pillars: Access, Content, Individuals, Businesses, Inclusion and Quality of Life.

CIS

Kyrgyzstan is ranked 6th within CIS (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in CIS in two of the twelve sub-pillars: Regulation and Quality of Life.

Figure 4: Performance of Kyrgyzstan against its income group and region, overall and by pillar

Table 2: Kyrgyzstan scores vs. averages of its income group and region, overall and by pillar

Dimension	Kyrgyzstan	Lower-middle-income countries	CIS
NRI	38.60	36.72	46.88
Technology	26.22	27.72	38.47
People	35.59	33.88	47.10
Governance	45.29	43.15	50.71
Impact	47.31	42.15	51.26

Strongest and weakest indicators

The indicators where Kyrgyzstan performs particularly well include Adult literacy rate, Income inequality, and Freedom to make life choices (Table 3). By contrast, the economy's weakest indicators include Handset prices, Adoption of emerging technologies, Investment in emerging technologies, and Medium and high-tech industry.

Table 3: Top-ranked and bottom-ranked indicators of Kyrgyzstan

Strongest indicators	Rank	Weakest indicators	Rank
Adult literacy rate	12	Internet access	110
Income inequality	13	Government promotion of investment in emerging technologies	110
Freedom to make life choices	15	Legal framework's adaptability to emerging technologies	113
Active mobile-broadband subscriptions	37	Mobile tariffs	114
Internet access in schools	46	Business use of digital tools	117
Rural gap in use of digital payments	57	SDG 7: Affordable and Clean Energy	117
High-tech exports	59	Investment in emerging technologies	119
Firms with website	60	Medium and high-tech industry	119
SDG 11: Sustainable Cities and Communities	60	Handset prices	122
Socioeconomic gap in use of digital payments	61	Adoption of emerging technologies	122

NRI 2020 At-A-Glance: Kyrgyzstan

Network Readiness Index Rank: 94 (out of 134) Score: 38.60

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	102	26.22	C. Governance pillar	97	45.29
1st sub-pillar: Access	92	45.01	1st sub-pillar: Trust	113	21.52
2nd sub-pillar: Content	98	19.52	2nd sub-pillar: Regulation	106	51.42
3rd sub-pillar: Future Technologies	124	14.13	3rd sub-pillar: Inclusion	70	62.93
B. People pillar	95	35.59	D. Impact pillar	85	47.31
1st sub-pillar: Individuals	88	47.01	1st sub-pillar: Economy	110	14.19
2nd sub-pillar: Businesses	90	35.04	2nd sub-pillar: Quality of Life	35	74.95
3rd sub-pillar: Governments	113	24.71	3rd sub-pillar: SDG Contribution	103	52.81

The Network Readiness Index in detail

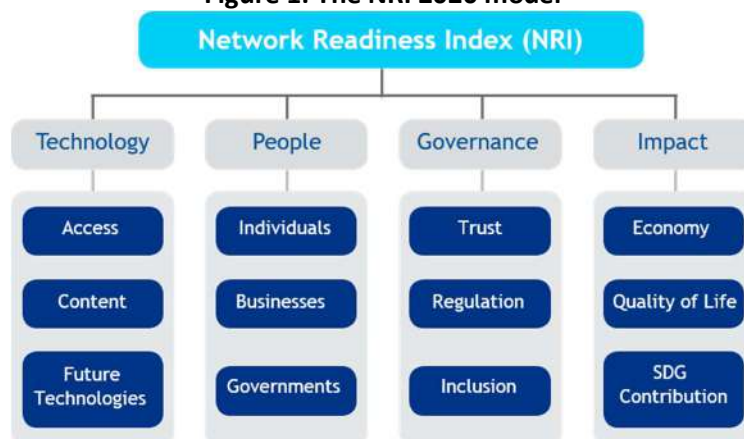| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	102	26.22	**C. Governance pillar**	97	45.29
1st sub-pillar: Access	92	45.01	*1st sub-pillar: Trust*	113	21.52
1.1.1 Mobile tariffs	114	34.52	3.1.1 Secure Internet servers	83	45.19
1.1.2 Handset prices	122	16.43	3.1.2 Cybersecurity	109	26.65
1.1.3 Internet access	110	20.89	3.1.3 Online access to financial account	104	10.62
1.1.4 4G mobile network coverage	90	70.00	3.1.4 Internet shopping	103	3.62
1.1.5 Fixed-broadband subscriptions	65	64.27	*2nd sub-pillar: Regulation*	106	51.42
1.1.6 International Internet bandwidth	74	67.56	3.2.1 Regulatory quality	96	43.71
1.1.7 Internet access in schools	46	41.37	3.2.2 ICT regulatory environment	91	73.55
2nd sub-pillar: Content	98	19.52	3.2.3 Legal framework's adaptability to emerging technologies	113	13.42
1.2.1 GitHub commits	78	2.39	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	96	24.83	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	70	62.93
1.2.4 Mobile apps development	96	50.30	3.3.1 E-Participation	65	70.37
3rd sub-pillar: Future Technologies	124	14.13	3.3.2 Socioeconomic gap in use of digital payments	61	70.09
1.3.1 Adoption of emerging technologies	122	15.66	3.3.3 Availability of local online content	99	41.25
1.3.2 Investment in emerging technologies	119	19.32	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	57	70.01
1.3.4 Computer software spending	91	7.40	**D. Impact pillar**	85	47.31
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	110	14.19
B. People pillar	95	35.59	4.1.1 Medium and high-tech industry	119	3.47
1st sub-pillar: Individuals	88	47.01	4.1.2 High-tech exports	59	15.26
2.1.1 Internet users	102	36.44	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	37	36.60	4.1.4 Labor productivity per employee	98	8.00
2.1.3 Use of virtual social networks	97	38.14	4.1.5 Prevalence of gig economy	94	30.02
2.1.4 Tertiary enrollment	69	29.79	*2nd sub-pillar: Quality of Life*	35	74.95
2.1.5 Adult literacy rate	12	99.50	4.2.1 Happiness	68	58.81
2.1.6 ICT skills	86	41.58	4.2.2 Freedom to make life choices	15	92.72
2nd sub-pillar: Businesses	90	35.04	4.2.3 Income inequality	13	90.98
2.2.1 Firms with website	60	55.38	4.2.4 Healthy life expectancy at birth	88	57.29
2.2.2 Ease of doing business	75	66.49	*3rd sub-pillar: SDG Contribution*	103	52.81
2.2.3 Professionals	71	22.22	4.3.1 SDG 3: Good Health and Well-Being	69	68.85
2.2.4 Technicians and associate professionals	62	33.35	4.3.2 SDG 4: Quality Education	79	2.27
2.2.5 Business use of digital tools	117	32.03	4.3.3 SDG 5: Gender Equality	82	71.66
2.2.6 R&D expenditure by businesses	78	0.79	4.3.4 SDG 7: Affordable and Clean Energy	117	52.96
3rd sub-pillar: Governments	113	24.71	.	.	.
2.3.1 Government online services	78	63.64			
2.3.2 Publication and use of open data	85	13.24			
2.3.3 Government promotion of investment in emerging tech	110	17.14			
2.3.4 R&D expenditure by governments and higher education	102	4.82			

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Network Readiness Index 2020 Laos

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
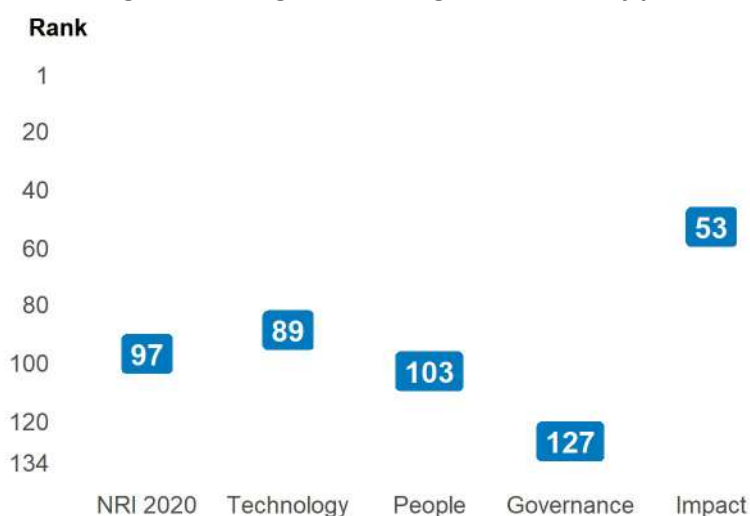
Figure 1: The NRI 2020 model

Global NRI position of Laos

Laos ranks 97th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Laos global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Laos relate to Economy, Future Technologies and Quality of Life, among others (Table 1). More could be done, though, to improve the economy's performances in the Regulation, Trust and Inclusion sub-pillars.

Table 1: Laos rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Economy	22	Content	108
Future Technologies	26	Access	112
Quality of Life	84	Businesses	112
SDG Contribution	92	Regulation	115
Governments	93	Trust	125
Individuals	102	Inclusion	130

NRI score and income

Figure 3 shows the position of Laos in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Laos is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
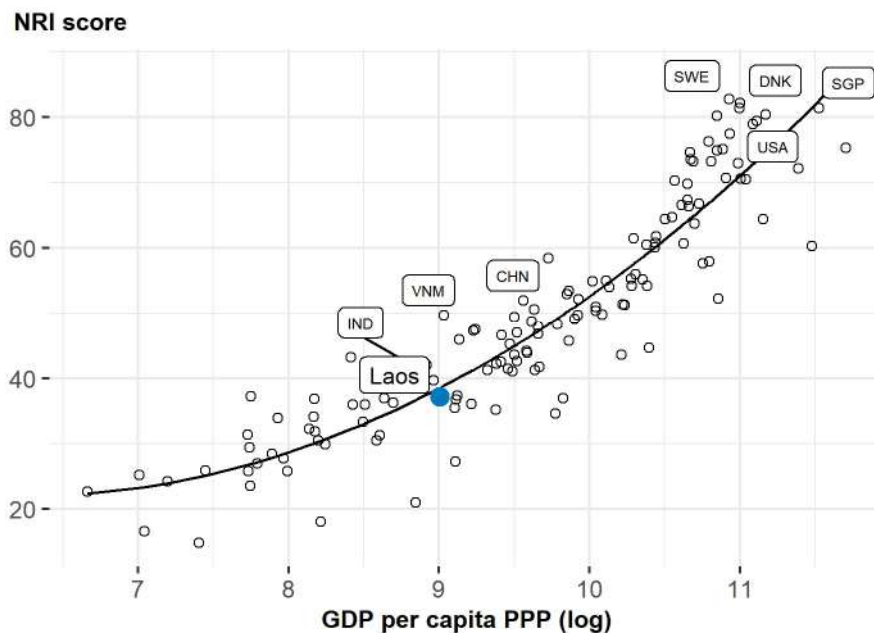
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Laos belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Lower-middle-income countries
Laos is ranked 15th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: nri.score, technology and impact. At the sub-pillar level, it outperforms lower-middle-income countries in four of the twelve sub-pillars: Future Technologies, Economy, Quality of Life and SDG Contribution.

Asia & Pacific
Laos is ranked 17th within Asia & Pacific (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Asia & Pacific in two of the twelve sub-pillars: Future Technologies and Economy.

Figure 4: Performance of Laos against its income group and region, overall and by pillar
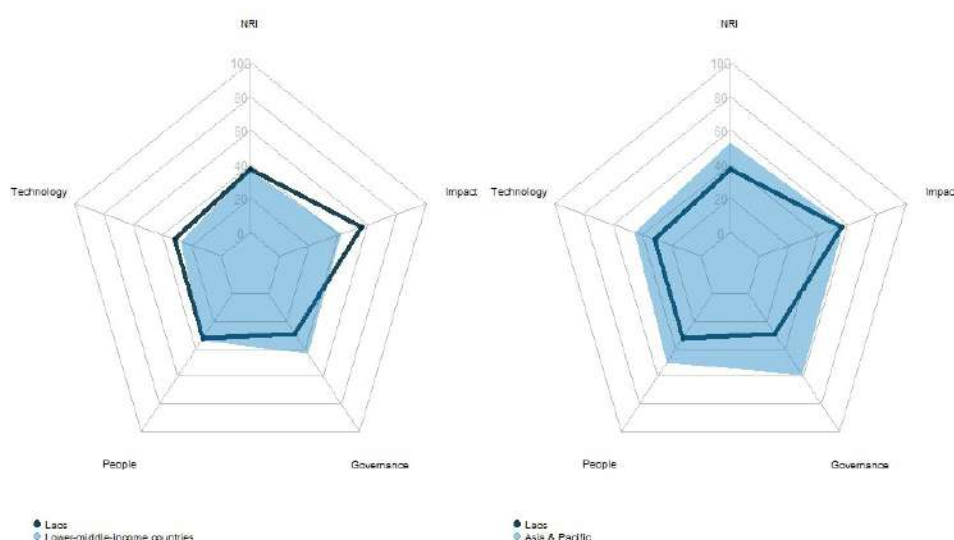
Table 2: Laos scores vs. averages of its income group and region, overall and by pillar

Dimension	Laos	Lower-middle-income countries	Asia & Pacific
NRI	37.12	36.72	52.76
Technology	31.50	27.72	45.33
People	32.34	33.88	49.64
Governance	29.01	43.15	59.20
Impact	55.64	42.15	56.86

Strongest and weakest indicators

The indicators where Laos performs particularly well include High-tech exports, Freedom to make life choices, and Prevalence of gig economy (Table 3). By contrast, the economy's weakest indicators include Government online services, E-Participation, and ICT regulatory environment.

Table 3: Top-ranked and bottom-ranked indicators of Laos

Strongest indicators	Rank	Weakest indicators	Rank
High-tech exports	7	Secure Internet servers	117
Freedom to make life choices	24	Regulatory quality	117
Prevalence of gig economy	42	Online access to financial account	118
Government promotion of investment in emerging technologies	44	Ease of doing business	121
Investment in emerging technologies	51	Socioeconomic gap in use of digital payments	123
Income inequality	61	Rural gap in use of digital payments	125
Legal framework's adaptability to emerging technologies	65	GitHub commits	126
Adoption of emerging technologies	69	ICT regulatory environment	129
SDG 11: Sustainable Cities and Communities	70	E-Participation	130
ICT skills	71	Government online services	131

NRI 2020 At-A-Glance: Laos

Network Readiness Index Rank: 97 (out of 134) Score: 37.12

Pillar/sub-pillar	Rank	Score
A. Technology pillar	89	31.50
1st sub-pillar: Access	112	34.34
2nd sub-pillar: Content	108	14.62
3rd sub-pillar: Future Technologies	26	45.55
B. People pillar	103	32.34
1st sub-pillar: Individuals	102	37.00
2nd sub-pillar: Businesses	112	27.58
3rd sub-pillar: Governments	93	32.45

Pillar/sub-pillar	Rank	Score
C. Governance pillar	127	29.01
1st sub-pillar: Trust	125	15.01
2nd sub-pillar: Regulation	115	45.01
3rd sub-pillar: Inclusion	130	27.00
D. Impact pillar	53	55.64
1st sub-pillar: Economy	22	48.16
2nd sub-pillar: Quality of Life	84	61.54
3rd sub-pillar: SDG Contribution	92	57.20

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	89	31.50
1st sub-pillar: Access	112	34.34
1.1.1 Mobile tariffs	87	51.35
1.1.2 Handset prices	111	23.15
1.1.3 Internet access	101	24.25
1.1.4 4G mobile network coverage	107	43.00
1.1.5 Fixed-broadband subscriptions	111	2.93
1.1.6 International Internet bandwidth	103	61.35
1.1.7 Internet access in schools	NA	NA
2nd sub-pillar: Content	108	14.62
1.2.1 GitHub commits	126	0.06
1.2.2 Wikipedia edits	NA	NA
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	105	41.39
3rd sub-pillar: Future Technologies	26	45.55
1.3.1 Adoption of emerging technologies	69	44.69
1.3.2 Investment in emerging technologies	51	46.40
1.3.3 ICT PCT patent applications	NA	NA
1.3.4 Computer software spending	NA	NA
1.3.5 Robot density	NA	NA
B. People pillar	103	32.34
1st sub-pillar: Individuals	102	37.00
2.1.1 Internet users	111	23.56
2.1.2 Active mobile-broadband subscriptions	106	15.46
2.1.3 Use of virtual social networks	88	42.27
2.1.4 Tertiary enrollment	98	10.42
2.1.5 Adult literacy rate	75	80.28
2.1.6 ICT skills	71	49.99
2nd sub-pillar: Businesses	112	27.58
2.2.1 Firms with website	101	24.84
2.2.2 Ease of doing business	121	36.42
2.2.3 Professionals	78	18.50
2.2.4 Technicians and associate professionals	112	10.49
2.2.5 Business use of digital tools	95	47.65
2.2.6 R&D expenditure by businesses	NA	NA
3rd sub-pillar: Governments	93	32.45
2.3.1 Government online services	131	16.97
2.3.2 Publication and use of open data	NA	NA
2.3.3 Government promotion of investment in emerging tech	44	47.92
2.3.4 R&D expenditure by governments and higher education	NA	NA

Indicator	Rank	Score
C. Governance pillar	127	29.01
1st sub-pillar: Trust	125	15.01
3.1.1 Secure Internet servers	117	27.54
3.1.2 Cybersecurity	114	20.26
3.1.3 Online access to financial account	118	5.12
3.1.4 Internet shopping	83	7.11
2nd sub-pillar: Regulation	115	45.01
3.2.1 Regulatory quality	117	33.97
3.2.2 ICT regulatory environment	129	29.73
3.2.3 Legal framework's adaptability to emerging technologies	65	41.33
3.2.4 e-commerce legislation	77	75.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	130	27.00
3.3.1 E-Participation	130	18.52
3.3.2 Socioeconomic gap in use of digital payments	123	21.08
3.3.3 Availability of local online content	73	56.46
3.3.4 Gender gap in Internet use	NA	NA
3.3.5 Rural gap in use of digital payments	125	11.95
D. Impact pillar	53	55.64
1st sub-pillar: Economy	22	48.16
4.1.1 Medium and high-tech industry	94	17.11
4.1.2 High-tech exports	7	70.36
4.1.3 PCT patent applications	NA	NA
4.1.4 Labor productivity per employee	NA	NA
4.1.5 Prevalence of gig economy	42	57.02
2nd sub-pillar: Quality of Life	84	61.54
4.2.1 Happiness	84	49.21
4.2.2 Freedom to make life choices	24	90.29
4.2.3 Income inequality	61	68.56
4.2.4 Healthy life expectancy at birth	106	38.12
3rd sub-pillar: SDG Contribution	92	57.20
4.3.1 SDG 3: Good Health and Well-Being	108	37.70
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 SDG 5: Gender Equality	100	61.55
4.3.4 SDG 7: Affordable and Clean Energy	97	68.06
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* Confidential data

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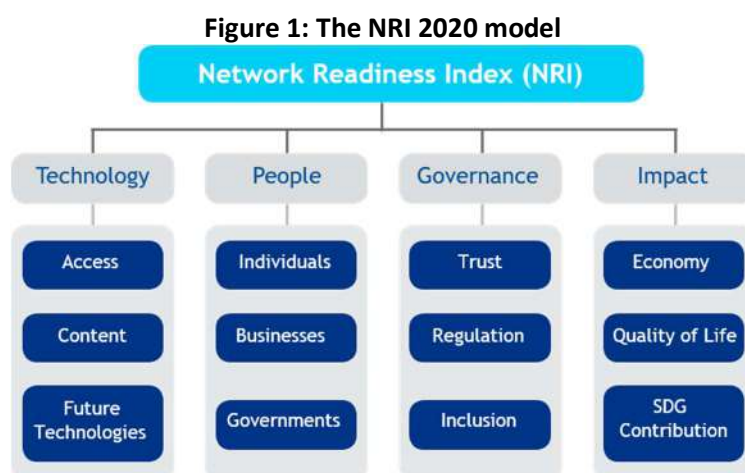**Sources**

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Network Readiness Index 2020 Latvia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Latvia

Latvia ranks 37th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Latvia global ranking, overall and by pillar
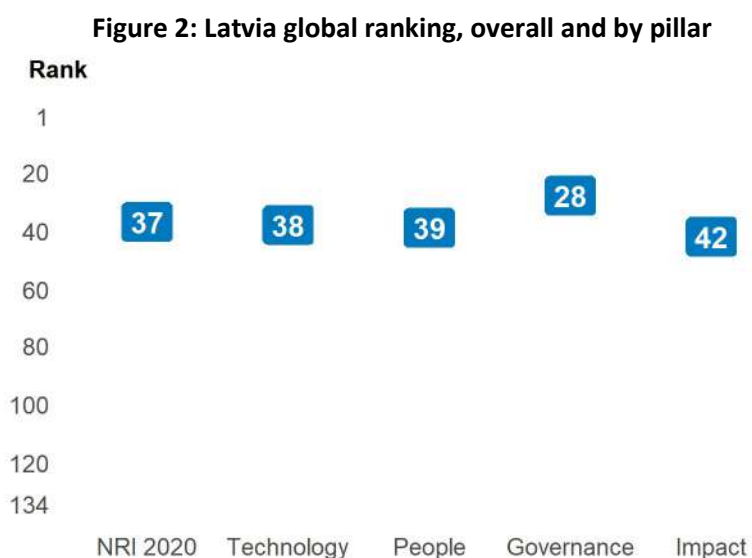
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Latvia relate to Individuals, Regulation and SDG Contribution, among others (Table 1). More could be done, though, to improve the economy's performances in the Future Technologies, Quality of Life and Governments sub-pillars.

Table 1: Latvia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	19	Access	40
Regulation	19	Inclusion	42
SDG Contribution	26	Economy	46
Trust	27	Future Technologies	70
Content	31	Quality of Life	72
Businesses	35	Governments	79

NRI score and income

Figure 3 shows the position of Latvia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Latvia is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
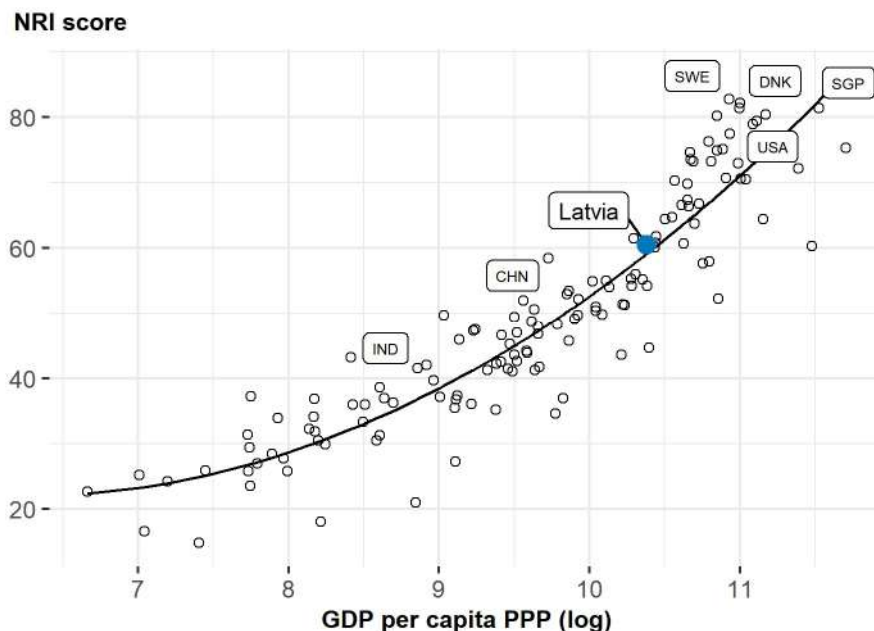
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Latvia belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries

Latvia is ranked 36th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in three of the twelve sub-pillars: Individuals, Regulation and SDG Contribution.

Europe

Latvia is ranked 27th within Europe (Figure 4, right panel). It has a score above the regional average in one of the four pillars: governance. With regard to sub-pillars, it outperforms the average in Europe in four of the twelve sub-pillars: Individuals, Trust, Regulation and SDG Contribution.

Figure 4: Performance of Latvia against its income group and region, overall and by pillar

Table 2: Latvia scores vs. averages of its income group and region, overall and by pillar

Dimension	Latvia	High-income countries	Europe
NRI	60.47	66.82	64.21
Technology	52.80	62.51	59.93
People	55.51	62.72	59.89
Governance	74.78	75.41	72.98
Impact	58.78	66.63	64.04

Strongest and weakest indicators

The indicators where Latvia performs particularly well include Internet access in schools, e-commerce legislation, and Adult literacy rate (Table 3). By contrast, the economy's weakest indicators include Freedom to make life choices, Government online services, and E-Participation.

Table 3: Top-ranked and bottom-ranked indicators of Latvia

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	Happiness	58
e-commerce legislation	1	Government promotion of investment in emerging technologies	66
Adult literacy rate	2	Healthy life expectancy at birth	66
SDG 5: Gender Equality	3	SDG 3: Good Health and Well-Being	67
Privacy protection by law content	4	Use of virtual social networks	68
Tertiary enrollment	9	Medium and high-tech industry	74
Active mobile-broadband subscriptions	12	Computer software spending	86
Business use of digital tools	16	Government online services	88
Online access to financial account	16	E-Participation	88
Ease of doing business	18	Freedom to make life choices	112

NRI 2020 At-A-Glance: Latvia

Network Readiness Index   Rank: 37 (out of 134)   Score: 60.47

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	38	52.80	C. Governance pillar	28	74.78
1st sub-pillar: Access	40	78.29	1st sub-pillar: Trust	27	68.19
2nd sub-pillar: Content	31	52.76	2nd sub-pillar: Regulation	19	84.42
3rd sub-pillar: Future Technologies	70	27.34	3rd sub-pillar: Inclusion	42	71.74
B. People pillar	39	55.51	D. Impact pillar	42	58.78
1st sub-pillar: Individuals	19	70.10	1st sub-pillar: Economy	46	32.91
2nd sub-pillar: Businesses	35	57.60	2nd sub-pillar: Quality of Life	72	64.04
3rd sub-pillar: Governments	79	38.83	3rd sub-pillar: SDG Contribution	26	79.40

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	38	52.80	**C. Governance pillar**	28	74.78
1st sub-pillar: Access	40	78.29	*1st sub-pillar: Trust*	27	68.19
1.1.1 Mobile tariffs	57	67.24	3.1.1 Secure Internet servers	29	78.97
1.1.2 Handset prices	54	50.09	3.1.2 Cybersecurity	45	80.17
1.1.3 Internet access	41	81.53	3.1.3 Online access to financial account	16	69.36
1.1.4 4G mobile network coverage	54	95.00	3.1.4 Internet shopping	34	44.25
1.1.5 Fixed-broadband subscriptions	48	80.11	*2nd sub-pillar: Regulation*	19	84.42
1.1.6 International Internet bandwidth	25	74.08	3.2.1 Regulatory quality	26	77.62
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	29	92.09
2nd sub-pillar: Content	31	52.76	3.2.3 Legal framework's adaptability to emerging technologies	35	55.58
1.2.1 GitHub commits	25	30.61	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	20	80.43	3.2.5 Privacy protection by law content	4	96.82
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	42	71.74
1.2.4 Mobile apps development	35	78.03	3.3.1 E-Participation	88	56.79
3rd sub-pillar: Future Technologies	70	27.34	3.3.2 Socioeconomic gap in use of digital payments	27	87.48
1.3.1 Adoption of emerging technologies	38	61.35	3.3.3 Availability of local online content	30	81.19
1.3.2 Investment in emerging technologies	54	44.86	3.3.4 Gender gap in Internet use	43	61.93
1.3.3 ICT PCT patent applications	38	19.98	3.3.5 Rural gap in use of digital payments	52	71.31
1.3.4 Computer software spending	86	9.06	**D. Impact pillar**	42	58.78
1.3.5 Robot density	48	1.45	*1st sub-pillar: Economy*	46	32.91
B. People pillar	39	55.51	4.1.1 Medium and high-tech industry	74	27.30
1st sub-pillar: Individuals	19	70.10	4.1.2 High-tech exports	30	31.45
2.1.1 Internet users	30	83.43	4.1.3 PCT patent applications	34	4.34
2.1.2 Active mobile-broadband subscriptions	12	51.31	4.1.4 Labor productivity per employee	45	42.20
2.1.3 Use of virtual social networks	68	52.58	4.1.5 Prevalence of gig economy	39	59.25
2.1.4 Tertiary enrollment	9	64.25	*2nd sub-pillar: Quality of Life*	72	64.04
2.1.5 Adult literacy rate	2	99.89	4.2.1 Happiness	58	64.41
2.1.6 ICT skills	37	69.13	4.2.2 Freedom to make life choices	112	54.93
2nd sub-pillar: Businesses	35	57.60	4.2.3 Income inequality	55	70.62
2.2.1 Firms with website	48	63.45	4.2.4 Healthy life expectancy at birth	66	66.20
2.2.2 Ease of doing business	18	88.53	*3rd sub-pillar: SDG Contribution*	26	79.40
2.2.3 Professionals	35	42.37	4.3.1 SDG 3: Good Health and Well-Being	67	70.49
2.2.4 Technicians and associate professionals	21	62.93	4.3.2 SDG 4: Quality Education	22	64.22
2.2.5 Business use of digital tools	16	84.81	4.3.3 SDG 5: Gender Equality	3	95.62
2.2.6 R&D expenditure by businesses	57	3.54	4.3.4 SDG 7: Affordable and Clean Energy	47	83.38
3rd sub-pillar: Governments	79	38.83	.	.	.
2.3.1 Government online services	88	56.98			
2.3.2 Publication and use of open data	55	27.89			
2.3.3 Government promotion of investment in emerging tech	66	37.49			
2.3.4 R&D expenditure by governments and higher education	55	32.96			

* Confidential data

5

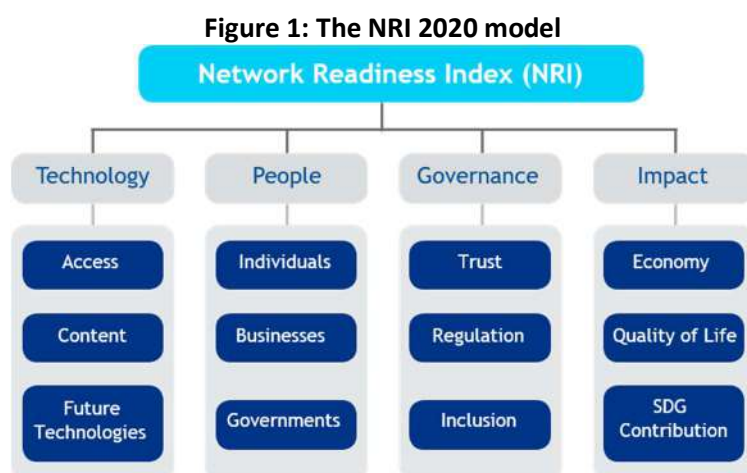**Sources**

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Network Readiness Index 2020
Lebanon

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Lebanon

Lebanon ranks 90th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Lebanon global ranking, overall and by pillar
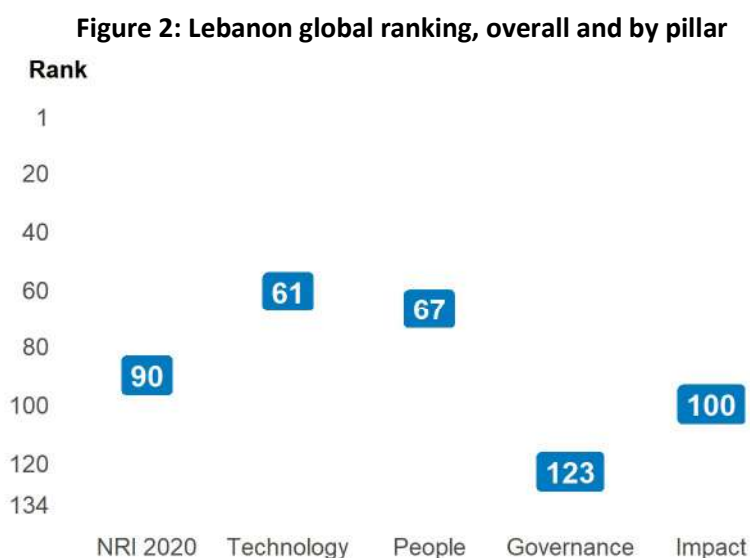
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Lebanon relate to Individuals, Businesses and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Governments, Quality of Life and Regulation sub-pillars.

Table 1: Lebanon rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	33	SDG Contribution	94
Businesses	42	Inclusion	105
Access	57	Trust	109
Content	60	Governments	112
Economy	86	Quality of Life	113
Future Technologies	88	Regulation	125

NRI score and income

Figure 3 shows the position of Lebanon in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Lebanon is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
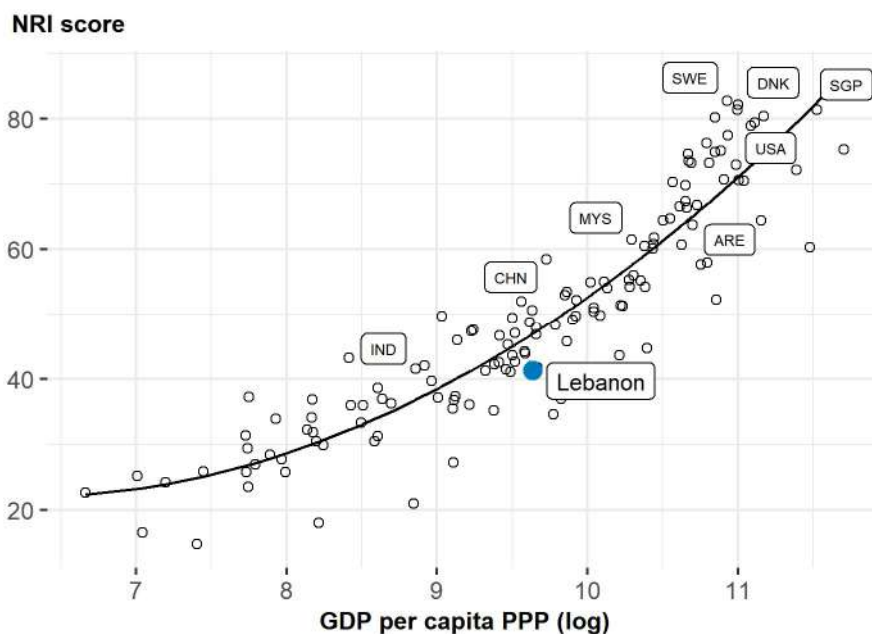
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Lebanon belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Arab States-is United Arab Emirates (ARE).

Performance against its income group and region

Upper-middle-income countries
Lebanon is ranked 30th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: technology and people. At the sub-pillar level, it outperforms upper-middle-income countries in three of the twelve sub-pillars: Access, Individuals and Businesses.

Arab States
Lebanon is ranked 9th within Arab States (Figure 4, right panel). It has a score above the regional average in one of the four pillars: technology. With regard to sub-pillars, it outperforms the average in Arab States in five of the twelve sub-pillars: Access, Content, Individuals, Businesses and SDG Contribution.

Figure 4: Performance of Lebanon against its income group and region, overall and by pillar

Table 2: Lebanon scores vs. averages of its income group and region, overall and by pillar

Dimension	Lebanon	Upper-middle-income countries	Arab States
NRI	41.30	47.39	47.18
Technology	41.55	38.42	39.24
People	47.91	46.66	47.97
Governance	34.82	54.31	51.70
Impact	40.94	50.17	49.82

Strongest and weakest indicators

The indicators where Lebanon performs particularly well include ICT skills, Income inequality, and Internet access in schools (Table 3). By contrast, the economy's weakest indicators include ICT regulatory environment, Freedom to make life choices, and Happiness.

Table 3: Top-ranked and bottom-ranked indicators of Lebanon

Strongest indicators	Rank	Weakest indicators	Rank
ICT skills	22	Active mobile-broadband subscriptions	105
Income inequality	27	SDG 5: Gender Equality	111
Internet access in schools	31	Government online services	114
Internet access	34	Ease of doing business	115
4G mobile network coverage	36	Cybersecurity	117
Mobile apps development	46	E-Participation	119
Internet users	46	Socioeconomic gap in use of digital payments	121
Adult literacy rate	49	Happiness	123
ICT PCT patent applications	50	ICT regulatory environment	131
Firms with website	50	Freedom to make life choices	131

NRI 2020 At-A-Glance: Lebanon

Network Readiness Index Rank: 90 (out of 134) Score: 41.30

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	61	41.55	C. Governance pillar	123	34.82
1st sub-pillar: Access	57	70.69	1st sub-pillar: Trust	109	23.11
2nd sub-pillar: Content	60	30.56	2nd sub-pillar: Regulation	125	35.33
3rd sub-pillar: Future Technologies	88	23.40	3rd sub-pillar: Inclusion	105	46.02
B. People pillar	67	47.91	D. Impact pillar	100	40.94
1st sub-pillar: Individuals	33	64.99	1st sub-pillar: Economy	86	19.90
2nd sub-pillar: Businesses	42	53.87	2nd sub-pillar: Quality of Life	113	46.19
3rd sub-pillar: Governments	112	24.86	3rd sub-pillar: SDG Contribution	94	56.71

The Network Readiness Index in detail

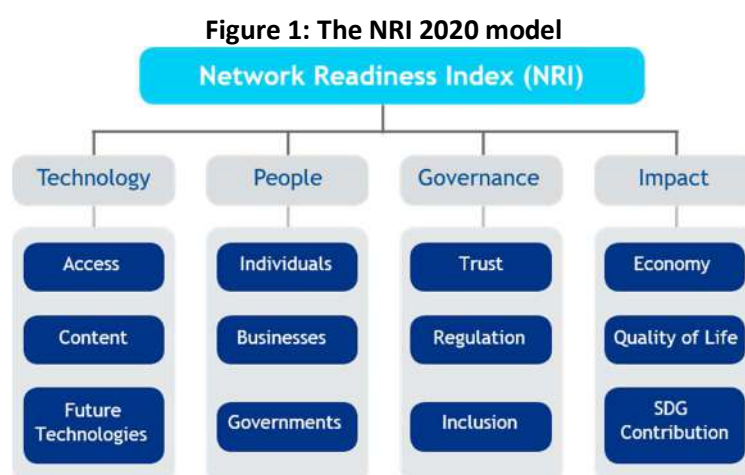| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	61	41.55	**C. Governance pillar**	123	34.82
1st sub-pillar: Access	57	70.69	*1st sub-pillar: Trust*	109	23.11
1.1.1 Mobile tariffs	98	47.41	3.1.1 Secure Internet servers	89	42.54
1.1.2 Handset prices	77	41.05	3.1.2 Cybersecurity	117	19.28
1.1.3 Internet access	34	84.32	3.1.3 Online access to financial account	100	12.96
1.1.4 4G mobile network coverage	36	98.20	3.1.4 Internet shopping	64	17.64
1.1.5 Fixed-broadband subscriptions	NA	NA	*2nd sub-pillar: Regulation*	125	35.33
1.1.6 International Internet bandwidth	89	63.26	3.2.1 Regulatory quality	95	43.89
1.1.7 Internet access in schools	31	89.88	3.2.2 ICT regulatory environment	131	23.94
2nd sub-pillar: Content	60	30.56	3.2.3 Legal framework's adaptability to emerging technologies	77	33.80
1.2.1 GitHub commits	64	3.83	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	65	44.02	3.2.5 Privacy protection by law content	81	0.00
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	105	46.02
1.2.4 Mobile apps development	46	71.13	3.3.1 E-Participation	119	30.86
3rd sub-pillar: Future Technologies	88	23.40	3.3.2 Socioeconomic gap in use of digital payments	121	30.08
1.3.1 Adoption of emerging technologies	79	40.87	3.3.3 Availability of local online content	82	51.76
1.3.2 Investment in emerging technologies	62	40.91	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	50	8.07	3.3.5 Rural gap in use of digital payments	51	71.37
1.3.4 Computer software spending	102	3.76	**D. Impact pillar**	100	40.94
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	86	19.90
B. People pillar	67	47.91	4.1.1 Medium and high-tech industry	79	25.29
1st sub-pillar: Individuals	33	64.99	4.1.2 High-tech exports	100	4.46
2.1.1 Internet users	46	77.86	4.1.3 PCT patent applications	59	0.66
2.1.2 Active mobile-broadband subscriptions	105	16.78	4.1.4 Labor productivity per employee	61	28.76
2.1.3 Use of virtual social networks	52	59.79	4.1.5 Prevalence of gig economy	68	40.34
2.1.4 Tertiary enrollment	NA	NA	*2nd sub-pillar: Quality of Life*	113	46.19
2.1.5 Adult literacy rate	49	93.68	4.2.1 Happiness	123	26.16
2.1.6 ICT skills	22	76.85	4.2.2 Freedom to make life choices	131	12.31
2nd sub-pillar: Businesses	42	53.87	4.2.3 Income inequality	27	80.41
2.2.1 Firms with website	50	62.69	4.2.4 Healthy life expectancy at birth	68	65.89
2.2.2 Ease of doing business	115	42.63	*3rd sub-pillar: SDG Contribution*	94	56.71
2.2.3 Professionals	NA	NA	4.3.1 SDG 3: Good Health and Well-Being	62	73.77
2.2.4 Technicians and associate professionals	NA	NA	4.3.2 SDG 4: Quality Education	68	25.67
2.2.5 Business use of digital tools	74	56.29	4.3.3 SDG 5: Gender Equality	111	48.46
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	58	81.43
3rd sub-pillar: Governments	112	24.86	.	.	.
2.3.1 Government online services	114	40.00			
2.3.2 Publication and use of open data	100	5.82			
2.3.3 Government promotion of investment in emerging tech	93	28.75			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

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Network Readiness Index 2020 Lesotho

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Lesotho

Lesotho ranks 121st out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Lesotho global ranking, overall and by pillar
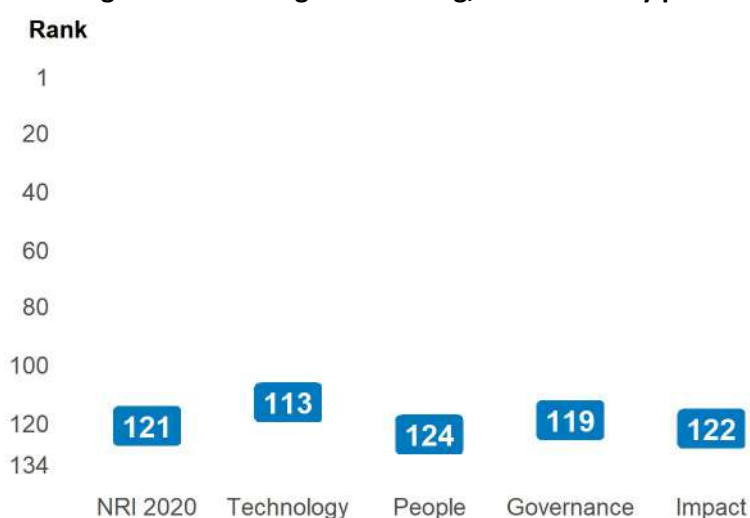
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Lesotho relate to Economy, Access and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Quality of Life and Governments sub-pillars.

Table 1: Lesotho rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Economy	96	Content	114
Access	105	Regulation	116
Future Technologies	109	Trust	120
SDG Contribution	110	Businesses	128
Individuals	111	Quality of Life	130
Inclusion	111	Governments	134

NRI score and income

Figure 3 shows the position of Lesotho in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Lesotho is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
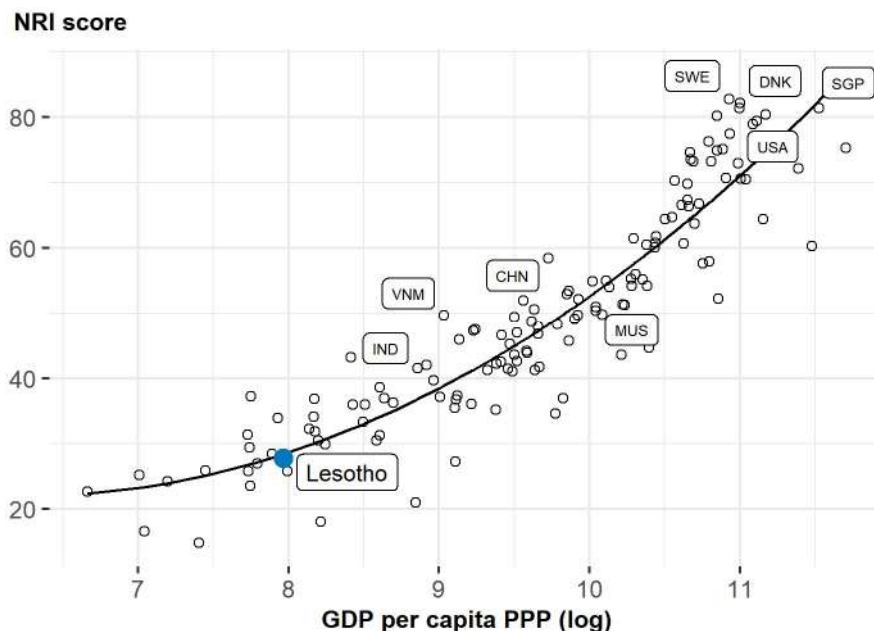
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Lesotho belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

2

Performance against its income group and region

Lower-middle-income countries
Lesotho is ranked 31st in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it trails lower-middle-income countries in all of them.

Africa
Lesotho is ranked 19th within Africa (Figure 4, right panel). It has a score above the regional average in one of the four pillars: technology. With regard to sub-pillars, it outperforms the average in Africa in six of the twelve sub-pillars: Access, Content, Individuals, Inclusion, Economy and SDG Contribution.

Figure 4: Performance of Lesotho against its income group and region, overall and by pillar
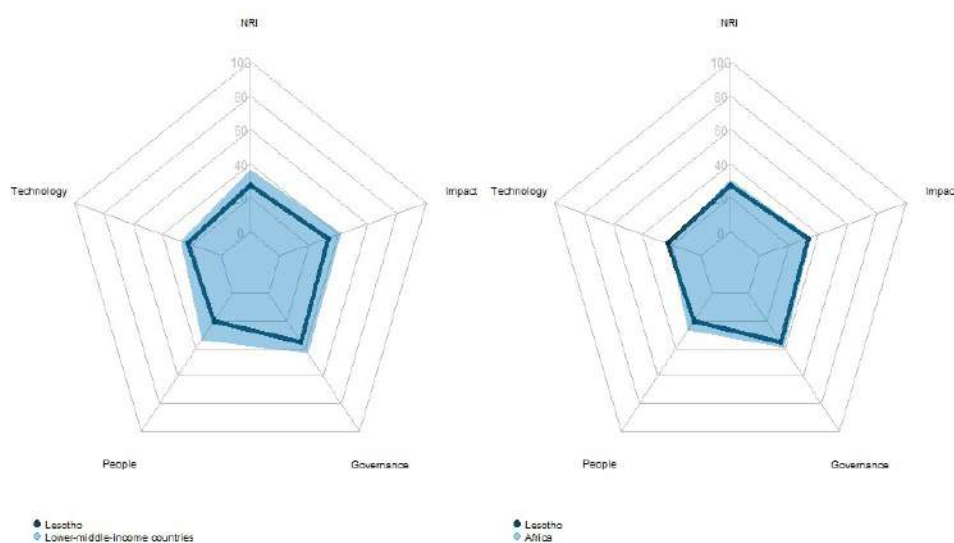
Table 2: Lesotho scores vs. averages of its income group and region, overall and by pillar

Dimension	Lesotho	Lower-middle-income countries	Africa
NRI	27.72	36.72	30.62
Technology	22.60	27.72	21.47
People	20.07	33.88	26.75
Governance	35.40	43.15	39.31
Impact	32.82	42.15	34.94

Strongest and weakest indicators

The indicators where Lesotho performs particularly well include SDG 5: Gender Equality, Privacy protection by law content, and Rural gap in use of digital payments (Table 3). By contrast, the economy's weakest indicators include Healthy life expectancy at birth, Cybersecurity, Adoption of emerging technologies, and Happiness.

Table 3: Top-ranked and bottom-ranked indicators of Lesotho

Strongest indicators	Rank	Weakest indicators	Rank
SDG 5: Gender Equality	5	Business use of digital tools	124
Privacy protection by law content	43	High-tech exports	124
Rural gap in use of digital payments	46	Government promotion of investment in emerging technologies	126
Online access to financial account	61	GitHub commits	127
Investment in emerging technologies	79	Legal framework's adaptability to emerging technologies	127
4G mobile network coverage	84	SDG 7: Affordable and Clean Energy	127
Adult literacy rate	85	Adoption of emerging technologies	128
Prevalence of gig economy	87	Happiness	128
Active mobile-broadband subscriptions	89	Cybersecurity	129
Fixed-broadband subscriptions	93	Healthy life expectancy at birth	133

![Portulans Institute logo]

NRI 2020 At-A-Glance: Lesotho

Network Readiness Index   Rank: 121 (out of 134)   Score: 27.72

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	113	22.60	C. Governance pillar	119	35.40
1st sub-pillar: Access	105	37.87	1st sub-pillar: Trust	120	17.82
2nd sub-pillar: Content	114	11.99	2nd sub-pillar: Regulation	116	44.74
3rd sub-pillar: Future Technologies	109	17.93	3rd sub-pillar: Inclusion	111	43.63
B. People pillar	124	20.07	D. Impact pillar	122	32.82
1st sub-pillar: Individuals	111	29.29	1st sub-pillar: Economy	96	17.75
2nd sub-pillar: Businesses	128	19.06	2nd sub-pillar: Quality of Life	130	30.20
3rd sub-pillar: Governments	134	11.86	3rd sub-pillar: SDG Contribution	110	50.50

The Network Readiness Index in detail

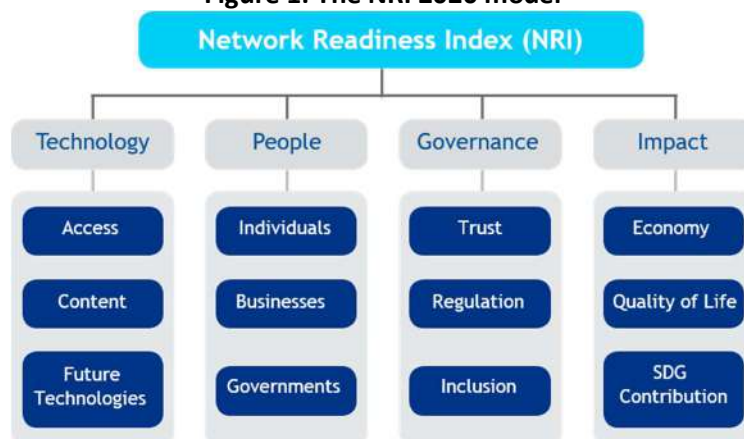| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	113	22.60	**C. Governance pillar**	119	35.40
1st sub-pillar: Access	105	37.87	*1st sub-pillar: Trust*	120	17.82
1.1.1 Mobile tariffs	120	28.71	3.1.1 Secure Internet servers	109	33.11
1.1.2 Handset prices	119	19.06	3.1.2 Cybersecurity	129	4.66
1.1.3 Internet access	95	30.23	3.1.3 Online access to financial account	61	30.94
1.1.4 4G mobile network coverage	84	75.00	3.1.4 Internet shopping	114	2.59
1.1.5 Fixed-broadband subscriptions	93	20.17	*2nd sub-pillar: Regulation*	116	44.74
1.1.6 International Internet bandwidth	118	54.05	3.2.1 Regulatory quality	103	40.48
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	107	65.83
2nd sub-pillar: Content	114	11.99	3.2.3 Legal framework's adaptability to emerging technologies	127	0.00
1.2.1 GitHub commits	127	0.05	3.2.4 e-commerce legislation	115	50.00
1.2.2 Wikipedia edits	NA	NA	3.2.5 Privacy protection by law content	43	67.41
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	111	43.63
1.2.4 Mobile apps development	113	35.62	3.3.1 E-Participation	117	32.10
3rd sub-pillar: Future Technologies	109	17.93	3.3.2 Socioeconomic gap in use of digital payments	101	43.06
1.3.1 Adoption of emerging technologies	128	0.00	3.3.3 Availability of local online content	119	26.44
1.3.2 Investment in emerging technologies	79	35.86	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	46	72.92
1.3.4 Computer software spending	NA	NA	**D. Impact pillar**	122	32.82
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	96	17.75
B. People pillar	124	20.07	4.1.1 Medium and high-tech industry	NA	NA
1st sub-pillar: Individuals	111	29.29	4.1.2 High-tech exports	124	0.40
2.1.1 Internet users	108	27.16	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	89	22.36	4.1.4 Labor productivity per employee	NA	NA
2.1.3 Use of virtual social networks	108	18.56	4.1.5 Prevalence of gig economy	87	35.11
2.1.4 Tertiary enrollment	106	6.90	*2nd sub-pillar: Quality of Life*	130	30.20
2.1.5 Adult literacy rate	85	69.95	4.2.1 Happiness	128	16.09
2.1.6 ICT skills	114	30.82	4.2.2 Freedom to make life choices	104	58.05
2nd sub-pillar: Businesses	128	19.06	4.2.3 Income inequality	103	46.65
2.2.1 Firms with website	123	6.27	4.2.4 Healthy life expectancy at birth	133	0.00
2.2.2 Ease of doing business	102	51.64	*3rd sub-pillar: SDG Contribution*	110	50.50
2.2.3 Professionals	123	2.00	4.3.1 SDG 3: Good Health and Well-Being	109	32.79
2.2.4 Technicians and associate professionals	98	17.39	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	124	18.00	4.3.3 SDG 5: Gender Equality	5	93.99
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	127	38.37
3rd sub-pillar: Governments	134	11.86	.	.	.
2.3.1 Government online services	120	33.33			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	126	0.08			
2.3.4 R&D expenditure by governments and higher education	109	2.17			

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Network Readiness Index 2020
Lithuania

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
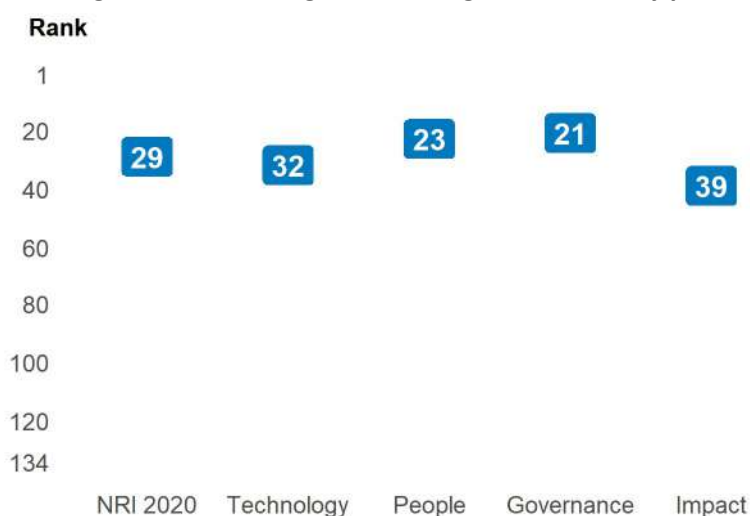
Figure 1: The NRI 2020 model

Global NRI position of Lithuania

Lithuania ranks 29th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Lithuania global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Lithuania relate to Regulation, Governments and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Economy, Future Technologies and Quality of Life sub-pillars.

Table 1: Lithuania rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	18	Businesses	27
Governments	20	Content	28
Trust	21	Access	30
Inclusion	23	Economy	45
SDG Contribution	25	Future Technologies	50
Individuals	26	Quality of Life	61

NRI score and income

Figure 3 shows the position of Lithuania in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Lithuania is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
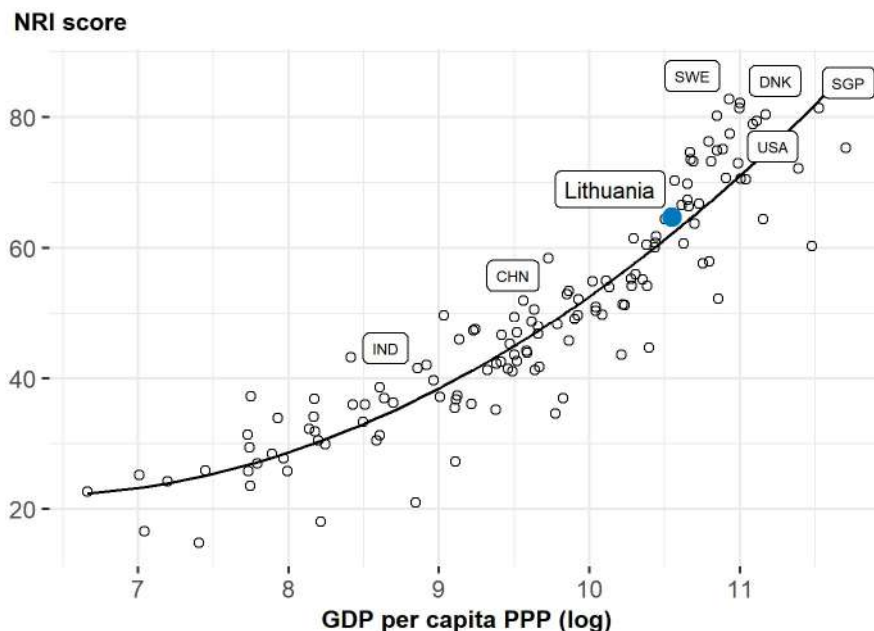
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Lithuania belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Lithuania is ranked 29th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: people and governance. At the sub-pillar level, it outperforms high-income countries in seven of the twelve sub-pillars: Individuals, Businesses, Governments, Trust, Regulation, Inclusion and SDG Contribution.

Europe
Lithuania is ranked 21st within Europe (Figure 4, right panel). It has a score above the regional average in two of the four pillars: nri.score, people and governance. With regard to sub-pillars, it outperforms the average in Europe in eight of the twelve sub-pillars: Access, Individuals, Businesses, Governments, Trust, Regulation, Inclusion and SDG Contribution.

Figure 4: Performance of Lithuania against its income group and region, overall and by pillar

Table 2: Lithuania scores vs. averages of its income group and region, overall and by pillar

Dimension	Lithuania	High-income countries	Europe
NRI	64.70	66.82	64.21
Technology	56.10	62.51	59.93
People	63.97	62.72	59.89
Governance	78.87	75.41	72.98
Impact	59.86	66.63	64.04

Strongest and weakest indicators

The indicators where Lithuania performs particularly well include e-commerce legislation, Adult literacy rate, and Cybersecurity (Table 3). By contrast, the economy's weakest indicators include Computer software spending, Freedom to make life choices, and Healthy life expectancy at birth.

Table 3: Top-ranked and bottom-ranked indicators of Lithuania

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Internet access	49
Adult literacy rate	4	Technicians and associate professionals	51
Cybersecurity	4	Happiness	51
SDG 5: Gender Equality	4	Medium and high-tech industry	52
ICT regulatory environment	5	SDG 3: Good Health and Well-Being	62
Privacy protection by law content	8	E-Participation	63
Business use of digital tools	9	Income inequality	66
International Internet bandwidth	10	Healthy life expectancy at birth	69
Ease of doing business	11	Freedom to make life choices	79
Rural gap in use of digital payments	11	Computer software spending	96

NRI 2020 At-A-Glance: Lithuania

Network Readiness Index   Rank: 29 (out of 134)   Score: 64.70

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	32	56.10	C. Governance pillar	21	78.87
1st sub-pillar: Access	30	81.53	1st sub-pillar: Trust	21	73.42
2nd sub-pillar: Content	28	55.71	2nd sub-pillar: Regulation	18	85.22
3rd sub-pillar: Future Technologies	50	31.07	3rd sub-pillar: Inclusion	23	77.98
B. People pillar	23	63.97	D. Impact pillar	39	59.86
1st sub-pillar: Individuals	26	68.04	1st sub-pillar: Economy	45	33.27
2nd sub-pillar: Businesses	27	61.44	2nd sub-pillar: Quality of Life	61	66.82
3rd sub-pillar: Governments	20	62.42	3rd sub-pillar: SDG Contribution	25	79.49

The Network Readiness Index in detail

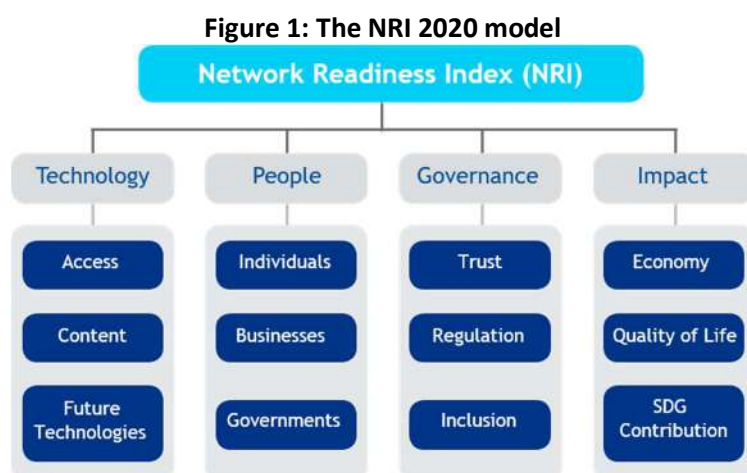| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	32	56.10	**C. Governance pillar**	21	78.87
1st sub-pillar: Access	30	81.53	*1st sub-pillar: Trust*	21	73.42
1.1.1 Mobile tariffs	19	84.23	3.1.1 Secure Internet servers	20	82.66
1.1.2 Handset prices	49	53.94	3.1.2 Cybersecurity	4	97.51
1.1.3 Internet access	49	78.32	3.1.3 Online access to financial account	20	60.65
1.1.4 4G mobile network coverage	38	98.00	3.1.4 Internet shopping	32	52.88
1.1.5 Fixed-broadband subscriptions	21	94.58	*2nd sub-pillar: Regulation*	18	85.22
1.1.6 International Internet bandwidth	10	80.11	3.2.1 Regulatory quality	29	75.93
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	5	97.30
2nd sub-pillar: Content	28	55.71	3.2.3 Legal framework's adaptability to emerging technologies	31	60.86
1.2.1 GitHub commits	24	32.39	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	22	79.99	3.2.5 Privacy protection by law content	8	92.00
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	23	77.98
1.2.4 Mobile apps development	24	84.75	3.3.1 E-Participation	63	72.84
3rd sub-pillar: Future Technologies	50	31.07	3.3.2 Socioeconomic gap in use of digital payments	35	82.71
1.3.1 Adoption of emerging technologies	31	65.18	3.3.3 Availability of local online content	15	87.56
1.3.2 Investment in emerging technologies	29	61.76	3.3.4 Gender gap in Internet use	16	67.59
1.3.3 ICT PCT patent applications	42	18.58	3.3.5 Rural gap in use of digital payments	11	79.18
1.3.4 Computer software spending	96	5.95	**D. Impact pillar**	39	59.86
1.3.5 Robot density	44	3.88	*1st sub-pillar: Economy*	45	33.27
B. People pillar	23	63.97	4.1.1 Medium and high-tech industry	52	35.50
1st sub-pillar: Individuals	26	68.04	4.1.2 High-tech exports	39	22.95
2.1.1 Internet users	42	79.45	4.1.3 PCT patent applications	36	3.38
2.1.2 Active mobile-broadband subscriptions	28	39.27	4.1.4 Labor productivity per employee	38	48.06
2.1.3 Use of virtual social networks	37	65.98	4.1.5 Prevalence of gig economy	43	56.48
2.1.4 Tertiary enrollment	25	52.73	*2nd sub-pillar: Quality of Life*	61	66.82
2.1.5 Adult literacy rate	4	99.80	4.2.1 Happiness	51	66.26
2.1.6 ICT skills	34	71.03	4.2.2 Freedom to make life choices	79	68.91
2nd sub-pillar: Businesses	27	61.44	4.2.3 Income inequality	66	66.24
2.2.1 Firms with website	18	81.80	4.2.4 Healthy life expectancy at birth	69	65.85
2.2.2 Ease of doing business	11	90.90	*3rd sub-pillar: SDG Contribution*	25	79.49
2.2.3 Professionals	14	57.58	4.3.1 SDG 3: Good Health and Well-Being	62	73.77
2.2.4 Technicians and associate professionals	51	41.33	4.3.2 SDG 4: Quality Education	34	58.62
2.2.5 Business use of digital tools	9	88.91	4.3.3 SDG 5: Gender Equality	4	94.82
2.2.6 R&D expenditure by businesses	47	8.12	4.3.4 SDG 7: Affordable and Clean Energy	45	83.74
3rd sub-pillar: Governments	20	62.42	.	.	.
2.3.1 Government online services	24	84.84			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	37	50.80			
2.3.4 R&D expenditure by governments and higher education	31	51.63			

* Confidential data

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Network Readiness Index 2020 Luxembourg

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Luxembourg

Luxembourg ranks 11th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Luxembourg global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Luxembourg relate to Access, Regulation and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Inclusion, Economy and Individuals sub-pillars.

Table 1: Luxembourg rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Access	1	SDG Contribution	14
Regulation	6	Governments	15
Content	7	Trust	17
Businesses	12	Inclusion	22
Quality of Life	12	Economy	26
Future Technologies	13	Individuals	56

NRI score and income

Figure 3 shows the position of Luxembourg in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Luxembourg is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
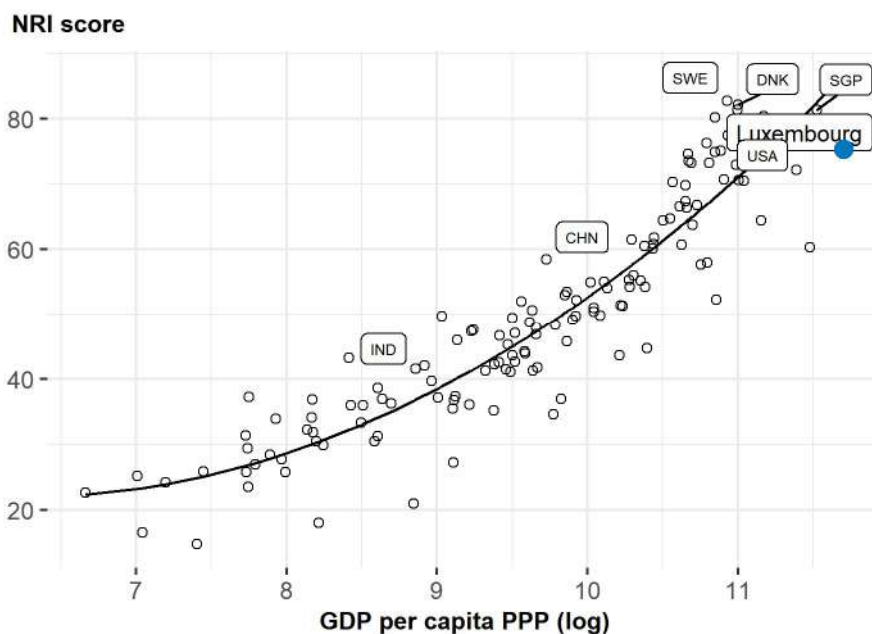
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Luxembourg belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Luxembourg is ranked 11th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Europe
Luxembourg is ranked 9th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Luxembourg against its income group and region, overall and by pillar

Table 2: Luxembourg scores vs. averages of its income group and region, overall and by pillar

Dimension	Luxembourg	High-income countries	Europe
NRI	75.27	66.82	64.21
Technology	79.28	62.51	59.93
People	68.35	62.72	59.89
Governance	82.06	75.41	72.98
Impact	71.39	66.63	64.04

3

Strongest and weakest indicators

The indicators where Luxembourg performs particularly well include International Internet bandwidth, Professionals, and e-commerce legislation (Table 3). By contrast, the economy's weakest indicators include Tertiary enrollment, Computer software spending, E-Participation, and Medium and high-tech industry.

Table 3: Top-ranked and bottom-ranked indicators of Luxembourg

Strongest indicators	Rank	Weakest indicators	Rank
International Internet bandwidth	1	Prevalence of gig economy	50
Professionals	1	Income inequality	52
e-commerce legislation	1	SDG 5: Gender Equality	63
Labor productivity per employee	1	High-tech exports	66
Government promotion of investment in emerging technologies	2	Ease of doing business	67
Legal framework's adaptability to emerging technologies	2	ICT regulatory environment	67
Mobile tariffs	3	E-Participation	69
Internet domain registrations	4	Medium and high-tech industry	69
Handset prices	6	Computer software spending	70
Adoption of emerging technologies	7	Tertiary enrollment	95

NRI 2020 At-A-Glance: Luxembourg

Network Readiness Index   Rank: 11 (out of 134)   Score: 75.27

Pillar/sub-pillar	Rank	Score
A. Technology pillar	6	79.28
1st sub-pillar: Access	1	92.35
2nd sub-pillar: Content	7	81.28
3rd sub-pillar: Future Technologies	13	64.20
B. People pillar	19	68.35
1st sub-pillar: Individuals	56	58.47
2nd sub-pillar: Businesses	12	72.02
3rd sub-pillar: Governments	15	74.56

Pillar/sub-pillar	Rank	Score
C. Governance pillar	16	82.06
1st sub-pillar: Trust	17	77.94
2nd sub-pillar: Regulation	6	89.83
3rd sub-pillar: Inclusion	22	78.43
D. Impact pillar	17	71.39
1st sub-pillar: Economy	26	46.12
2nd sub-pillar: Quality of Life	12	86.80
3rd sub-pillar: SDG Contribution	14	81.24

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	6	79.28
1st sub-pillar: Access	1	92.35
1.1.1 Mobile tariffs	3	97.81
1.1.2 Handset prices	6	82.46
1.1.3 Internet access	15	92.97
1.1.4 4G mobile network coverage	46	97.00
1.1.5 Fixed-broadband subscriptions	45	83.86
1.1.6 International Internet bandwidth	1	100.00
1.1.7 Internet access in schools	NA	NA
2nd sub-pillar: Content	7	81.28
1.2.1 GitHub commits	16	57.99
1.2.2 Wikipedia edits	9	87.14
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	10	90.21
3rd sub-pillar: Future Technologies	13	64.20
1.3.1 Adoption of emerging technologies	7	92.18
1.3.2 Investment in emerging technologies	10	79.58
1.3.3 ICT PCT patent applications	11	69.57
1.3.4 Computer software spending	70	15.49
1.3.5 Robot density	NA	NA
B. People pillar	19	68.35
1st sub-pillar: Individuals	56	58.47
2.1.1 Internet users	7	97.33
2.1.2 Active mobile-broadband subscriptions	38	36.59
2.1.3 Use of virtual social networks	44	63.92
2.1.4 Tertiary enrollment	95	13.50
2.1.5 Adult literacy rate	NA	NA
2.1.6 ICT skills	17	81.03
2nd sub-pillar: Businesses	12	72.02
2.2.1 Firms with website	11	86.11
2.2.2 Ease of doing business	67	69.64
2.2.3 Professionals	1	100.00
2.2.4 Technicians and associate professionals	17	69.55
2.2.5 Business use of digital tools	8	89.47
2.2.6 R&D expenditure by businesses	29	17.32
3rd sub-pillar: Governments	15	74.56
2.3.1 Government online services	48	75.76
2.3.2 Publication and use of open data	NA	NA
2.3.3 Government promotion of investment in emerging tech	2	95.30
2.3.4 R&D expenditure by governments and higher education	28	52.64

| Indicator	Rank	Score
C. Governance pillar	16	82.06
1st sub-pillar: Trust	17	77.94
3.1.1 Secure Internet servers	15	84.53
3.1.2 Cybersecurity	12	95.12
3.1.3 Online access to financial account	17	66.56
3.1.4 Internet shopping	20	65.55
2nd sub-pillar: Regulation	6	89.83
3.2.1 Regulatory quality	11	90.12
3.2.2 ICT regulatory environment	67	83.40
3.2.3 Legal framework's adaptability to emerging technologies	2	90.97
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	16	84.64
3rd sub-pillar: Inclusion	22	78.43
3.3.1 E-Participation	69	69.14
3.3.2 Socioeconomic gap in use of digital payments	8	97.26
3.3.3 Availability of local online content	16	86.50
3.3.4 Gender gap in Internet use	36	62.99
3.3.5 Rural gap in use of digital payments	21	76.25
D. Impact pillar	17	71.39
1st sub-pillar: Economy	26	46.12
4.1.1 Medium and high-tech industry	69	27.92
4.1.2 High-tech exports	66	13.21
4.1.3 PCT patent applications	14	36.62
4.1.4 Labor productivity per employee	1	100.00
4.1.5 Prevalence of gig economy	50	52.86
2nd sub-pillar: Quality of Life	12	86.80
4.2.1 Happiness	7	92.60
4.2.2 Freedom to make life choices	10	94.40
4.2.3 Income inequality	52	72.42
4.2.4 Healthy life expectancy at birth	15	87.79
3rd sub-pillar: SDG Contribution	14	81.24
4.3.1 SDG 3: Good Health and Well-Being	13	90.16
4.3.2 SDG 4: Quality Education	32	59.45
4.3.3 SDG 5: Gender Equality	63	75.34
4.3.4 SDG 7: Affordable and Clean Energy	14	90.75
.	.	.

* Confidential data

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# Network Readiness Index 2020 Madagascar

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Figure 1: The NRI 2020 model
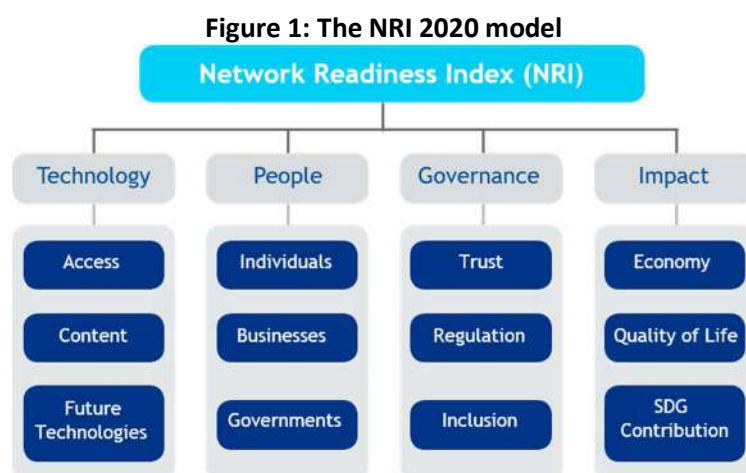
Global NRI position of Madagascar

Madagascar ranks 124th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Madagascar global ranking, overall and by pillar
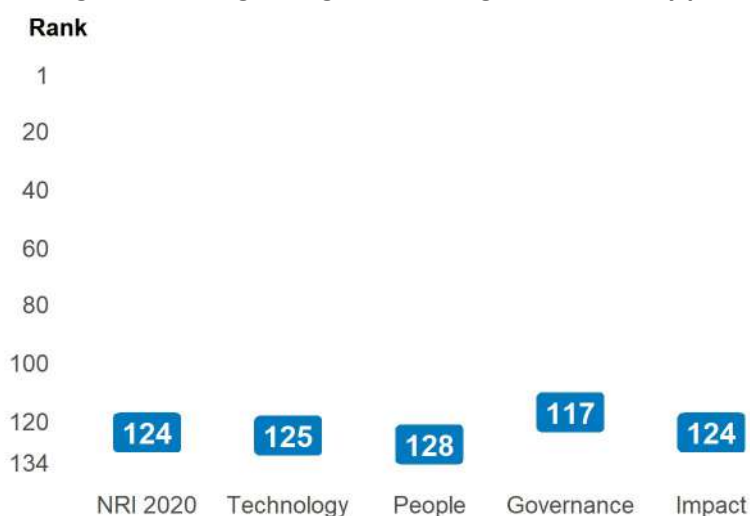
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Madagascar relate to Regulation, Future Technologies and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Governments and Trust sub-pillars.

Table 1: Madagascar rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	99	Individuals	122
Future Technologies	101	Quality of Life	124
Economy	113	Businesses	126
SDG Contribution	113	Access	127
Inclusion	115	Governments	127
Content	118	Trust	130

NRI score and income

Figure 3 shows the position of Madagascar in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Madagascar is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
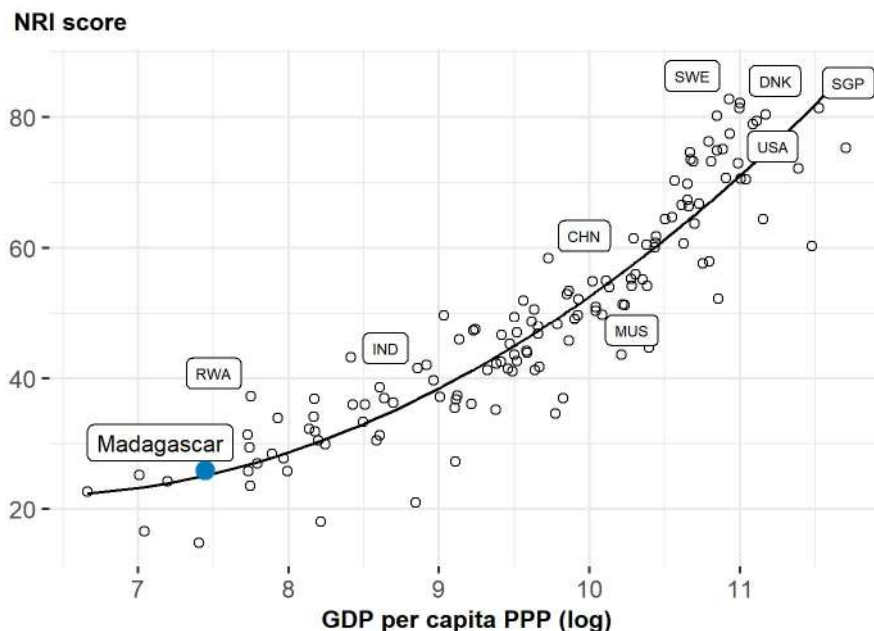
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Madagascar belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Low-income countries
Madagascar is ranked 7th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: nri.score, technology and governance. At the sub-pillar level, it outperforms low-income countries in six of the twelve sub-pillars: Content, Future Technologies, Individuals, Regulation, Inclusion and SDG Contribution.

Africa
Madagascar is ranked 22nd within Africa (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in one of the twelve sub-pillars: Regulation.

Figure 4: Performance of Madagascar against its income group and region, overall and by pillar

Table 2: Madagascar scores vs. averages of its income group and region, overall and by pillar

Dimension	Madagascar	Low-income countries	Africa
NRI	25.84	25.61	30.62
Technology	17.06	16.33	21.47
People	18.33	20.61	26.75
Governance	35.63	32.58	39.31
Impact	32.33	32.92	34.94

Strongest and weakest indicators

The indicators where Madagascar performs particularly well include e-commerce legislation, Prevalence of gig economy, and Internet access in schools (Table 3). By contrast, the economy's weakest indicators include SDG 3: Good Health and Well-Being, Mobile tariffs, and Internet users.

Table 3: Top-ranked and bottom-ranked indicators of Madagascar

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Ease of doing business	126
Prevalence of gig economy	58	Government online services	126
Internet access in schools	69	Internet access	127
Socioeconomic gap in use of digital payments	79	E-Participation	127
Fixed-broadband subscriptions	86	Secure Internet servers	128
Investment in emerging technologies	86	Active mobile-broadband subscriptions	129
Adult literacy rate	87	Freedom to make life choices	129
SDG 5: Gender Equality	87	Mobile tariffs	131
SDG 7: Affordable and Clean Energy	87	Internet users	131
Income inequality	91	SDG 3: Good Health and Well-Being	132

NRI 2020 At-A-Glance: Madagascar

Network Readiness Index   Rank: 124 (out of 134)   Score: 25.84

Pillar/sub-pillar	Rank	Score
A. Technology pillar	125	17.06
1st sub-pillar: Access	127	20.85
2nd sub-pillar: Content	118	10.82
3rd sub-pillar: Future Technologies	101	19.50
B. People pillar	128	18.33
1st sub-pillar: Individuals	122	18.29
2nd sub-pillar: Businesses	126	19.58
3rd sub-pillar: Governments	127	17.12

Pillar/sub-pillar	Rank	Score
C. Governance pillar	117	35.63
1st sub-pillar: Trust	130	12.96
2nd sub-pillar: Regulation	99	54.22
3rd sub-pillar: Inclusion	115	39.70
D. Impact pillar	124	32.33
1st sub-pillar: Economy	113	12.94
2nd sub-pillar: Quality of Life	124	38.59
3rd sub-pillar: SDG Contribution	113	45.47

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	125	17.06
1st sub-pillar: Access	127	20.85
1.1.1 Mobile tariffs	131	7.62
1.1.2 Handset prices	109	23.56
1.1.3 Internet access	127	7.95
1.1.4 4G mobile network coverage	119	25.00
1.1.5 Fixed-broadband subscriptions	86	27.87
1.1.6 International Internet bandwidth	120	53.56
1.1.7 Internet access in schools	69	0.41
2nd sub-pillar: Content	118	10.82
1.2.1 GitHub commits	120	0.14
1.2.2 Wikipedia edits	116	7.31
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	112	35.75
3rd sub-pillar: Future Technologies	101	19.50
1.3.1 Adoption of emerging technologies	116	22.75
1.3.2 Investment in emerging technologies	86	33.88
1.3.3 ICT PCT patent applications	NA	NA
1.3.4 Computer software spending	114	1.87
1.3.5 Robot density	NA	NA
B. People pillar	128	18.33
1st sub-pillar: Individuals	122	18.29
2.1.1 Internet users	131	7.36
2.1.2 Active mobile-broadband subscriptions	129	4.73
2.1.3 Use of virtual social networks	121	6.60
2.1.4 Tertiary enrollment	120	3.33
2.1.5 Adult literacy rate	87	67.59
2.1.6 ICT skills	125	20.13
2nd sub-pillar: Businesses	126	19.58
2.2.1 Firms with website	103	23.22
2.2.2 Ease of doing business	126	30.94
2.2.3 Professionals	119	4.15
2.2.4 Technicians and associate professionals	124	2.74
2.2.5 Business use of digital tools	109	36.83
2.2.6 R&D expenditure by businesses	NA	NA
3rd sub-pillar: Governments	127	17.12
2.3.1 Government online services	126	26.66
2.3.2 Publication and use of open data	NA	NA
2.3.3 Government promotion of investment in emerging tech	111	17.02
2.3.4 R&D expenditure by governments and higher education	94	7.69

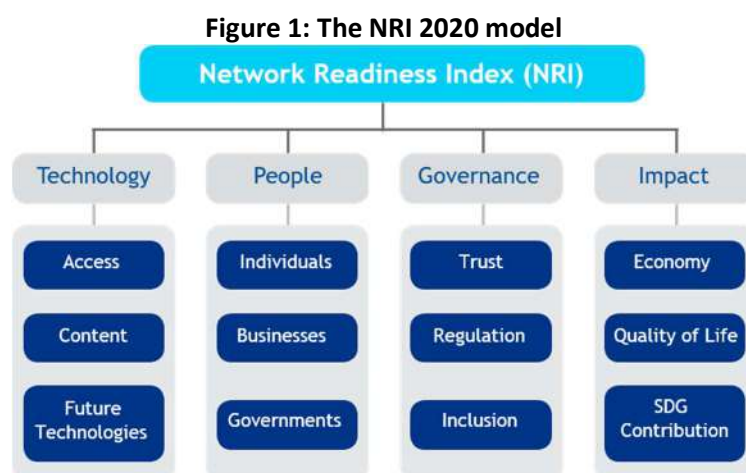| Indicator	Rank	Score
C. Governance pillar	117	35.63
1st sub-pillar: Trust	130	12.96
3.1.1 Secure Internet servers	128	17.29
3.1.2 Cybersecurity	113	20.37
3.1.3 Online access to financial account	NA	NA
3.1.4 Internet shopping	121	1.24
2nd sub-pillar: Regulation	99	54.22
3.2.1 Regulatory quality	114	35.26
3.2.2 ICT regulatory environment	104	67.76
3.2.3 Legal framework's adaptability to emerging technologies	112	13.85
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	115	39.70
3.3.1 E-Participation	127	27.16
3.3.2 Socioeconomic gap in use of digital payments	79	58.79
3.3.3 Availability of local online content	109	34.13
3.3.4 Gender gap in Internet use	NA	NA
3.3.5 Rural gap in use of digital payments	114	38.73
D. Impact pillar	124	32.33
1st sub-pillar: Economy	113	12.94
4.1.1 Medium and high-tech industry	117	4.24
4.1.2 High-tech exports	121	0.58
4.1.3 PCT patent applications	NA	NA
4.1.4 Labor productivity per employee	119	0.54
4.1.5 Prevalence of gig economy	58	46.40
2nd sub-pillar: Quality of Life	124	38.59
4.2.1 Happiness	115	32.35
4.2.2 Freedom to make life choices	129	29.72
4.2.3 Income inequality	91	52.58
4.2.4 Healthy life expectancy at birth	105	39.70
3rd sub-pillar: SDG Contribution	113	45.47
4.3.1 SDG 3: Good Health and Well-Being	132	0.00
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 SDG 5: Gender Equality	87	67.30
4.3.4 SDG 7: Affordable and Clean Energy	87	72.54
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* Confidential data

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Network Readiness Index 2020 Malawi

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Malawi

Malawi ranks 127th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Malawi global ranking, overall and by pillar
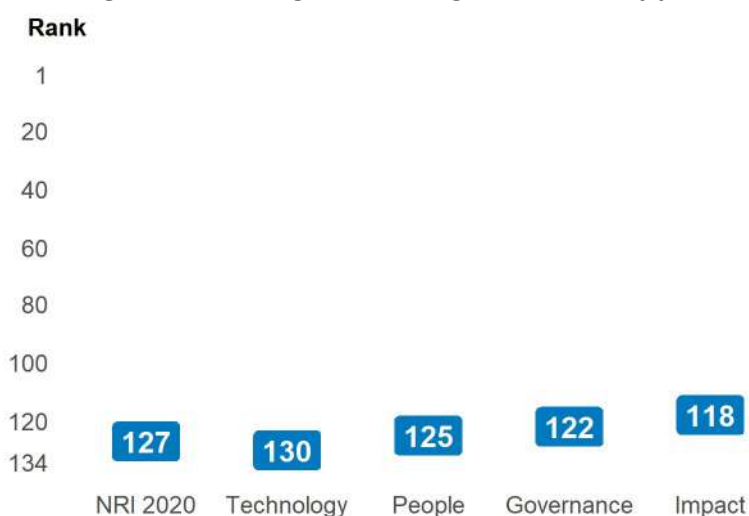
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Malawi relate to Regulation, SDG Contribution and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Content and Individuals sub-pillars.

Table 1: Malawi rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	104	Economy	124
SDG Contribution	106	Future Technologies	127
Trust	114	Inclusion	127
Businesses	119	Access	128
Quality of Life	120	Content	130
Governments	122	Individuals	130

NRI score and income

Figure 3 shows the position of Malawi in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Malawi is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
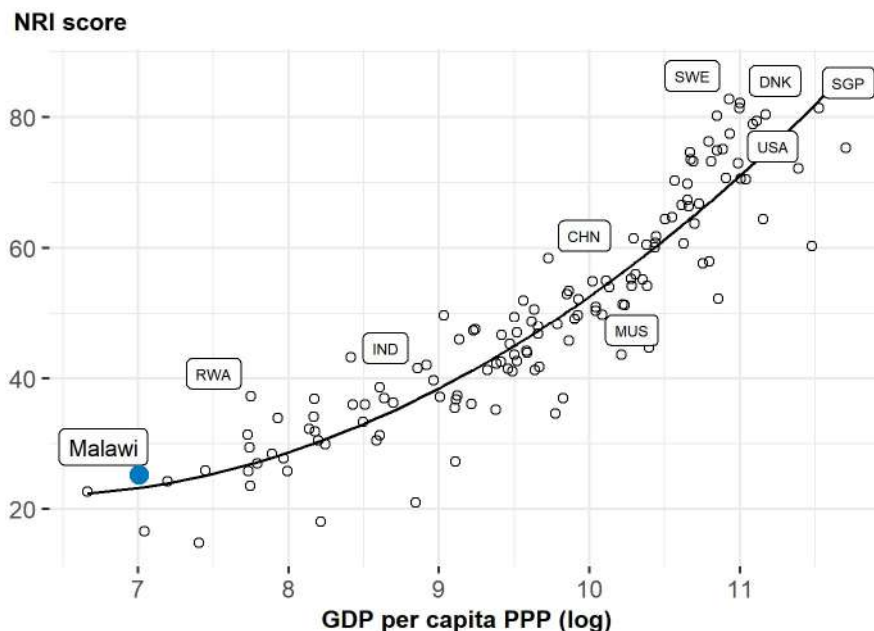
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Malawi belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Low-income countries
Malawi is ranked 9th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: governance and impact. At the sub-pillar level, it outperforms low-income countries in four of the twelve sub-pillars: Businesses, Trust, Regulation and SDG Contribution.

Africa
Malawi is ranked 25th within Africa (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in three of the twelve sub-pillars: Regulation, Quality of Life and SDG Contribution.

Figure 4: Performance of Malawi against its income group and region, overall and by pillar

Table 2: Malawi scores vs. averages of its income group and region, overall and by pillar

Dimension	Malawi	Low-income countries	Africa
NRI	25.23	25.61	30.62
Technology	11.64	16.33	21.47
People	19.55	20.61	26.75
Governance	34.90	32.58	39.31
Impact	34.83	32.92	34.94

3

Strongest and weakest indicators

The indicators where Malawi performs particularly well include High-tech exports, ICT regulatory environment, and Privacy protection by law content (Table 3). By contrast, the economy's weakest indicators include Use of virtual social networks, Mobile apps development, Mobile tariffs, and ICT skills.

Table 3: Top-ranked and bottom-ranked indicators of Malawi

Strongest indicators	Rank	Weakest indicators	Rank
High-tech exports	42	International Internet bandwidth	126
ICT regulatory environment	46	Prevalence of gig economy	126
Privacy protection by law content	58	Tertiary enrollment	127
Online access to financial account	60	Handset prices	128
SDG 7: Affordable and Clean Energy	61	Internet users	128
Rural gap in use of digital payments	75	Availability of local online content	129
e-commerce legislation	77	Mobile tariffs	130
Firms with website	78	ICT skills	130
Gender gap in Internet use	87	Mobile apps development	132
Freedom to make life choices	87	Use of virtual social networks	133

![Portulans Institute logo]

NRI 2020 At-A-Glance: Malawi

Network Readiness Index   Rank: 127 (out of 134)   Score: 25.23

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	130	11.64	C. Governance pillar	122	34.90
1st sub-pillar: Access	128	17.47	1st sub-pillar: Trust	114	21.33
2nd sub-pillar: Content	130	5.49	2nd sub-pillar: Regulation	104	51.62
3rd sub-pillar: Future Technologies	127	11.96	3rd sub-pillar: Inclusion	127	31.75
B. People pillar	125	19.55	D. Impact pillar	118	34.83
1st sub-pillar: Individuals	130	14.11	1st sub-pillar: Economy	124	9.95
2nd sub-pillar: Businesses	119	23.99	2nd sub-pillar: Quality of Life	120	42.27
3rd sub-pillar: Governments	122	20.54	3rd sub-pillar: SDG Contribution	106	52.27

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	130	11.64	**C. Governance pillar**	122	34.90
1st sub-pillar: Access	128	17.47	*1st sub-pillar: Trust*	114	21.33
1.1.1 Mobile tariffs	130	8.23	3.1.1 Secure Internet servers	122	22.46
1.1.2 Handset prices	128	4.10	3.1.2 Cybersecurity	105	28.93
1.1.3 Internet access	122	10.82	3.1.3 Online access to financial account	60	31.01
1.1.4 4G mobile network coverage	118	30.00	3.1.4 Internet shopping	113	2.93
1.1.5 Fixed-broadband subscriptions	116	0.77	*2nd sub-pillar: Regulation*	104	51.62
1.1.6 International Internet bandwidth	126	50.88	3.2.1 Regulatory quality	112	36.64
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	46	88.03
2nd sub-pillar: Content	130	5.49	3.2.3 Legal framework's adaptability to emerging technologies	122	8.87
1.2.1 GitHub commits	123	0.09	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	112	12.47	3.2.5 Privacy protection by law content	58	49.55
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	127	31.75
1.2.4 Mobile apps development	132	9.33	3.3.1 E-Participation	109	39.51
3rd sub-pillar: Future Technologies	127	11.96	3.3.2 Socioeconomic gap in use of digital payments	113	39.05
1.3.1 Adoption of emerging technologies	125	13.46	3.3.3 Availability of local online content	129	16.58
1.3.2 Investment in emerging technologies	117	19.79	3.3.4 Gender gap in Internet use	87	0.00
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	75	63.63
1.3.4 Computer software spending	110	2.63	**D. Impact pillar**	118	34.83
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	124	9.95
B. People pillar	125	19.55	4.1.1 Medium and high-tech industry	99	14.23
1st sub-pillar: Individuals	130	14.11	4.1.2 High-tech exports	42	21.81
2.1.1 Internet users	128	11.47	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	120	9.45	4.1.4 Labor productivity per employee	121	0.00
2.1.3 Use of virtual social networks	133	0.72	4.1.5 Prevalence of gig economy	126	3.78
2.1.4 Tertiary enrollment	127	0.00	*2nd sub-pillar: Quality of Life*	120	42.27
2.1.5 Adult literacy rate	96	51.29	4.2.1 Happiness	124	23.11
2.1.6 ICT skills	130	11.72	4.2.2 Freedom to make life choices	87	66.29
2nd sub-pillar: Businesses	119	23.99	4.2.3 Income inequality	102	47.16
2.2.1 Firms with website	78	41.10	4.2.4 Healthy life expectancy at birth	112	32.51
2.2.2 Ease of doing business	95	54.31	*3rd sub-pillar: SDG Contribution*	106	52.27
2.2.3 Professionals	115	6.39	4.3.1 SDG 3: Good Health and Well-Being	114	29.51
2.2.4 Technicians and associate professionals	125	0.00	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	123	18.14	4.3.3 SDG 5: Gender Equality	99	61.75
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	61	80.64
3rd sub-pillar: Governments	122	20.54	.	.	.
2.3.1 Government online services	113	40.60			
2.3.2 Publication and use of open data	93	10.51			
2.3.3 Government promotion of investment in emerging tech	117	10.51			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

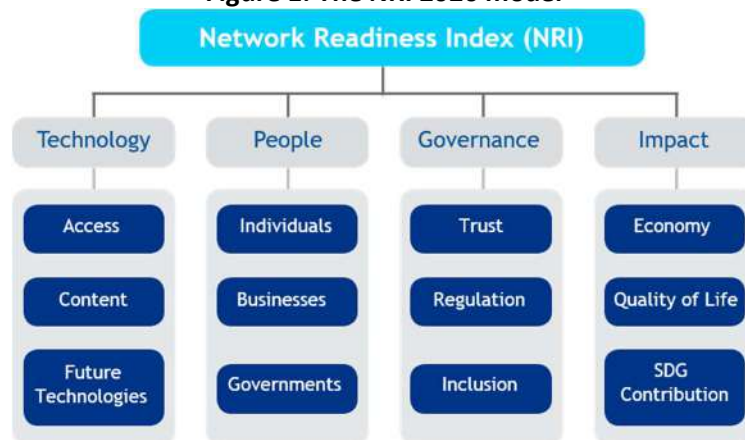**Sources**

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Network Readiness Index 2020 Malaysia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
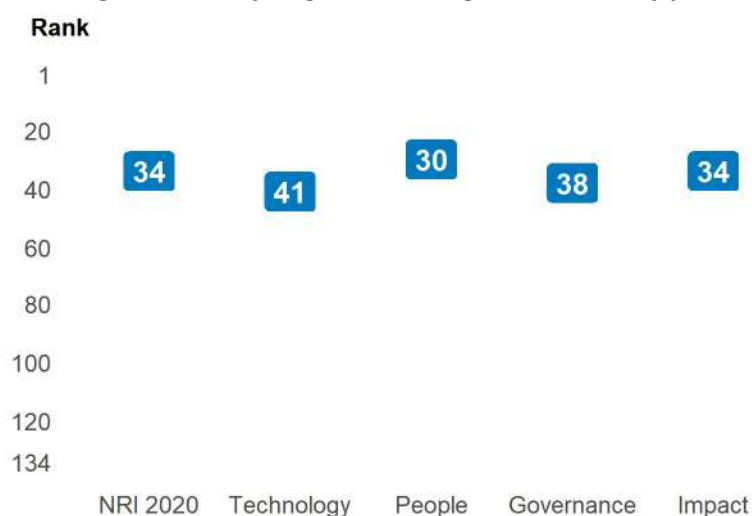
Figure 1: The NRI 2020 model

Global NRI position of Malaysia

Malaysia ranks 34th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Malaysia global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Malaysia relate to Economy, Individuals and Governments, among others (Table 1). More could be done, though, to improve the economy's performances in the Content, Quality of Life and SDG Contribution sub-pillars.

Table 1: Malaysia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Economy	13	Inclusion	47
Individuals	18	Access	48
Governments	24	Businesses	50
Regulation	29	Content	58
Future Technologies	30	Quality of Life	60
Trust	37	SDG Contribution	75

NRI score and income

Figure 3 shows the position of Malaysia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Malaysia is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
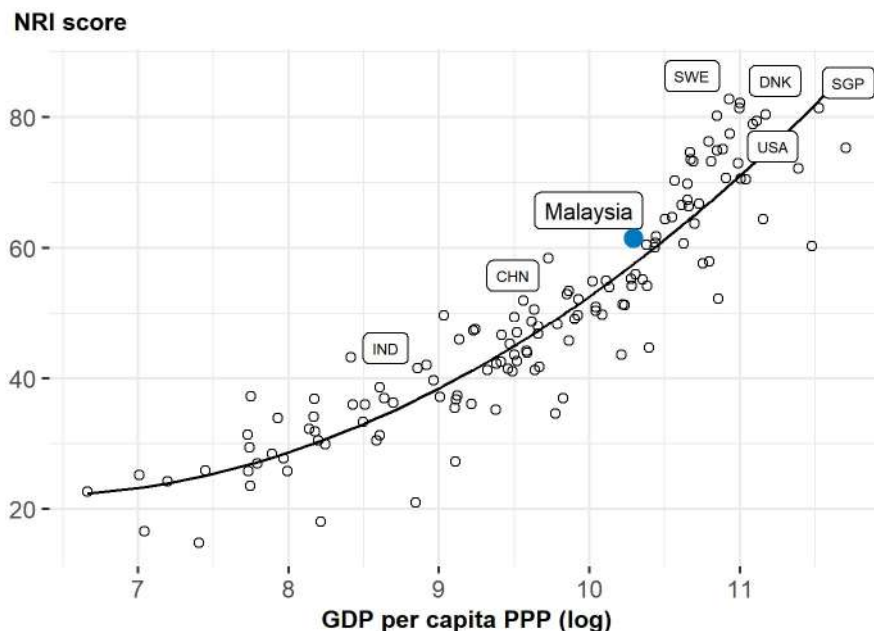
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Malaysia belongs to the group of upper-middle-income countries, where it is the best performer. The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Upper-middle-income countries
Malaysia is ranked 1st in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Economy and Quality of Life.

Asia & Pacific
Malaysia is ranked 7th within Asia & Pacific (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Asia & Pacific in nine of the twelve sub-pillars: Access, Future Technologies, Individuals, Businesses, Governments, Trust, Regulation, Inclusion and Economy.

Figure 4: Performance of Malaysia against its income group and region, overall and by pillar

Table 2: Malaysia scores vs. averages of its income group and region, overall and by pillar

Dimension	Malaysia	Upper-middle-income countries	Asia & Pacific
NRI	61.43	47.39	52.76
Technology	50.70	38.42	45.33
People	60.21	46.66	49.64
Governance	71.43	54.31	59.20
Impact	63.36	50.17	56.86

3

Strongest and weakest indicators

The indicators where Malaysia performs particularly well include e-commerce legislation, High-tech exports, and Prevalence of gig economy (Table 3). By contrast, the economy's weakest indicators include Firms with website, Rural gap in use of digital payments, and Income inequality.

Table 3: Top-ranked and bottom-ranked indicators of Malaysia

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Fixed-broadband subscriptions	66
High-tech exports	1	Tertiary enrollment	66
Prevalence of gig economy	5	GitHub commits	68
Cybersecurity	8	Handset prices	70
Use of virtual social networks	9	SDG 7: Affordable and Clean Energy	72
ICT skills	10	SDG 11: Sustainable Cities and Communities	77
Government promotion of investment in emerging technologies	10	Happiness	80
Investment in emerging technologies	12	Income inequality	83
Ease of doing business	12	Rural gap in use of digital payments	85
Active mobile-broadband subscriptions	18	Firms with website	100

NRI 2020 At-A-Glance: Malaysia

Network Readiness Index   Rank: 34 (out of 134)   Score: 61.43

Pillar/sub-pillar	Rank	Score
A. Technology pillar	41	50.70
1st sub-pillar: Access	48	74.75
2nd sub-pillar: Content	58	32.53
3rd sub-pillar: Future Technologies	30	44.82
B. People pillar	30	60.21
1st sub-pillar: Individuals	18	70.11
2nd sub-pillar: Businesses	50	48.90
3rd sub-pillar: Governments	24	61.62

Pillar/sub-pillar	Rank	Score
C. Governance pillar	38	71.43
1st sub-pillar: Trust	37	63.27
2nd sub-pillar: Regulation	29	80.51
3rd sub-pillar: Inclusion	47	70.52
D. Impact pillar	34	63.36
1st sub-pillar: Economy	13	57.53
2nd sub-pillar: Quality of Life	60	67.53
3rd sub-pillar: SDG Contribution	75	65.03

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	41	50.70
1st sub-pillar: Access	48	74.75
1.1.1 Mobile tariffs	53	68.41
1.1.2 Handset prices	70	43.54
1.1.3 Internet access	28	86.95
1.1.4 4G mobile network coverage	61	93.00
1.1.5 Fixed-broadband subscriptions	66	64.04
1.1.6 International Internet bandwidth	51	70.15
1.1.7 Internet access in schools	28	97.18
2nd sub-pillar: Content	58	32.53
1.2.1 GitHub commits	68	3.37
1.2.2 Wikipedia edits	56	49.92
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	47	70.92
3rd sub-pillar: Future Technologies	30	44.82
1.3.1 Adoption of emerging technologies	25	71.90
1.3.2 Investment in emerging technologies	12	78.89
1.3.3 ICT PCT patent applications	30	27.66
1.3.4 Computer software spending	28	30.32
1.3.5 Robot density	27	15.32
B. People pillar	30	60.21
1st sub-pillar: Individuals	18	70.11
2.1.1 Internet users	35	80.98
2.1.2 Active mobile-broadband subscriptions	18	45.82
2.1.3 Use of virtual social networks	9	81.44
2.1.4 Tertiary enrollment	66	32.63
2.1.5 Adult literacy rate	51	93.41
2.1.6 ICT skills	10	86.39
2nd sub-pillar: Businesses	50	48.90
2.2.1 Firms with website	100	25.54
2.2.2 Ease of doing business	12	90.64
2.2.3 Professionals	53	29.56
2.2.4 Technicians and associate professionals	48	44.57
2.2.5 Business use of digital tools	22	82.30
2.2.6 R&D expenditure by businesses	24	20.77
3rd sub-pillar: Governments	24	61.62
2.3.1 Government online services	24	84.84
2.3.2 Publication and use of open data	54	28.06
2.3.3 Government promotion of investment in emerging tech	10	76.69
2.3.4 R&D expenditure by governments and higher education	24	56.89

Indicator	Rank	Score
C. Governance pillar	38	71.43
1st sub-pillar: Trust	37	63.27
3.1.1 Secure Internet servers	44	70.33
3.1.2 Cybersecurity	8	95.88
3.1.3 Online access to financial account	42	43.40
3.1.4 Internet shopping	35	43.46
2nd sub-pillar: Regulation	29	80.51
3.2.1 Regulatory quality	39	66.44
3.2.2 ICT regulatory environment	46	88.03
3.2.3 Legal framework's adaptability to emerging technologies	19	67.58
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	47	70.52
3.3.1 E-Participation	29	85.18
3.3.2 Socioeconomic gap in use of digital payments	49	76.98
3.3.3 Availability of local online content	38	76.62
3.3.4 Gender gap in Internet use	65	56.70
3.3.5 Rural gap in use of digital payments	85	57.10
D. Impact pillar	34	63.36
1st sub-pillar: Economy	13	57.53
4.1.1 Medium and high-tech industry	21	56.32
4.1.2 High-tech exports	1	100.00
4.1.3 PCT patent applications	45	2.18
4.1.4 Labor productivity per employee	46	38.94
4.1.5 Prevalence of gig economy	5	90.19
2nd sub-pillar: Quality of Life	60	67.53
4.2.1 Happiness	80	53.76
4.2.2 Freedom to make life choices	18	91.93
4.2.3 Income inequality	83	56.70
4.2.4 Healthy life expectancy at birth	60	67.72
3rd sub-pillar: SDG Contribution	75	65.03
4.3.1 SDG 3: Good Health and Well-Being	62	73.77
4.3.2 SDG 4: Quality Education	46	43.23
4.3.3 SDG 5: Gender Equality	60	75.77
4.3.4 SDG 7: Affordable and Clean Energy	72	77.38
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* Confidential data

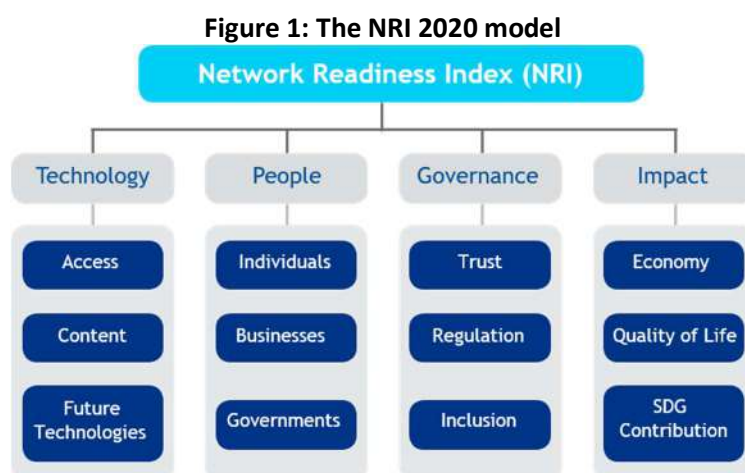**Sources**

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Network Readiness Index 2020 Mali

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Mali

Mali ranks 123rd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Mali global ranking, overall and by pillar
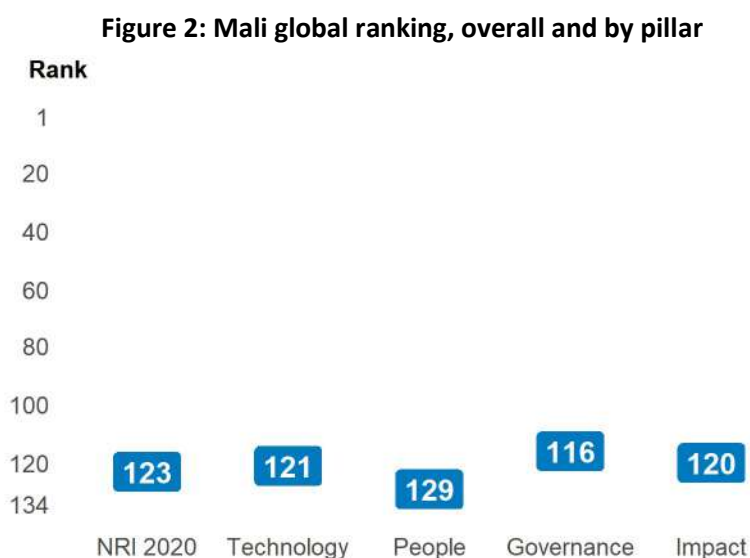
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Mali relate to Content, Inclusion and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Governments and Individuals sub-pillars.

Table 1: Mali rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Content	100	SDG Contribution	116
Inclusion	107	Businesses	118
Regulation	108	Access	125
Future Technologies	111	Trust	126
Quality of Life	112	Governments	129
Economy	114	Individuals	131

NRI score and income

Figure 3 shows the position of Mali in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Mali is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
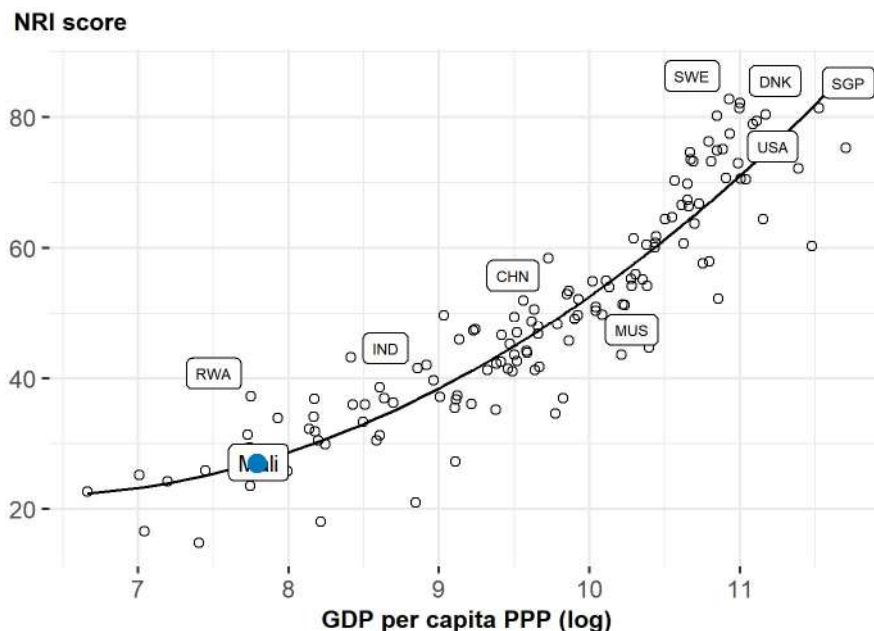
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Mali belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Low-income countries
Mali is ranked 6th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, governance and impact. At the sub-pillar level, it outperforms low-income countries in seven of the twelve sub-pillars: Access, Content, Businesses, Regulation, Inclusion, Quality of Life and SDG Contribution.

Africa
Mali is ranked 21st within Africa (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in four of the twelve sub-pillars: Content, Regulation, Inclusion and Quality of Life.

Figure 4: Performance of Mali against its income group and region, overall and by pillar

Table 2: Mali scores vs. averages of its income group and region, overall and by pillar

Dimension	Mali	Low-income countries	Africa
NRI	27.00	25.61	30.62
Technology	19.04	16.33	21.47
People	18.17	20.61	26.75
Governance	36.59	32.58	39.31
Impact	34.21	32.92	34.94

Strongest and weakest indicators

The indicators where Mali performs particularly well include SDG 7: Affordable and Clean Energy, Income inequality, and Socioeconomic gap in use of digital payments (Table 3). By contrast, the economy's weakest indicators include SDG 3: Good Health and Well-Being, Internet users, Mobile tariffs, Cybersecurity, Healthy life expectancy at birth, and SDG 5: Gender Equality.

Table 3: Top-ranked and bottom-ranked indicators of Mali

Strongest indicators	Rank	Weakest indicators	Rank
SDG 7: Affordable and Clean Energy	13	GitHub commits	124
Income inequality	37	Legal framework's adaptability to emerging technologies	124
Socioeconomic gap in use of digital payments	47	Secure Internet servers	125
Online access to financial account	72	Handset prices	127
e-commerce legislation	77	Mobile tariffs	128
ICT regulatory environment	81	Cybersecurity	128
Firms with website	82	Healthy life expectancy at birth	128
R&D expenditure by governments and higher education	86	SDG 5: Gender Equality	128
Investment in emerging technologies	89	Internet users	129
Prevalence of gig economy	89	SDG 3: Good Health and Well-Being	130

NRI 2020 At-A-Glance: Mali

Network Readiness Index — Rank: 123 (out of 134) — Score: 27.00

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	121	19.04	C. Governance pillar	116	36.59
1st sub-pillar: Access	125	22.37	1st sub-pillar: Trust	126	13.69
2nd sub-pillar: Content	100	17.29	2nd sub-pillar: Regulation	108	50.50
3rd sub-pillar: Future Technologies	111	17.47	3rd sub-pillar: Inclusion	107	45.58
B. People pillar	129	18.17	D. Impact pillar	120	34.21
1st sub-pillar: Individuals	131	13.62	1st sub-pillar: Economy	114	12.69
2nd sub-pillar: Businesses	118	24.71	2nd sub-pillar: Quality of Life	112	46.65
3rd sub-pillar: Governments	129	16.16	3rd sub-pillar: SDG Contribution	116	43.29

The Network Readiness Index in detail

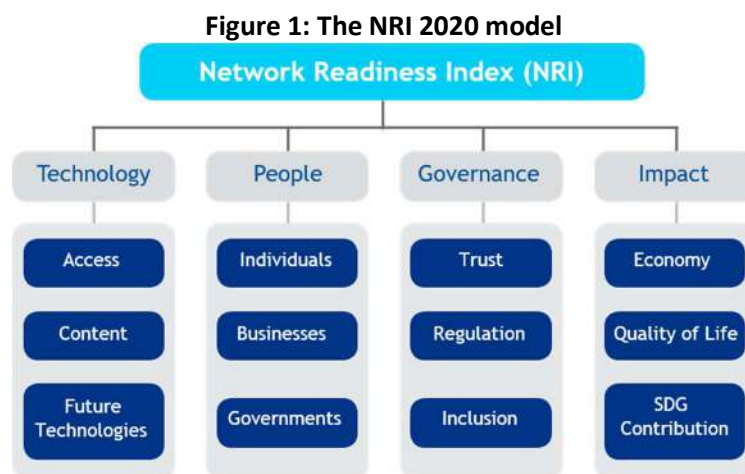| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	121	19.04	**C. Governance pillar**	116	36.59
1st sub-pillar: Access	125	22.37	*1st sub-pillar: Trust*	126	13.69
1.1.1 Mobile tariffs	128	18.92	3.1.1 Secure Internet servers	125	18.87
1.1.2 Handset prices	127	7.48	3.1.2 Cybersecurity	128	8.34
1.1.3 Internet access	114	17.15	3.1.3 Online access to financial account	72	24.23
1.1.4 4G mobile network coverage	116	31.00	3.1.4 Internet shopping	108	3.32
1.1.5 Fixed-broadband subscriptions	105	6.25	*2nd sub-pillar: Regulation*	108	50.50
1.1.6 International Internet bandwidth	122	53.43	3.2.1 Regulatory quality	106	39.31
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	81	80.31
2nd sub-pillar: Content	100	17.29	3.2.3 Legal framework's adaptability to emerging technologies	124	7.40
1.2.1 GitHub commits	124	0.07	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	111	12.67	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	107	45.58
1.2.4 Mobile apps development	108	39.14	3.3.1 E-Participation	123	29.63
3rd sub-pillar: Future Technologies	111	17.47	3.3.2 Socioeconomic gap in use of digital payments	47	78.28
1.3.1 Adoption of emerging technologies	120	16.80	3.3.3 Availability of local online content	114	29.58
1.3.2 Investment in emerging technologies	89	33.17	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	109	44.85
1.3.4 Computer software spending	112	2.43	**D. Impact pillar**	120	34.21
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	114	12.69
B. People pillar	129	18.17	4.1.1 Medium and high-tech industry	NA	NA
1st sub-pillar: Individuals	131	13.62	4.1.2 High-tech exports	111	2.36
2.1.1 Internet users	129	10.66	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	117	10.70	4.1.4 Labor productivity per employee	109	3.12
2.1.3 Use of virtual social networks	119	6.70	4.1.5 Prevalence of gig economy	89	32.59
2.1.4 Tertiary enrollment	122	2.72	*2nd sub-pillar: Quality of Life*	112	46.65
2.1.5 Adult literacy rate	106	16.95	4.2.1 Happiness	98	45.11
2.1.6 ICT skills	105	34.02	4.2.2 Freedom to make life choices	117	50.25
2nd sub-pillar: Businesses	118	24.71	4.2.3 Income inequality	37	77.32
2.2.1 Firms with website	82	37.96	4.2.4 Healthy life expectancy at birth	128	13.92
2.2.2 Ease of doing business	117	40.17	*3rd sub-pillar: SDG Contribution*	116	43.29
2.2.3 Professionals	121	3.99	4.3.1 SDG 3: Good Health and Well-Being	130	16.39
2.2.4 Technicians and associate professionals	114	8.35	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	114	33.07	4.3.3 SDG 5: Gender Equality	128	20.31
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	13	91.62
3rd sub-pillar: Governments	129	16.16	.	.	.
2.3.1 Government online services	122	32.73			
2.3.2 Publication and use of open data	105	2.46			
2.3.3 Government promotion of investment in emerging tech	112	16.64			
2.3.4 R&D expenditure by governments and higher education	86	12.82			

* Confidential data

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Network Readiness Index 2020 Malta

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Malta

Malta ranks 26th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Malta global ranking, overall and by pillar
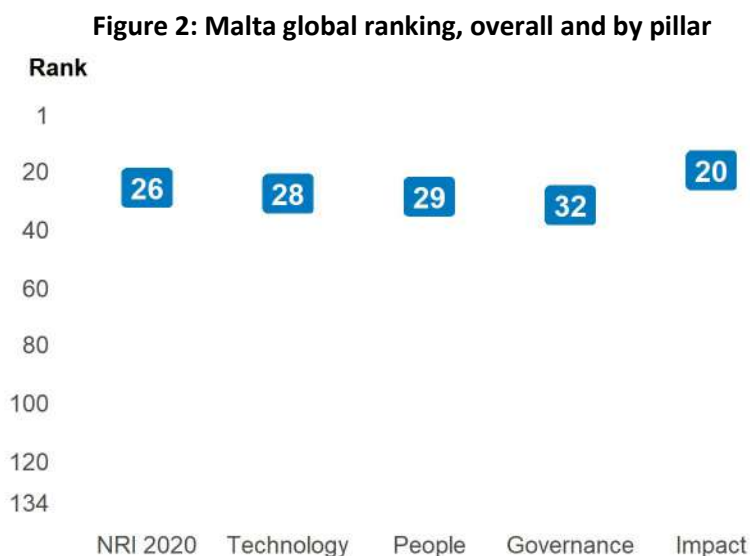
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Malta relate to Regulation, Quality of Life and SDG Contribution, among others (Table 1). More could be done, though, to improve the economy's performances in the Inclusion, Businesses and Trust sub-pillars.

Table 1: Malta rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	13	Access	31
Quality of Life	13	Governments	31
SDG Contribution	15	Future Technologies	33
Content	21	Inclusion	37
Individuals	22	Businesses	38
Economy	27	Trust	41

NRI score and income

Figure 3 shows the position of Malta in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Malta is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
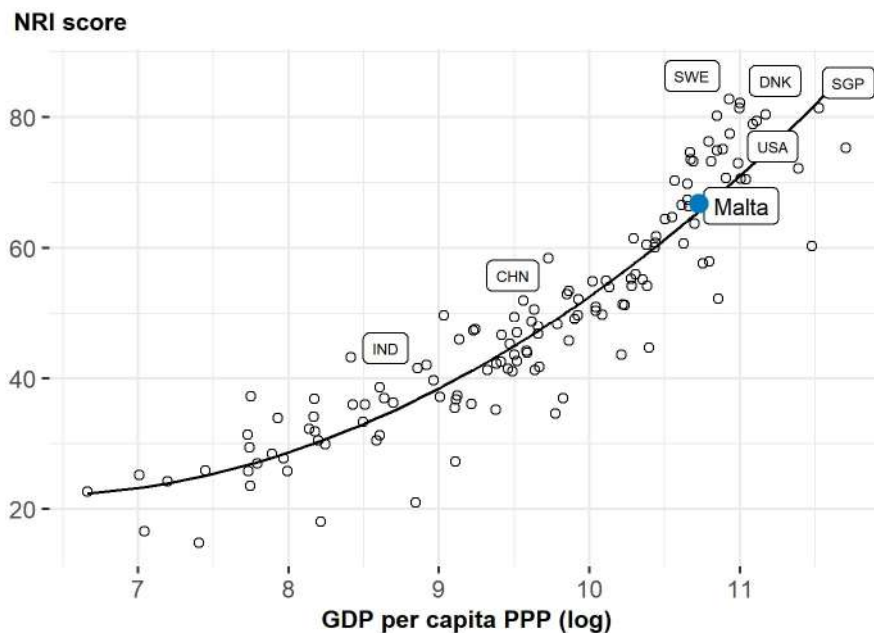
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Malta belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Malta is ranked 26th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: impact. At the sub-pillar level, it outperforms high-income countries in six of the twelve sub-pillars: Content, Individuals, Regulation, Economy, Quality of Life and SDG Contribution.

Europe
Malta is ranked 18th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in nine of the twelve sub-pillars: Access, Content, Individuals, Governments, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Malta against its income group and region, overall and by pillar
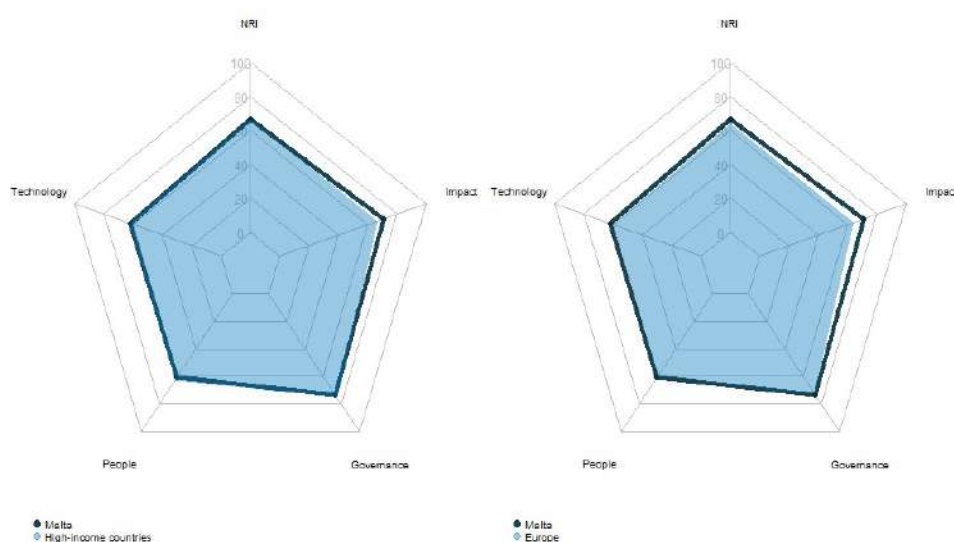
Table 2: Malta scores vs. averages of its income group and region, overall and by pillar

Dimension	Malta	High-income countries	Europe
NRI	66.73	66.82	64.21
Technology	61.60	62.51	59.93
People	60.91	62.72	59.89
Governance	73.38	75.41	72.98
Impact	71.03	66.63	64.04

3

Strongest and weakest indicators

The indicators where Malta performs particularly well include 4G mobile network coverage, e-commerce legislation, and Fixed-broadband subscriptions (Table 3). By contrast, the economy's weakest indicators include Ease of doing business, Cybersecurity, and R&D expenditure by governments and higher education.

Table 3: Top-ranked and bottom-ranked indicators of Malta

Strongest indicators	Rank	Weakest indicators	Rank
4G mobile network coverage	1	Business use of digital tools	45
e-commerce legislation	1	R&D expenditure by businesses	46
Fixed-broadband subscriptions	2	Adult literacy rate	52
SDG 7: Affordable and Clean Energy	2	Availability of local online content	53
Use of virtual social networks	4	Tertiary enrollment	56
ICT regulatory environment	5	Mobile tariffs	66
International Internet bandwidth	9	SDG 5: Gender Equality	73
High-tech exports	10	R&D expenditure by governments and higher education	78
Firms with website	13	Cybersecurity	82
Government promotion of investment in emerging technologies	14	Ease of doing business	83

NRI 2020 At-A-Glance: Malta

Network Readiness Index   Rank: 26 (out of 134)   Score: 66.73

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	28	61.60	C. Governance pillar	32	73.38
1st sub-pillar: Access	31	80.67	1st sub-pillar: Trust	41	59.02
2nd sub-pillar: Content	21	62.87	2nd sub-pillar: Regulation	13	86.29
3rd sub-pillar: Future Technologies	33	41.26	3rd sub-pillar: Inclusion	37	74.83
B. People pillar	29	60.91	D. Impact pillar	20	71.03
1st sub-pillar: Individuals	22	69.29	1st sub-pillar: Economy	27	45.53
2nd sub-pillar: Businesses	38	56.44	2nd sub-pillar: Quality of Life	13	86.61
3rd sub-pillar: Governments	31	56.99	3rd sub-pillar: SDG Contribution	15	80.94

The Network Readiness Index in detail

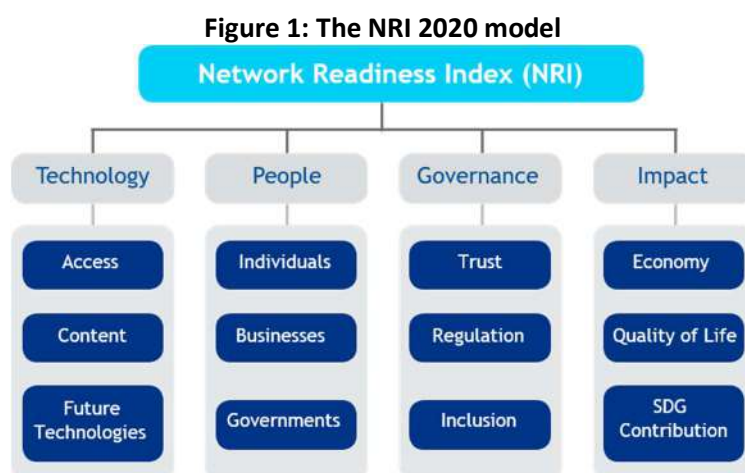| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	28	61.60	**C. Governance pillar**	32	73.38
1st sub-pillar: Access	31	80.67	*1st sub-pillar: Trust*	41	59.02
1.1.1 Mobile tariffs	66	61.50	3.1.1 Secure Internet servers	39	74.16
1.1.2 Handset prices	40	58.24	3.1.2 Cybersecurity	82	51.03
1.1.3 Internet access	33	84.34	3.1.3 Online access to financial account	31	51.17
1.1.4 4G mobile network coverage	1	100.00	3.1.4 Internet shopping	25	59.74
1.1.5 Fixed-broadband subscriptions	2	99.73	*2nd sub-pillar: Regulation*	13	86.29
1.1.6 International Internet bandwidth	9	80.19	3.2.1 Regulatory quality	21	80.86
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	5	97.30
2nd sub-pillar: Content	21	62.87	3.2.3 Legal framework's adaptability to emerging technologies	21	67.02
1.2.1 GitHub commits	20	45.79	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	44	64.81	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	37	74.83
1.2.4 Mobile apps development	15	87.62	3.3.1 E-Participation	38	82.71
3rd sub-pillar: Future Technologies	33	41.26	3.3.2 Socioeconomic gap in use of digital payments	34	83.08
1.3.1 Adoption of emerging technologies	37	61.51	3.3.3 Availability of local online content	53	66.43
1.3.2 Investment in emerging technologies	38	53.67	3.3.4 Gender gap in Internet use	20	66.93
1.3.3 ICT PCT patent applications	23	50.44	3.3.5 Rural gap in use of digital payments	34	74.97
1.3.4 Computer software spending	33	29.12	**D. Impact pillar**	20	71.03
1.3.5 Robot density	34	11.58	*1st sub-pillar: Economy*	27	45.53
B. People pillar	29	60.91	4.1.1 Medium and high-tech industry	44	41.44
1st sub-pillar: Individuals	22	69.29	4.1.2 High-tech exports	10	55.79
2.1.1 Internet users	34	81.18	4.1.3 PCT patent applications	27	10.33
2.1.2 Active mobile-broadband subscriptions	23	43.31	4.1.4 Labor productivity per employee	26	57.58
2.1.3 Use of virtual social networks	4	91.75	4.1.5 Prevalence of gig economy	33	62.52
2.1.4 Tertiary enrollment	56	39.36	*2nd sub-pillar: Quality of Life*	13	86.61
2.1.5 Adult literacy rate	52	92.96	4.2.1 Happiness	22	79.41
2.1.6 ICT skills	40	67.18	4.2.2 Freedom to make life choices	14	93.32
2nd sub-pillar: Businesses	38	56.44	4.2.3 Income inequality	17	87.11
2.2.1 Firms with website	13	85.68	4.2.4 Healthy life expectancy at birth	18	86.60
2.2.2 Ease of doing business	83	63.51	*3rd sub-pillar: SDG Contribution*	15	80.94
2.2.3 Professionals	27	45.92	4.3.1 SDG 3: Good Health and Well-Being	18	88.52
2.2.4 Technicians and associate professionals	20	63.49	4.3.2 SDG 4: Quality Education	38	55.06
2.2.5 Business use of digital tools	45	71.44	4.3.3 SDG 5: Gender Equality	73	73.42
2.2.6 R&D expenditure by businesses	46	8.61	4.3.4 SDG 7: Affordable and Clean Energy	2	99.57
3rd sub-pillar: Governments	31	56.99	.	.	.
2.3.1 Government online services	40	80.61			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	14	73.44			
2.3.4 R&D expenditure by governments and higher education	78	16.93			

* Confidential data

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Network Readiness Index 2020 Mauritius

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Mauritius

Mauritius ranks 61st out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Mauritius global ranking, overall and by pillar
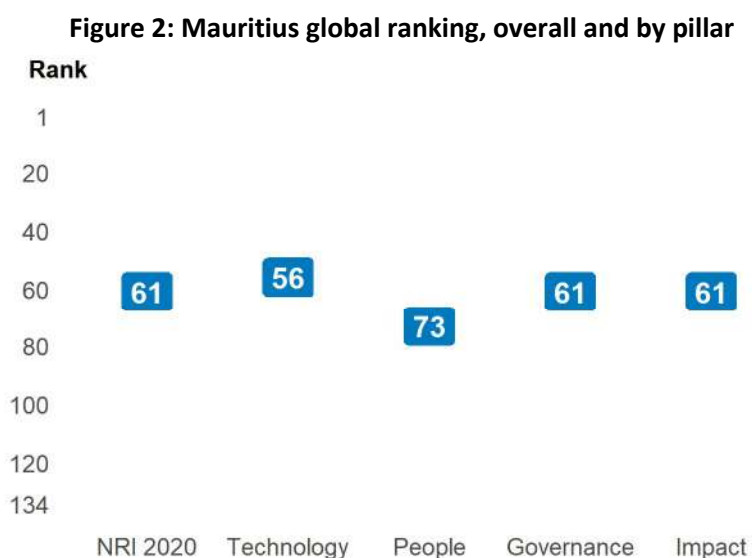
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Mauritius relate to Quality of Life, Content and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Regulation, Governments and Economy sub-pillars.

Table 1: Mauritius rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	43	Inclusion	68
Content	56	Individuals	71
Future Technologies	58	Businesses	72
SDG Contribution	59	Regulation	73
Trust	61	Governments	74
Access	64	Economy	79

NRI score and income

Figure 3 shows the position of Mauritius in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Mauritius is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
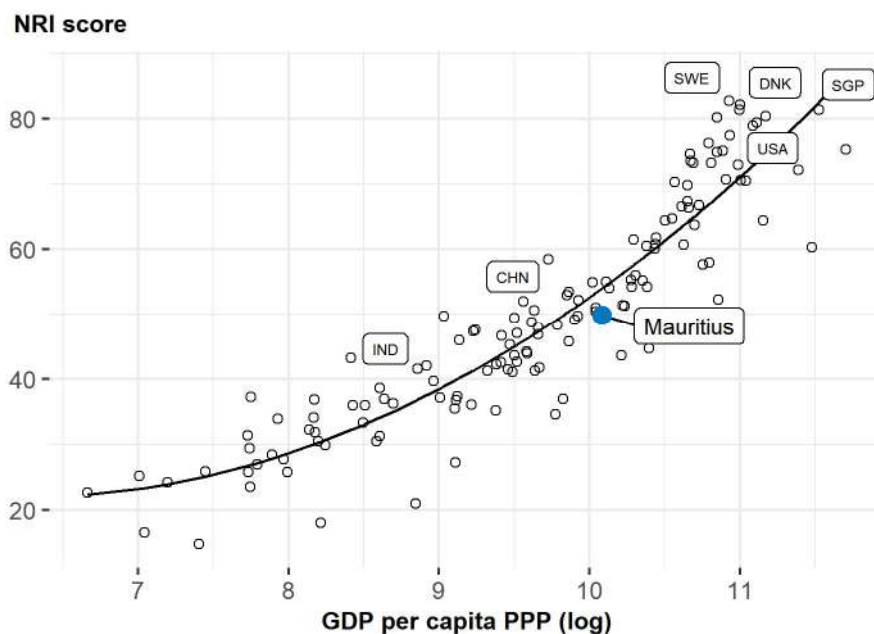
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Mauritius belongs to the group of high-income countries, where the best performer is Sweden (SWE). It is the top performer of its region, Africa.

Performance against its income group and region

High-income countries
Mauritius is ranked 48th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it trails high-income countries in all of them.

Africa
Mauritius is ranked 1st within Africa (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of Mauritius against its income group and region, overall and by pillar
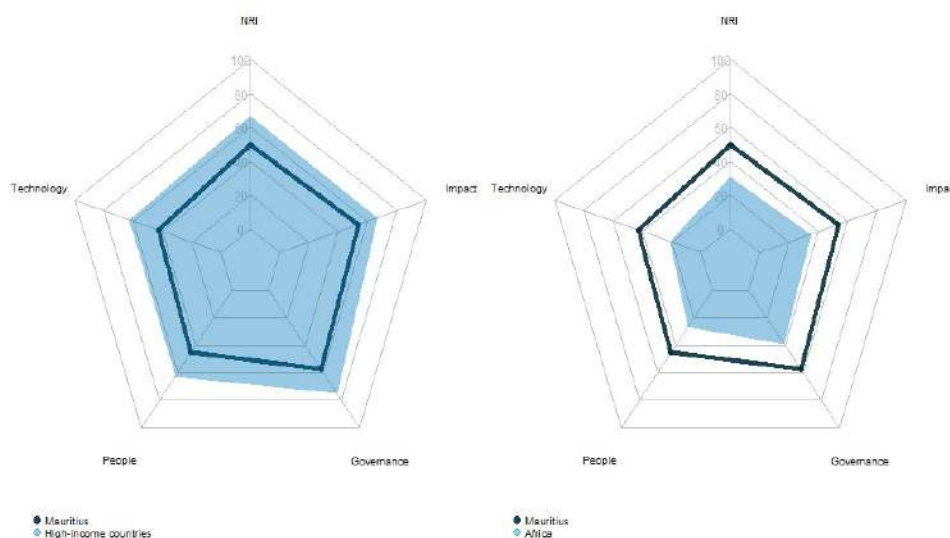
Table 2: Mauritius scores vs. averages of its income group and region, overall and by pillar

Dimension	Mauritius	High-income countries	Africa
NRI	49.83	66.82	30.62
Technology	42.81	62.51	21.47
People	45.18	62.72	26.75
Governance	57.68	75.41	39.31
Impact	53.63	66.63	34.94

Strongest and weakest indicators

The indicators where Mauritius performs particularly well include SDG 7: Affordable and Clean Energy, Ease of doing business, and Cybersecurity (Table 3). By contrast, the economy's weakest indicators include High-tech exports, Medium and high-tech industry, and Firms with website.

Table 3: Top-ranked and bottom-ranked indicators of Mauritius

Strongest indicators	Rank	Weakest indicators	Rank
SDG 7: Affordable and Clean Energy	9	R&D expenditure by businesses	83
Ease of doing business	13	Online access to financial account	83
Cybersecurity	15	Legal framework's adaptability to emerging technologies	84
International Internet bandwidth	22	Prevalence of gig economy	84
4G mobile network coverage	24	Business use of digital tools	85
Use of virtual social networks	31	Adoption of emerging technologies	86
Regulatory quality	31	SDG 3: Good Health and Well-Being	92
Freedom to make life choices	32	Firms with website	95
Happiness	42	Medium and high-tech industry	102
GitHub commits	45	High-tech exports	105

NRI 2020 At-A-Glance: Mauritius

Network Readiness Index   Rank: 61 (out of 134)   Score: 49.83

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	56	42.81	C. Governance pillar	61	57.68
1st sub-pillar: Access	64	65.61	1st sub-pillar: Trust	61	45.22
2nd sub-pillar: Content	56	33.59	2nd sub-pillar: Regulation	73	64.58
3rd sub-pillar: Future Technologies	58	29.23	3rd sub-pillar: Inclusion	68	63.25
B. People pillar	73	45.18	D. Impact pillar	61	53.63
1st sub-pillar: Individuals	71	54.15	1st sub-pillar: Economy	79	21.06
2nd sub-pillar: Businesses	72	40.67	2nd sub-pillar: Quality of Life	43	72.58
3rd sub-pillar: Governments	74	40.74	3rd sub-pillar: SDG Contribution	59	67.26

The Network Readiness Index in detail

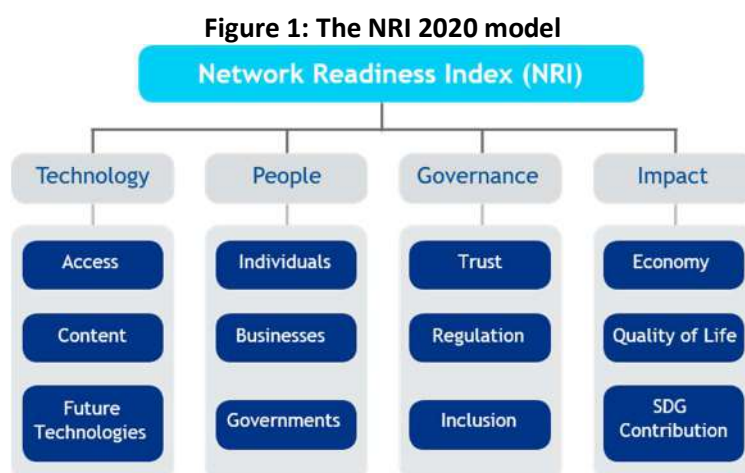| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	56	42.81	**C. Governance pillar**	61	57.68
1st sub-pillar: Access	64	65.61	*1st sub-pillar: Trust*	61	45.22
1.1.1 Mobile tariffs	68	60.96	3.1.1 Secure Internet servers	70	49.83
1.1.2 Handset prices	58	47.59	3.1.2 Cybersecurity	15	94.47
1.1.3 Internet access	65	69.65	3.1.3 Online access to financial account	83	18.11
1.1.4 4G mobile network coverage	24	99.00	3.1.4 Internet shopping	62	18.46
1.1.5 Fixed-broadband subscriptions	46	80.82	*2nd sub-pillar: Regulation*	73	64.58
1.1.6 International Internet bandwidth	22	74.22	3.2.1 Regulatory quality	31	74.04
1.1.7 Internet access in schools	52	27.04	3.2.2 ICT regulatory environment	78	80.89
2nd sub-pillar: Content	56	33.59	3.2.3 Legal framework's adaptability to emerging technologies	84	30.79
1.2.1 GitHub commits	45	12.83	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	59	47.16	3.2.5 Privacy protection by law content	49	62.18
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	68	63.25
1.2.4 Mobile apps development	63	65.49	3.3.1 E-Participation	79	62.97
3rd sub-pillar: Future Technologies	58	29.23	3.3.2 Socioeconomic gap in use of digital payments	53	73.97
1.3.1 Adoption of emerging technologies	86	38.18	3.3.3 Availability of local online content	77	54.02
1.3.2 Investment in emerging technologies	81	34.96	3.3.4 Gender gap in Internet use	70	53.85
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	50	71.42
1.3.4 Computer software spending	74	14.55	**D. Impact pillar**	61	53.63
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	79	21.06
B. People pillar	73	45.18	4.1.1 Medium and high-tech industry	102	12.23
1st sub-pillar: Individuals	71	54.15	4.1.2 High-tech exports	105	4.06
2.1.1 Internet users	82	57.67	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	83	24.92	4.1.4 Labor productivity per employee	54	32.10
2.1.3 Use of virtual social networks	31	68.04	4.1.5 Prevalence of gig economy	84	35.85
2.1.4 Tertiary enrollment	70	29.29	*2nd sub-pillar: Quality of Life*	43	72.58
2.1.5 Adult literacy rate	64	88.86	4.2.1 Happiness	42	69.74
2.1.6 ICT skills	57	56.09	4.2.2 Freedom to make life choices	32	88.08
2nd sub-pillar: Businesses	72	40.67	4.2.3 Income inequality	65	67.53
2.2.1 Firms with website	95	30.65	4.2.4 Healthy life expectancy at birth	72	64.96
2.2.2 Ease of doing business	13	90.63	*3rd sub-pillar: SDG Contribution*	59	67.26
2.2.3 Professionals	69	23.20	4.3.1 SDG 3: Good Health and Well-Being	92	57.38
2.2.4 Technicians and associate professionals	45	47.68	4.3.2 SDG 4: Quality Education	55	35.64
2.2.5 Business use of digital tools	85	51.57	4.3.3 SDG 5: Gender Equality	56	76.47
2.2.6 R&D expenditure by businesses	83	0.29	4.3.4 SDG 7: Affordable and Clean Energy	9	92.12
3rd sub-pillar: Governments	74	40.74	.	.	.
2.3.1 Government online services	68	69.09			
2.3.2 Publication and use of open data	59	26.30			
2.3.3 Government promotion of investment in emerging tech	59	39.15			
2.3.4 R&D expenditure by governments and higher education	60	28.41			

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Network Readiness Index 2020 Mexico

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Mexico

Mexico ranks 63rd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Mexico global ranking, overall and by pillar
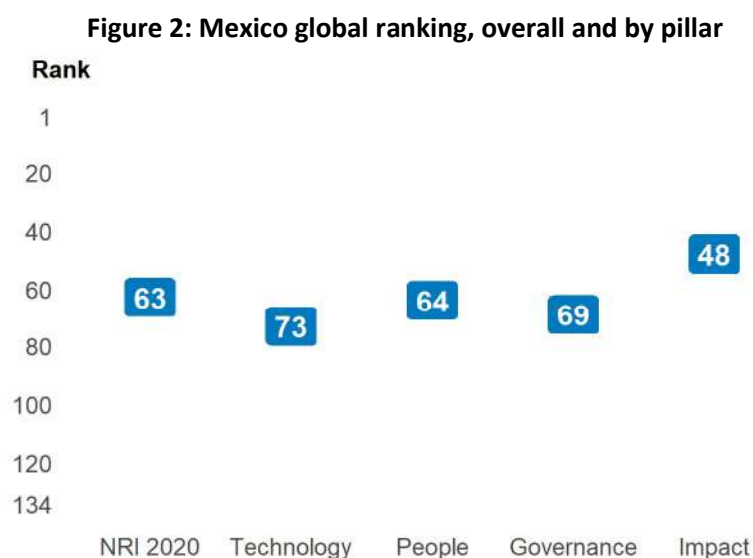
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Mexico relate to Governments, Regulation and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Businesses and Inclusion sub-pillars.

Table 1: Mexico rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	37	Individuals	73
Regulation	40	Future Technologies	75
Economy	44	Content	76
Quality of Life	51	Trust	76
SDG Contribution	57	Businesses	80
Access	70	Inclusion	90

NRI score and income

Figure 3 shows the position of Mexico in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Mexico is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
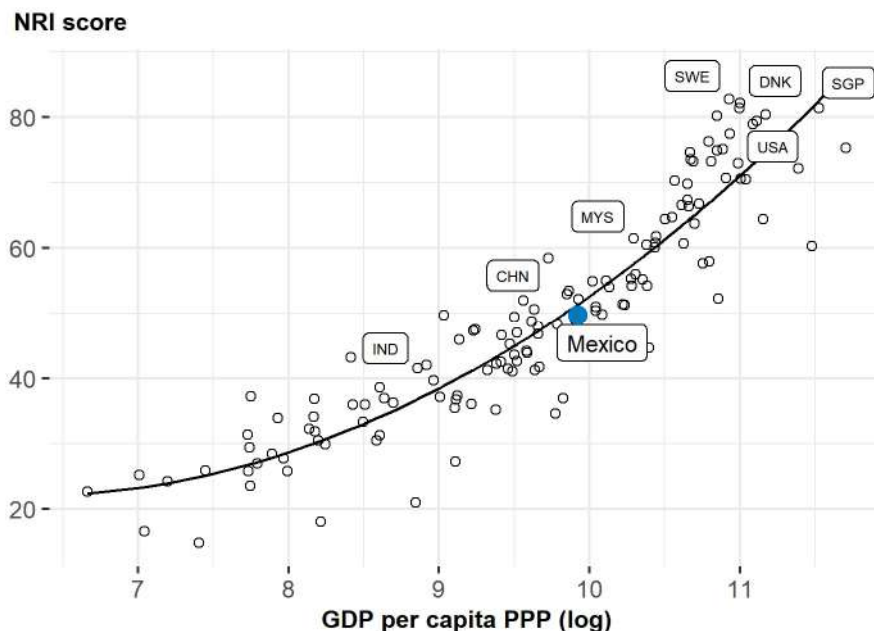
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Mexico belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

2

Performance against its income group and region

Upper-middle-income countries

Mexico is ranked 14th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, people, governance and impact. At the sub-pillar level, it outperforms upper-middle-income countries in seven of the twelve sub-pillars: Access, Future Technologies, Governments, Regulation, Economy, Quality of Life and SDG Contribution.

The Americas

Mexico is ranked 8th within The Americas (Figure 4, right panel). It has a score above the regional average in three of the four pillars: nri.score, people, governance and impact. With regard to sub-pillars, it outperforms the average in The Americas in five of the twelve sub-pillars: Access, Governments, Regulation, Economy and Quality of Life.

Figure 4: Performance of Mexico against its income group and region, overall and by pillar

Table 2: Mexico scores vs. averages of its income group and region, overall and by pillar

Dimension	Mexico	Upper-middle-income countries	The Americas
NRI	49.67	47.39	47.67
Technology	37.92	38.42	38.26
People	48.89	46.66	45.24
Governance	54.92	54.31	54.59
Impact	56.96	50.17	52.61

Strongest and weakest indicators

The indicators where Mexico performs particularly well include e-commerce legislation, Publication and use of open data, and Privacy protection by law content (Table 3). By contrast, the economy's weakest indicators include Rural gap in use of digital payments, Income inequality, and Socioeconomic gap in use of digital payments.

Table 3: Top-ranked and bottom-ranked indicators of Mexico

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Internet shopping	79
Publication and use of open data	11	SDG 5: Gender Equality	83
Privacy protection by law content	15	Firms with website	84
High-tech exports	21	Secure Internet servers	84
Medium and high-tech industry	25	4G mobile network coverage	88
Use of virtual social networks	27	Online access to financial account	90
Freedom to make life choices	27	ICT skills	94
ICT regulatory environment	31	Socioeconomic gap in use of digital payments	100
Happiness	32	Income inequality	104
Robot density	33	Rural gap in use of digital payments	120

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NRI 2020 At-A-Glance: Mexico

Network Readiness Index   Rank: 63 (out of 134)   Score: 49.67

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	73	37.92	C. Governance pillar	69	54.92
1st sub-pillar: Access	70	61.70	1st sub-pillar: Trust	76	34.30
2nd sub-pillar: Content	76	25.69	2nd sub-pillar: Regulation	40	76.65
3rd sub-pillar: Future Technologies	75	26.36	3rd sub-pillar: Inclusion	90	53.80
B. People pillar	64	48.89	D. Impact pillar	48	56.96
1st sub-pillar: Individuals	73	53.82	1st sub-pillar: Economy	44	33.36
2nd sub-pillar: Businesses	80	38.08	2nd sub-pillar: Quality of Life	51	70.02
3rd sub-pillar: Governments	37	54.76	3rd sub-pillar: SDG Contribution	57	67.51

The Network Readiness Index in detail

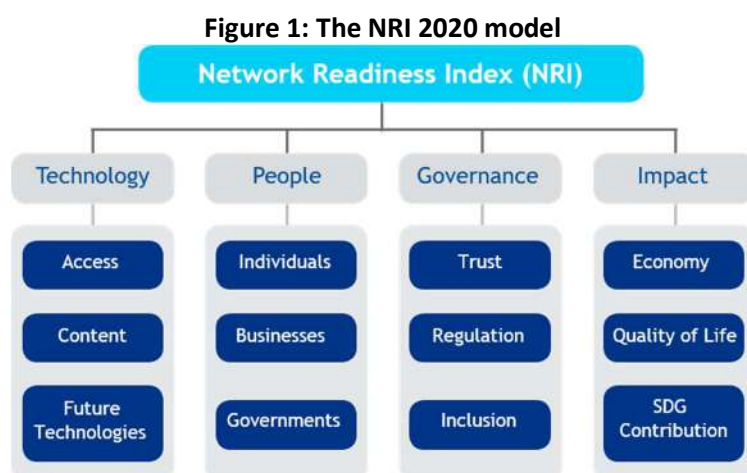| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	73	37.92	**C. Governance pillar**	69	54.92
1st sub-pillar: Access	70	61.70	*1st sub-pillar: Trust*	76	34.30
1.1.1 Mobile tariffs	79	56.51	3.1.1 Secure Internet servers	84	44.73
1.1.2 Handset prices	36	60.23	3.1.2 Cybersecurity	66	67.28
1.1.3 Internet access	79	52.74	3.1.3 Online access to financial account	90	16.28
1.1.4 4G mobile network coverage	88	70.91	3.1.4 Internet shopping	79	8.94
1.1.5 Fixed-broadband subscriptions	41	86.62	*2nd sub-pillar: Regulation*	40	76.65
1.1.6 International Internet bandwidth	78	66.04	3.2.1 Regulatory quality	61	54.74
1.1.7 Internet access in schools	50	38.88	3.2.2 ICT regulatory environment	31	91.51
2nd sub-pillar: Content	76	25.69	3.2.3 Legal framework's adaptability to emerging technologies	42	50.43
1.2.1 GitHub commits	72	2.99	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	78	37.04	3.2.5 Privacy protection by law content	15	86.57
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	90	53.80
1.2.4 Mobile apps development	72	58.98	3.3.1 E-Participation	41	81.48
3rd sub-pillar: Future Technologies	75	26.36	3.3.2 Socioeconomic gap in use of digital payments	100	44.00
1.3.1 Adoption of emerging technologies	47	55.16	3.3.3 Availability of local online content	66	60.30
1.3.2 Investment in emerging technologies	65	39.74	3.3.4 Gender gap in Internet use	54	59.21
1.3.3 ICT PCT patent applications	54	5.75	3.3.5 Rural gap in use of digital payments	120	24.03
1.3.4 Computer software spending	66	19.14	**D. Impact pillar**	48	56.96
1.3.5 Robot density	33	12.04	*1st sub-pillar: Economy*	44	33.36
B. People pillar	64	48.89	4.1.1 Medium and high-tech industry	25	53.10
1st sub-pillar: Individuals	73	53.82	4.1.2 High-tech exports	21	39.21
2.1.1 Internet users	70	65.07	4.1.3 PCT patent applications	60	0.64
2.1.2 Active mobile-broadband subscriptions	75	26.82	4.1.4 Labor productivity per employee	59	29.01
2.1.3 Use of virtual social networks	27	69.07	4.1.5 Prevalence of gig economy	60	44.84
2.1.4 Tertiary enrollment	71	29.02	*2nd sub-pillar: Quality of Life*	51	70.02
2.1.5 Adult literacy rate	46	94.08	4.2.1 Happiness	32	73.49
2.1.6 ICT skills	94	38.83	4.2.2 Freedom to make life choices	27	89.82
2nd sub-pillar: Businesses	80	38.08	4.2.3 Income inequality	104	45.36
2.2.1 Firms with website	84	37.09	4.2.4 Healthy life expectancy at birth	46	71.41
2.2.2 Ease of doing business	58	74.51	*3rd sub-pillar: SDG Contribution*	57	67.51
2.2.3 Professionals	70	22.34	4.3.1 SDG 3: Good Health and Well-Being	39	78.69
2.2.4 Technicians and associate professionals	72	29.90	4.3.2 SDG 4: Quality Education	61	31.43
2.2.5 Business use of digital tools	62	60.88	4.3.3 SDG 5: Gender Equality	83	70.95
2.2.6 R&D expenditure by businesses	55	3.79	4.3.4 SDG 7: Affordable and Clean Energy	38	85.48
3rd sub-pillar: Governments	37	54.76	.	.	.
2.3.1 Government online services	38	81.82			
2.3.2 Publication and use of open data	11	73.45			
2.3.3 Government promotion of investment in emerging tech	67	36.90			
2.3.4 R&D expenditure by governments and higher education	61	26.86			

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Network Readiness Index 2020 Moldova

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Moldova

Moldova ranks 71st out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Technology and Governance.

Figure 2: Moldova global ranking, overall and by pillar
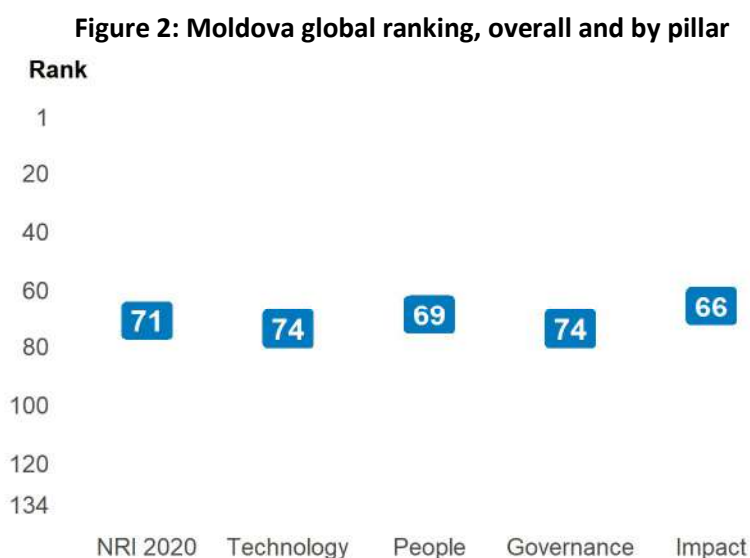
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Moldova relate to Quality of Life, Access and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Economy, Regulation and Future Technologies sub-pillars.

Table 1: Moldova rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	50	Individuals	70
Access	56	SDG Contribution	79
Trust	56	Inclusion	81
Governments	63	Economy	97
Content	66	Regulation	101
Businesses	68	Future Technologies	126

NRI score and income

Figure 3 shows the position of Moldova in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Moldova is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
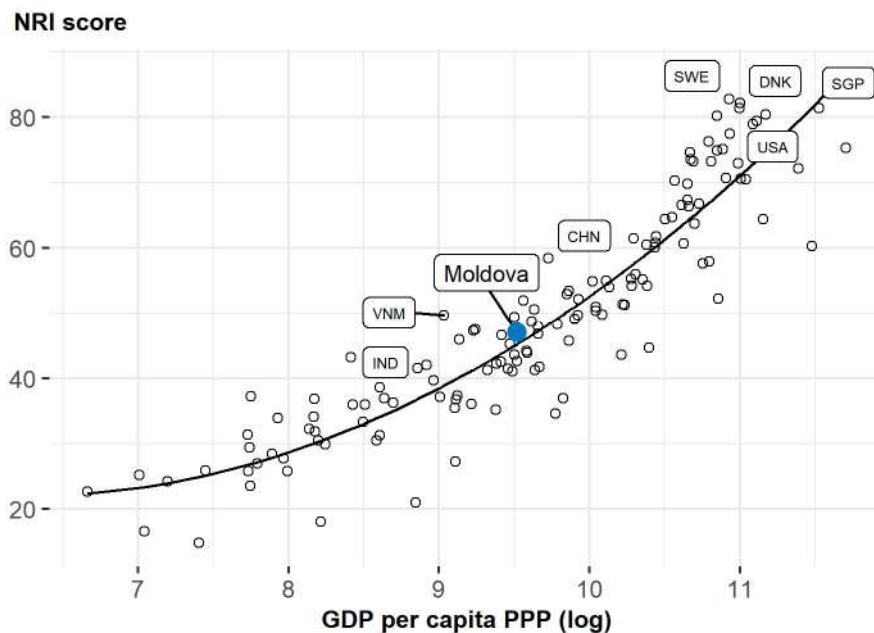
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Moldova belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Europe-is Sweden (SWE).

Performance against its income group and region

Lower-middle-income countries
Moldova is ranked 3rd in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in ten of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Quality of Life and SDG Contribution.

Europe
Moldova is ranked 39th within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Moldova against its income group and region, overall and by pillar

Table 2: Moldova scores vs. averages of its income group and region, overall and by pillar

Dimension	Moldova	Lower-middle-income countries	Europe
NRI	47.09	36.72	64.21
Technology	37.68	27.72	59.93
People	46.90	33.88	59.89
Governance	53.13	43.15	72.98
Impact	50.65	42.15	64.04

Strongest and weakest indicators

The indicators where Moldova performs particularly well include Income inequality, SDG 5: Gender Equality, and Adult literacy rate (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, Investment in emerging technologies, and Use of virtual social networks.

Table 3: Top-ranked and bottom-ranked indicators of Moldova

Strongest indicators	Rank	Weakest indicators	Rank
Income inequality	5	Medium and high-tech industry	85
SDG 5: Gender Equality	13	Healthy life expectancy at birth	87
Adult literacy rate	14	Adoption of emerging technologies	89
Fixed-broadband subscriptions	18	Handset prices	91
International Internet bandwidth	30	Computer software spending	93
Internet access in schools	30	Socioeconomic gap in use of digital payments	95
Publication and use of open data	32	High-tech exports	99
ICT regulatory environment	35	Use of virtual social networks	100
Professionals	36	Investment in emerging technologies	118
SDG 11: Sustainable Cities and Communities	38	SDG 7: Affordable and Clean Energy	124

NRI 2020 At-A-Glance: Moldova

Network Readiness Index Rank: 71 (out of 134) Score: 47.09

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	74	37.68	C. Governance pillar	74	53.13
1st sub-pillar: Access	56	71.39	1st sub-pillar: Trust	56	46.81
2nd sub-pillar: Content	66	28.37	2nd sub-pillar: Regulation	101	53.14
3rd sub-pillar: Future Technologies	126	13.28	3rd sub-pillar: Inclusion	81	59.43
B. People pillar	69	46.90	D. Impact pillar	66	50.65
1st sub-pillar: Individuals	70	54.16	1st sub-pillar: Economy	97	17.55
2nd sub-pillar: Businesses	68	41.93	2nd sub-pillar: Quality of Life	50	71.04
3rd sub-pillar: Governments	63	44.63	3rd sub-pillar: SDG Contribution	79	63.35

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	74	37.68	**C. Governance pillar**	74	53.13
1st sub-pillar: Access	56	71.39	*1st sub-pillar: Trust*	56	46.81
1.1.1 Mobile tariffs	74	58.54	3.1.1 Secure Internet servers	49	67.19
1.1.2 Handset prices	91	34.50	3.1.2 Cybersecurity	54	70.86
1.1.3 Internet access	81	50.40	3.1.3 Online access to financial account	71	25.65
1.1.4 4G mobile network coverage	46	97.00	3.1.4 Internet shopping	54	23.53
1.1.5 Fixed-broadband subscriptions	18	95.63	*2nd sub-pillar: Regulation*	101	53.14
1.1.6 International Internet bandwidth	30	73.12	3.2.1 Regulatory quality	74	50.33
1.1.7 Internet access in schools	30	90.56	3.2.2 ICT regulatory environment	35	89.77
2nd sub-pillar: Content	66	28.37	3.2.3 Legal framework's adaptability to emerging technologies	70	39.00
1.2.1 GitHub commits	50	8.86	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	76	39.88	3.2.5 Privacy protection by law content	77	11.61
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	81	59.43
1.2.4 Mobile apps development	71	60.72	3.3.1 E-Participation	54	75.31
3rd sub-pillar: Future Technologies	126	13.28	3.3.2 Socioeconomic gap in use of digital payments	95	49.27
1.3.1 Adoption of emerging technologies	89	37.40	3.3.3 Availability of local online content	61	62.70
1.3.2 Investment in emerging technologies	118	19.51	3.3.4 Gender gap in Internet use	79	45.86
1.3.3 ICT PCT patent applications	65	2.28	3.3.5 Rural gap in use of digital payments	72	64.02
1.3.4 Computer software spending	93	7.09	**D. Impact pillar**	66	50.65
1.3.5 Robot density	66	0.10	*1st sub-pillar: Economy*	97	17.55
B. People pillar	69	46.90	4.1.1 Medium and high-tech industry	85	20.70
1st sub-pillar: Individuals	70	54.16	4.1.2 High-tech exports	99	4.80
2.1.1 Internet users	49	75.74	4.1.3 PCT patent applications	68	0.36
2.1.2 Active mobile-broadband subscriptions	72	27.96	4.1.4 Labor productivity per employee	83	17.68
2.1.3 Use of virtual social networks	100	34.02	4.1.5 Prevalence of gig economy	61	44.20
2.1.4 Tertiary enrollment	72	28.72	*2nd sub-pillar: Quality of Life*	50	71.04
2.1.5 Adult literacy rate	14	99.21	4.2.1 Happiness	67	61.14
2.1.6 ICT skills	52	59.31	4.2.2 Freedom to make life choices	78	69.49
2nd sub-pillar: Businesses	68	41.93	4.2.3 Income inequality	5	96.13
2.2.1 Firms with website	73	44.81	4.2.4 Healthy life expectancy at birth	87	57.42
2.2.2 Ease of doing business	47	78.11	*3rd sub-pillar: SDG Contribution*	79	63.35
2.2.3 Professionals	36	41.55	4.3.1 SDG 3: Good Health and Well-Being	73	67.21
2.2.4 Technicians and associate professionals	73	29.70	4.3.2 SDG 4: Quality Education	54	35.86
2.2.5 Business use of digital tools	75	56.25	4.3.3 SDG 5: Gender Equality	13	87.75
2.2.6 R&D expenditure by businesses	74	1.13	4.3.4 SDG 7: Affordable and Clean Energy	124	45.74
3rd sub-pillar: Governments	63	44.63	.	.	.
2.3.1 Government online services	51	74.54			
2.3.2 Publication and use of open data	32	43.68			
2.3.3 Government promotion of investment in emerging tech	53	42.65			
2.3.4 R&D expenditure by governments and higher education	77	17.63			

* Confidential data

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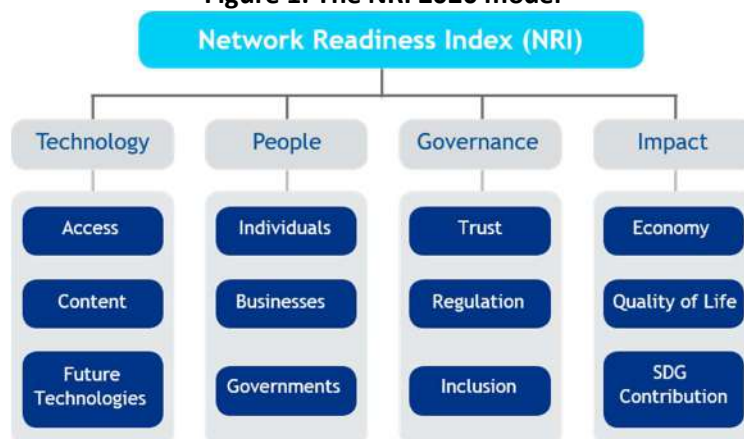
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Network Readiness Index 2020 Mongolia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Mongolia

Mongolia ranks 89th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Technology and People.

Figure 2: Mongolia global ranking, overall and by pillar
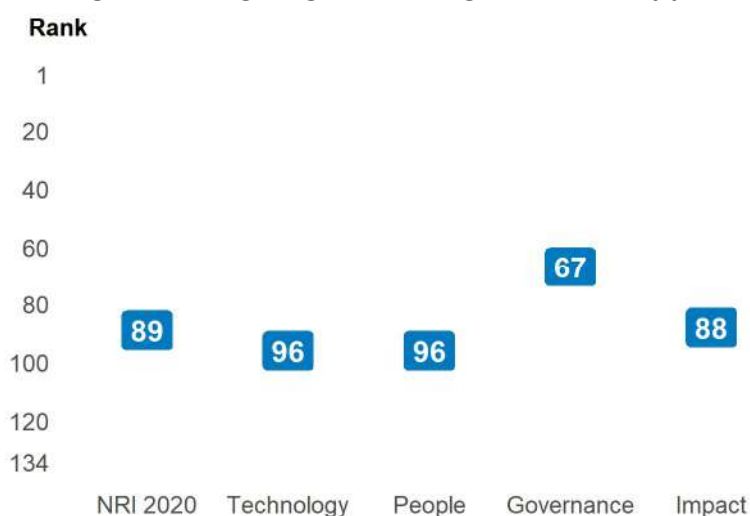
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Mongolia relate to Inclusion, SDG Contribution and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Future Technologies, Businesses and Economy sub-pillars.

Table 1: Mongolia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Inclusion	40	Access	98
SDG Contribution	61	Regulation	103
Trust	68	Governments	106
Content	75	Future Technologies	110
Individuals	83	Businesses	110
Quality of Life	85	Economy	118

NRI score and income

Figure 3 shows the position of Mongolia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Mongolia is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
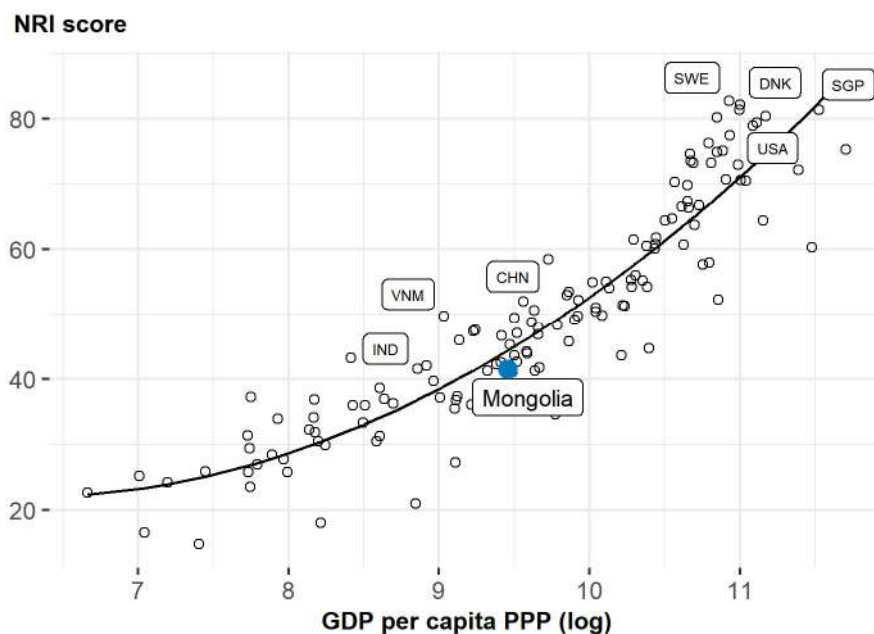
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Mongolia belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Lower-middle-income countries

Mongolia is ranked 10th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in six of the twelve sub-pillars: Content, Individuals, Trust, Inclusion, Quality of Life and SDG Contribution.

Asia & Pacific

Mongolia is ranked 16th within Asia & Pacific (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Asia & Pacific in two of the twelve sub-pillars: Inclusion and SDG Contribution.

Figure 4: Performance of Mongolia against its income group and region, overall and by pillar
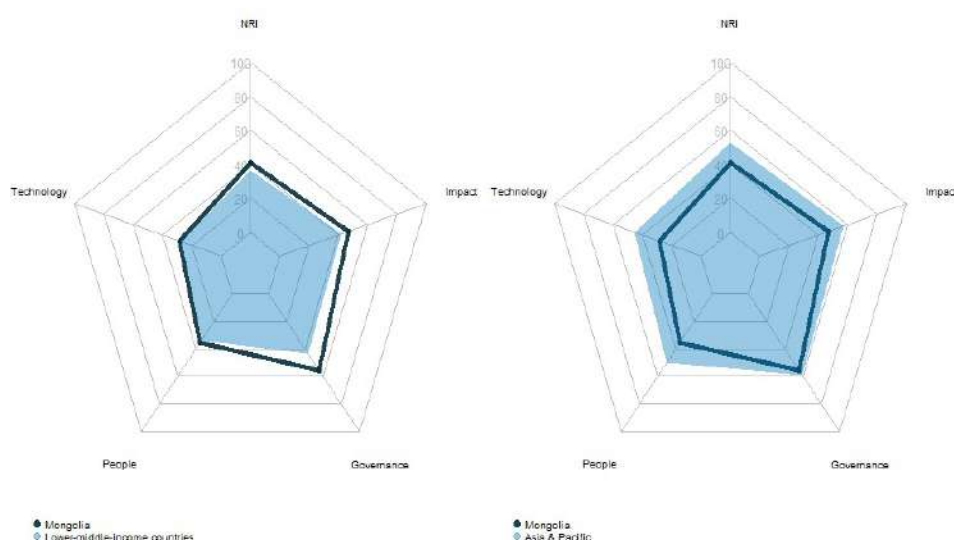
Table 2: Mongolia scores vs. averages of its income group and region, overall and by pillar

Dimension	Mongolia	Lower-middle-income countries	Asia & Pacific
NRI	41.44	36.72	52.76
Technology	27.98	27.72	45.33
People	35.41	33.88	49.64
Governance	55.73	43.15	59.20
Impact	46.64	42.15	56.86

Strongest and weakest indicators

The indicators where Mongolia performs particularly well include Gender gap in Internet use, SDG 5: Gender Equality, and Rural gap in use of digital payments (Table 3). By contrast, the economy's weakest indicators include Business use of digital tools, Fixed-broadband subscriptions, and Medium and high-tech industry.

Table 3: Top-ranked and bottom-ranked indicators of Mongolia

Strongest indicators	Rank	Weakest indicators	Rank
Gender gap in Internet use	1	4G mobile network coverage	105
SDG 5: Gender Equality	2	Internet access	107
Rural gap in use of digital payments	13	Technicians and associate professionals	107
Adult literacy rate	26	Freedom to make life choices	107
Socioeconomic gap in use of digital payments	26	Legal framework's adaptability to emerging technologies	110
Use of virtual social networks	31	Adoption of emerging technologies	112
Income inequality	31	Internet users	113
Internet access in schools	36	Medium and high-tech industry	114
Online access to financial account	36	Fixed-broadband subscriptions	119
Professionals	38	Business use of digital tools	121

NRI 2020 At-A-Glance: Mongolia

Network Readiness Index Rank: 89 (out of 134) Score: 41.44

Pillar/sub-pillar	Rank	Score
A. Technology pillar	96	27.98
1st sub-pillar: Access	98	40.41
2nd sub-pillar: Content	75	26.03
3rd sub-pillar: Future Technologies	110	17.49
B. People pillar	96	35.41
1st sub-pillar: Individuals	83	51.20
2nd sub-pillar: Businesses	110	29.04
3rd sub-pillar: Governments	106	26.00

Pillar/sub-pillar	Rank	Score
C. Governance pillar	67	55.73
1st sub-pillar: Trust	68	41.21
2nd sub-pillar: Regulation	103	52.05
3rd sub-pillar: Inclusion	40	73.92
D. Impact pillar	88	46.64
1st sub-pillar: Economy	118	11.88
2nd sub-pillar: Quality of Life	85	60.87
3rd sub-pillar: SDG Contribution	61	67.18

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	96	27.98
1st sub-pillar: Access	98	40.41
1.1.1 Mobile tariffs	88	50.51
1.1.2 Handset prices	101	30.61
1.1.3 Internet access	107	22.78
1.1.4 4G mobile network coverage	105	45.00
1.1.5 Fixed-broadband subscriptions	119	0.58
1.1.6 International Internet bandwidth	96	62.72
1.1.7 Internet access in schools	36	70.66
2nd sub-pillar: Content	75	26.03
1.2.1 GitHub commits	87	1.75
1.2.2 Wikipedia edits	81	34.67
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	62	66.05
3rd sub-pillar: Future Technologies	110	17.49
1.3.1 Adoption of emerging technologies	112	25.94
1.3.2 Investment in emerging technologies	90	32.94
1.3.3 ICT PCT patent applications	82	0.00
1.3.4 Computer software spending	82	11.06
1.3.5 Robot density	NA	NA
B. People pillar	96	35.41
1st sub-pillar: Individuals	83	51.20
2.1.1 Internet users	113	21.71
2.1.2 Active mobile-broadband subscriptions	54	32.41
2.1.3 Use of virtual social networks	31	68.04
2.1.4 Tertiary enrollment	39	47.70
2.1.5 Adult literacy rate	26	98.00
2.1.6 ICT skills	91	39.32
2nd sub-pillar: Businesses	110	29.04
2.2.1 Firms with website	91	32.51
2.2.2 Ease of doing business	76	66.40
2.2.3 Professionals	38	40.81
2.2.4 Technicians and associate professionals	107	12.47
2.2.5 Business use of digital tools	121	21.86
2.2.6 R&D expenditure by businesses	84	0.22
3rd sub-pillar: Governments	106	26.00
2.3.1 Government online services	96	51.51
2.3.2 Publication and use of open data	NA	NA
2.3.3 Government promotion of investment in emerging tech	104	19.92
2.3.4 R&D expenditure by governments and higher education	97	6.57

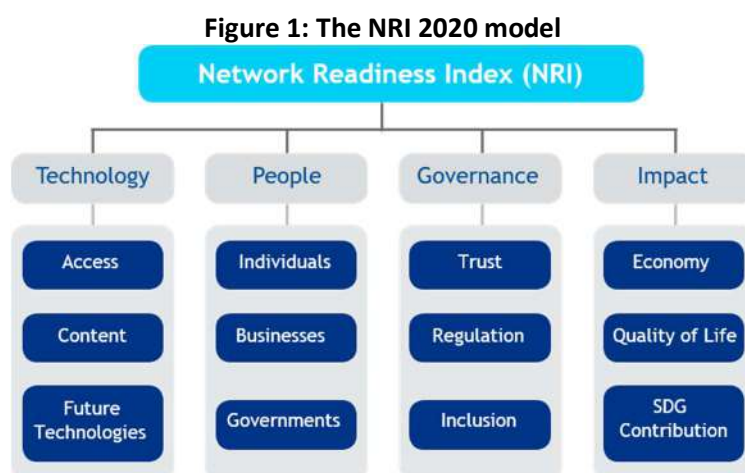| Indicator	Rank	Score
C. Governance pillar	67	55.73
1st sub-pillar: Trust	68	41.21
3.1.1 Secure Internet servers	59	59.31
3.1.2 Cybersecurity	85	49.51
3.1.3 Online access to financial account	36	46.58
3.1.4 Internet shopping	77	9.46
2nd sub-pillar: Regulation	103	52.05
3.2.1 Regulatory quality	69	50.76
3.2.2 ICT regulatory environment	102	67.96
3.2.3 Legal framework's adaptability to emerging technologies	110	14.50
3.2.4 e-commerce legislation	77	75.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	40	73.92
3.3.1 E-Participation	84	59.26
3.3.2 Socioeconomic gap in use of digital payments	26	89.54
3.3.3 Availability of local online content	98	42.61
3.3.4 Gender gap in Internet use	1	100.00
3.3.5 Rural gap in use of digital payments	13	78.22
D. Impact pillar	88	46.64
1st sub-pillar: Economy	118	11.88
4.1.1 Medium and high-tech industry	114	6.79
4.1.2 High-tech exports	81	9.41
4.1.3 PCT patent applications	75	0.13
4.1.4 Labor productivity per employee	NA	NA
4.1.5 Prevalence of gig economy	91	31.17
2nd sub-pillar: Quality of Life	85	60.87
4.2.1 Happiness	73	56.41
4.2.2 Freedom to make life choices	107	57.09
4.2.3 Income inequality	31	78.09
4.2.4 Healthy life expectancy at birth	95	51.90
3rd sub-pillar: SDG Contribution	61	67.18
4.3.1 SDG 3: Good Health and Well-Being	94	55.74
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 SDG 5: Gender Equality	2	95.66
4.3.4 SDG 7: Affordable and Clean Energy	99	67.34
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* Confidential data

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# Network Readiness Index 2020 Montenegro

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Montenegro

Montenegro ranks 58th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Montenegro global ranking, overall and by pillar
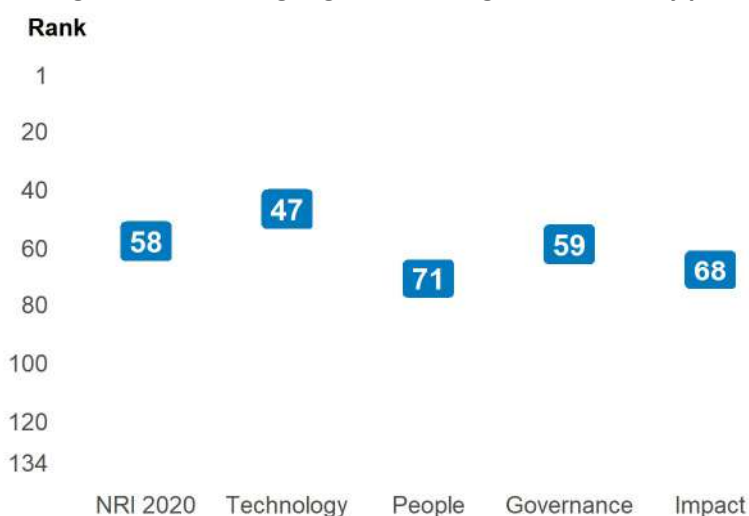
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Montenegro relate to Content, Future Technologies and Individuals, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Quality of Life and Governments sub-pillars.

Table 1: Montenegro rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Content	39	Access	63
Future Technologies	40	SDG Contribution	63
Individuals	50	Economy	68
Inclusion	53	Trust	70
Regulation	61	Quality of Life	86
Businesses	62	Governments	92

NRI score and income

Figure 3 shows the position of Montenegro in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Montenegro is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
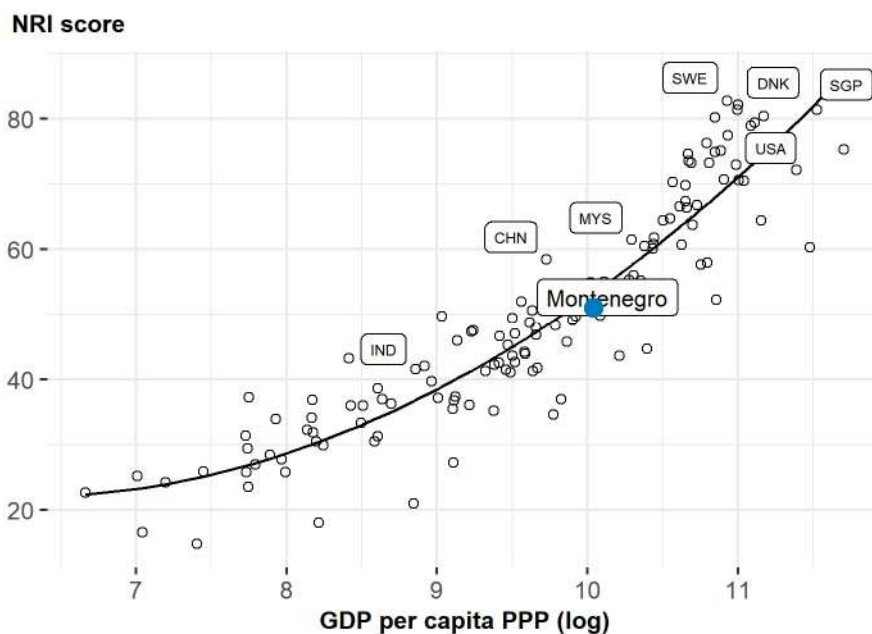
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Montenegro belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Europe-is Sweden (SWE).

Performance against its income group and region

Upper-middle-income countries
Montenegro is ranked 11th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, governance and impact. At the sub-pillar level, it outperforms upper-middle-income countries in nine of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Regulation, Inclusion, Economy and SDG Contribution.

Europe
Montenegro is ranked 35th within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Montenegro against its income group and region, overall and by pillar
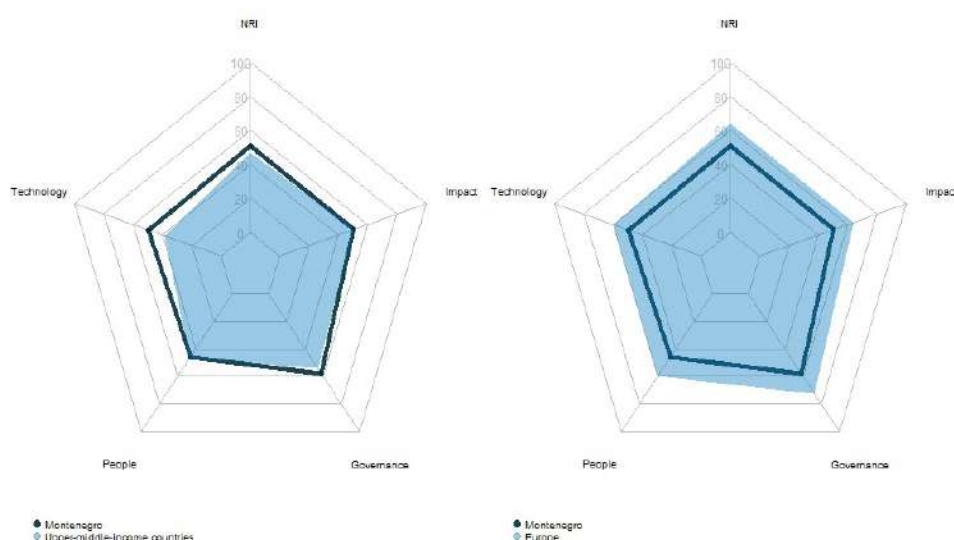
Table 2: Montenegro scores vs. averages of its income group and region, overall and by pillar

Dimension	Montenegro	Upper-middle-income countries	Europe
NRI	50.95	47.39	64.21
Technology	49.37	38.42	59.93
People	45.81	46.66	59.89
Governance	58.13	54.31	72.98
Impact	50.50	50.17	64.04

Strongest and weakest indicators

The indicators where Montenegro performs particularly well include International Internet bandwidth, Rural gap in use of digital payments, and ICT regulatory environment (Table 3). By contrast, the economy's weakest indicators include Mobile tariffs, Freedom to make life choices, Government online services, and High-tech exports.

Table 3: Top-ranked and bottom-ranked indicators of Montenegro

Strongest indicators	Rank	Weakest indicators	Rank
International Internet bandwidth	4	Firms with website	85
Rural gap in use of digital payments	5	Investment in emerging technologies	87
ICT regulatory environment	11	Handset prices	89
Gender gap in Internet use	17	Online access to financial account	89
Adult literacy rate	19	Medium and high-tech industry	91
Computer software spending	24	E-Participation	93
Technicians and associate professionals	29	Government online services	94
Professionals	32	High-tech exports	94
4G mobile network coverage	38	Freedom to make life choices	113
Healthy life expectancy at birth	42	Mobile tariffs	115

NRI 2020 At-A-Glance: Montenegro

Network Readiness Index　　　Rank: 58 (out of 134)　　　Score: 50.95

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	47	49.37	C. Governance pillar	59	58.13
1st sub-pillar: Access	63	66.47	1st sub-pillar: Trust	70	38.53
2nd sub-pillar: Content	39	44.30	2nd sub-pillar: Regulation	61	67.72
3rd sub-pillar: Future Technologies	40	37.34	3rd sub-pillar: Inclusion	53	68.15
B. People pillar	71	45.81	D. Impact pillar	68	50.50
1st sub-pillar: Individuals	50	59.28	1st sub-pillar: Economy	68	24.03
2nd sub-pillar: Businesses	62	45.50	2nd sub-pillar: Quality of Life	86	60.47
3rd sub-pillar: Governments	92	32.66	3rd sub-pillar: SDG Contribution	63	66.98

The Network Readiness Index in detail

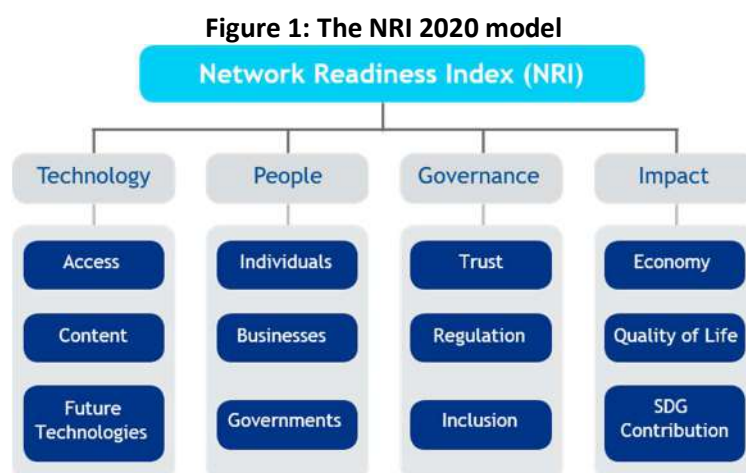| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	47	49.37	**C. Governance pillar**	59	58.13
1st sub-pillar: Access	63	66.47	*1st sub-pillar: Trust*	70	38.53
1.1.1　Mobile tariffs	115	34.48	3.1.1　Secure Internet servers	67	52.18
1.1.2　Handset prices	89	35.83	3.1.2　Cybersecurity	64	68.36
1.1.3　Internet access	60	72.10	3.1.3　Online access to financial account	89	16.36
1.1.4　4G mobile network coverage	38	98.00	3.1.4　Internet shopping	65	17.23
1.1.5　Fixed-broadband subscriptions	54	75.33	*2nd sub-pillar: Regulation*	61	67.72
1.1.6　International Internet bandwidth	4	83.09	3.2.1　Regulatory quality	53	59.40
1.1.7　Internet access in schools	NA	NA	3.2.2　ICT regulatory environment	11	96.14
2nd sub-pillar: Content	39	44.30	3.2.3　Legal framework's adaptability to emerging technologies	68	40.33
1.2.1　GitHub commits	49	9.12	3.2.4　e-commerce legislation	77	75.00
1.2.2　Wikipedia edits	51	58.96	3.2.5　Privacy protection by law content	NA	NA
1.2.3　Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	53	68.15
1.2.4　Mobile apps development	64	64.82	3.3.1　E-Participation	93	53.09
3rd sub-pillar: Future Technologies	40	37.34	3.3.2　Socioeconomic gap in use of digital payments	54	73.54
1.3.1　Adoption of emerging technologies	70	44.68	3.3.3　Availability of local online content	56	65.63
1.3.2　Investment in emerging technologies	87	33.65	3.3.4　Gender gap in Internet use	17	67.45
1.3.3　ICT PCT patent applications	NA	NA	3.3.5　Rural gap in use of digital payments	5	81.06
1.3.4　Computer software spending	24	33.70	**D. Impact pillar**	68	50.50
1.3.5　Robot density	NA	NA	*1st sub-pillar: Economy*	68	24.03
B. People pillar	71	45.81	4.1.1　Medium and high-tech industry	91	18.75
1st sub-pillar: Individuals	50	59.28	4.1.2　High-tech exports	94	6.00
2.1.1　Internet users	61	70.99	4.1.3　PCT patent applications	NA	NA
2.1.2　Active mobile-broadband subscriptions	71	28.30	4.1.4　Labor productivity per employee	65	27.67
2.1.3　Use of virtual social networks	47	61.86	4.1.5　Prevalence of gig economy	62	43.69
2.1.4　Tertiary enrollment	50	40.70	*2nd sub-pillar: Quality of Life*	86	60.47
2.1.5　Adult literacy rate	19	98.55	4.2.1　Happiness	82	52.93
2.1.6　ICT skills	59	55.28	4.2.2　Freedom to make life choices	113	54.29
2nd sub-pillar: Businesses	62	45.50	4.2.3　Income inequality	72	61.86
2.2.1　Firms with website	85	36.57	4.2.4　Healthy life expectancy at birth	42	72.83
2.2.2　Ease of doing business	49	77.10	*3rd sub-pillar: SDG Contribution*	63	66.98
2.2.3　Professionals	32	44.11	4.3.1　SDG 3: Good Health and Well-Being	79	65.57
2.2.4　Technicians and associate professionals	29	56.20	4.3.2　SDG 4: Quality Education	52	39.25
2.2.5　Business use of digital tools	72	57.67	4.3.3　SDG 5: Gender Equality	71	73.74
2.2.6　R&D expenditure by businesses	71	1.35	4.3.4　SDG 7: Affordable and Clean Energy	59	81.07
3rd sub-pillar: Governments	92	32.66	.	.	.
2.3.1　Government online services	94	52.73			
2.3.2　Publication and use of open data	82	14.54			
2.3.3　Government promotion of investment in emerging tech	54	41.54			
2.3.4　R&D expenditure by governments and higher education	70	21.83			

* Confidential data

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Network Readiness Index 2020 Morocco

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Morocco

Morocco ranks 93rd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Morocco global ranking, overall and by pillar
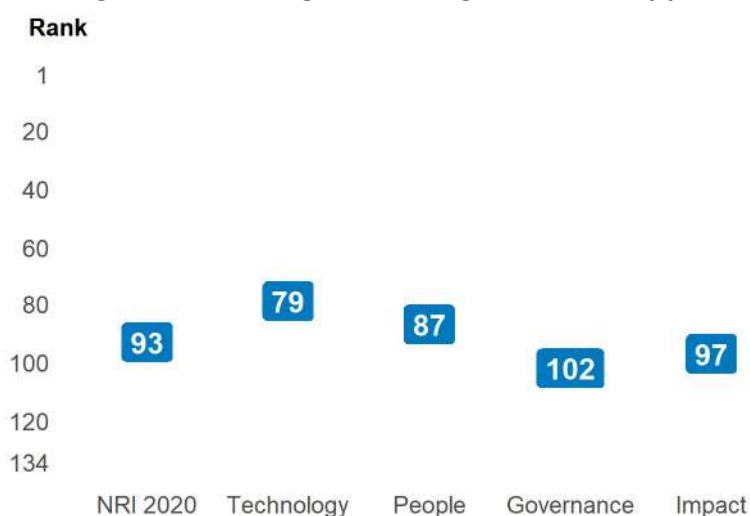
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Morocco relate to Regulation, Access and Governments, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, SDG Contribution and Inclusion sub-pillars.

Table 1: Morocco rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	67	Businesses	91
Access	71	Quality of Life	94
Governments	86	Future Technologies	99
Economy	88	Trust	107
Content	91	SDG Contribution	109
Individuals	91	Inclusion	121

NRI score and income

Figure 3 shows the position of Morocco in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Morocco is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
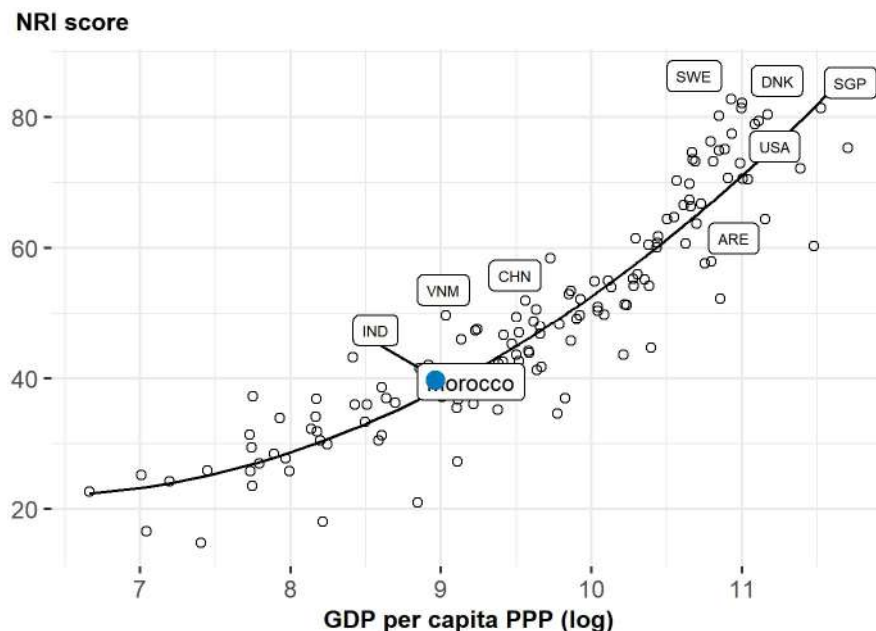
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Morocco belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Arab States-is United Arab Emirates (ARE).

Performance against its income group and region

Lower-middle-income countries
Morocco is ranked 12th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, people and impact. At the sub-pillar level, it outperforms lower-middle-income countries in eight of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Regulation, Economy and Quality of Life.

Arab States
Morocco is ranked 11th within Arab States (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Arab States in one of the twelve sub-pillars: Regulation.

Figure 4: Performance of Morocco against its income group and region, overall and by pillar
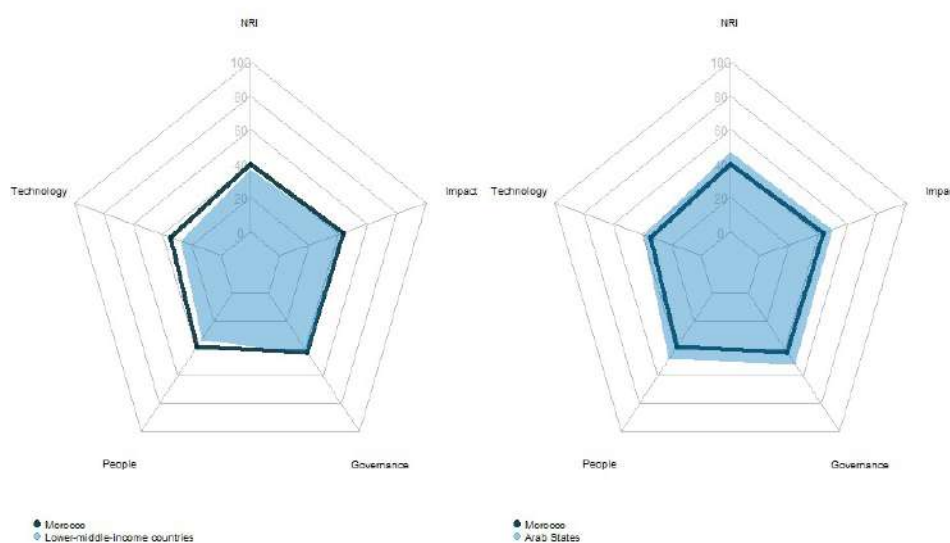
Table 2: Morocco scores vs. averages of its income group and region, overall and by pillar

Dimension	Morocco	Lower-middle-income countries	Arab States
NRI	39.71	36.72	47.18
Technology	34.26	27.72	39.24
People	38.75	33.88	47.97
Governance	42.77	43.15	51.70
Impact	43.06	42.15	49.82

Strongest and weakest indicators

The indicators where Morocco performs particularly well include e-commerce legislation, SDG 7: Affordable and Clean Energy, and Internet access in schools (Table 3). By contrast, the economy's weakest indicators include Rural gap in use of digital payments, SDG 5: Gender Equality, and Professionals.

Table 3: Top-ranked and bottom-ranked indicators of Morocco

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Government online services	97
SDG 7: Affordable and Clean Energy	27	E-Participation	97
Internet access in schools	35	Mobile tariffs	102
ICT regulatory environment	35	GitHub commits	102
R&D expenditure by governments and higher education	39	Internet shopping	118
Robot density	50	Online access to financial account	120
R&D expenditure by businesses	50	Socioeconomic gap in use of digital payments	120
4G mobile network coverage	52	Professionals	122
Ease of doing business	52	SDG 5: Gender Equality	125
Medium and high-tech industry	54	Rural gap in use of digital payments	128

NRI 2020 At-A-Glance: Morocco

Network Readiness Index   Rank: 93 (out of 134)   Score: 39.71

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	79	34.26	C. Governance pillar	102	42.77
1st sub-pillar: Access	71	61.67	1st sub-pillar: Trust	107	24.60
2nd sub-pillar: Content	91	21.35	2nd sub-pillar: Regulation	67	66.15
3rd sub-pillar: Future Technologies	99	19.75	3rd sub-pillar: Inclusion	121	37.55
B. People pillar	87	38.75	D. Impact pillar	97	43.06
1st sub-pillar: Individuals	91	44.90	1st sub-pillar: Economy	88	19.69
2nd sub-pillar: Businesses	91	34.75	2nd sub-pillar: Quality of Life	94	58.79
3rd sub-pillar: Governments	86	36.60	3rd sub-pillar: SDG Contribution	109	50.70

The Network Readiness Index in detail

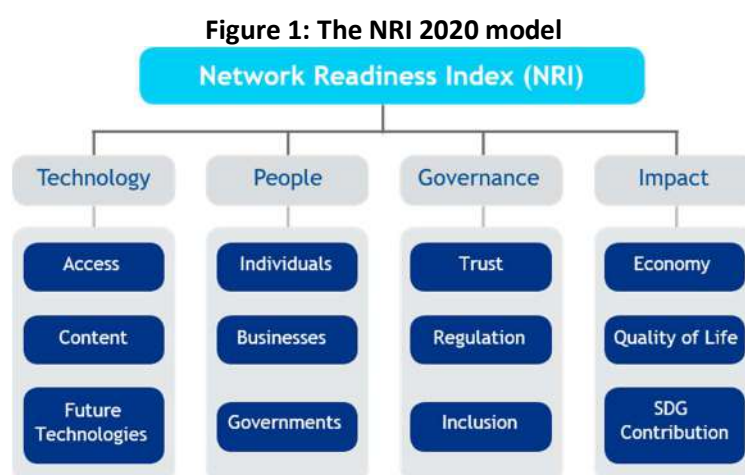| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	79	34.26	**C. Governance pillar**	102	42.77
1st sub-pillar: Access	71	61.67	*1st sub-pillar: Trust*	107	24.60
1.1.1 Mobile tariffs	102	45.77	3.1.1 Secure Internet servers	77	47.18
1.1.2 Handset prices	85	36.55	3.1.2 Cybersecurity	93	45.61
1.1.3 Internet access	55	74.10	3.1.3 Online access to financial account	120	3.56
1.1.4 4G mobile network coverage	52	96.00	3.1.4 Internet shopping	118	2.04
1.1.5 Fixed-broadband subscriptions	83	30.87	*2nd sub-pillar: Regulation*	67	66.15
1.1.6 International Internet bandwidth	57	69.46	3.2.1 Regulatory quality	90	46.06
1.1.7 Internet access in schools	35	78.96	3.2.2 ICT regulatory environment	35	89.77
2nd sub-pillar: Content	91	21.35	3.2.3 Legal framework's adaptability to emerging technologies	90	28.78
1.2.1 GitHub commits	102	0.78	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	89	29.83	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	121	37.55
1.2.4 Mobile apps development	88	53.44	3.3.1 E-Participation	97	49.38
3rd sub-pillar: Future Technologies	99	19.75	3.3.2 Socioeconomic gap in use of digital payments	120	30.50
1.3.1 Adoption of emerging technologies	90	37.16	3.3.3 Availability of local online content	69	59.97
1.3.2 Investment in emerging technologies	82	34.94	3.3.4 Gender gap in Internet use	76	47.90
1.3.3 ICT PCT patent applications	57	4.11	3.3.5 Rural gap in use of digital payments	128	0.00
1.3.4 Computer software spending	59	21.14	**D. Impact pillar**	97	43.06
1.3.5 Robot density	50	1.40	*1st sub-pillar: Economy*	88	19.69
B. People pillar	87	38.75	4.1.1 Medium and high-tech industry	54	35.30
1st sub-pillar: Individuals	91	44.90	4.1.2 High-tech exports	90	7.58
2.1.1 Internet users	73	64.07	4.1.3 PCT patent applications	71	0.28
2.1.2 Active mobile-broadband subscriptions	88	22.40	4.1.4 Labor productivity per employee	88	13.55
2.1.3 Use of virtual social networks	81	48.45	4.1.5 Prevalence of gig economy	66	41.75
2.1.4 Tertiary enrollment	75	25.86	*2nd sub-pillar: Quality of Life*	94	58.79
2.1.5 Adult literacy rate	90	66.23	4.2.1 Happiness	92	46.46
2.1.6 ICT skills	84	42.41	4.2.2 Freedom to make life choices	89	64.92
2nd sub-pillar: Businesses	91	34.75	4.2.3 Income inequality	75	60.57
2.2.1 Firms with website	61	53.29	4.2.4 Healthy life expectancy at birth	79	63.23
2.2.2 Ease of doing business	52	76.32	*3rd sub-pillar: SDG Contribution*	109	50.70
2.2.3 Professionals	122	3.53	4.3.1 SDG 3: Good Health and Well-Being	69	68.85
2.2.4 Technicians and associate professionals	96	18.27	4.3.2 SDG 4: Quality Education	74	16.01
2.2.5 Business use of digital tools	84	51.62	4.3.3 SDG 5: Gender Equality	125	28.98
2.2.6 R&D expenditure by businesses	50	5.46	4.3.4 SDG 7: Affordable and Clean Energy	27	88.37
3rd sub-pillar: Governments	86	36.60	.	.	.
2.3.1 Government online services	97	50.91			
2.3.2 Publication and use of open data	78	16.86			
2.3.3 Government promotion of investment in emerging tech	79	33.39			
2.3.4 R&D expenditure by governments and higher education	39	45.26			

* Confidential data

5

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Network Readiness Index 2020 Mozambique

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Mozambique

Mozambique ranks 128th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Mozambique global ranking, overall and by pillar
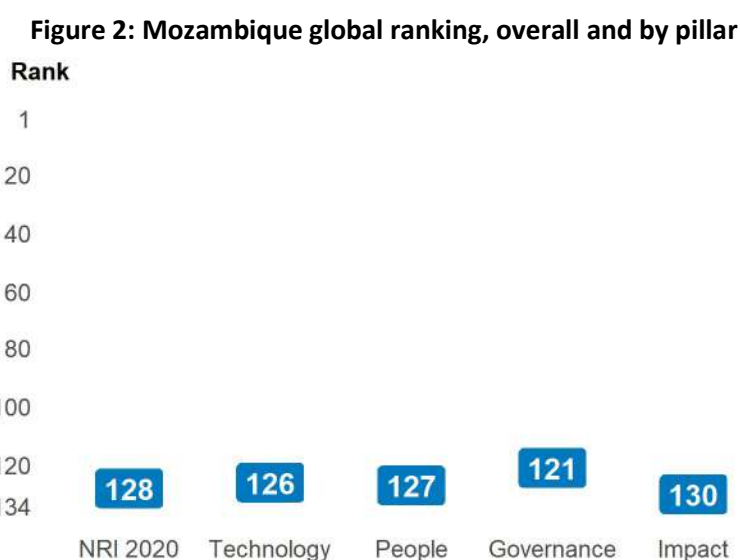
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Mozambique relate to Regulation, Governments and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Economy, SDG Contribution and Individuals sub-pillars.

Table 1: Mozambique rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	114	Future Technologies	123
Governments	116	Businesses	124
Trust	116	Content	126
Inclusion	116	Economy	129
Quality of Life	119	SDG Contribution	131
Access	121	Individuals	132

NRI score and income

Figure 3 shows the position of Mozambique in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Mozambique is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
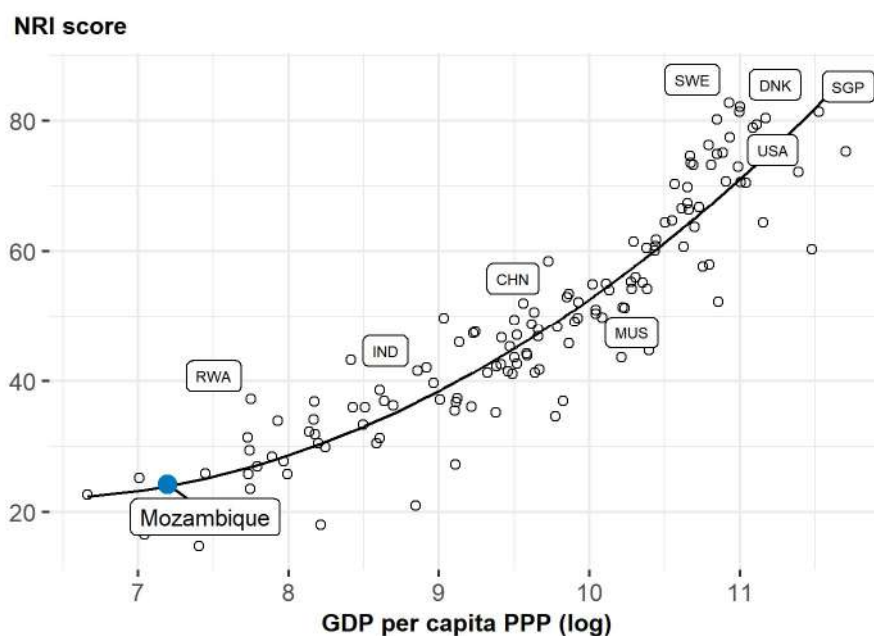
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Mozambique belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Low-income countries
Mozambique is ranked 10th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: governance. At the sub-pillar level, it outperforms low-income countries in four of the twelve sub-pillars: Access, Trust, Regulation and Inclusion.

Africa
Mozambique is ranked 26th within Africa (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in one of the twelve sub-pillars: Quality of Life.

Figure 4: Performance of Mozambique against its income group and region, overall and by pillar
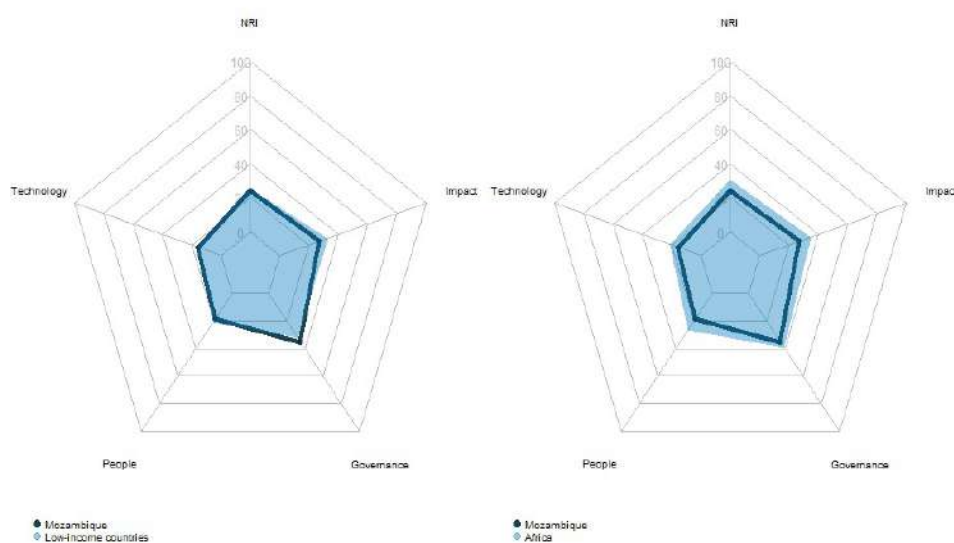
Table 2: Mozambique scores vs. averages of its income group and region, overall and by pillar

Dimension	Mozambique	Low-income countries	Africa
NRI	24.18	25.61	30.62
Technology	15.85	16.33	21.47
People	18.80	20.61	26.75
Governance	35.07	32.58	39.31
Impact	26.99	32.92	34.94

Strongest and weakest indicators

The indicators where Mozambique performs particularly well include Privacy protection by law content, Freedom to make life choices, and Online access to financial account (Table 3). By contrast, the economy's weakest indicators include ICT skills, SDG 7: Affordable and Clean Energy, Internet users, and Active mobile-broadband subscriptions.

Table 3: Top-ranked and bottom-ranked indicators of Mozambique

Strongest indicators	Rank	Weakest indicators	Rank
Privacy protection by law content	28	Internet access	123
Freedom to make life choices	46	ICT regulatory environment	123
Online access to financial account	55	Handset prices	125
R&D expenditure by governments and higher education	68	Mobile apps development	125
High-tech exports	73	Healthy life expectancy at birth	125
Firms with website	87	Availability of local online content	128
R&D expenditure by businesses	91	Internet users	130
Internet shopping	92	Active mobile-broadband subscriptions	130
Rural gap in use of digital payments	94	SDG 7: Affordable and Clean Energy	131
E-Participation	95	ICT skills	132

NRI 2020 At-A-Glance: Mozambique

Network Readiness Index   Rank: 128 (out of 134)   Score: 24.18

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	126	15.85	C. Governance pillar	121	35.07
1st sub-pillar: Access	121	25.24	1st sub-pillar: Trust	116	20.07
2nd sub-pillar: Content	126	7.32	2nd sub-pillar: Regulation	114	45.51
3rd sub-pillar: Future Technologies	123	15.00	3rd sub-pillar: Inclusion	116	39.64
B. People pillar	127	18.80	D. Impact pillar	130	26.99
1st sub-pillar: Individuals	132	13.53	1st sub-pillar: Economy	129	7.79
2nd sub-pillar: Businesses	124	20.31	2nd sub-pillar: Quality of Life	119	42.56
3rd sub-pillar: Governments	116	22.56	3rd sub-pillar: SDG Contribution	131	30.60

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	126	15.85	**C. Governance pillar**	121	35.07
1st sub-pillar: Access	121	25.24	*1st sub-pillar: Trust*	116	20.07
1.1.1 Mobile tariffs	113	34.78	3.1.1 Secure Internet servers	120	24.23
1.1.2 Handset prices	125	11.68	3.1.2 Cybersecurity	120	16.25
1.1.3 Internet access	123	10.56	3.1.3 Online access to financial account	55	34.30
1.1.4 4G mobile network coverage	114	33.00	3.1.4 Internet shopping	92	5.48
1.1.5 Fixed-broadband subscriptions	117	0.67	*2nd sub-pillar: Regulation*	114	45.51
1.1.6 International Internet bandwidth	106	60.73	3.2.1 Regulatory quality	113	35.42
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	123	54.06
2nd sub-pillar: Content	126	7.32	3.2.3 Legal framework's adaptability to emerging technologies	119	10.34
1.2.1 GitHub commits	118	0.20	3.2.4 e-commerce legislation	115	50.00
1.2.2 Wikipedia edits	117	6.77	3.2.5 Privacy protection by law content	28	77.74
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	116	39.64
1.2.4 Mobile apps development	125	22.20	3.3.1 E-Participation	95	50.62
3rd sub-pillar: Future Technologies	123	15.00	3.3.2 Socioeconomic gap in use of digital payments	116	35.96
1.3.1 Adoption of emerging technologies	119	17.19	3.3.3 Availability of local online content	128	18.19
1.3.2 Investment in emerging technologies	106	26.00	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	94	53.79
1.3.4 Computer software spending	115	1.80	**D. Impact pillar**	130	26.99
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	129	7.79
B. People pillar	127	18.80	4.1.1 Medium and high-tech industry	101	13.65
1st sub-pillar: Individuals	132	13.53	4.1.2 High-tech exports	73	10.69
2.1.1 Internet users	130	7.57	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	130	4.52	4.1.4 Labor productivity per employee	117	1.01
2.1.3 Use of virtual social networks	122	6.29	4.1.5 Prevalence of gig economy	122	5.83
2.1.4 Tertiary enrollment	114	4.78	*2nd sub-pillar: Quality of Life*	119	42.56
2.1.5 Adult literacy rate	98	49.37	4.2.1 Happiness	103	44.01
2.1.6 ICT skills	132	8.67	4.2.2 Freedom to make life choices	46	84.12
2nd sub-pillar: Businesses	124	20.31	4.2.3 Income inequality	117	23.20
2.2.1 Firms with website	87	35.76	4.2.4 Healthy life expectancy at birth	125	18.91
2.2.2 Ease of doing business	112	43.80	*3rd sub-pillar: SDG Contribution*	131	30.60
2.2.3 Professionals	120	4.13	4.3.1 SDG 3: Good Health and Well-Being	114	29.51
2.2.4 Technicians and associate professionals	120	5.41	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	116	32.72	4.3.3 SDG 5: Gender Equality	107	52.11
2.2.6 R&D expenditure by businesses	91	0.03	4.3.4 SDG 7: Affordable and Clean Energy	131	0.00
3rd sub-pillar: Governments	116	22.56	.	.	.
2.3.1 Government online services	100	50.30			
2.3.2 Publication and use of open data	104	3.46			
2.3.3 Government promotion of investment in emerging tech	114	13.02			
2.3.4 R&D expenditure by governments and higher education	68	23.46			

* Confidential data

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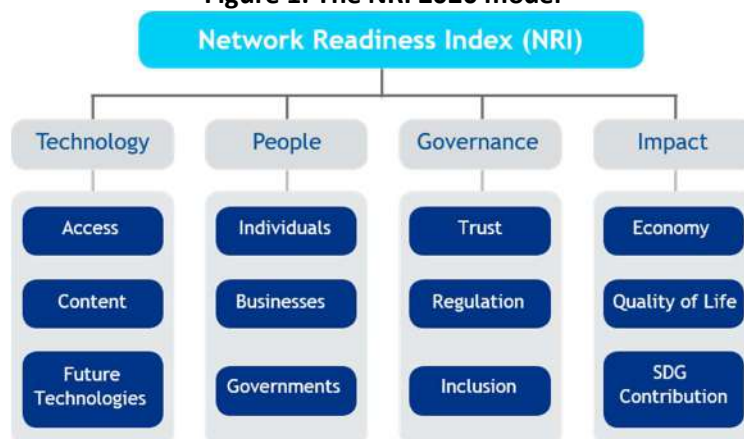
Network Readiness Index 2020 Namibia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
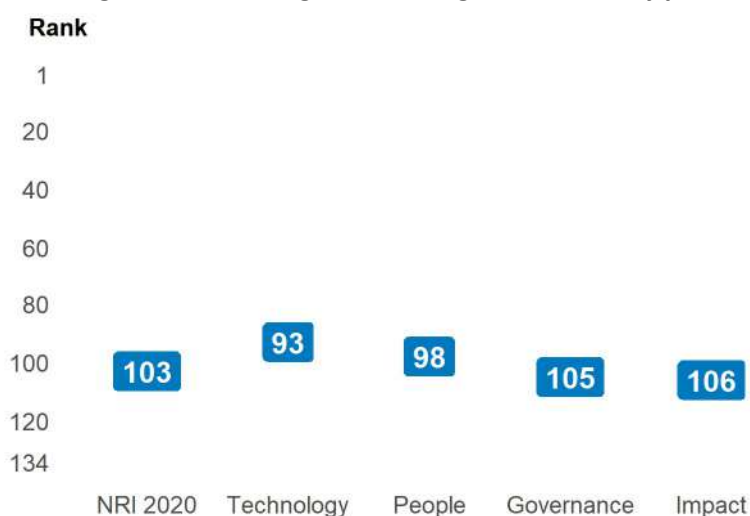
Figure 1: The NRI 2020 model

Global NRI position of Namibia

Namibia ranks 103rd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Namibia global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Namibia relate to SDG Contribution, Future Technologies and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Regulation and Quality of Life sub-pillars.

Table 1: Namibia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	62	Economy	99
Future Technologies	71	Businesses	100
Content	79	Governments	100
Trust	91	Access	103
Inclusion	91	Regulation	121
Individuals	95	Quality of Life	128

NRI score and income

Figure 3 shows the position of Namibia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Namibia is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
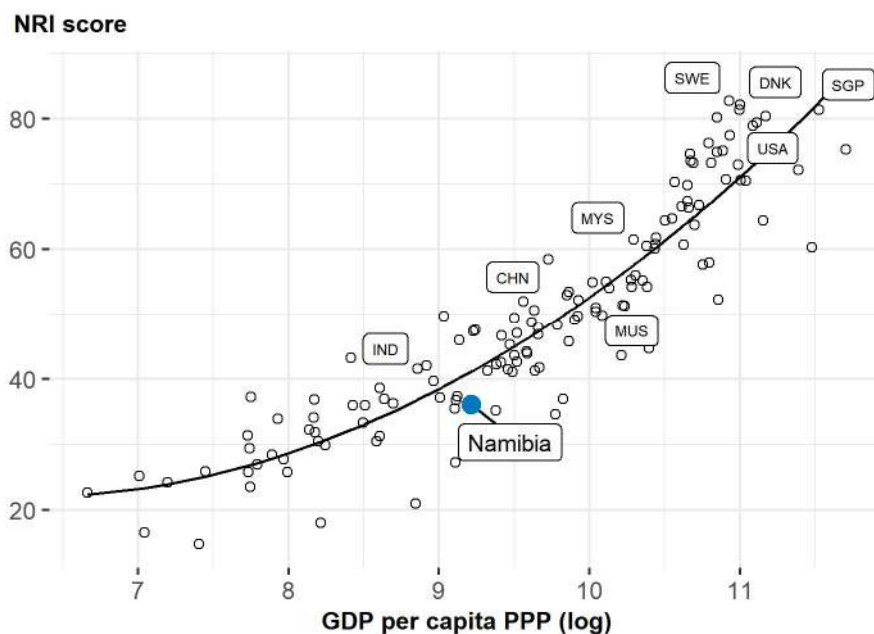
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Namibia belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Upper-middle-income countries
Namibia is ranked 33rd in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in two of the twelve sub-pillars: Future Technologies and SDG Contribution.

Africa
Namibia is ranked 9th within Africa (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in ten of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Inclusion, Economy and SDG Contribution.

Figure 4: Performance of Namibia against its income group and region, overall and by pillar
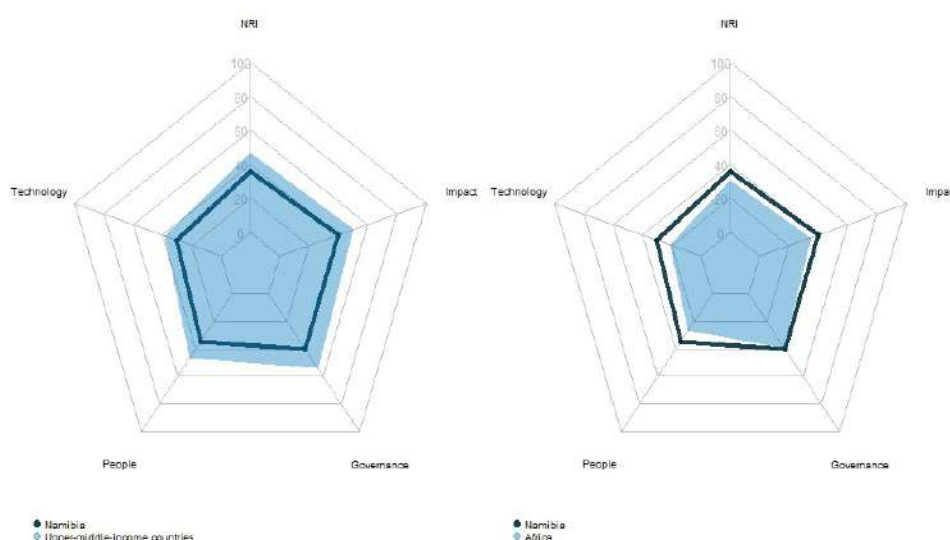
Table 2: Namibia scores vs. averages of its income group and region, overall and by pillar

Dimension	Namibia	Upper-middle-income countries	Africa
NRI	36.11	47.39	30.62
Technology	30.00	38.42	21.47
People	34.24	46.66	26.75
Governance	40.55	54.31	39.31
Impact	39.64	50.17	34.94

Strongest and weakest indicators

The indicators where Namibia performs particularly well include SDG 5: Gender Equality, Online access to financial account, and SDG 7: Affordable and Clean Energy (Table 3). By contrast, the economy's weakest indicators include e-commerce legislation, Cybersecurity, and High-tech exports.

Table 3: Top-ranked and bottom-ranked indicators of Namibia

Strongest indicators	Rank	Weakest indicators	Rank
SDG 5: Gender Equality	11	Medium and high-tech industry	107
Online access to financial account	35	4G mobile network coverage	110
SDG 7: Affordable and Clean Energy	35	Happiness	112
Active mobile-broadband subscriptions	42	Fixed-broadband subscriptions	113
Handset prices	60	Healthy life expectancy at birth	113
Internet domain registrations	62	International Internet bandwidth	114
Adult literacy rate	63	Income inequality	120
Rural gap in use of digital payments	65	Cybersecurity	123
R&D expenditure by governments and higher education	67	High-tech exports	123
Internet shopping	67	e-commerce legislation	131

NRI 2020 At-A-Glance: Namibia

Network Readiness Index   Rank: 103 (out of 134)   Score: 36.11

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	93	30.00	C. Governance pillar	105	40.55
1st sub-pillar: Access	103	38.14	1st sub-pillar: Trust	91	29.26
2nd sub-pillar: Content	79	24.64	2nd sub-pillar: Regulation	121	38.78
3rd sub-pillar: Future Technologies	71	27.20	3rd sub-pillar: Inclusion	91	53.61
B. People pillar	98	34.24	D. Impact pillar	106	39.64
1st sub-pillar: Individuals	95	42.12	1st sub-pillar: Economy	99	17.43
2nd sub-pillar: Businesses	100	31.21	2nd sub-pillar: Quality of Life	128	34.46
3rd sub-pillar: Governments	100	29.39	3rd sub-pillar: SDG Contribution	62	67.04

The Network Readiness Index in detail

| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	93	30.00	**C. Governance pillar**	105	40.55
1st sub-pillar: Access	103	38.14	*1st sub-pillar: Trust*	91	29.26
1.1.1 Mobile tariffs	93	49.43	3.1.1 Secure Internet servers	95	39.82
1.1.2 Handset prices	60	46.93	3.1.2 Cybersecurity	123	12.89
1.1.3 Internet access	90	34.39	3.1.3 Online access to financial account	35	48.77
1.1.4 4G mobile network coverage	110	39.00	3.1.4 Internet shopping	67	15.54
1.1.5 Fixed-broadband subscriptions	113	1.80	*2nd sub-pillar: Regulation*	121	38.78
1.1.6 International Internet bandwidth	114	57.31	3.2.1 Regulatory quality	75	50.26
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	100	69.12
2nd sub-pillar: Content	79	24.64	3.2.3 Legal framework's adaptability to emerging technologies	76	35.76
1.2.1 GitHub commits	104	0.75	3.2.4 e-commerce legislation	131	0.00
1.2.2 Wikipedia edits	75	40.02	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	91	53.61
1.2.4 Mobile apps development	89	53.33	3.3.1 E-Participation	100	48.15
3rd sub-pillar: Future Technologies	71	27.20	3.3.2 Socioeconomic gap in use of digital payments	75	61.49
1.3.1 Adoption of emerging technologies	71	44.52	3.3.3 Availability of local online content	103	37.76
1.3.2 Investment in emerging technologies	NA	NA	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	65	67.03
1.3.4 Computer software spending	83	9.89	**D. Impact pillar**	106	39.64
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	99	17.43
B. People pillar	98	34.24	4.1.1 Medium and high-tech industry	107	9.10
1st sub-pillar: Individuals	95	42.12	4.1.2 High-tech exports	123	0.42
2.1.1 Internet users	91	49.84	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	42	35.59	4.1.4 Labor productivity per employee	77	20.70
2.1.3 Use of virtual social networks	104	26.80	4.1.5 Prevalence of gig economy	71	39.52
2.1.4 Tertiary enrollment	90	16.25	*2nd sub-pillar: Quality of Life*	128	34.46
2.1.5 Adult literacy rate	63	89.12	4.2.1 Happiness	112	34.25
2.1.6 ICT skills	103	35.10	4.2.2 Freedom to make life choices	94	61.91
2nd sub-pillar: Businesses	100	31.21	4.2.3 Income inequality	120	10.05
2.2.1 Firms with website	88	34.71	4.2.4 Healthy life expectancy at birth	113	31.62
2.2.2 Ease of doing business	91	55.04	*3rd sub-pillar: SDG Contribution*	62	67.04
2.2.3 Professionals	79	17.93	4.3.1 SDG 3: Good Health and Well-Being	94	55.74
2.2.4 Technicians and associate professionals	86	22.90	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	78	55.69	4.3.3 SDG 5: Gender Equality	11	88.56
2.2.6 R&D expenditure by businesses	75	0.98	4.3.4 SDG 7: Affordable and Clean Energy	35	85.91
3rd sub-pillar: Governments	100	29.39	.	.	.
2.3.1 Government online services	97	50.91			
2.3.2 Publication and use of open data	95	9.08			
2.3.3 Government promotion of investment in emerging tech	76	33.79			
2.3.4 R&D expenditure by governments and higher education	67	23.79			

* Confidential data

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Network Readiness Index 2020 Nepal

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model
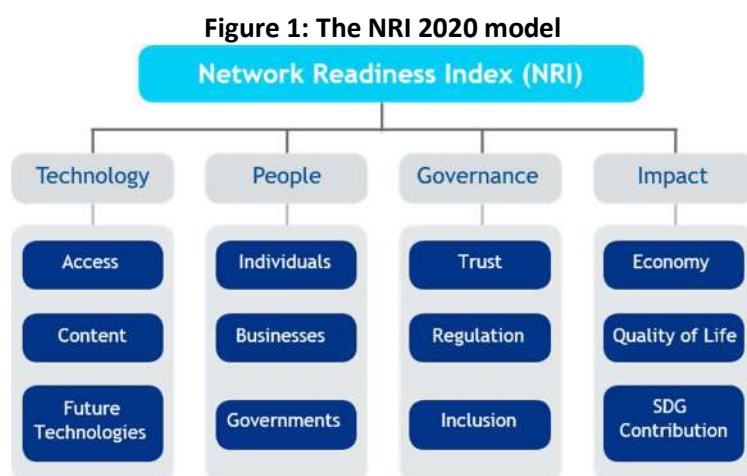
Global NRI position of Nepal

Nepal ranks 113th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Nepal global ranking, overall and by pillar
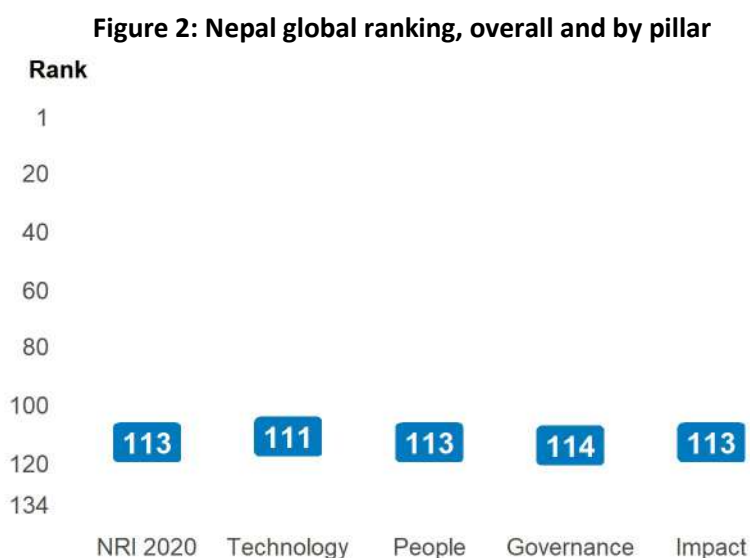
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Nepal relate to Quality of Life, Content and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Economy and SDG Contribution sub-pillars.

Table 1: Nepal rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	76	Businesses	109
Content	89	Inclusion	113
Future Technologies	106	Access	114
Governments	107	Trust	117
Regulation	107	Economy	117
Individuals	108	SDG Contribution	127

NRI score and income

Figure 3 shows the position of Nepal in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Nepal is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
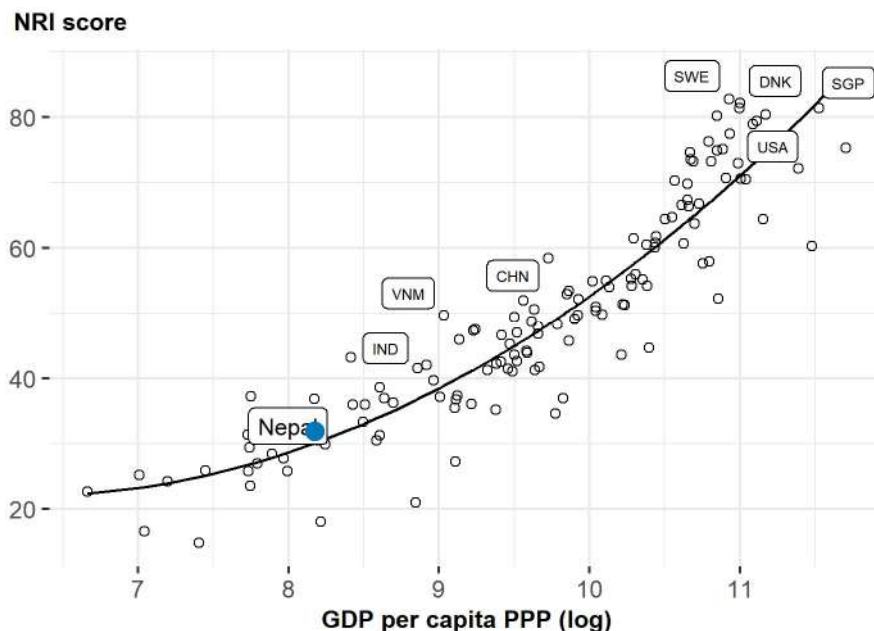
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Nepal belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Lower-middle-income countries
Nepal is ranked 26th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in two of the twelve sub-pillars: Content and Quality of Life.

Asia & Pacific
Nepal is ranked 21st within Asia & Pacific (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Nepal against its income group and region, overall and by pillar
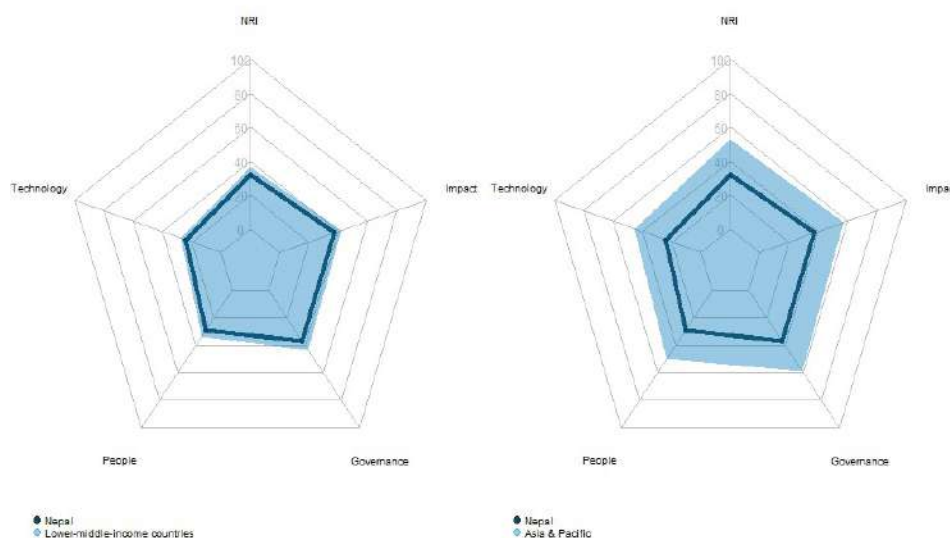
Table 2: Nepal scores vs. averages of its income group and region, overall and by pillar

Dimension	Nepal	Lower-middle-income countries	Asia & Pacific
NRI	31.81	36.72	52.76
Technology	24.28	27.72	45.33
People	28.81	33.88	49.64
Governance	36.82	43.15	59.20
Impact	37.34	42.15	56.86

Strongest and weakest indicators

The indicators where Nepal performs particularly well include e-commerce legislation, Income inequality, and Privacy protection by law content (Table 3). By contrast, the economy's weakest indicators include SDG 11: Sustainable Cities and Communities, 4G mobile network coverage, Business use of digital tools, and SDG 7: Affordable and Clean Energy.

Table 3: Top-ranked and bottom-ranked indicators of Nepal

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Handset prices	115
Income inequality	33	Government online services	115
Privacy protection by law content	71	Online access to financial account	115
Freedom to make life choices	75	Regulatory quality	115
Professionals	77	Internet shopping	116
GitHub commits	79	Computer software spending	117
Happiness	79	Business use of digital tools	118
Publication and use of open data	81	SDG 7: Affordable and Clean Energy	118
Ease of doing business	86	4G mobile network coverage	122
Wikipedia edits	87	SDG 11: Sustainable Cities and Communities	127

NRI 2020 At-A-Glance: Nepal

Network Readiness Index   Rank: 113 (out of 134)   Score: 31.81

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	111	24.28	C. Governance pillar	114	36.82
1st sub-pillar: Access	114	32.63	1st sub-pillar: Trust	117	19.42
2nd sub-pillar: Content	89	21.84	2nd sub-pillar: Regulation	107	50.74
3rd sub-pillar: Future Technologies	106	18.37	3rd sub-pillar: Inclusion	113	40.30
B. People pillar	113	28.81	D. Impact pillar	113	37.34
1st sub-pillar: Individuals	108	31.24	1st sub-pillar: Economy	117	12.00
2nd sub-pillar: Businesses	109	29.29	2nd sub-pillar: Quality of Life	76	63.07
3rd sub-pillar: Governments	107	25.88	3rd sub-pillar: SDG Contribution	127	36.96

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	111	24.28	**C. Governance pillar**	114	36.82
1st sub-pillar: Access	114	32.63	*1st sub-pillar: Trust*	117	19.42
1.1.1 Mobile tariffs	92	49.45	3.1.1 Secure Internet servers	90	41.83
1.1.2 Handset prices	115	21.21	3.1.2 Cybersecurity	108	27.30
1.1.3 Internet access	112	17.70	3.1.3 Online access to financial account	115	6.34
1.1.4 4G mobile network coverage	122	15.47	3.1.4 Internet shopping	116	2.20
1.1.5 Fixed-broadband subscriptions	NA	NA	*2nd sub-pillar: Regulation*	107	50.74
1.1.6 International Internet bandwidth	108	59.30	3.2.1 Regulatory quality	115	34.99
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	106	66.03
2nd sub-pillar: Content	89	21.84	3.2.3 Legal framework's adaptability to emerging technologies	96	24.70
1.2.1 GitHub commits	79	2.36	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	87	32.32	3.2.5 Privacy protection by law content	71	27.96
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	113	40.30
1.2.4 Mobile apps development	92	51.85	3.3.1 E-Participation	114	34.56
3rd sub-pillar: Future Technologies	106	18.37	3.3.2 Socioeconomic gap in use of digital payments	96	47.57
1.3.1 Adoption of emerging technologies	108	27.45	3.3.3 Availability of local online content	108	34.35
1.3.2 Investment in emerging technologies	105	26.30	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	110	44.73
1.3.4 Computer software spending	117	1.36	**D. Impact pillar**	113	37.34
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	117	12.00
B. People pillar	113	28.81	4.1.1 Medium and high-tech industry	104	10.43
1st sub-pillar: Individuals	108	31.24	4.1.2 High-tech exports	112	2.24
2.1.1 Internet users	105	32.31	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	101	17.70	4.1.4 Labor productivity per employee	NA	NA
2.1.3 Use of virtual social networks	100	34.02	4.1.5 Prevalence of gig economy	106	23.33
2.1.4 Tertiary enrollment	102	8.53	*2nd sub-pillar: Quality of Life*	76	63.07
2.1.5 Adult literacy rate	94	58.71	4.2.1 Happiness	79	54.16
2.1.6 ICT skills	100	36.17	4.2.2 Freedom to make life choices	75	70.62
2nd sub-pillar: Businesses	109	29.29	4.2.3 Income inequality	33	77.84
2.2.1 Firms with website	107	19.27	4.2.4 Healthy life expectancy at birth	98	49.66
2.2.2 Ease of doing business	86	58.29	*3rd sub-pillar: SDG Contribution*	127	36.96
2.2.3 Professionals	77	19.27	4.3.1 SDG 3: Good Health and Well-Being	109	32.79
2.2.4 Technicians and associate professionals	94	18.44	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	118	31.19	4.3.3 SDG 5: Gender Equality	109	50.76
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	118	52.67
3rd sub-pillar: Governments	107	25.88	.	.	.
2.3.1 Government online services	115	38.18			
2.3.2 Publication and use of open data	81	15.49			
2.3.3 Government promotion of investment in emerging tech	100	23.98			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

Sources
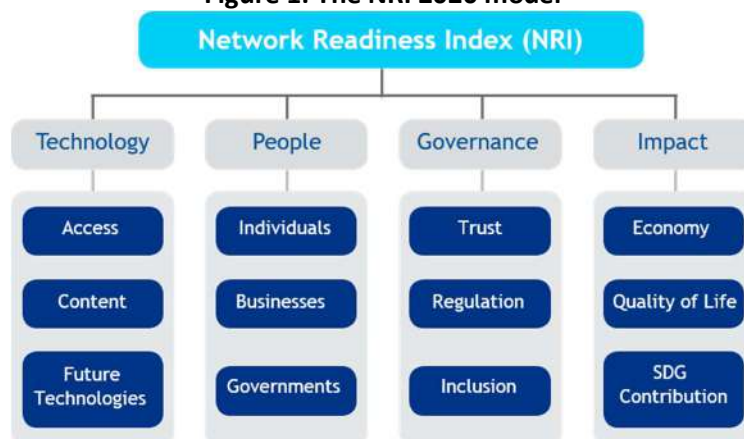
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Network Readiness Index 2020 Netherlands

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
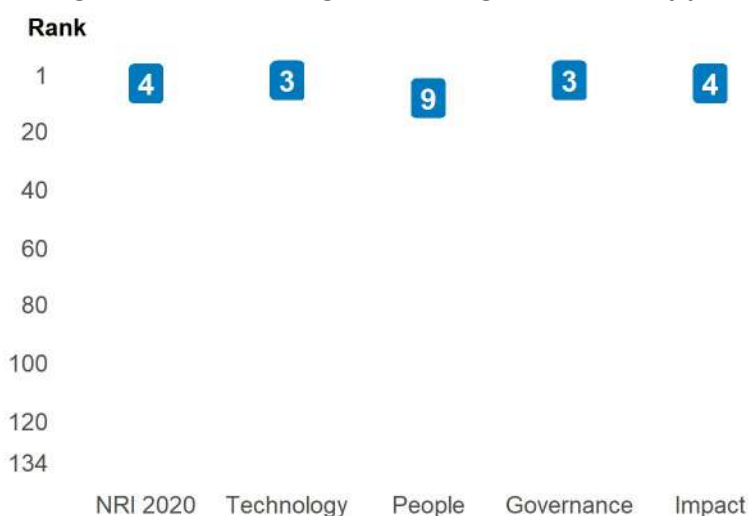
Figure 1: The NRI 2020 model

Global NRI position of Netherlands

Netherlands ranks 4th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology and Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Netherlands global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Netherlands relate to Content, Trust and Inclusion, among others (Table 1). More could be done, though, to improve the economy's performances in the Governments, Access and Individuals sub-pillars.

Table 1: Netherlands rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Content	2	SDG Contribution	9
Trust	3	Regulation	10
Inclusion	5	Quality of Life	10
Future Technologies	8	Governments	11
Economy	8	Access	12
Businesses	9	Individuals	20

NRI score and income

Figure 3 shows the position of Netherlands in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Netherlands is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
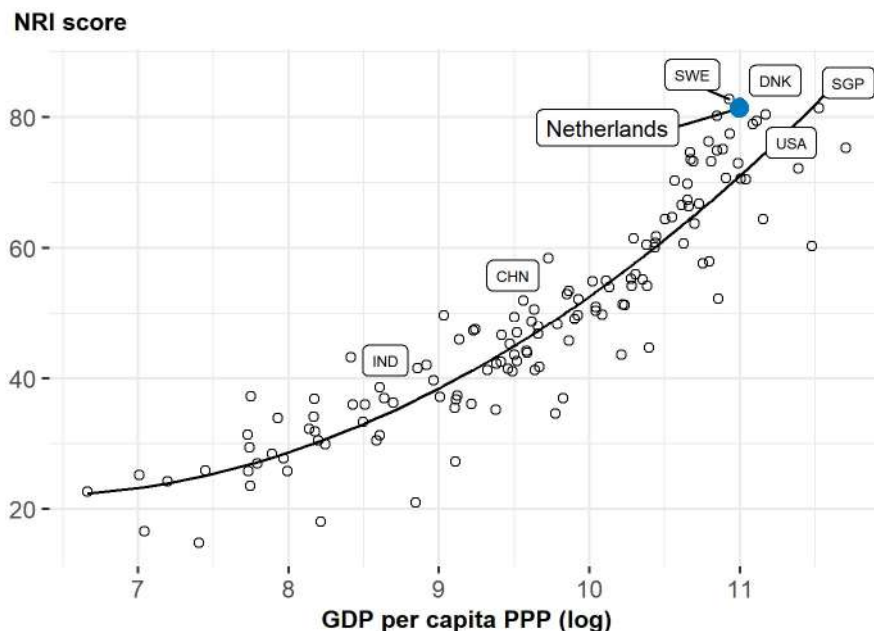
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Netherlands belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Netherlands is ranked 4th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it has a higher score than the average of high-income countries in all of them.

Europe
Netherlands is ranked 3rd within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of Netherlands against its income group and region, overall and by pillar
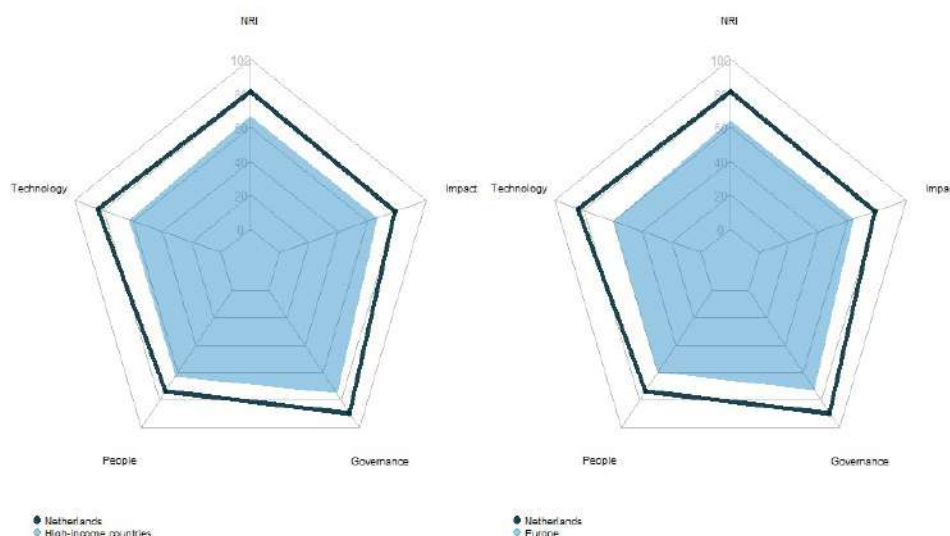
Table 2: Netherlands scores vs. averages of its income group and region, overall and by pillar

Dimension	Netherlands	High-income countries	Europe
NRI	81.37	66.82	64.21
Technology	83.81	62.51	59.93
People	73.45	62.72	59.89
Governance	89.47	75.41	72.98
Impact	78.75	66.63	64.04

Strongest and weakest indicators

The indicators where Netherlands performs particularly well include Internet access in schools, Internet domain registrations, and Adoption of emerging technologies (Table 3). By contrast, the economy's weakest indicators include SDG 5: Gender Equality, SDG 7: Affordable and Clean Energy, and Use of virtual social networks.

Table 3: Top-ranked and bottom-ranked indicators of Netherlands

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	International Internet bandwidth	29
Internet domain registrations	1	Mobile tariffs	30
Adoption of emerging technologies	1	Handset prices	34
e-commerce legislation	1	Freedom to make life choices	36
Business use of digital tools	2	Ease of doing business	41
Secure Internet servers	2	Privacy protection by law content	41
Internet shopping	2	Active mobile-broadband subscriptions	43
Prevalence of gig economy	2	Use of virtual social networks	44
Regulatory quality	3	SDG 7: Affordable and Clean Energy	48
Availability of local online content	3	SDG 5: Gender Equality	69

NRI 2020 At-A-Glance: Netherlands

Network Readiness Index   Rank: 4 (out of 134)   Score: 81.37

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	3	83.81	C. Governance pillar	3	89.47
1st sub-pillar: Access	12	86.86	1st sub-pillar: Trust	3	93.78
2nd sub-pillar: Content	2	91.79	2nd sub-pillar: Regulation	10	88.23
3rd sub-pillar: Future Technologies	8	72.79	3rd sub-pillar: Inclusion	5	86.41
B. People pillar	9	73.45	D. Impact pillar	4	78.75
1st sub-pillar: Individuals	20	70.01	1st sub-pillar: Economy	8	63.79
2nd sub-pillar: Businesses	9	73.68	2nd sub-pillar: Quality of Life	10	88.72
3rd sub-pillar: Governments	11	76.66	3rd sub-pillar: SDG Contribution	9	83.74

The Network Readiness Index in detail

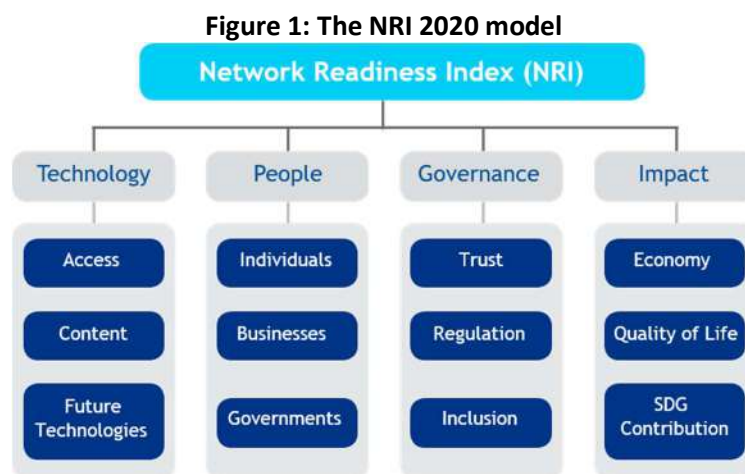| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	3	83.81	**C. Governance pillar**	3	89.47
1st sub-pillar: Access	12	86.86	*1st sub-pillar: Trust*	3	93.78
1.1.1 Mobile tariffs	30	77.99	3.1.1 Secure Internet servers	2	93.98
1.1.2 Handset prices	34	62.71	3.1.2 Cybersecurity	13	95.02
1.1.3 Internet access	9	96.14	3.1.3 Online access to financial account	5	89.01
1.1.4 4G mobile network coverage	24	99.00	3.1.4 Internet shopping	2	97.11
1.1.5 Fixed-broadband subscriptions	6	98.81	*2nd sub-pillar: Regulation*	10	88.23
1.1.6 International Internet bandwidth	29	73.35	3.2.1 Regulatory quality	3	95.86
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	19	94.98
2nd sub-pillar: Content	2	91.79	3.2.3 Legal framework's adaptability to emerging technologies	8	82.05
1.2.1 GitHub commits	5	79.07	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	5	93.02	3.2.5 Privacy protection by law content	41	68.26
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	5	86.41
1.2.4 Mobile apps development	5	95.07	3.3.1 E-Participation	9	96.30
3rd sub-pillar: Future Technologies	8	72.79	3.3.2 Socioeconomic gap in use of digital payments	11	96.62
1.3.1 Adoption of emerging technologies	1	100.00	3.3.3 Availability of local online content	3	97.09
1.3.2 Investment in emerging technologies	5	87.95	3.3.4 Gender gap in Internet use	27	66.16
1.3.3 ICT PCT patent applications	13	66.62	3.3.5 Rural gap in use of digital payments	25	75.85
1.3.4 Computer software spending	9	55.71	**D. Impact pillar**	4	78.75
1.3.5 Robot density	11	53.69	*1st sub-pillar: Economy*	8	63.79
B. People pillar	9	73.45	4.1.1 Medium and high-tech industry	15	62.41
1st sub-pillar: Individuals	20	70.01	4.1.2 High-tech exports	18	42.97
2.1.1 Internet users	11	94.91	4.1.3 PCT patent applications	9	51.85
2.1.2 Active mobile-broadband subscriptions	43	35.31	4.1.4 Labor productivity per employee	15	67.09
2.1.3 Use of virtual social networks	44	63.92	4.1.5 Prevalence of gig economy	2	94.63
2.1.4 Tertiary enrollment	12	61.98	*2nd sub-pillar: Quality of Life*	10	88.72
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	6	93.02
2.1.6 ICT skills	4	93.94	4.2.2 Freedom to make life choices	36	86.80
2nd sub-pillar: Businesses	9	73.68	4.2.3 Income inequality	14	88.92
2.2.1 Firms with website	4	95.65	4.2.4 Healthy life expectancy at birth	20	86.13
2.2.2 Ease of doing business	41	81.14	*3rd sub-pillar: SDG Contribution*	9	83.74
2.2.3 Professionals	5	65.69	4.3.1 SDG 3: Good Health and Well-Being	6	95.08
2.2.4 Technicians and associate professionals	16	70.95	4.3.2 SDG 4: Quality Education	7	72.90
2.2.5 Business use of digital tools	2	99.21	4.3.3 SDG 5: Gender Equality	69	74.10
2.2.6 R&D expenditure by businesses	17	29.45	4.3.4 SDG 7: Affordable and Clean Energy	48	82.95
3rd sub-pillar: Governments	11	76.66	.	.	.
2.3.1 Government online services	12	90.30			
2.3.2 Publication and use of open data	9	74.95			
2.3.3 Government promotion of investment in emerging tech	20	66.87			
2.3.4 R&D expenditure by governments and higher education	12	74.51			

* Confidential data

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Network Readiness Index 2020 New Zealand

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of New Zealand

New Zealand ranks 16th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: New Zealand global ranking, overall and by pillar
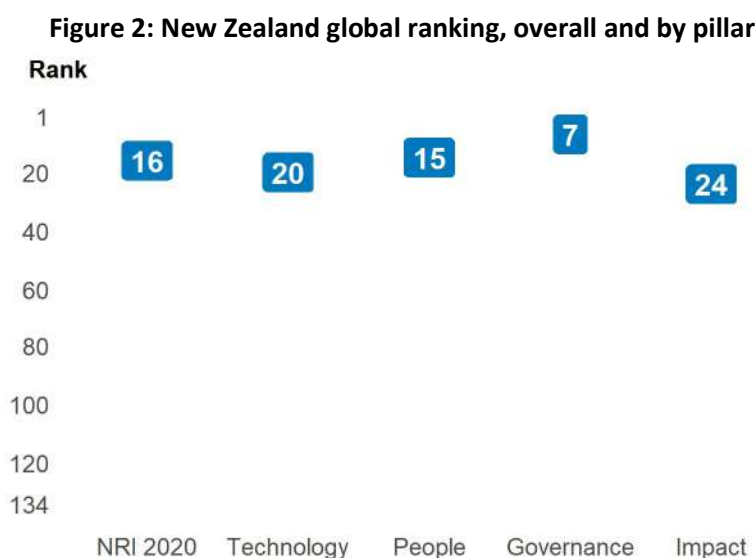
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of New Zealand relate to Inclusion, Quality of Life and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Future Technologies and Economy sub-pillars.

Table 1: New Zealand rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Inclusion	2	Regulation	16
Quality of Life	7	Governments	18
Trust	9	Individuals	23
Content	12	SDG Contribution	24
Businesses	15	Future Technologies	29
Access	16	Economy	38

NRI score and income

Figure 3 shows the position of New Zealand in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, New Zealand is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
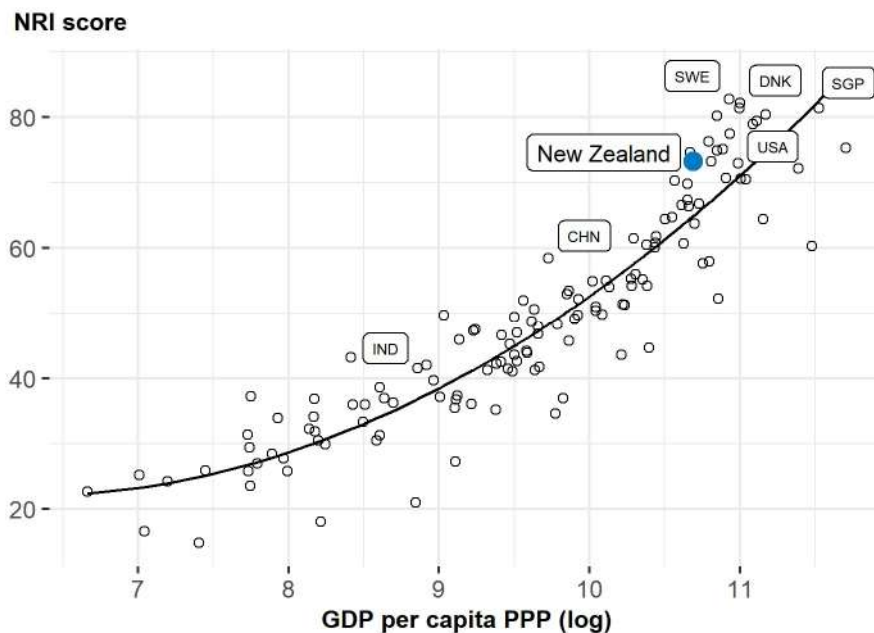
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. New Zealand belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

High-income countries
New Zealand is ranked 16th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in ten of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Quality of Life and SDG Contribution.

Asia & Pacific
New Zealand is ranked 5th within Asia & Pacific (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Asia & Pacific in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Quality of Life and SDG Contribution.

Figure 4: Performance of New Zealand against its income group and region, overall and by pillar

Table 2: New Zealand scores vs. averages of its income group and region, overall and by pillar

Dimension	New Zealand	High-income countries	Asia & Pacific
NRI	73.27	66.82	52.76
Technology	68.44	62.51	45.33
People	69.56	62.72	49.64
Governance	86.57	75.41	59.20
Impact	68.49	66.63	56.86

Strongest and weakest indicators

The indicators where New Zealand performs particularly well include Ease of doing business, e-commerce legislation, and SDG 3: Good Health and Well-Being (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, Medium and high-tech industry, and ICT regulatory environment.

Table 3: Top-ranked and bottom-ranked indicators of New Zealand

Strongest indicators	Rank	Weakest indicators	Rank
Ease of doing business	1	Government promotion of investment in emerging technologies	35
e-commerce legislation	1	Cybersecurity	38
SDG 3: Good Health and Well-Being	2	Rural gap in use of digital payments	39
Regulatory quality	4	4G mobile network coverage	46
E-Participation	4	High-tech exports	50
Socioeconomic gap in use of digital payments	4	Computer software spending	55
Fixed-broadband subscriptions	5	SDG 5: Gender Equality	74
GitHub commits	6	ICT regulatory environment	80
Online access to financial account	6	Medium and high-tech industry	82
Publication and use of open data	7	SDG 7: Affordable and Clean Energy	83

NRI 2020 At-A-Glance: New Zealand

Network Readiness Index
Rank: 16 (out of 134)
Score: 73.27

Pillar/sub-pillar	Rank	Score
A. Technology pillar	20	68.44
1st sub-pillar: Access	16	86.25
2nd sub-pillar: Content	12	74.21
3rd sub-pillar: Future Technologies	29	44.86
B. People pillar	15	69.56
1st sub-pillar: Individuals	23	68.85
2nd sub-pillar: Businesses	15	70.10
3rd sub-pillar: Governments	18	69.72

Pillar/sub-pillar	Rank	Score
C. Governance pillar	7	86.57
1st sub-pillar: Trust	9	84.79
2nd sub-pillar: Regulation	16	85.33
3rd sub-pillar: Inclusion	2	89.60
D. Impact pillar	24	68.49
1st sub-pillar: Economy	38	36.40
2nd sub-pillar: Quality of Life	7	89.57
3rd sub-pillar: SDG Contribution	24	79.52

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	20	68.44
1st sub-pillar: Access	16	86.25
1.1.1 Mobile tariffs	18	84.30
1.1.2 Handset prices	11	73.96
1.1.3 Internet access	24	87.77
1.1.4 4G mobile network coverage	46	97.00
1.1.5 Fixed-broadband subscriptions	5	99.03
1.1.6 International Internet bandwidth	16	75.42
1.1.7 Internet access in schools	NA	NA
2nd sub-pillar: Content	12	74.21
1.2.1 GitHub commits	6	77.28
1.2.2 Wikipedia edits	24	79.37
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	18	86.45
3rd sub-pillar: Future Technologies	29	44.86
1.3.1 Adoption of emerging technologies	18	77.97
1.3.2 Investment in emerging technologies	19	68.51
1.3.3 ICT PCT patent applications	26	41.38
1.3.4 Computer software spending	55	22.01
1.3.5 Robot density	29	14.42
B. People pillar	15	69.56
1st sub-pillar: Individuals	23	68.85
2.1.1 Internet users	15	90.88
2.1.2 Active mobile-broadband subscriptions	19	44.91
2.1.3 Use of virtual social networks	15	75.26
2.1.4 Tertiary enrollment	15	59.81
2.1.5 Adult literacy rate	NA	NA
2.1.6 ICT skills	29	73.41
2nd sub-pillar: Businesses	15	70.10
2.2.1 Firms with website	17	83.07
2.2.2 Ease of doing business	1	100.00
2.2.3 Professionals	NA	NA
2.2.4 Technicians and associate professionals	NA	NA
2.2.5 Business use of digital tools	25	81.24
2.2.6 R&D expenditure by businesses	34	16.11
3rd sub-pillar: Governments	18	69.72
2.3.1 Government online services	10	92.73
2.3.2 Publication and use of open data	7	79.38
2.3.3 Government promotion of investment in emerging tech	35	51.81
2.3.4 R&D expenditure by governments and higher education	26	54.95

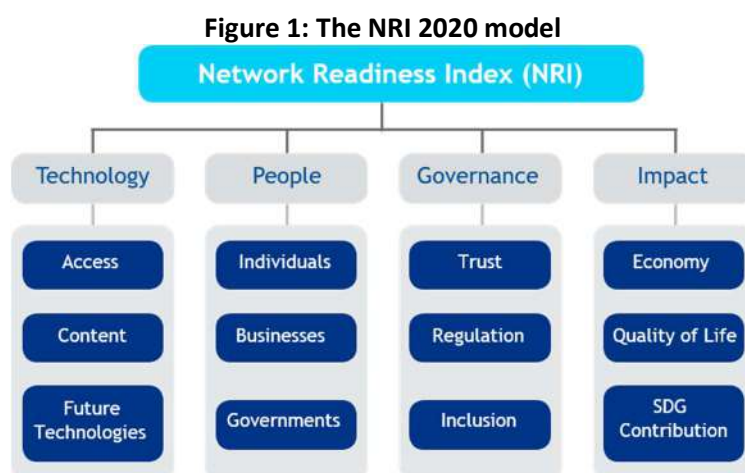| Indicator	Rank	Score
C. Governance pillar	7	86.57
1st sub-pillar: Trust	9	84.79
3.1.1 Secure Internet servers	27	79.17
3.1.2 Cybersecurity	38	84.62
3.1.3 Online access to financial account	6	86.73
3.1.4 Internet shopping	8	88.63
2nd sub-pillar: Regulation	16	85.33
3.2.1 Regulatory quality	4	95.00
3.2.2 ICT regulatory environment	80	80.51
3.2.3 Legal framework's adaptability to emerging technologies	23	65.82
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	2	89.60
3.3.1 E-Participation	4	98.77
3.3.2 Socioeconomic gap in use of digital payments	4	99.29
3.3.3 Availability of local online content	17	86.43
3.3.4 Gender gap in Internet use	NA	NA
3.3.5 Rural gap in use of digital payments	39	73.94
D. Impact pillar	24	68.49
1st sub-pillar: Economy	38	36.40
4.1.1 Medium and high-tech industry	82	23.46
4.1.2 High-tech exports	50	18.44
4.1.3 PCT patent applications	25	14.56
4.1.4 Labor productivity per employee	31	51.66
4.1.5 Prevalence of gig economy	14	73.86
2nd sub-pillar: Quality of Life	7	89.57
4.2.1 Happiness	11	88.69
4.2.2 Freedom to make life choices	20	91.29
4.2.3 Income inequality	NA	NA
4.2.4 Healthy life expectancy at birth	14	88.73
3rd sub-pillar: SDG Contribution	24	79.52
4.3.1 SDG 3: Good Health and Well-Being	2	96.72
4.3.2 SDG 4: Quality Education	26	63.61
4.3.3 SDG 5: Gender Equality	74	73.04
4.3.4 SDG 7: Affordable and Clean Energy	83	73.12
.	.	.

* Confidential data

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Network Readiness Index 2020 Nigeria

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Nigeria

Nigeria ranks 117th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Nigeria global ranking, overall and by pillar
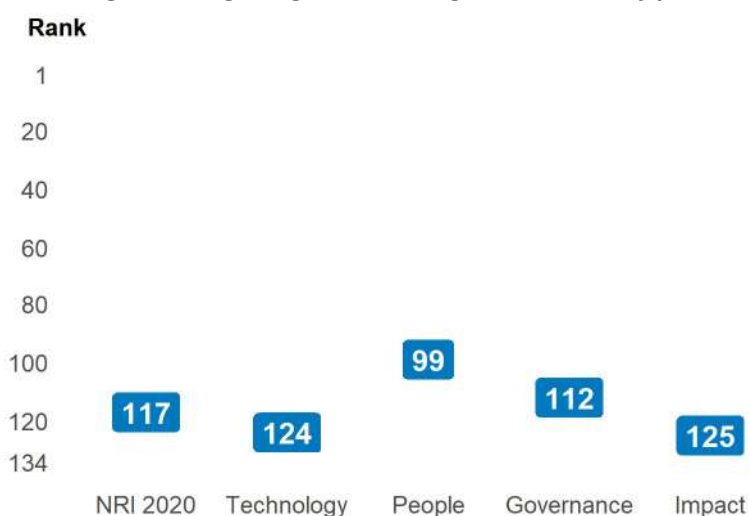
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Nigeria relate to Businesses, Trust and Governments, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Inclusion and Quality of Life sub-pillars.

Table 1: Nigeria rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Businesses	53	Individuals	117
Trust	83	Access	119
Governments	99	Content	119
Economy	100	SDG Contribution	120
Future Technologies	104	Inclusion	122
Regulation	113	Quality of Life	125

NRI score and income

Figure 3 shows the position of Nigeria in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Nigeria is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
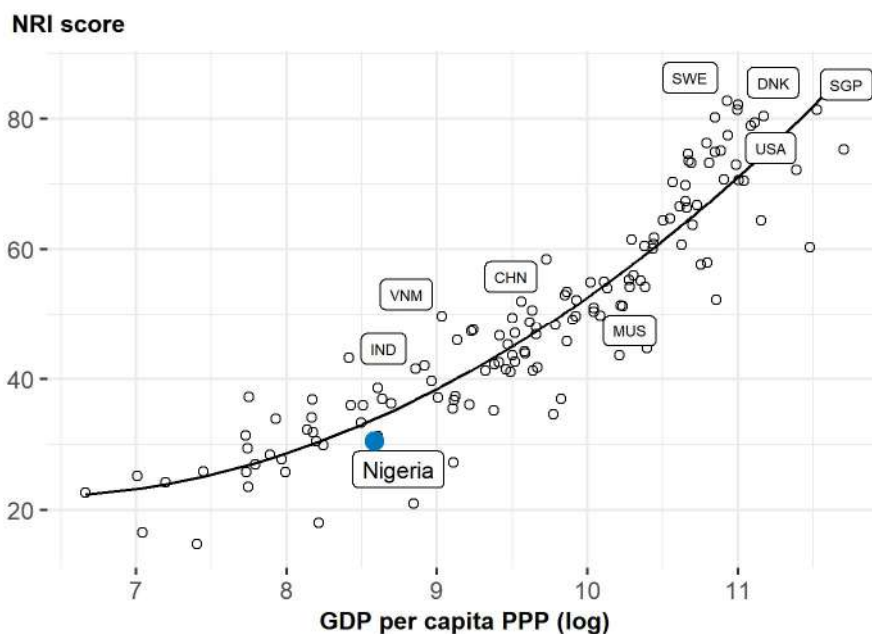
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Nigeria belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries
Nigeria is ranked 29th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: people. At the sub-pillar level, it outperforms lower-middle-income countries in two of the twelve sub-pillars: Businesses and Trust.

Africa
Nigeria is ranked 15th within Africa (Figure 4, right panel). It has a score above the regional average in one of the four pillars: people. With regard to sub-pillars, it outperforms the average in Africa in four of the twelve sub-pillars: Businesses, Governments, Trust and Economy.

Figure 4: Performance of Nigeria against its income group and region, overall and by pillar
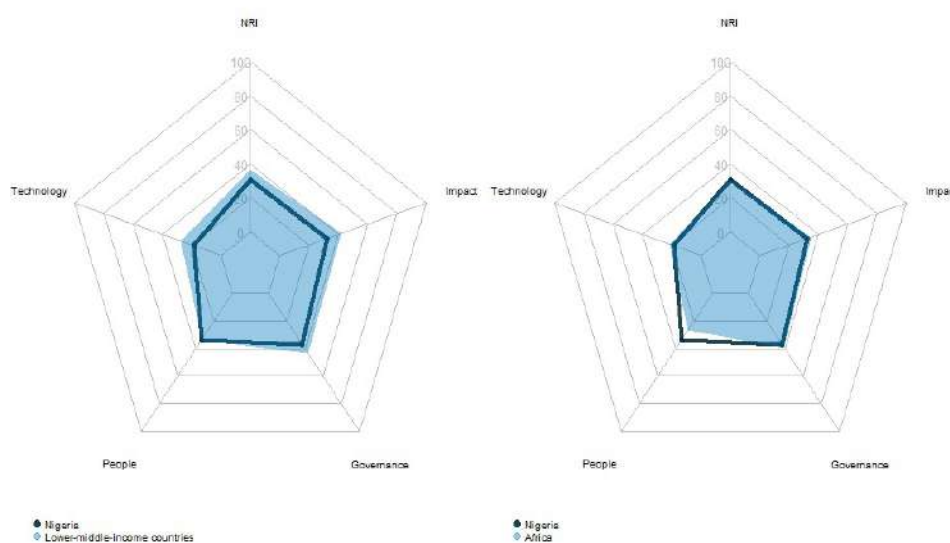
Table 2: Nigeria scores vs. averages of its income group and region, overall and by pillar

Dimension	Nigeria	Lower-middle-income countries	Africa
NRI	30.44	36.72	30.62
Technology	18.52	27.72	21.47
People	33.91	33.88	26.75
Governance	37.18	43.15	39.31
Impact	32.15	42.15	34.94

Strongest and weakest indicators

The indicators where Nigeria performs particularly well include Technicians and associate professionals, Medium and high-tech industry, and Business use of digital tools (Table 3). By contrast, the economy's weakest indicators include International Internet bandwidth, Healthy life expectancy at birth, and Internet access.

Table 3: Top-ranked and bottom-ranked indicators of Nigeria

Strongest indicators	Rank	Weakest indicators	Rank
Technicians and associate professionals	4	Wikipedia edits	118
Medium and high-tech industry	43	Availability of local online content	118
Business use of digital tools	50	Rural gap in use of digital payments	118
Cybersecurity	59	4G mobile network coverage	120
Publication and use of open data	69	SDG 5: Gender Equality	120
Adoption of emerging technologies	74	Regulatory quality	121
Privacy protection by law content	75	SDG 3: Good Health and Well-Being	122
ICT PCT patent applications	77	Internet access	129
e-commerce legislation	77	International Internet bandwidth	130
Online access to financial account	80	Healthy life expectancy at birth	130

NRI 2020 At-A-Glance: Nigeria

Network Readiness Index   Rank: 117 (out of 134)   Score: 30.44

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	124	18.52	C. Governance pillar	112	37.17
1st sub-pillar: Access	119	26.11	1st sub-pillar: Trust	83	32.23
2nd sub-pillar: Content	119	10.51	2nd sub-pillar: Regulation	113	46.10
3rd sub-pillar: Future Technologies	104	18.94	3rd sub-pillar: Inclusion	122	33.20
B. People pillar	99	33.91	D. Impact pillar	125	32.15
1st sub-pillar: Individuals	117	24.94	1st sub-pillar: Economy	100	17.12
2nd sub-pillar: Businesses	53	47.20	2nd sub-pillar: Quality of Life	125	38.12
3rd sub-pillar: Governments	99	29.58	3rd sub-pillar: SDG Contribution	120	41.22

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	124	18.52	**C. Governance pillar**	112	37.17
1st sub-pillar: Access	119	26.11	*1st sub-pillar: Trust*	83	32.23
1.1.1 Mobile tariffs	86	51.96	3.1.1 Secure Internet servers	105	34.46
1.1.2 Handset prices	117	20.01	3.1.2 Cybersecurity	59	69.56
1.1.3 Internet access	129	7.27	3.1.3 Online access to financial account	80	19.70
1.1.4 4G mobile network coverage	120	22.34	3.1.4 Internet shopping	94	5.21
1.1.5 Fixed-broadband subscriptions	102	8.16	*2nd sub-pillar: Regulation*	113	46.10
1.1.6 International Internet bandwidth	130	46.89	3.2.1 Regulatory quality	121	31.98
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	87	77.99
2nd sub-pillar: Content	119	10.51	3.2.3 Legal framework's adaptability to emerging technologies	99	22.70
1.2.1 GitHub commits	101	1.00	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	118	5.94	3.2.5 Privacy protection by law content	75	22.81
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	122	33.20
1.2.4 Mobile apps development	115	34.73	3.3.1 E-Participation	102	46.91
3rd sub-pillar: Future Technologies	104	18.94	3.3.2 Socioeconomic gap in use of digital payments	110	40.81
1.3.1 Adoption of emerging technologies	74	43.17	3.3.3 Availability of local online content	118	27.51
1.3.2 Investment in emerging technologies	113	22.87	3.3.4 Gender gap in Internet use	84	22.17
1.3.3 ICT PCT patent applications	77	0.24	3.3.5 Rural gap in use of digital payments	118	28.59
1.3.4 Computer software spending	84	9.49	**D. Impact pillar**	125	32.15
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	100	17.12
B. People pillar	99	33.91	4.1.1 Medium and high-tech industry	43	42.61
1st sub-pillar: Individuals	117	24.94	4.1.2 High-tech exports	107	3.51
2.1.1 Internet users	98	40.56	4.1.3 PCT patent applications	88	0.00
2.1.2 Active mobile-broadband subscriptions	115	10.86	4.1.4 Labor productivity per employee	96	8.30
2.1.3 Use of virtual social networks	116	11.34	4.1.5 Prevalence of gig economy	91	31.17
2.1.4 Tertiary enrollment	107	6.89	*2nd sub-pillar: Quality of Life*	125	38.12
2.1.5 Adult literacy rate	97	51.12	4.2.1 Happiness	114	32.69
2.1.6 ICT skills	117	28.86	4.2.2 Freedom to make life choices	97	60.26
2nd sub-pillar: Businesses	53	47.20	4.2.3 Income inequality	94	51.55
2.2.1 Firms with website	113	14.86	4.2.4 Healthy life expectancy at birth	130	7.99
2.2.2 Ease of doing business	109	47.13	*3rd sub-pillar: SDG Contribution*	120	41.22
2.2.3 Professionals	97	14.24	4.3.1 SDG 3: Good Health and Well-Being	122	22.95
2.2.4 Technicians and associate professionals	4	91.41	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	50	68.38	4.3.3 SDG 5: Gender Equality	120	40.74
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	102	66.11
3rd sub-pillar: Governments	99	29.58	.	.	.
2.3.1 Government online services	100	50.30			
2.3.2 Publication and use of open data	69	20.97			
2.3.3 Government promotion of investment in emerging tech	109	17.46			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

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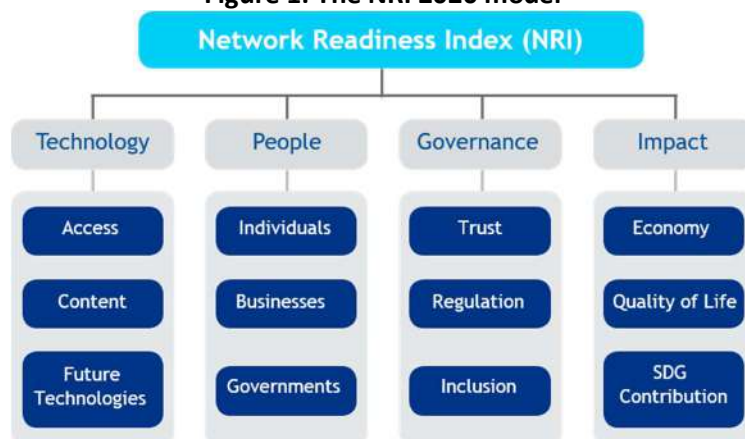
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Network Readiness Index 2020 North Macedonia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
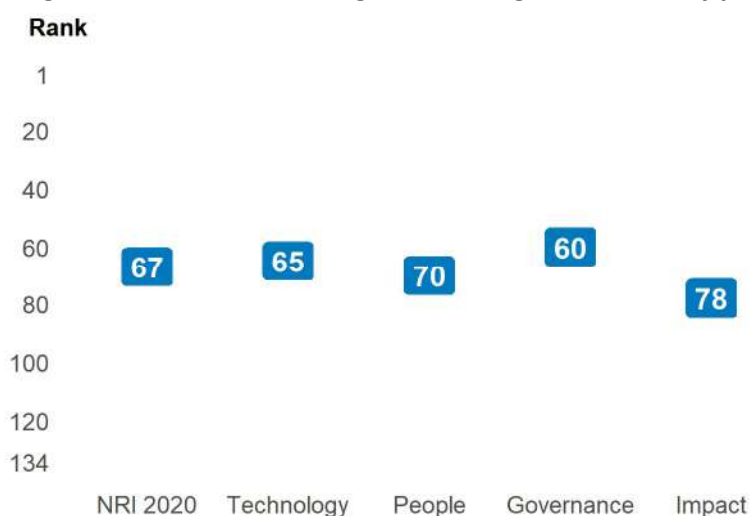
Figure 1: The NRI 2020 model

Global NRI position of North Macedonia

North Macedonia ranks 67th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: North Macedonia global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of North Macedonia relate to Content, Businesses and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Quality of Life, Economy and Future Technologies sub-pillars.

Table 1: North Macedonia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Content	49	Individuals	74
Businesses	60	SDG Contribution	76
Access	61	Governments	80
Trust	64	Quality of Life	80
Inclusion	66	Economy	81
Regulation	68	Future Technologies	120

NRI score and income

Figure 3 shows the position of North Macedonia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, North Macedonia is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
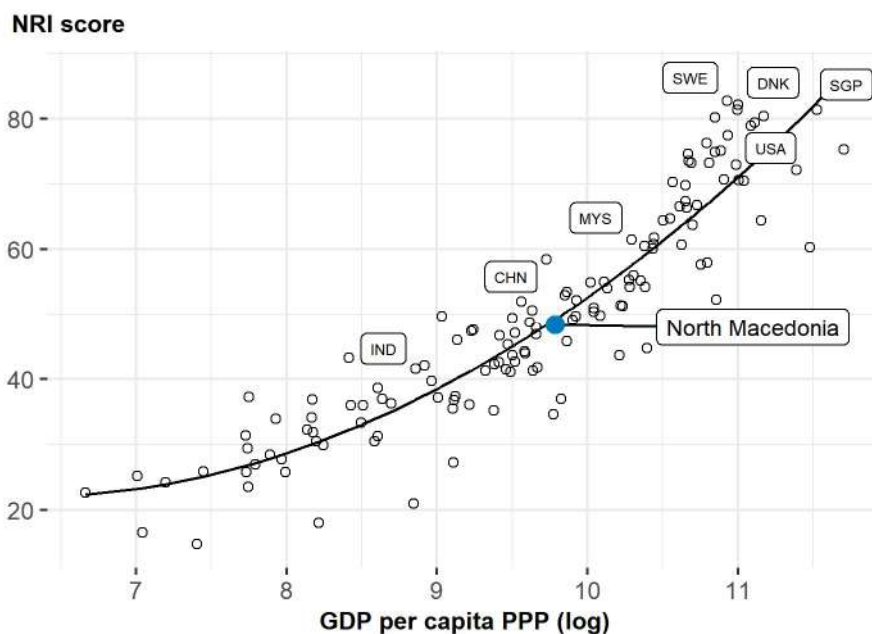
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. North Macedonia belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Europe-is Sweden (SWE).

Performance against its income group and region

Upper-middle-income countries
North Macedonia is ranked 17th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: nri.score, technology and governance. At the sub-pillar level, it outperforms upper-middle-income countries in seven of the twelve sub-pillars: Access, Content, Businesses, Trust, Regulation, Inclusion and Quality of Life.

Europe
North Macedonia is ranked 37th within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of North Macedonia against its income group and region, overall and by pillar
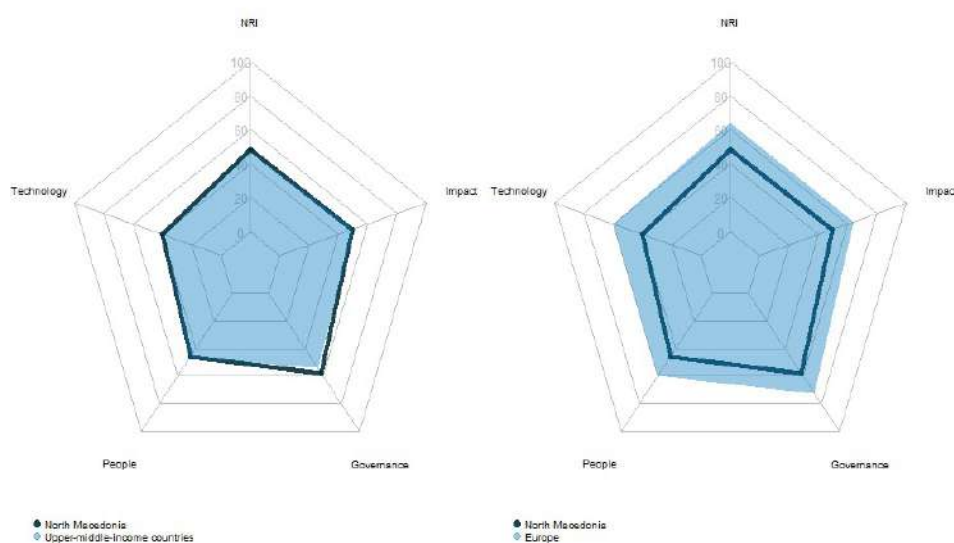
Table 2: North Macedonia scores vs. averages of its income group and region, overall and by pillar

Dimension	North Macedonia	Upper-middle-income countries	Europe
NRI	48.28	47.39	64.21
Technology	40.09	38.42	59.93
People	46.07	46.66	59.89
Governance	57.72	54.31	72.98
Impact	49.25	50.17	64.04

Strongest and weakest indicators

The indicators where North Macedonia performs particularly well include Ease of doing business, 4G mobile network coverage, and Adult literacy rate (Table 3). By contrast, the economy's weakest indicators include Investment in emerging technologies, Business use of digital tools, ICT skills, and Freedom to make life choices.

Table 3: Top-ranked and bottom-ranked indicators of North Macedonia

Strongest indicators	Rank	Weakest indicators	Rank
Ease of doing business	16	High-tech exports	88
4G mobile network coverage	18	International Internet bandwidth	91
Adult literacy rate	33	Legal framework's adaptability to emerging technologies	91
Cybersecurity	36	Happiness	94
Privacy protection by law content	36	Government promotion of investment in emerging technologies	95
E-Participation	38	Adoption of emerging technologies	96
Internet users	43	ICT skills	101
Regulatory quality	43	Freedom to make life choices	101
SDG 11: Sustainable Cities and Communities	43	Business use of digital tools	103
Wikipedia edits	45	Investment in emerging technologies	123

NRI 2020 At-A-Glance: North Macedonia

Network Readiness Index   Rank: 67 (out of 134)   Score: 48.28

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	65	40.09	C. Governance pillar	60	57.72
1st sub-pillar: Access	61	67.73	1st sub-pillar: Trust	64	44.10
2nd sub-pillar: Content	49	37.01	2nd sub-pillar: Regulation	68	65.75
3rd sub-pillar: Future Technologies	120	15.52	3rd sub-pillar: Inclusion	66	63.31
B. People pillar	70	46.07	D. Impact pillar	78	49.25
1st sub-pillar: Individuals	74	53.54	1st sub-pillar: Economy	81	20.68
2nd sub-pillar: Businesses	60	46.08	2nd sub-pillar: Quality of Life	80	62.21
3rd sub-pillar: Governments	80	38.57	3rd sub-pillar: SDG Contribution	76	64.84

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	65	40.09	**C. Governance pillar**	60	57.72
1st sub-pillar: Access	61	67.73	*1st sub-pillar: Trust*	64	44.10
1.1.1 Mobile tariffs	77	57.19	3.1.1 Secure Internet servers	68	52.16
1.1.2 Handset prices	78	39.32	3.1.2 Cybersecurity	36	85.81
1.1.3 Internet access	68	69.08	3.1.3 Online access to financial account	88	16.85
1.1.4 4G mobile network coverage	18	99.53	3.1.4 Internet shopping	56	21.59
1.1.5 Fixed-broadband subscriptions	49	78.06	*2nd sub-pillar: Regulation*	68	65.75
1.1.6 International Internet bandwidth	91	63.23	3.2.1 Regulatory quality	43	62.98
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	46	88.03
2nd sub-pillar: Content	49	37.01	3.2.3 Legal framework's adaptability to emerging technologies	91	28.51
1.2.1 GitHub commits	53	7.82	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	45	64.39	3.2.5 Privacy protection by law content	36	74.21
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	66	63.31
1.2.4 Mobile apps development	54	68.39	3.3.1 E-Participation	38	82.71
3rd sub-pillar: Future Technologies	120	15.52	3.3.2 Socioeconomic gap in use of digital payments	72	62.80
1.3.1 Adoption of emerging technologies	96	32.55	3.3.3 Availability of local online content	80	52.34
1.3.2 Investment in emerging technologies	123	17.45	3.3.4 Gender gap in Internet use	55	59.18
1.3.3 ICT PCT patent applications	82	0.00	3.3.5 Rural gap in use of digital payments	80	59.52
1.3.4 Computer software spending	80	12.09	**D. Impact pillar**	78	49.25
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	81	20.68
B. People pillar	70	46.07	4.1.1 Medium and high-tech industry	65	29.24
1st sub-pillar: Individuals	74	53.54	4.1.2 High-tech exports	88	8.00
2.1.1 Internet users	43	78.88	4.1.3 PCT patent applications	55	0.81
2.1.2 Active mobile-broadband subscriptions	79	25.79	4.1.4 Labor productivity per employee	70	25.02
2.1.3 Use of virtual social networks	68	52.58	4.1.5 Prevalence of gig economy	67	40.36
2.1.4 Tertiary enrollment	68	30.66	*2nd sub-pillar: Quality of Life*	80	62.21
2.1.5 Adult literacy rate	33	97.20	4.2.1 Happiness	94	45.65
2.1.6 ICT skills	101	36.16	4.2.2 Freedom to make life choices	101	59.47
2nd sub-pillar: Businesses	60	46.08	4.2.3 Income inequality	46	74.23
2.2.1 Firms with website	50	62.69	4.2.4 Healthy life expectancy at birth	51	69.51
2.2.2 Ease of doing business	16	89.36	*3rd sub-pillar: SDG Contribution*	76	64.84
2.2.3 Professionals	47	35.33	4.3.1 SDG 3: Good Health and Well-Being	65	72.13
2.2.4 Technicians and associate professionals	50	43.15	4.3.2 SDG 4: Quality Education	67	26.04
2.2.5 Business use of digital tools	103	43.13	4.3.3 SDG 5: Gender Equality	86	67.45
2.2.6 R&D expenditure by businesses	62	2.84	4.3.4 SDG 7: Affordable and Clean Energy	56	81.50
3rd sub-pillar: Governments	80	38.57	.	.	.
2.3.1 Government online services	57	73.34			
2.3.2 Publication and use of open data	49	32.58			
2.3.3 Government promotion of investment in emerging tech	95	27.25			
2.3.4 R&D expenditure by governments and higher education	73	21.11			

* Confidential data

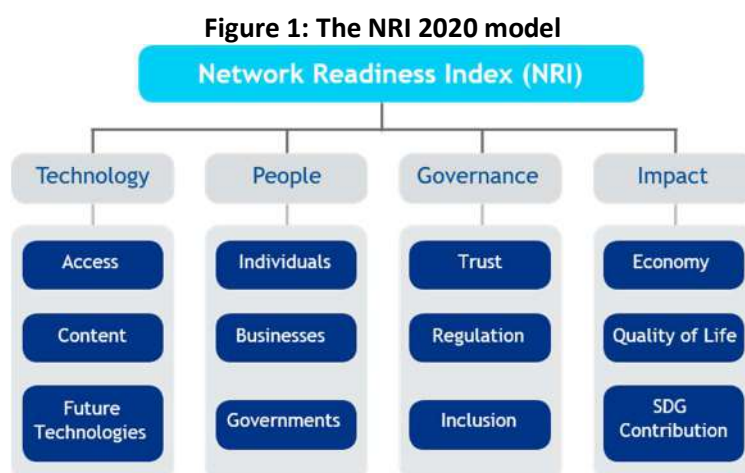**Sources**

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Network Readiness Index 2020 Norway

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Norway

Norway ranks 7th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Norway global ranking, overall and by pillar
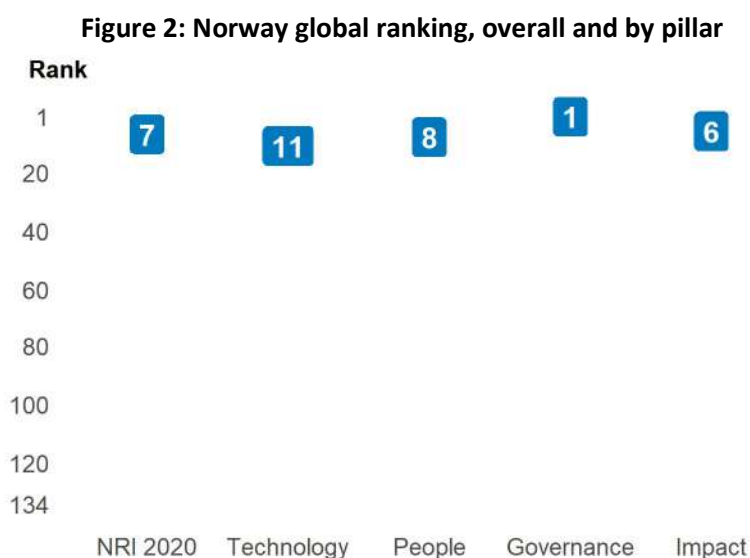
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Norway relate to Regulation, Trust and Quality of Life, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Individuals and Future Technologies sub-pillars.

Table 1: Norway rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	1	Access	6
Trust	2	Inclusion	11
Quality of Life	2	Economy	18
SDG Contribution	2	Businesses	19
Content	3	Individuals	21
Governments	3	Future Technologies	22

NRI score and income

Figure 3 shows the position of Norway in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Norway is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
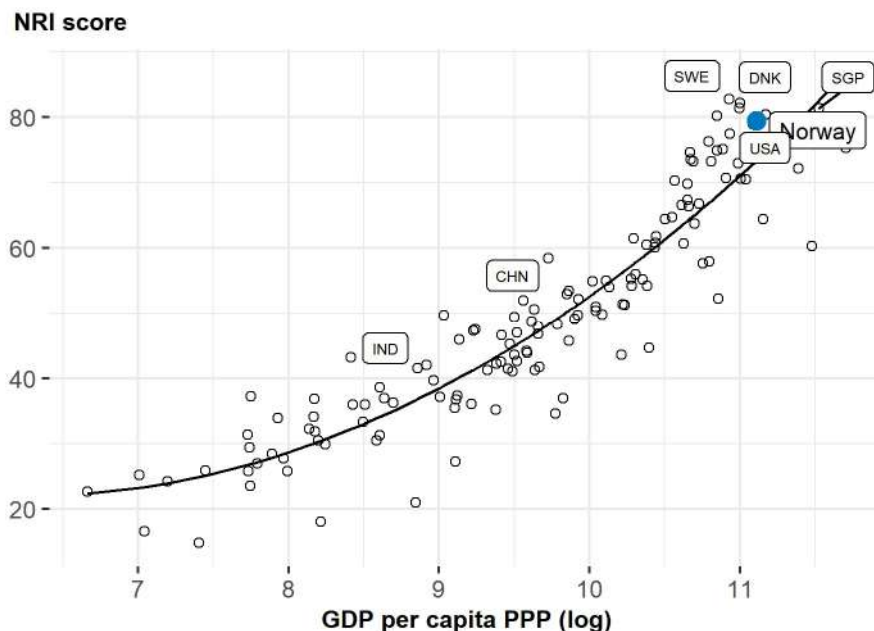
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Norway belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Norway is ranked 7th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it has a higher score than the average of high-income countries in all of them.

Europe
Norway is ranked 6th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of Norway against its income group and region, overall and by pillar
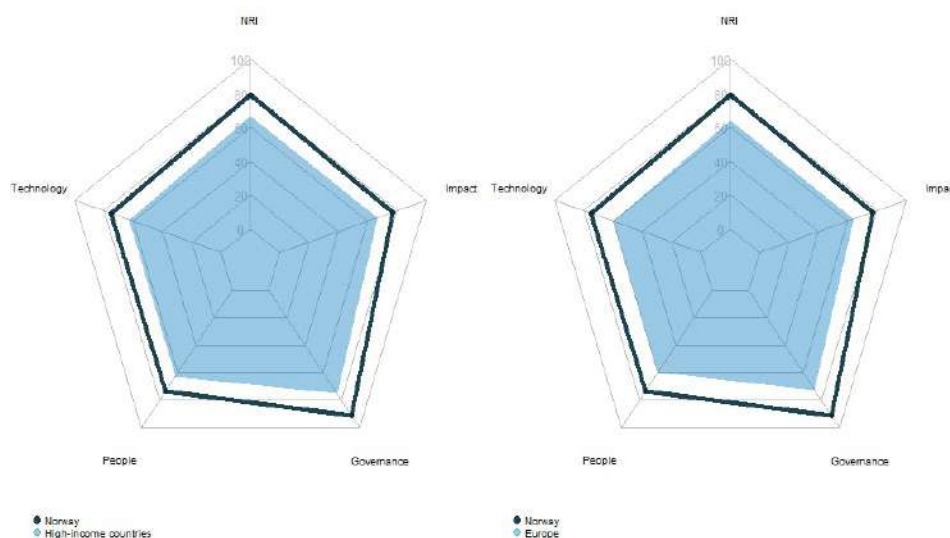
Table 2: Norway scores vs. averages of its income group and region, overall and by pillar

Dimension	Norway	High-income countries	Europe
NRI	79.39	66.82	64.21
Technology	75.23	62.51	59.93
People	73.88	62.72	59.89
Governance	91.30	75.41	72.98
Impact	77.14	66.63	64.04

Strongest and weakest indicators

The indicators where Norway performs particularly well include Internet access in schools, Wikipedia edits, and Online access to financial account (Table 3). By contrast, the economy's weakest indicators include International Internet bandwidth, SDG 7: Affordable and Clean Energy, and Medium and high-tech industry.

Table 3: Top-ranked and bottom-ranked indicators of Norway

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	Use of virtual social networks	24
Wikipedia edits	1	Firms with website	24
Online access to financial account	1	Robot density	26
e-commerce legislation	1	Availability of local online content	26
Socioeconomic gap in use of digital payments	1	Active mobile-broadband subscriptions	29
Mobile tariffs	2	SDG 5: Gender Equality	29
GitHub commits	2	Fixed-broadband subscriptions	30
R&D expenditure by governments and higher education	2	Medium and high-tech industry	31
SDG 3: Good Health and Well-Being	2	SDG 7: Affordable and Clean Energy	32
SDG 11: Sustainable Cities and Communities	2	International Internet bandwidth	38

NRI 2020 At-A-Glance: Norway

Network Readiness Index   Rank: 7 (out of 134)   Score: 79.39

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	11	75.23	C. Governance pillar	1	91.30
1st sub-pillar: Access	6	89.39	1st sub-pillar: Trust	2	94.13
2nd sub-pillar: Content	3	86.28	2nd sub-pillar: Regulation	1	95.94
3rd sub-pillar: Future Technologies	22	50.02	3rd sub-pillar: Inclusion	11	83.83
B. People pillar	8	73.88	D. Impact pillar	6	77.14
1st sub-pillar: Individuals	21	69.94	1st sub-pillar: Economy	18	51.79
2nd sub-pillar: Businesses	19	67.38	2nd sub-pillar: Quality of Life	2	93.49
3rd sub-pillar: Governments	3	84.31	3rd sub-pillar: SDG Contribution	2	86.13

The Network Readiness Index in detail

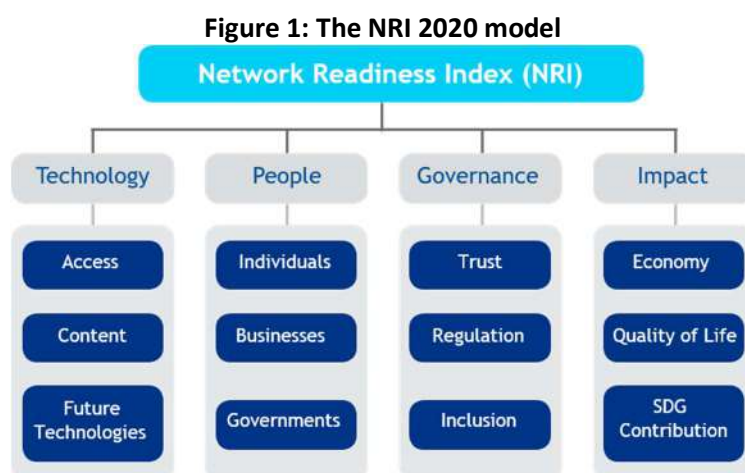| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	11	75.23	**C. Governance pillar**	1	91.30
1st sub-pillar: Access	6	89.39	*1st sub-pillar: Trust*	2	94.13
1.1.1 Mobile tariffs	2	98.00	3.1.1 Secure Internet servers	17	83.75
1.1.2 Handset prices	21	67.37	3.1.2 Cybersecurity	9	95.77
1.1.3 Internet access	10	95.99	3.1.3 Online access to financial account	1	100.00
1.1.4 4G mobile network coverage	9	99.90	3.1.4 Internet shopping	3	96.99
1.1.5 Fixed-broadband subscriptions	30	92.53	*2nd sub-pillar: Regulation*	1	95.94
1.1.6 International Internet bandwidth	38	71.93	3.2.1 Regulatory quality	10	90.14
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	4	97.88
2nd sub-pillar: Content	3	86.28	3.2.3 Legal framework's adaptability to emerging technologies	NA	NA
1.2.1 GitHub commits	2	93.70	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	1	100.00	3.2.5 Privacy protection by law content	5	95.75
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	11	83.83
1.2.4 Mobile apps development	17	87.21	3.3.1 E-Participation	18	90.13
3rd sub-pillar: Future Technologies	22	50.02	3.3.2 Socioeconomic gap in use of digital payments	1	100.00
1.3.1 Adoption of emerging technologies	NA	NA	3.3.3 Availability of local online content	26	84.01
1.3.2 Investment in emerging technologies	16	73.55	3.3.4 Gender gap in Internet use	11	68.53
1.3.3 ICT PCT patent applications	19	59.31	3.3.5 Rural gap in use of digital payments	20	76.50
1.3.4 Computer software spending	16	50.74	**D. Impact pillar**	6	77.14
1.3.5 Robot density	26	16.47	*1st sub-pillar: Economy*	18	51.79
B. People pillar	8	73.88	4.1.1 Medium and high-tech industry	31	50.80
1st sub-pillar: Individuals	21	69.94	4.1.2 High-tech exports	19	40.23
2.1.1 Internet users	8	96.74	4.1.3 PCT patent applications	13	37.87
2.1.2 Active mobile-broadband subscriptions	29	38.93	4.1.4 Labor productivity per employee	7	78.28
2.1.3 Use of virtual social networks	24	70.10	4.1.5 Prevalence of gig economy	NA	NA
2.1.4 Tertiary enrollment	16	59.78	*2nd sub-pillar: Quality of Life*	2	93.49
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	5	93.35
2.1.6 ICT skills	15	84.15	4.2.2 Freedom to make life choices	4	98.42
2nd sub-pillar: Businesses	19	67.38	4.2.3 Income inequality	8	92.78
2.2.1 Firms with website	24	79.79	4.2.4 Healthy life expectancy at birth	11	89.38
2.2.2 Ease of doing business	9	92.68	*3rd sub-pillar: SDG Contribution*	2	86.13
2.2.3 Professionals	4	67.11	4.3.1 SDG 3: Good Health and Well-Being	2	96.72
2.2.4 Technicians and associate professionals	18	68.74	4.3.2 SDG 4: Quality Education	17	66.04
2.2.5 Business use of digital tools	NA	NA	4.3.3 SDG 5: Gender Equality	29	82.14
2.2.6 R&D expenditure by businesses	20	28.61	4.3.4 SDG 7: Affordable and Clean Energy	32	86.42
3rd sub-pillar: Governments	3	84.31	.	.	.
2.3.1 Government online services	19	87.28			
2.3.2 Publication and use of open data	10	73.81			
2.3.3 Government promotion of investment in emerging tech	NA	NA			
2.3.4 R&D expenditure by governments and higher education	2	91.85			

* Confidential data

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Network Readiness Index 2020 Oman

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Oman

Oman ranks 44th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Oman global ranking, overall and by pillar
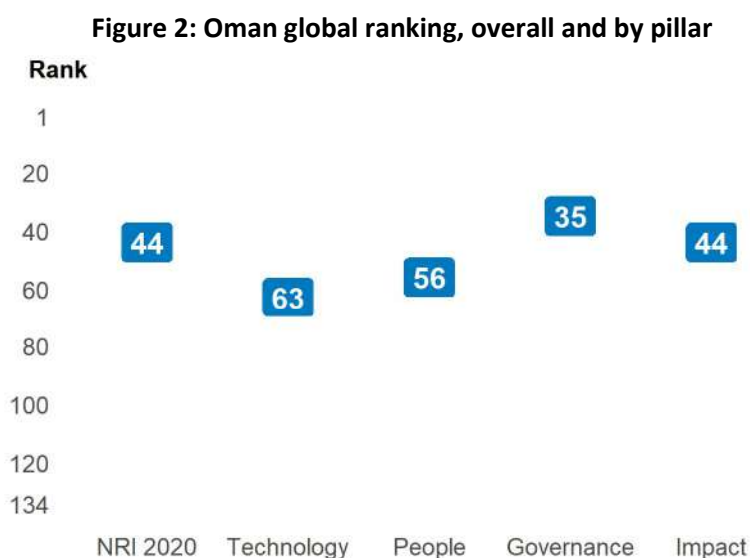
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Oman relate to Inclusion, Quality of Life and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Businesses and Content sub-pillars.

Table 1: Oman rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Inclusion	21	Economy	49
Quality of Life	23	Access	55
Trust	32	Future Technologies	66
Governments	38	SDG Contribution	78
Individuals	46	Businesses	83
Regulation	46	Content	90

NRI score and income

Figure 3 shows the position of Oman in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Oman is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
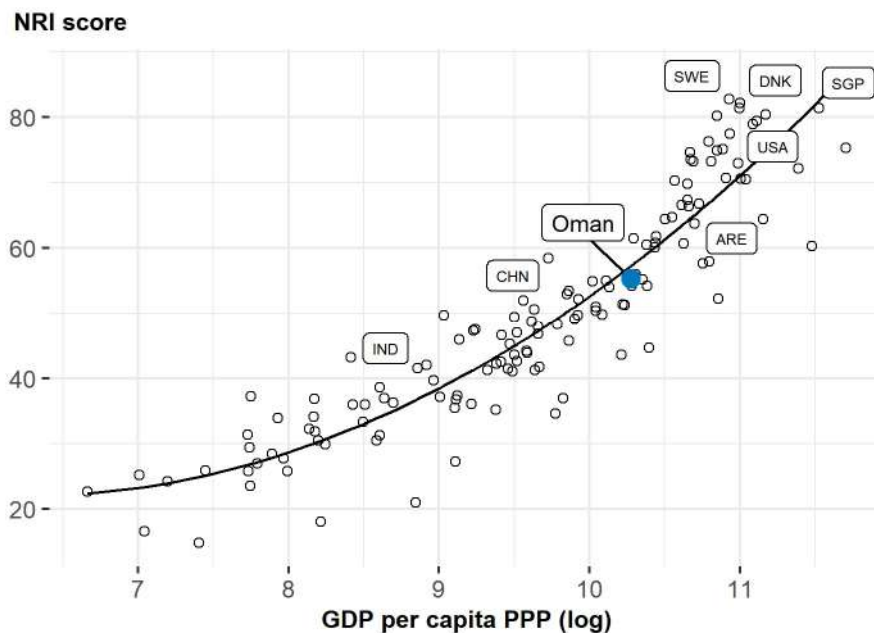
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Oman belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Arab States-is United Arab Emirates (ARE).

Performance against its income group and region

High-income countries
Oman is ranked 42nd in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in two of the twelve sub-pillars: Inclusion and Quality of Life.

Arab States
Oman is ranked 5th within Arab States (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Arab States in nine of the twelve sub-pillars: Access, Individuals, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Oman against its income group and region, overall and by pillar

Table 2: Oman scores vs. averages of its income group and region, overall and by pillar

Dimension	Oman	High-income countries	Arab States
NRI	55.33	66.82	47.18
Technology	40.34	62.51	39.24
People	50.08	62.72	47.97
Governance	72.54	75.41	51.70
Impact	58.37	66.63	49.82

Strongest and weakest indicators

The indicators where Oman performs particularly well include Internet access in schools, Gender gap in Internet use, and Freedom to make life choices (Table 3). By contrast, the economy's weakest indicators include GitHub commits, High-tech exports, and Computer software spending.

Table 3: Top-ranked and bottom-ranked indicators of Oman

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	R&D expenditure by governments and higher education	88
Gender gap in Internet use	3	SDG 5: Gender Equality	90
Freedom to make life choices	17	Fixed-broadband subscriptions	91
Cybersecurity	18	Internet domain registrations	91
Happiness	20	SDG 7: Affordable and Clean Energy	91
Internet access	23	Secure Internet servers	92
Government promotion of investment in emerging technologies	23	Wikipedia edits	93
Government online services	24	Computer software spending	98
Prevalence of gig economy	29	High-tech exports	110
ICT regulatory environment	30	GitHub commits	121

NRI 2020 At-A-Glance: Oman

Network Readiness Index   Rank: 44 (out of 134)   Score: 55.33

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	63	40.34	C. Governance pillar	35	72.54
1st sub-pillar: Access	55	71.42	1st sub-pillar: Trust	32	67.37
2nd sub-pillar: Content	90	21.54	2nd sub-pillar: Regulation	46	71.63
3rd sub-pillar: Future Technologies	66	28.04	3rd sub-pillar: Inclusion	21	78.62
B. People pillar	56	50.08	D. Impact pillar	44	58.37
1st sub-pillar: Individuals	46	60.44	1st sub-pillar: Economy	49	31.96
2nd sub-pillar: Businesses	83	36.76	2nd sub-pillar: Quality of Life	23	79.36
3rd sub-pillar: Governments	38	53.04	3rd sub-pillar: SDG Contribution	78	63.80

The Network Readiness Index in detail

| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	63	40.34	**C. Governance pillar**	35	72.54
1st sub-pillar: Access	55	71.42	*1st sub-pillar: Trust*	32	67.37
1.1.1 Mobile tariffs	41	72.29	3.1.1 Secure Internet servers	92	41.56
1.1.2 Handset prices	53	51.70	3.1.2 Cybersecurity	18	93.17
1.1.3 Internet access	23	88.53	3.1.3 Online access to financial account	NA	NA
1.1.4 4G mobile network coverage	51	96.05	3.1.4 Internet shopping	NA	NA
1.1.5 Fixed-broadband subscriptions	91	21.04	*2nd sub-pillar: Regulation*	46	71.63
1.1.6 International Internet bandwidth	48	70.32	3.2.1 Regulatory quality	55	58.24
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	30	91.89
2nd sub-pillar: Content	90	21.54	3.2.3 Legal framework's adaptability to emerging technologies	30	61.39
1.2.1 GitHub commits	121	0.13	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	93	26.22	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	21	78.62
1.2.4 Mobile apps development	73	58.68	3.3.1 E-Participation	38	82.71
3rd sub-pillar: Future Technologies	66	28.04	3.3.2 Socioeconomic gap in use of digital payments	NA	NA
1.3.1 Adoption of emerging technologies	44	57.47	3.3.3 Availability of local online content	41	74.51
1.3.2 Investment in emerging technologies	43	50.01	3.3.4 Gender gap in Internet use	3	78.63
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	NA	NA
1.3.4 Computer software spending	98	4.56	**D. Impact pillar**	44	58.37
1.3.5 Robot density	64	0.14	*1st sub-pillar: Economy*	49	31.96
B. People pillar	56	50.08	4.1.1 Medium and high-tech industry	70	27.84
1st sub-pillar: Individuals	46	60.44	4.1.2 High-tech exports	110	2.39
2.1.1 Internet users	39	79.93	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	53	33.00	4.1.4 Labor productivity per employee	53	32.53
2.1.3 Use of virtual social networks	63	55.67	4.1.5 Prevalence of gig economy	29	65.07
2.1.4 Tertiary enrollment	73	27.41	*2nd sub-pillar: Quality of Life*	23	79.36
2.1.5 Adult literacy rate	44	94.43	4.2.1 Happiness	20	81.77
2.1.6 ICT skills	31	72.21	4.2.2 Freedom to make life choices	17	92.01
2nd sub-pillar: Businesses	83	36.76	4.2.3 Income inequality	NA	NA
2.2.1 Firms with website	NA	NA	4.2.4 Healthy life expectancy at birth	74	64.31
2.2.2 Ease of doing business	64	70.32	*3rd sub-pillar: SDG Contribution*	78	63.80
2.2.3 Professionals	85	17.27	4.3.1 SDG 3: Good Health and Well-Being	73	67.21
2.2.4 Technicians and associate professionals	70	31.55	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	58	62.93	4.3.3 SDG 5: Gender Equality	90	66.03
2.2.6 R&D expenditure by businesses	67	1.74	4.3.4 SDG 7: Affordable and Clean Energy	91	69.65
3rd sub-pillar: Governments	38	53.04	.	.	.
2.3.1 Government online services	24	84.84			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	23	62.28			
2.3.4 R&D expenditure by governments and higher education	88	11.99			

* Confidential data

5

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Network Readiness Index 2020 Pakistan

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model
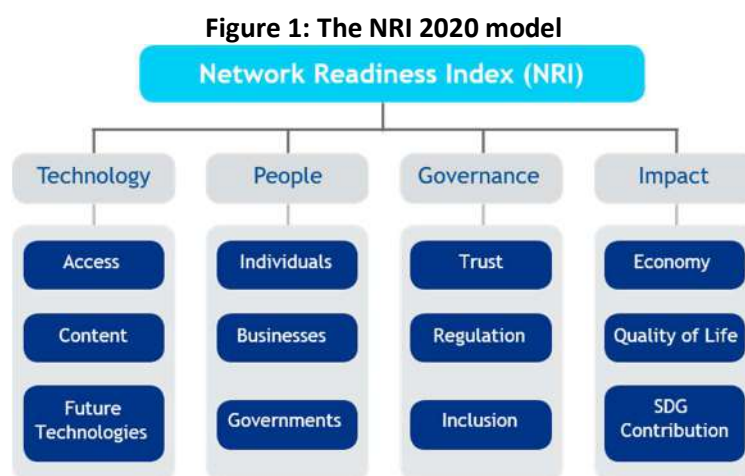
Global NRI position of Pakistan

Pakistan ranks 111th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Pakistan global ranking, overall and by pillar
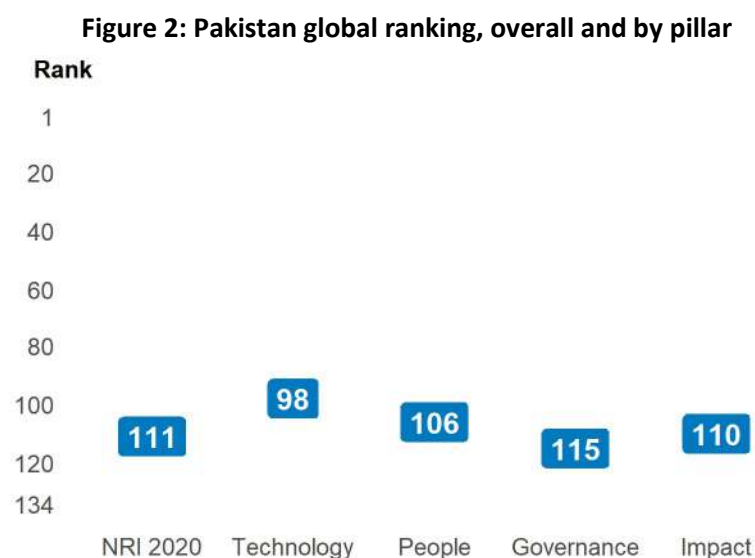
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Pakistan relate to Future Technologies, Businesses and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, Inclusion and SDG Contribution sub-pillars.

Table 1: Pakistan rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	87	Content	101
Businesses	87	Regulation	111
Economy	92	Trust	112
Quality of Life	93	Individuals	119
Governments	95	Inclusion	120
Access	96	SDG Contribution	124

NRI score and income

Figure 3 shows the position of Pakistan in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Pakistan is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
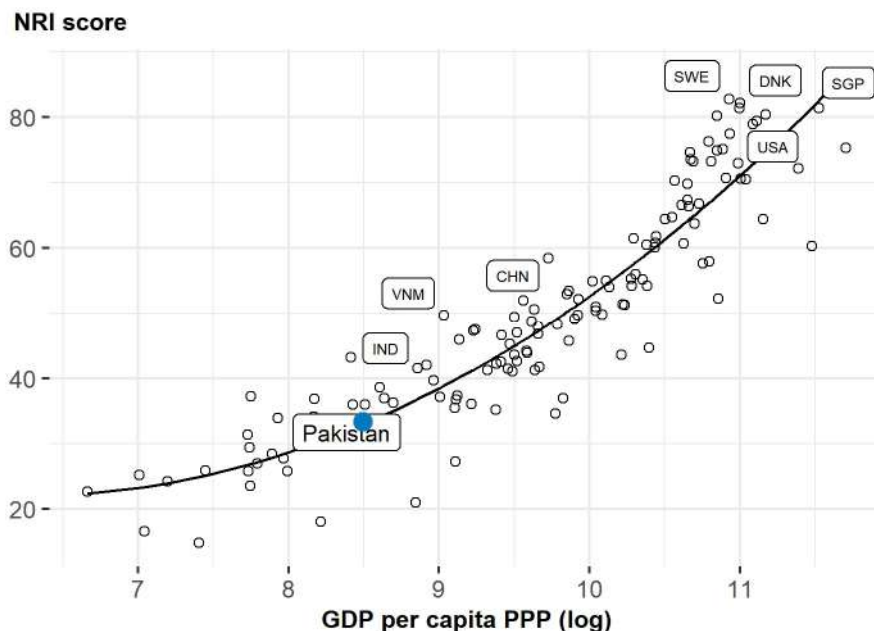
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Pakistan belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Asia & Pacific-is Singapore (SGP).

2

Performance against its income group and region

Lower-middle-income countries
Pakistan is ranked 24th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in three of the twelve sub-pillars: Access, Businesses and Quality of Life.

Asia & Pacific
Pakistan is ranked 20th within Asia & Pacific (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Pakistan against its income group and region, overall and by pillar
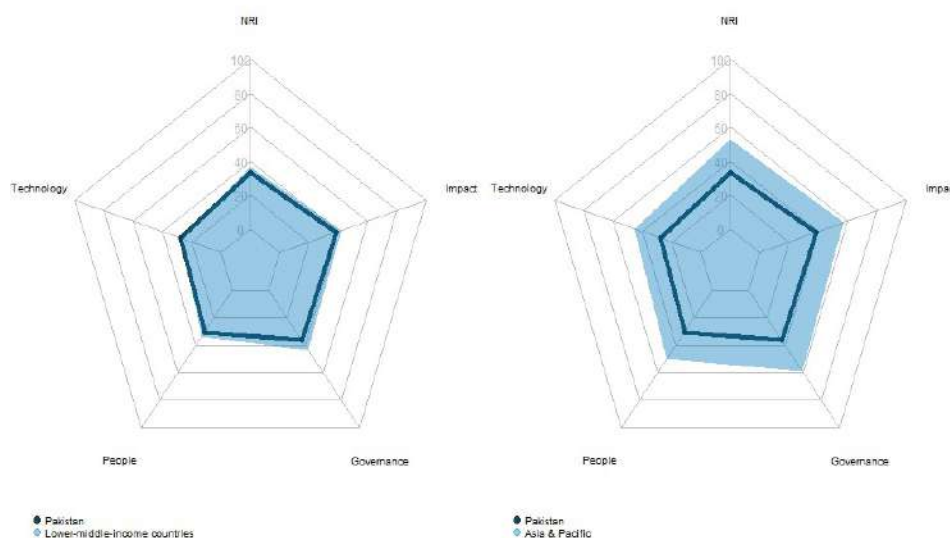
Table 2: Pakistan scores vs. averages of its income group and region, overall and by pillar

Dimension	Pakistan	Lower-middle-income countries	Asia & Pacific
NRI	33.29	36.72	52.76
Technology	27.66	27.72	45.33
People	30.44	33.88	49.64
Governance	36.63	43.15	59.20
Impact	38.41	42.15	56.86

Strongest and weakest indicators

The indicators where Pakistan performs particularly well include Income inequality, ICT regulatory environment, and Investment in emerging technologies (Table 3). By contrast, the economy's weakest indicators include SDG 5: Gender Equality, Internet users, and Internet shopping.

Table 3: Top-ranked and bottom-ranked indicators of Pakistan

Strongest indicators	Rank	Weakest indicators	Rank
Income inequality	40	Secure Internet servers	110
ICT regulatory environment	41	Regulatory quality	110
Investment in emerging technologies	49	Use of virtual social networks	111
Computer software spending	51	Tertiary enrollment	112
Government promotion of investment in emerging technologies	52	e-commerce legislation	115
Prevalence of gig economy	52	SDG 3: Good Health and Well-Being	117
Legal framework's adaptability to emerging technologies	59	Active mobile-broadband subscriptions	119
Medium and high-tech industry	63	Internet shopping	123
SDG 7: Affordable and Clean Energy	64	Internet users	124
Mobile tariffs	67	SDG 5: Gender Equality	133

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NRI 2020 At-A-Glance: Pakistan

Network Readiness Index   Rank: 111 (out of 134)   Score: 33.29

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	98	27.66	C. Governance pillar	115	36.63
1st sub-pillar: Access	96	42.77	1st sub-pillar: Trust	112	22.21
2nd sub-pillar: Content	101	16.78	2nd sub-pillar: Regulation	111	49.13
3rd sub-pillar: Future Technologies	87	23.42	3rd sub-pillar: Inclusion	120	38.55
B. People pillar	106	30.44	D. Impact pillar	110	38.41
1st sub-pillar: Individuals	119	23.77	1st sub-pillar: Economy	92	18.47
2nd sub-pillar: Businesses	87	35.45	2nd sub-pillar: Quality of Life	93	58.98
3rd sub-pillar: Governments	95	32.11	3rd sub-pillar: SDG Contribution	124	37.79

The Network Readiness Index in detail

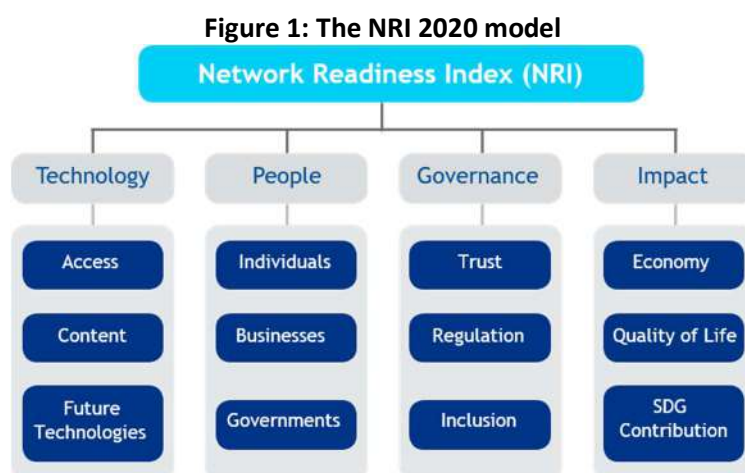| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	98	27.66	**C. Governance pillar**	115	36.63
1st sub-pillar: Access	96	42.77	*1st sub-pillar: Trust*	112	22.21
1.1.1 Mobile tariffs	67	61.32	3.1.1 Secure Internet servers	110	33.04
1.1.2 Handset prices	102	29.63	3.1.2 Cybersecurity	94	43.23
1.1.3 Internet access	108	21.93	3.1.3 Online access to financial account	102	11.51
1.1.4 4G mobile network coverage	92	68.60	3.1.4 Internet shopping	123	1.05
1.1.5 Fixed-broadband subscriptions	99	12.88	*2nd sub-pillar: Regulation*	111	49.13
1.1.6 International Internet bandwidth	97	62.26	3.2.1 Regulatory quality	110	37.22
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	41	89.19
2nd sub-pillar: Content	101	16.78	3.2.3 Legal framework's adaptability to emerging technologies	59	43.43
1.2.1 GitHub commits	108	0.49	3.2.4 e-commerce legislation	115	50.00
1.2.2 Wikipedia edits	105	15.98	3.2.5 Privacy protection by law content	72	25.79
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	120	38.55
1.2.4 Mobile apps development	95	50.31	3.3.1 E-Participation	95	50.62
3rd sub-pillar: Future Technologies	87	23.42	3.3.2 Socioeconomic gap in use of digital payments	102	42.35
1.3.1 Adoption of emerging technologies	68	45.59	3.3.3 Availability of local online content	83	51.53
1.3.2 Investment in emerging technologies	49	48.24	3.3.4 Gender gap in Internet use	87	0.00
1.3.3 ICT PCT patent applications	80	0.12	3.3.5 Rural gap in use of digital payments	105	48.25
1.3.4 Computer software spending	51	23.17	**D. Impact pillar**	110	38.41
1.3.5 Robot density	70	0.00	*1st sub-pillar: Economy*	92	18.47
B. People pillar	106	30.44	4.1.1 Medium and high-tech industry	63	31.28
1st sub-pillar: Individuals	119	23.77	4.1.2 High-tech exports	103	4.40
2.1.1 Internet users	124	13.25	4.1.3 PCT patent applications	87	0.00
2.1.2 Active mobile-broadband subscriptions	119	10.25	4.1.4 Labor productivity per employee	95	8.95
2.1.3 Use of virtual social networks	111	15.46	4.1.5 Prevalence of gig economy	52	47.72
2.1.4 Tertiary enrollment	112	5.99	*2nd sub-pillar: Quality of Life*	93	58.98
2.1.5 Adult literacy rate	99	47.41	4.2.1 Happiness	76	54.61
2.1.6 ICT skills	70	50.23	4.2.2 Freedom to make life choices	84	67.60
2nd sub-pillar: Businesses	87	35.45	4.2.3 Income inequality	40	76.03
2.2.1 Firms with website	75	43.42	4.2.4 Healthy life expectancy at birth	107	37.67
2.2.2 Ease of doing business	94	54.34	*3rd sub-pillar: SDG Contribution*	124	37.79
2.2.3 Professionals	106	12.05	4.3.1 SDG 3: Good Health and Well-Being	117	27.87
2.2.4 Technicians and associate professionals	103	16.39	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	87	51.04	4.3.3 SDG 5: Gender Equality	133	0.00
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	64	80.13
3rd sub-pillar: Governments	95	32.11	.	.	.
2.3.1 Government online services	80	61.82			
2.3.2 Publication and use of open data	103	3.59			
2.3.3 Government promotion of investment in emerging tech	52	42.98			
2.3.4 R&D expenditure by governments and higher education	74	20.07			

* Confidential data

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Network Readiness Index 2020 Panama

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Panama

Panama ranks 77th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Panama global ranking, overall and by pillar
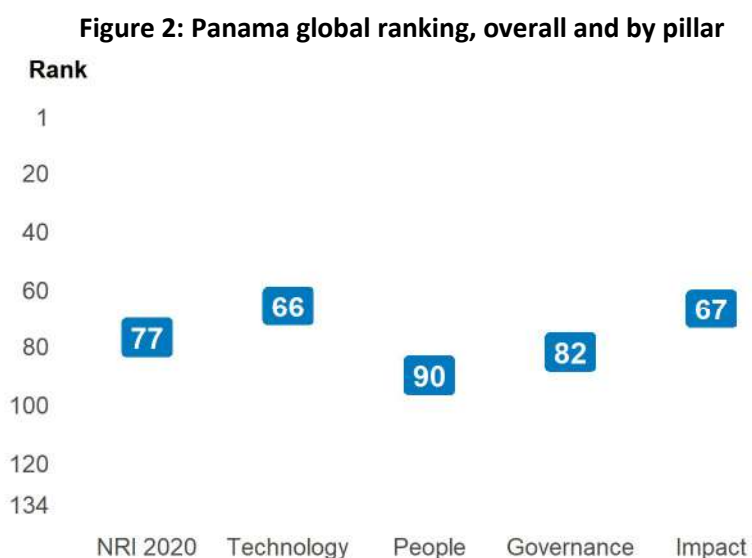
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Panama relate to Content, SDG Contribution and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the Inclusion, Governments and Economy sub-pillars.

Table 1: Panama rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Content	47	Individuals	87
SDG Contribution	47	Businesses	88
Regulation	56	Trust	89
Quality of Life	62	Inclusion	93
Access	78	Governments	102
Future Technologies	80	Economy	105

NRI score and income

Figure 3 shows the position of Panama in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Panama is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
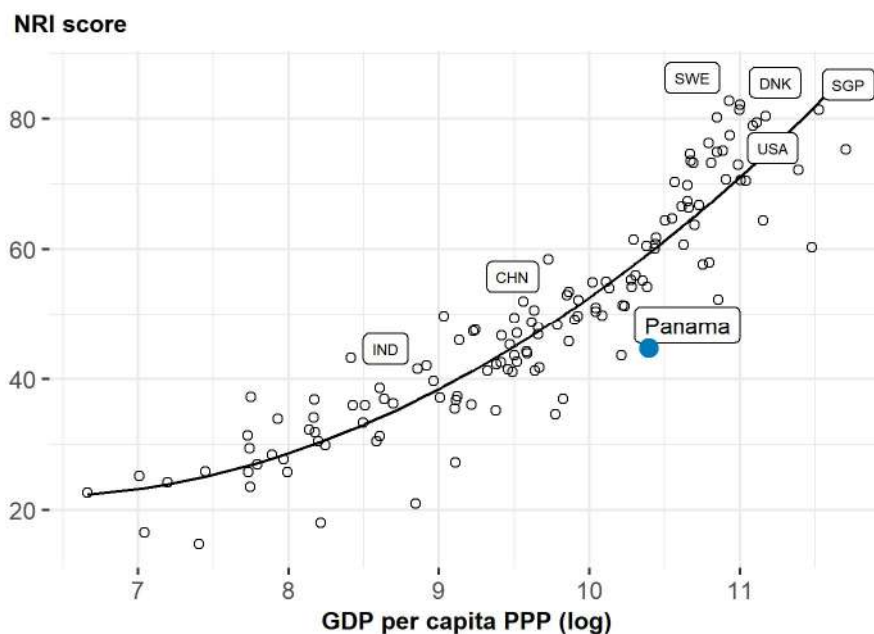
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Panama belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

High-income countries
Panama is ranked 49th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it trails high-income countries in all of them.

The Americas
Panama is ranked 12th within The Americas (Figure 4, right panel). It has a score above the regional average in one of the four pillars: technology. With regard to sub-pillars, it outperforms the average in The Americas in three of the twelve sub-pillars: Content, Regulation and SDG Contribution.

Figure 4: Performance of Panama against its income group and region, overall and by pillar
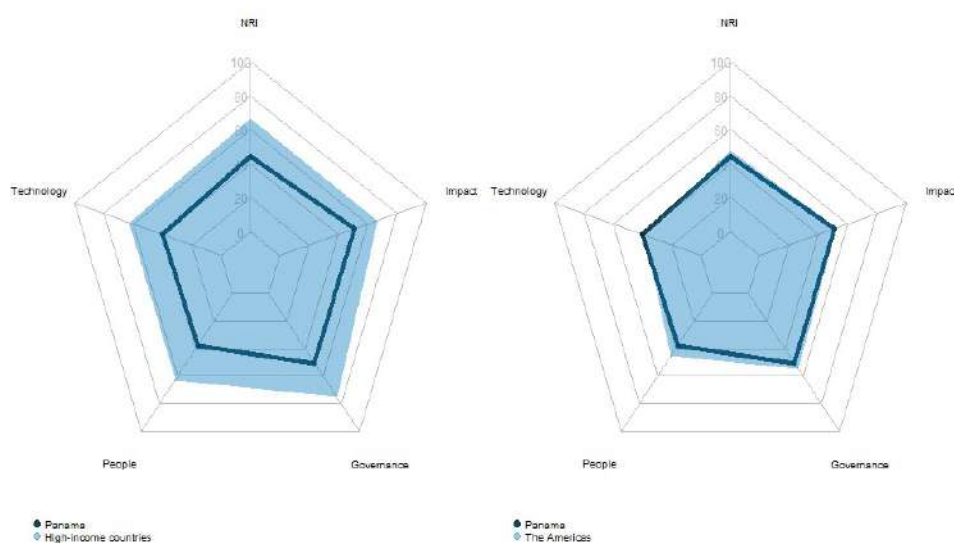
Table 2: Panama scores vs. averages of its income group and region, overall and by pillar

Dimension	Panama	High-income countries	The Americas
NRI	44.74	66.82	47.67
Technology	39.99	62.51	38.26
People	37.75	62.72	45.24
Governance	50.65	75.41	54.59
Impact	50.57	66.63	52.61

Strongest and weakest indicators

The indicators where Panama performs particularly well include e-commerce legislation, Gender gap in Internet use, and SDG 7: Affordable and Clean Energy (Table 3). By contrast, the economy's weakest indicators include Rural gap in use of digital payments, 4G mobile network coverage, ICT skills, and Medium and high-tech industry.

Table 3: Top-ranked and bottom-ranked indicators of Panama

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	R&D expenditure by businesses	93
Gender gap in Internet use	4	Online access to financial account	98
SDG 7: Affordable and Clean Energy	6	Cybersecurity	99
SDG 5: Gender Equality	14	R&D expenditure by governments and higher education	106
Internet domain registrations	23	Socioeconomic gap in use of digital payments	107
SDG 3: Good Health and Well-Being	25	Income inequality	111
Handset prices	28	ICT skills	112
Healthy life expectancy at birth	31	Medium and high-tech industry	112
Freedom to make life choices	38	4G mobile network coverage	114
International Internet bandwidth	42	Rural gap in use of digital payments	116

![Portulans Institute logo]

NRI 2020 At-A-Glance: Panama

Network Readiness Index   Rank: 77 (out of 134)   Score: 44.74

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	66	39.99	C. Governance pillar	82	50.65
1st sub-pillar: Access	78	54.75	1st sub-pillar: Trust	89	30.08
2nd sub-pillar: Content	47	39.34	2nd sub-pillar: Regulation	56	68.39
3rd sub-pillar: Future Technologies	80	25.88	3rd sub-pillar: Inclusion	93	53.47
B. People pillar	90	37.75	D. Impact pillar	67	50.57
1st sub-pillar: Individuals	87	50.01	1st sub-pillar: Economy	105	14.93
2nd sub-pillar: Businesses	88	35.42	2nd sub-pillar: Quality of Life	62	66.46
3rd sub-pillar: Governments	102	27.82	3rd sub-pillar: SDG Contribution	47	70.34

The Network Readiness Index in detail

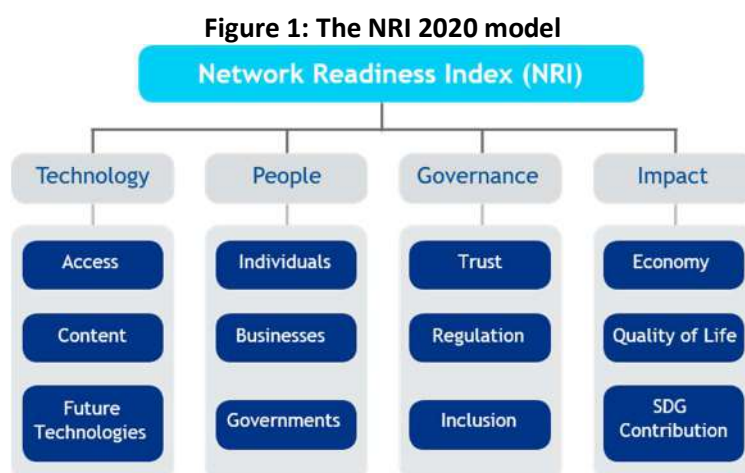| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	66	39.99	**C. Governance pillar**	82	50.65
1st sub-pillar: Access	78	54.75	*1st sub-pillar: Trust*	89	30.08
1.1.1 Mobile tariffs	76	57.36	3.1.1 Secure Internet servers	57	60.21
1.1.2 Handset prices	28	64.54	3.1.2 Cybersecurity	99	39.11
1.1.3 Internet access	75	60.61	3.1.3 Online access to financial account	98	13.18
1.1.4 4G mobile network coverage	114	33.00	3.1.4 Internet shopping	81	7.81
1.1.5 Fixed-broadband subscriptions	79	41.75	*2nd sub-pillar: Regulation*	56	68.39
1.1.6 International Internet bandwidth	42	71.22	3.2.1 Regulatory quality	52	60.26
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	51	86.88
2nd sub-pillar: Content	47	39.34	3.2.3 Legal framework's adaptability to emerging technologies	67	40.52
1.2.1 GitHub commits	54	7.48	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	60	46.77	3.2.5 Privacy protection by law content	54	54.30
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	93	53.47
1.2.4 Mobile apps development	56	67.50	3.3.1 E-Participation	88	56.79
3rd sub-pillar: Future Technologies	80	25.88	3.3.2 Socioeconomic gap in use of digital payments	107	41.27
1.3.1 Adoption of emerging technologies	66	47.02	3.3.3 Availability of local online content	74	56.08
1.3.2 Investment in emerging technologies	64	40.39	3.3.4 Gender gap in Internet use	4	75.79
1.3.3 ICT PCT patent applications	73	0.95	3.3.5 Rural gap in use of digital payments	116	37.42
1.3.4 Computer software spending	72	15.15	**D. Impact pillar**	67	50.57
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	105	14.93
B. People pillar	90	37.75	4.1.1 Medium and high-tech industry	112	7.65
1st sub-pillar: Individuals	87	50.01	4.1.2 High-tech exports	52	17.41
2.1.1 Internet users	84	56.92	4.1.3 PCT patent applications	49	1.07
2.1.2 Active mobile-broadband subscriptions	74	26.98	4.1.4 Labor productivity per employee	NA	NA
2.1.3 Use of virtual social networks	63	55.67	4.1.5 Prevalence of gig economy	88	33.59
2.1.4 Tertiary enrollment	64	34.60	*2nd sub-pillar: Quality of Life*	62	66.46
2.1.5 Adult literacy rate	45	94.13	4.2.1 Happiness	49	66.69
2.1.6 ICT skills	112	31.78	4.2.2 Freedom to make life choices	38	86.35
2nd sub-pillar: Businesses	88	35.42	4.2.3 Income inequality	111	35.57
2.2.1 Firms with website	86	35.99	4.2.4 Healthy life expectancy at birth	31	77.21
2.2.2 Ease of doing business	81	64.26	*3rd sub-pillar: SDG Contribution*	47	70.34
2.2.3 Professionals	63	25.61	4.3.1 SDG 3: Good Health and Well-Being	25	83.61
2.2.4 Technicians and associate professionals	71	30.79	4.3.2 SDG 4: Quality Education	77	10.42
2.2.5 Business use of digital tools	77	55.83	4.3.3 SDG 5: Gender Equality	14	86.92
2.2.6 R&D expenditure by businesses	93	0.02	4.3.4 SDG 7: Affordable and Clean Energy	6	95.38
3rd sub-pillar: Governments	102	27.82	.	.	.
2.3.1 Government online services	81	61.21			
2.3.2 Publication and use of open data	77	17.90			
2.3.3 Government promotion of investment in emerging tech	92	28.98			
2.3.4 R&D expenditure by governments and higher education	106	3.21			

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Network Readiness Index 2020 Paraguay

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Paraguay

Paraguay ranks 92nd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Paraguay global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Paraguay relate to SDG Contribution, Inclusion and Quality of Life, among others (Table 1). More could be done, though, to improve the economy's performances in the Economy, Access and Future Technologies sub-pillars.

Table 1: Paraguay rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	46	Trust	86
Inclusion	60	Individuals	90
Quality of Life	78	Governments	101
Content	81	Economy	101
Regulation	84	Access	106
Businesses	85	Future Technologies	113

NRI score and income

Figure 3 shows the position of Paraguay in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Paraguay is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
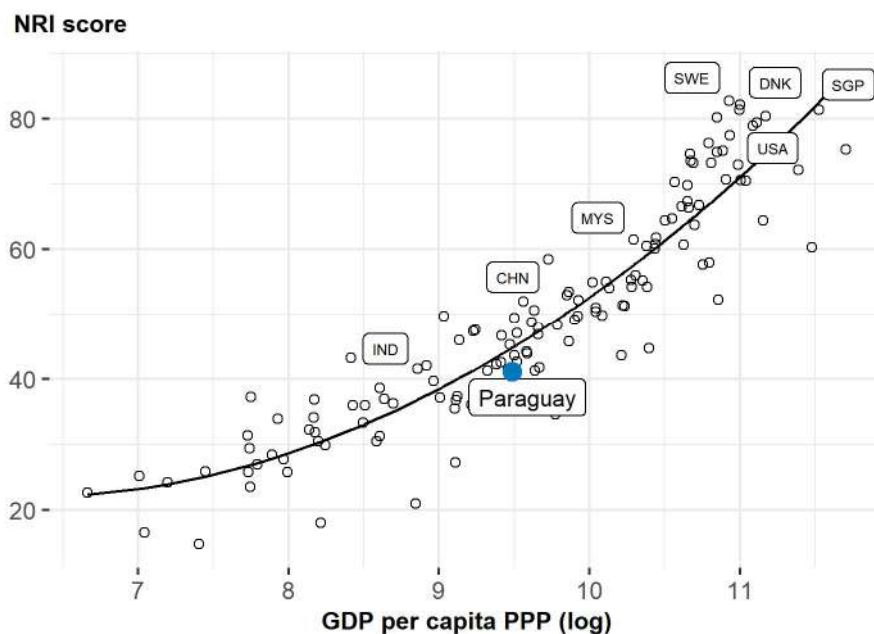
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Paraguay belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

Upper-middle-income countries
Paraguay is ranked 31st in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in three of the twelve sub-pillars: Inclusion, Quality of Life and SDG Contribution.

The Americas
Paraguay is ranked 16th within The Americas (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in The Americas in two of the twelve sub-pillars: Inclusion and SDG Contribution.

Figure 4: Performance of Paraguay against its income group and region, overall and by pillar

Table 2: Paraguay scores vs. averages of its income group and region, overall and by pillar

Dimension	Paraguay	Upper-middle-income countries	The Americas
NRI	41.12	47.39	47.67
Technology	25.81	38.42	38.26
People	36.56	46.66	45.24
Governance	52.08	54.31	54.59
Impact	50.03	50.17	52.61

Strongest and weakest indicators

The indicators where Paraguay performs particularly well include e-commerce legislation, Rural gap in use of digital payments, and Gender gap in Internet use (Table 3). By contrast, the economy's weakest indicators include ICT skills, Prevalence of gig economy, and Government promotion of investment in emerging technologies.

Table 3: Top-ranked and bottom-ranked indicators of Paraguay

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Availability of local online content	106
Rural gap in use of digital payments	4	Income inequality	106
Gender gap in Internet use	7	Internet shopping	111
Privacy protection by law content	32	Legal framework's adaptability to emerging technologies	111
Firms with website	34	Fixed-broadband subscriptions	118
Freedom to make life choices	44	ICT regulatory environment	118
High-tech exports	51	Investment in emerging technologies	120
Publication and use of open data	53	Government promotion of investment in emerging technologies	122
Adult literacy rate	54	Prevalence of gig economy	125
E-Participation	56	ICT skills	127

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NRI 2020 At-A-Glance: Paraguay

Network Readiness Index　　Rank: 92 (out of 134)　　Score: 41.12

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	105	25.81	C. Governance pillar	78	52.08
1st sub-pillar: Access	106	36.34	1st sub-pillar: Trust	86	31.17
2nd sub-pillar: Content	81	23.81	2nd sub-pillar: Regulation	84	59.71
3rd sub-pillar: Future Technologies	113	17.26	3rd sub-pillar: Inclusion	60	65.35
B. People pillar	93	36.56	D. Impact pillar	75	50.03
1st sub-pillar: Individuals	90	45.44	1st sub-pillar: Economy	101	16.88
2nd sub-pillar: Businesses	85	36.01	2nd sub-pillar: Quality of Life	78	62.45
3rd sub-pillar: Governments	101	28.23	3rd sub-pillar: SDG Contribution	46	70.75

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	105	25.81	**C. Governance pillar**	78	52.08
1st sub-pillar: Access	106	36.34	*1st sub-pillar: Trust*	86	31.17
1.1.1　Mobile tariffs	84	53.48	3.1.1　Secure Internet servers	79	46.71
1.1.2　Handset prices	68	43.99	3.1.2　Cybersecurity	68	64.46
1.1.3　Internet access	102	24.20	3.1.3　Online access to financial account	106	10.29
1.1.4　4G mobile network coverage	96	65.00	3.1.4　Internet shopping	111	3.22
1.1.5　Fixed-broadband subscriptions	118	0.66	*2nd sub-pillar: Regulation*	84	59.71
1.1.6　International Internet bandwidth	100	61.69	3.2.1　Regulatory quality	80	48.68
1.1.7　Internet access in schools	66	5.41	3.2.2　ICT regulatory environment	118	58.88
2nd sub-pillar: Content	81	23.81	3.2.3　Legal framework's adaptability to emerging technologies	111	14.11
1.2.1　GitHub commits	94	1.39	3.2.4　e-commerce legislation	1	100.00
1.2.2　Wikipedia edits	82	34.12	3.2.5　Privacy protection by law content	32	76.89
1.2.3　Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	60	65.35
1.2.4　Mobile apps development	75	58.12	3.3.1　E-Participation	56	74.07
3rd sub-pillar: Future Technologies	113	17.26	3.3.2　Socioeconomic gap in use of digital payments	70	62.91
1.3.1　Adoption of emerging technologies	104	28.79	3.3.3　Availability of local online content	106	37.28
1.3.2　Investment in emerging technologies	120	19.09	3.3.4　Gender gap in Internet use	7	70.51
1.3.3　ICT PCT patent applications	NA	NA	3.3.5　Rural gap in use of digital payments	4	81.99
1.3.4　Computer software spending	101	3.91	**D. Impact pillar**	75	50.03
1.3.5　Robot density	NA	NA	*1st sub-pillar: Economy*	101	16.88
B. People pillar	93	36.56	4.1.1　Medium and high-tech industry	71	27.82
1st sub-pillar: Individuals	90	45.44	4.1.2　High-tech exports	51	18.37
2.1.1　Internet users	72	64.27	4.1.3　PCT patent applications	NA	NA
2.1.2　Active mobile-broadband subscriptions	91	21.83	4.1.4　Labor productivity per employee	84	16.08
2.1.3　Use of virtual social networks	63	55.67	4.1.5　Prevalence of gig economy	125	5.26
2.1.4　Tertiary enrollment	78	24.90	*2nd sub-pillar: Quality of Life*	78	62.45
2.1.5　Adult literacy rate	54	92.33	4.2.1　Happiness	71	58.17
2.1.6　ICT skills	127	13.62	4.2.2　Freedom to make life choices	44	85.18
2nd sub-pillar: Businesses	85	36.01	4.2.3　Income inequality	106	43.30
2.2.1　Firms with website	34	72.10	4.2.4　Healthy life expectancy at birth	80	63.14
2.2.2　Ease of doing business	105	50.98	*3rd sub-pillar: SDG Contribution*	46	70.75
2.2.3　Professionals	90	16.07	4.3.1　SDG 3: Good Health and Well-Being	73	67.21
2.2.4　Technicians and associate professionals	68	31.96	4.3.2　SDG 4: Quality Education	NA	NA
2.2.5　Business use of digital tools	100	44.93	4.3.3　SDG 5: Gender Equality	66	74.58
2.2.6　R&D expenditure by businesses	95	0.00	4.3.4　SDG 7: Affordable and Clean Energy	60	81.00
3rd sub-pillar: Governments	101	28.23	.	.	.
2.3.1　Government online services	64	69.70			
2.3.2　Publication and use of open data	53	28.07			
2.3.3　Government promotion of investment in emerging tech	122	6.76			
2.3.4　R&D expenditure by governments and higher education	93	8.39			

* Confidential data

Sources
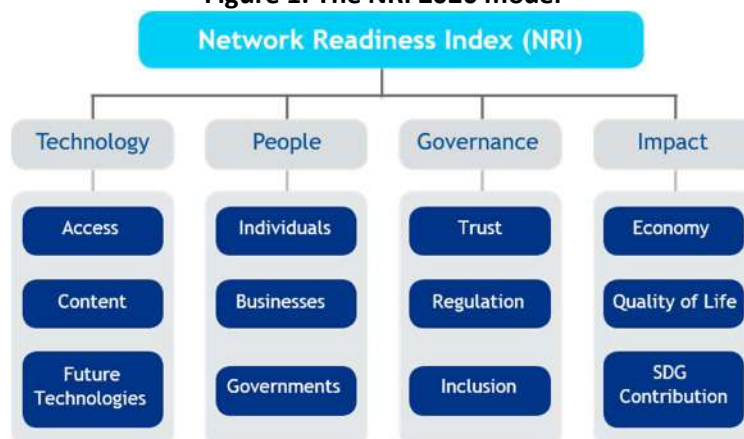
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Network Readiness Index 2020 Peru

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
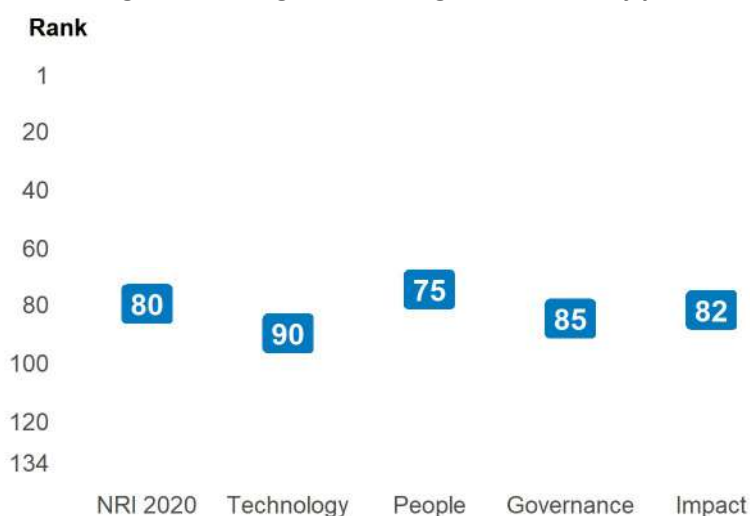
Figure 1: The NRI 2020 model

Global NRI position of Peru

Peru ranks 80th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Peru global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Peru relate to Regulation, Businesses and SDG Contribution, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Future Technologies and Economy sub-pillars.

Table 1: Peru rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	55	Access	87
Businesses	58	Inclusion	88
SDG Contribution	58	Governments	91
Quality of Life	67	Trust	101
Content	68	Future Technologies	115
Individuals	75	Economy	115

NRI score and income

Figure 3 shows the position of Peru in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Peru is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
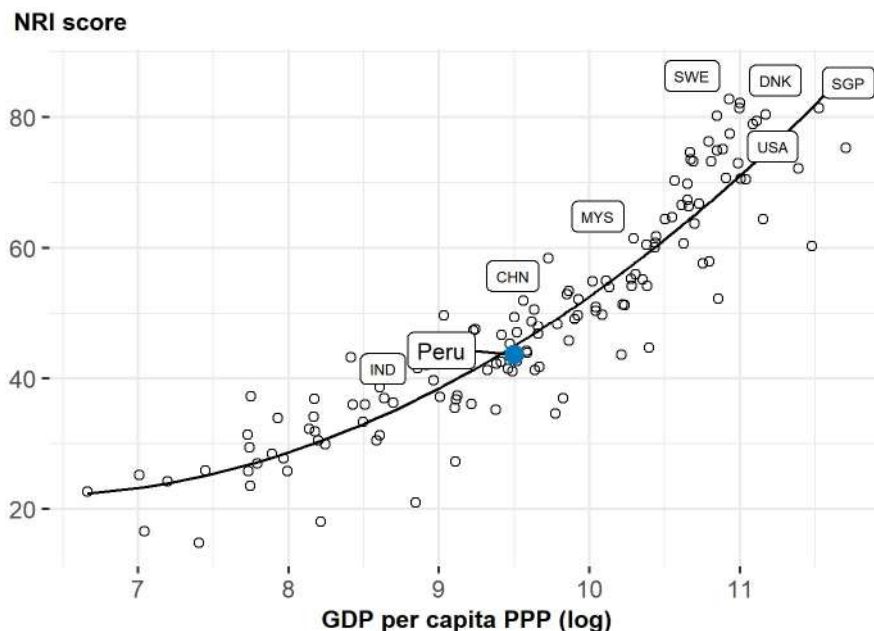
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Peru belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

Upper-middle-income countries
Peru is ranked 27th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in four of the twelve sub-pillars: Businesses, Regulation, Quality of Life and SDG Contribution.

The Americas
Peru is ranked 13th within The Americas (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in The Americas in two of the twelve sub-pillars: Businesses and Regulation.

Figure 4: Performance of Peru against its income group and region, overall and by pillar

Table 2: Peru scores vs. averages of its income group and region, overall and by pillar

Dimension	Peru	Upper-middle-income countries	The Americas
NRI	43.67	47.39	47.67
Technology	31.44	38.42	38.26
People	44.79	46.66	45.24
Governance	49.98	54.31	54.59
Impact	48.47	50.17	52.61

Strongest and weakest indicators

The indicators where Peru performs particularly well include e-commerce legislation, SDG 7: Affordable and Clean Energy, and Mobile tariffs (Table 3). By contrast, the economy's weakest indicators include ICT skills, Socioeconomic gap in use of digital payments, and Prevalence of gig economy.

Table 3: Top-ranked and bottom-ranked indicators of Peru

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Legal framework's adaptability to emerging technologies	97
SDG 7: Affordable and Clean Energy	11	Government promotion of investment in emerging technologies	99
Mobile tariffs	14	Availability of local online content	100
Use of virtual social networks	17	4G mobile network coverage	103
Tertiary enrollment	28	R&D expenditure by governments and higher education	103
SDG 3: Good Health and Well-Being	34	Online access to financial account	107
Firms with website	39	Investment in emerging technologies	108
Regulatory quality	44	Prevalence of gig economy	113
ICT regulatory environment	46	Socioeconomic gap in use of digital payments	114
Internet access in schools	47	ICT skills	118

NRI 2020 At-A-Glance: Peru

Network Readiness Index   Rank: 80 (out of 134)   Score: 43.67

Pillar/sub-pillar	Rank	Score
A. Technology pillar	90	31.44
1st sub-pillar: Access	87	49.29
2nd sub-pillar: Content	68	28.20
3rd sub-pillar: Future Technologies	115	16.82
B. People pillar	75	44.79
1st sub-pillar: Individuals	75	53.49
2nd sub-pillar: Businesses	58	46.34
3rd sub-pillar: Governments	91	34.52

Pillar/sub-pillar	Rank	Score
C. Governance pillar	85	49.98
1st sub-pillar: Trust	101	26.44
2nd sub-pillar: Regulation	55	68.85
3rd sub-pillar: Inclusion	88	54.64
D. Impact pillar	82	48.47
1st sub-pillar: Economy	115	12.51
2nd sub-pillar: Quality of Life	67	65.60
3rd sub-pillar: SDG Contribution	58	67.29

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	90	31.44
1st sub-pillar: Access	87	49.29
1.1.1 Mobile tariffs	14	87.40
1.1.2 Handset prices	52	52.02
1.1.3 Internet access	97	29.60
1.1.4 4G mobile network coverage	103	52.24
1.1.5 Fixed-broadband subscriptions	95	17.39
1.1.6 International Internet bandwidth	79	65.61
1.1.7 Internet access in schools	47	40.77
2nd sub-pillar: Content	68	28.20
1.2.1 GitHub commits	71	3.15
1.2.2 Wikipedia edits	57	49.18
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	77	56.92
3rd sub-pillar: Future Technologies	115	16.82
1.3.1 Adoption of emerging technologies	83	38.64
1.3.2 Investment in emerging technologies	108	25.15
1.3.3 ICT PCT patent applications	64	2.39
1.3.4 Computer software spending	67	17.71
1.3.5 Robot density	63	0.19
B. People pillar	75	44.79
1st sub-pillar: Individuals	75	53.49
2.1.1 Internet users	90	51.43
2.1.2 Active mobile-broadband subscriptions	82	25.08
2.1.3 Use of virtual social networks	17	73.20
2.1.4 Tertiary enrollment	28	51.49
2.1.5 Adult literacy rate	53	92.83
2.1.6 ICT skills	118	26.93
2nd sub-pillar: Businesses	58	46.34
2.2.1 Firms with website	39	69.31
2.2.2 Ease of doing business	71	68.04
2.2.3 Professionals	87	16.93
2.2.4 Technicians and associate professionals	75	27.05
2.2.5 Business use of digital tools	89	50.39
2.2.6 R&D expenditure by businesses	NA	NA
3rd sub-pillar: Governments	91	34.52
2.3.1 Government online services	51	74.54
2.3.2 Publication and use of open data	48	33.33
2.3.3 Government promotion of investment in emerging tech	99	25.40
2.3.4 R&D expenditure by governments and higher education	103	4.82

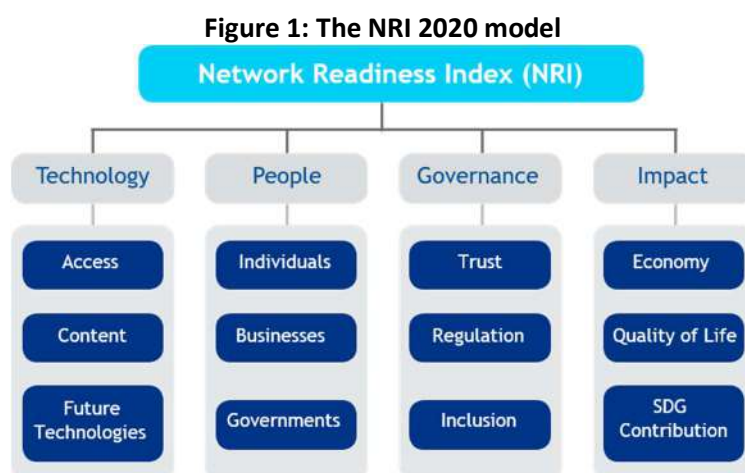| Indicator	Rank	Score
C. Governance pillar	85	49.98
1st sub-pillar: Trust	101	26.44
3.1.1 Secure Internet servers	76	47.50
3.1.2 Cybersecurity	97	42.58
3.1.3 Online access to financial account	107	10.13
3.1.4 Internet shopping	90	5.56
2nd sub-pillar: Regulation	55	68.85
3.2.1 Regulatory quality	44	62.83
3.2.2 ICT regulatory environment	46	88.03
3.2.3 Legal framework's adaptability to emerging technologies	97	24.52
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	88	54.64
3.3.1 E-Participation	54	75.31
3.3.2 Socioeconomic gap in use of digital payments	114	38.38
3.3.3 Availability of local online content	100	40.45
3.3.4 Gender gap in Internet use	73	50.00
3.3.5 Rural gap in use of digital payments	61	69.07
D. Impact pillar	82	48.47
1st sub-pillar: Economy	115	12.51
4.1.1 Medium and high-tech industry	87	20.10
4.1.2 High-tech exports	87	8.65
4.1.3 PCT patent applications	62	0.56
4.1.4 Labor productivity per employee	87	14.36
4.1.5 Prevalence of gig economy	113	18.90
2nd sub-pillar: Quality of Life	67	65.60
4.2.1 Happiness	57	64.99
4.2.2 Freedom to make life choices	69	74.78
4.2.3 Income inequality	92	52.06
4.2.4 Healthy life expectancy at birth	48	70.58
3rd sub-pillar: SDG Contribution	58	67.29
4.3.1 SDG 3: Good Health and Well-Being	34	80.33
4.3.2 SDG 4: Quality Education	64	28.07
4.3.3 SDG 5: Gender Equality	84	68.87
4.3.4 SDG 7: Affordable and Clean Energy	11	91.98
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* Confidential data

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Network Readiness Index 2020 Philippines

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Philippines

Philippines ranks 74th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Philippines global ranking, overall and by pillar
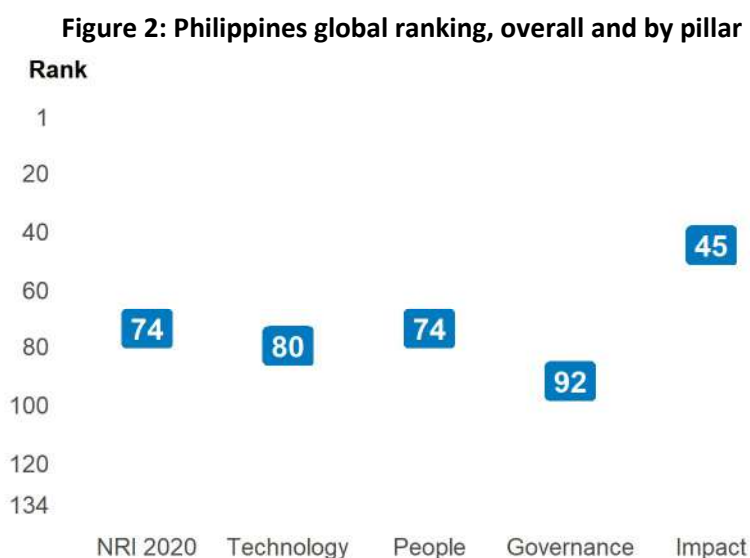
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Philippines relate to Economy, Individuals and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Content, Businesses and Inclusion sub-pillars.

Table 1: Philippines rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Economy	25	Regulation	79
Individuals	54	SDG Contribution	81
Future Technologies	68	Access	83
Governments	68	Content	88
Quality of Life	69	Businesses	95
Trust	79	Inclusion	109

NRI score and income

Figure 3 shows the position of Philippines in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Philippines is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
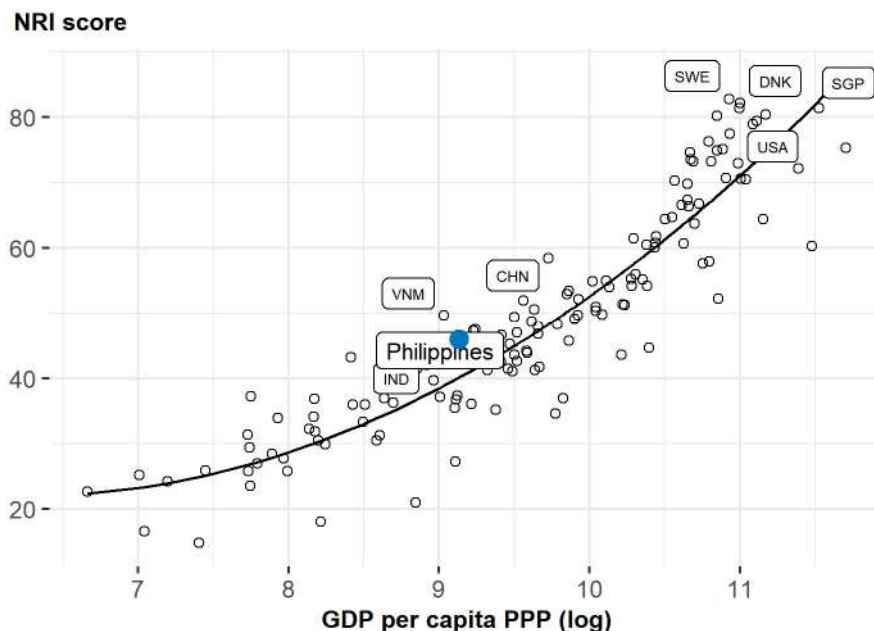
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Philippines belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Lower-middle-income countries
Philippines is ranked 4th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Regulation, Economy, Quality of Life and SDG Contribution.

Asia & Pacific
Philippines is ranked 12th within Asia & Pacific (Figure 4, right panel). It has a score above the regional average in one of the four pillars: impact. With regard to sub-pillars, it outperforms the average in Asia & Pacific in two of the twelve sub-pillars: Individuals and Economy.

Figure 4: Performance of Philippines against its income group and region, overall and by pillar
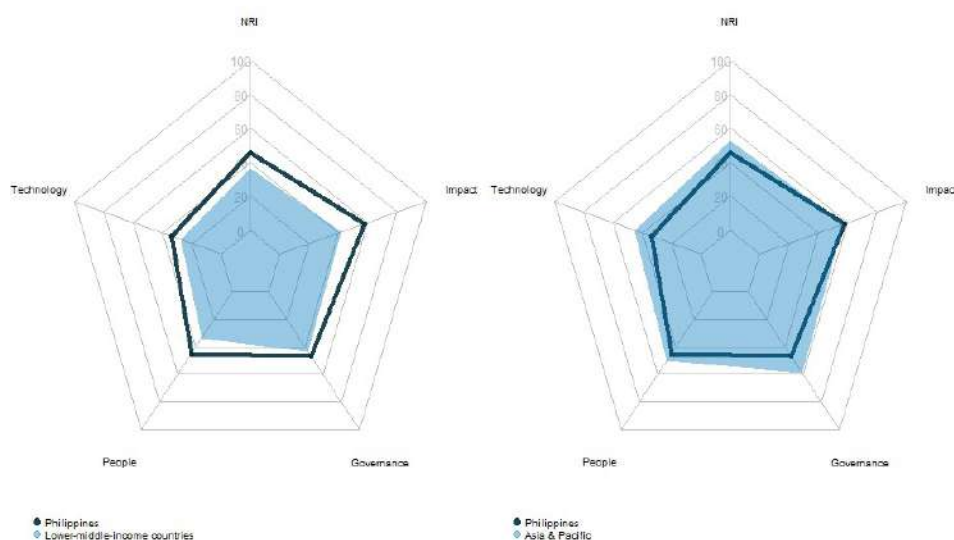
Table 2: Philippines scores vs. averages of its income group and region, overall and by pillar

Dimension	Philippines	Lower-middle-income countries	Asia & Pacific
NRI	45.95	36.72	52.76
Technology	33.83	27.72	45.33
People	45.08	33.88	49.64
Governance	46.91	43.15	59.20
Impact	57.99	42.15	56.86

Strongest and weakest indicators

The indicators where Philippines performs particularly well include e-commerce legislation, High-tech exports, and SDG 5: Gender Equality (Table 3). By contrast, the economy's weakest indicators include Socioeconomic gap in use of digital payments, Rural gap in use of digital payments, and ICT regulatory environment.

Table 3: Top-ranked and bottom-ranked indicators of Philippines

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Secure Internet servers	98
High-tech exports	1	Technicians and associate professionals	99
SDG 5: Gender Equality	15	Income inequality	100
Medium and high-tech industry	20	International Internet bandwidth	101
ICT skills	21	Mobile apps development	101
Publication and use of open data	22	Professionals	103
Freedom to make life choices	23	Mobile tariffs	106
SDG 7: Affordable and Clean Energy	23	ICT regulatory environment	108
Adult literacy rate	29	Rural gap in use of digital payments	123
Investment in emerging technologies	31	Socioeconomic gap in use of digital payments	126

NRI 2020 At-A-Glance: Philippines

Network Readiness Index   Rank: 74 (out of 134)   Score: 45.95

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	80	33.83	C. Governance pillar	92	46.91
1st sub-pillar: Access	83	51.84	1st sub-pillar: Trust	79	32.90
2nd sub-pillar: Content	88	22.05	2nd sub-pillar: Regulation	79	62.59
3rd sub-pillar: Future Technologies	68	27.61	3rd sub-pillar: Inclusion	109	45.24
B. People pillar	74	45.08	D. Impact pillar	45	57.99
1st sub-pillar: Individuals	54	58.81	1st sub-pillar: Economy	25	46.21
2nd sub-pillar: Businesses	95	33.08	2nd sub-pillar: Quality of Life	69	65.05
3rd sub-pillar: Governments	68	43.34	3rd sub-pillar: SDG Contribution	81	62.71

The Network Readiness Index in detail

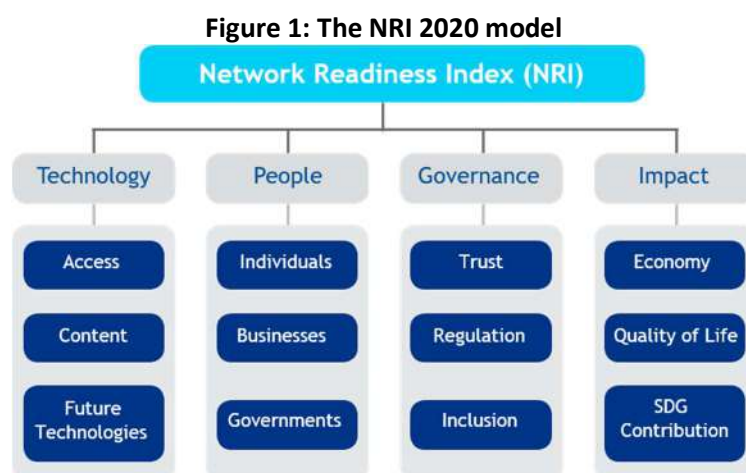| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	80	33.83	**C. Governance pillar**	92	46.91
1st sub-pillar: Access	83	51.84	*1st sub-pillar: Trust*	79	32.90
1.1.1 Mobile tariffs	106	38.60	3.1.1 Secure Internet servers	98	37.62
1.1.2 Handset prices	86	36.43	3.1.2 Cybersecurity	60	68.80
1.1.3 Internet access	86	42.56	3.1.3 Online access to financial account	97	13.55
1.1.4 4G mobile network coverage	80	80.00	3.1.4 Internet shopping	71	11.62
1.1.5 Fixed-broadband subscriptions	NA	NA	*2nd sub-pillar: Regulation*	79	62.59
1.1.6 International Internet bandwidth	101	61.61	3.2.1 Regulatory quality	66	52.42
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	108	64.87
2nd sub-pillar: Content	88	22.05	3.2.3 Legal framework's adaptability to emerging technologies	80	31.69
1.2.1 GitHub commits	86	1.77	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	71	41.07	3.2.5 Privacy protection by law content	47	63.96
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	109	45.24
1.2.4 Mobile apps development	101	44.63	3.3.1 E-Participation	56	74.07
3rd sub-pillar: Future Technologies	68	27.61	3.3.2 Socioeconomic gap in use of digital payments	126	17.77
1.3.1 Adoption of emerging technologies	52	51.83	3.3.3 Availability of local online content	49	67.52
1.3.2 Investment in emerging technologies	31	61.10	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	69	1.39	3.3.5 Rural gap in use of digital payments	123	21.61
1.3.4 Computer software spending	54	22.56	**D. Impact pillar**	45	57.99
1.3.5 Robot density	51	1.18	*1st sub-pillar: Economy*	25	46.21
B. People pillar	74	45.08	4.1.1 Medium and high-tech industry	20	57.04
1st sub-pillar: Individuals	54	58.81	4.1.2 High-tech exports	1	100.00
2.1.1 Internet users	79	59.17	4.1.3 PCT patent applications	79	0.07
2.1.2 Active mobile-broadband subscriptions	76	26.21	4.1.4 Labor productivity per employee	89	13.09
2.1.3 Use of virtual social networks	34	67.01	4.1.5 Prevalence of gig economy	35	60.82
2.1.4 Tertiary enrollment	76	25.52	*2nd sub-pillar: Quality of Life*	69	65.05
2.1.5 Adult literacy rate	29	97.69	4.2.1 Happiness	37	70.26
2.1.6 ICT skills	21	77.28	4.2.2 Freedom to make life choices	23	90.88
2nd sub-pillar: Businesses	95	33.08	4.2.3 Income inequality	100	47.94
2.2.1 Firms with website	64	49.81	4.2.4 Healthy life expectancy at birth	96	51.12
2.2.2 Ease of doing business	87	57.66	*3rd sub-pillar: SDG Contribution*	81	62.71
2.2.3 Professionals	103	12.88	4.3.1 SDG 3: Good Health and Well-Being	96	54.10
2.2.4 Technicians and associate professionals	99	17.19	4.3.2 SDG 4: Quality Education	78	10.31
2.2.5 Business use of digital tools	65	59.44	4.3.3 SDG 5: Gender Equality	15	86.62
2.2.6 R&D expenditure by businesses	69	1.54	4.3.4 SDG 7: Affordable and Clean Energy	23	88.80
3rd sub-pillar: Governments	68	43.34	.	.	.
2.3.1 Government online services	59	72.12			
2.3.2 Publication and use of open data	22	54.70			
2.3.3 Government promotion of investment in emerging tech	58	39.40			
2.3.4 R&D expenditure by governments and higher education	95	7.14			

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Network Readiness Index 2020 Poland

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Poland

Poland ranks 33rd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Poland global ranking, overall and by pillar
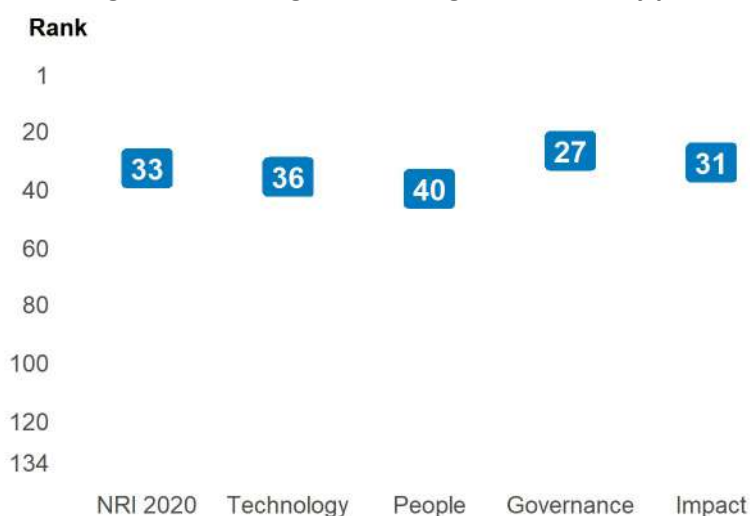
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Poland relate to Trust, Inclusion and Quality of Life, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, Governments and Future Technologies sub-pillars.

Table 1: Poland rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Trust	20	Content	34
Inclusion	20	Economy	41
Quality of Life	25	Regulation	47
SDG Contribution	27	Individuals	48
Access	32	Governments	50
Businesses	33	Future Technologies	60

NRI score and income

Figure 3 shows the position of Poland in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Poland is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
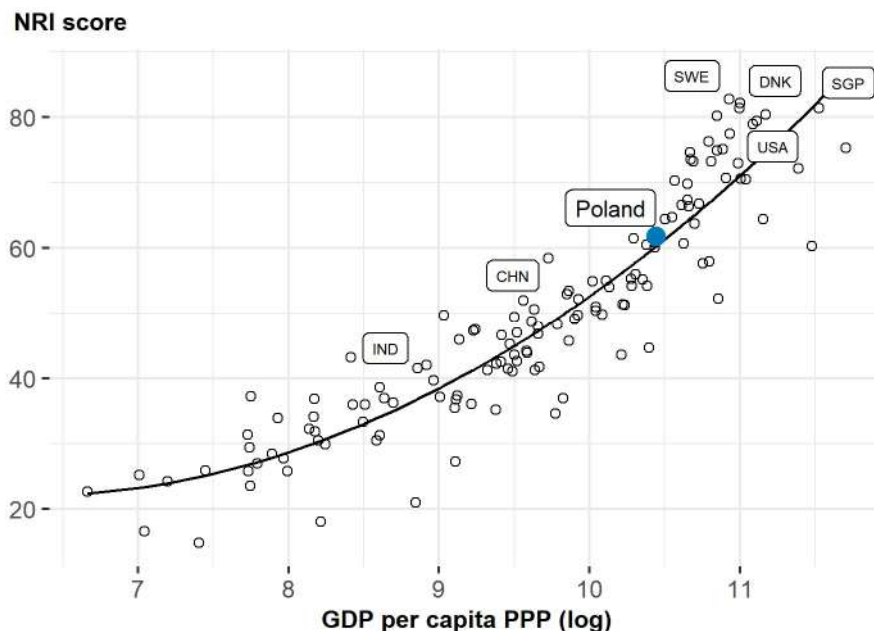
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Poland belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Poland is ranked 33rd in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in three of the twelve sub-pillars: Trust, Inclusion and SDG Contribution.

Europe
Poland is ranked 24th within Europe (Figure 4, right panel). It has a score above the regional average in two of the four pillars: governance and impact. With regard to sub-pillars, it outperforms the average in Europe in five of the twelve sub-pillars: Access, Trust, Inclusion, Quality of Life and SDG Contribution.

Figure 4: Performance of Poland against its income group and region, overall and by pillar

Table 2: Poland scores vs. averages of its income group and region, overall and by pillar

Dimension	Poland	High-income countries	Europe
NRI	61.80	66.82	64.21
Technology	52.99	62.51	59.93
People	55.14	62.72	59.89
Governance	75.00	75.41	72.98
Impact	64.08	66.63	64.04

Strongest and weakest indicators

The indicators where Poland performs particularly well include 4G mobile network coverage, Internet access in schools, and e-commerce legislation (Table 3). By contrast, the economy's weakest indicators include International Internet bandwidth, Use of virtual social networks, and Investment in emerging technologies.

Table 3: Top-ranked and bottom-ranked indicators of Poland

Strongest indicators	Rank	Weakest indicators	Rank
4G mobile network coverage	1	R&D expenditure by governments and higher education	57
Internet access in schools	1	Privacy protection by law content	57
e-commerce legislation	1	ICT skills	60
Active mobile-broadband subscriptions	3	Adoption of emerging technologies	61
SDG 4: Quality Education	8	SDG 7: Affordable and Clean Energy	62
E-Participation	9	Fixed-broadband subscriptions	63
Mobile tariffs	10	Government promotion of investment in emerging technologies	65
SDG 5: Gender Equality	12	Investment in emerging technologies	73
Online access to financial account	15	Use of virtual social networks	79
Income inequality	18	International Internet bandwidth	95

NRI 2020 At-A-Glance: Poland

Network Readiness Index   Rank: 33 (out of 134)   Score: 61.80

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	36	52.99	C. Governance pillar	27	75.00
1st sub-pillar: Access	32	80.50	1st sub-pillar: Trust	20	74.58
2nd sub-pillar: Content	34	49.78	2nd sub-pillar: Regulation	47	71.39
3rd sub-pillar: Future Technologies	60	28.68	3rd sub-pillar: Inclusion	20	79.02
B. People pillar	40	55.14	D. Impact pillar	31	64.08
1st sub-pillar: Individuals	48	59.62	1st sub-pillar: Economy	41	34.37
2nd sub-pillar: Businesses	33	58.38	2nd sub-pillar: Quality of Life	25	79.02
3rd sub-pillar: Governments	50	47.43	3rd sub-pillar: SDG Contribution	27	78.85

The Network Readiness Index in detail

| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	36	52.99	**C. Governance pillar**	27	75.00
1st sub-pillar: Access	32	80.50	*1st sub-pillar: Trust*	20	74.58
1.1.1 Mobile tariffs	10	91.61	3.1.1 Secure Internet servers	26	79.26
1.1.2 Handset prices	42	57.01	3.1.2 Cybersecurity	31	87.43
1.1.3 Internet access	35	84.15	3.1.3 Online access to financial account	15	70.34
1.1.4 4G mobile network coverage	1	100.00	3.1.4 Internet shopping	23	61.28
1.1.5 Fixed-broadband subscriptions	63	67.89	*2nd sub-pillar: Regulation*	47	71.39
1.1.6 International Internet bandwidth	95	62.86	3.2.1 Regulatory quality	36	70.84
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	35	89.77
2nd sub-pillar: Content	34	49.78	3.2.3 Legal framework's adaptability to emerging technologies	56	45.62
1.2.1 GitHub commits	28	29.66	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	32	73.13	3.2.5 Privacy protection by law content	57	50.73
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	20	79.02
1.2.4 Mobile apps development	40	75.37	3.3.1 E-Participation	9	96.30
3rd sub-pillar: Future Technologies	60	28.68	3.3.2 Socioeconomic gap in use of digital payments	23	92.30
1.3.1 Adoption of emerging technologies	61	48.92	3.3.3 Availability of local online content	51	67.13
1.3.2 Investment in emerging technologies	73	37.21	3.3.4 Gender gap in Internet use	29	65.60
1.3.3 ICT PCT patent applications	39	19.58	3.3.5 Rural gap in use of digital payments	42	73.79
1.3.4 Computer software spending	43	25.13	**D. Impact pillar**	31	64.08
1.3.5 Robot density	31	12.54	*1st sub-pillar: Economy*	41	34.37
B. People pillar	40	55.14	4.1.1 Medium and high-tech industry	38	45.17
1st sub-pillar: Individuals	48	59.62	4.1.2 High-tech exports	48	19.14
2.1.1 Internet users	47	77.20	4.1.3 PCT patent applications	40	2.65
2.1.2 Active mobile-broadband subscriptions	3	68.16	4.1.4 Labor productivity per employee	35	49.64
2.1.3 Use of virtual social networks	79	49.48	4.1.5 Prevalence of gig economy	46	55.24
2.1.4 Tertiary enrollment	35	49.35	*2nd sub-pillar: Quality of Life*	25	79.02
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	40	69.76
2.1.6 ICT skills	60	53.92	4.2.2 Freedom to make life choices	39	86.34
2nd sub-pillar: Businesses	33	58.38	4.2.3 Income inequality	18	85.82
2.2.1 Firms with website	37	70.49	4.2.4 Healthy life expectancy at birth	37	74.16
2.2.2 Ease of doing business	39	81.63	*3rd sub-pillar: SDG Contribution*	27	78.85
2.2.3 Professionals	20	49.98	4.3.1 SDG 3: Good Health and Well-Being	50	77.05
2.2.4 Technicians and associate professionals	28	56.36	4.3.2 SDG 4: Quality Education	8	71.56
2.2.5 Business use of digital tools	36	74.78	4.3.3 SDG 5: Gender Equality	12	88.25
2.2.6 R&D expenditure by businesses	30	17.04	4.3.4 SDG 7: Affordable and Clean Energy	62	80.56
3rd sub-pillar: Governments	50	47.43	.	.	.
2.3.1 Government online services	22	85.45			
2.3.2 Publication and use of open data	47	33.95			
2.3.3 Government promotion of investment in emerging tech	65	38.08			
2.3.4 R&D expenditure by governments and higher education	57	32.23			

* Confidential data

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Network Readiness Index 2020 Portugal

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
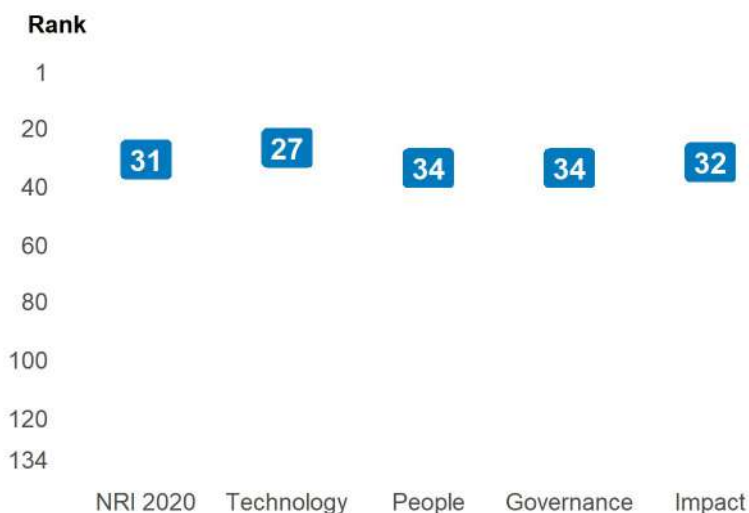
Figure 1: The NRI 2020 model
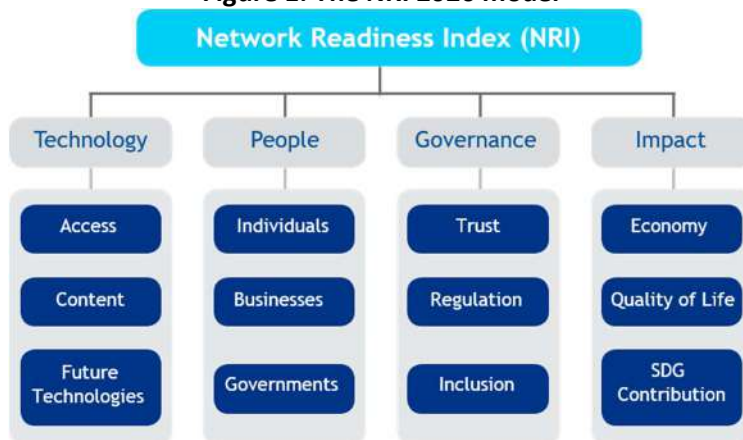
Global NRI position of Portugal

Portugal ranks 31st out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People and Governance.

Figure 2: Portugal global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Portugal relate to SDG Contribution, Regulation and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Trust and Economy sub-pillars.

Table 1: Portugal rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	13	Future Technologies	28
Regulation	14	Inclusion	34
Access	25	Individuals	39
Content	25	Businesses	40
Quality of Life	26	Trust	43
Governments	27	Economy	51

NRI score and income

Figure 3 shows the position of Portugal in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Portugal is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
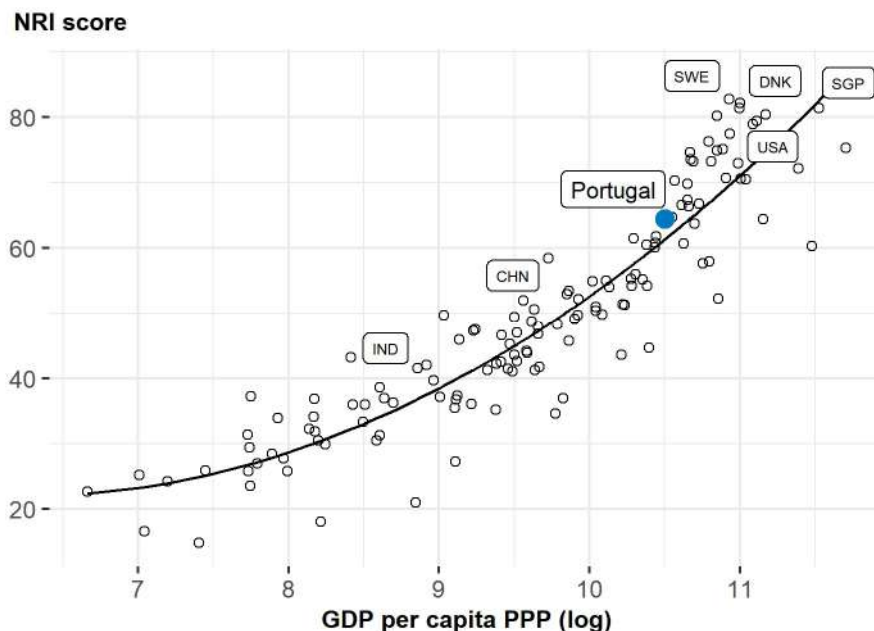
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Portugal belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Portugal is ranked 31st in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in four of the twelve sub-pillars: Access, Content, Regulation and SDG Contribution.

Europe
Portugal is ranked 22nd within Europe (Figure 4, right panel). It has a score above the regional average in one of the four pillars: nri.score and technology. With regard to sub-pillars, it outperforms the average in Europe in seven of the twelve sub-pillars: Access, Future Technologies, Governments, Regulation, Inclusion, Quality of Life and SDG Contribution.

Figure 4: Performance of Portugal against its income group and region, overall and by pillar

Table 2: Portugal scores vs. averages of its income group and region, overall and by pillar

Dimension	Portugal	High-income countries	Europe
NRI	64.40	66.82	64.21
Technology	62.07	62.51	59.93
People	58.93	62.72	59.89
Governance	72.62	75.41	72.98
Impact	63.97	66.63	64.04

Strongest and weakest indicators

The indicators where Portugal performs particularly well include Internet access in schools, e-commerce legislation, and Privacy protection by law content (Table 3). By contrast, the economy's weakest indicators include High-tech exports, Active mobile-broadband subscriptions, and Medium and high-tech industry.

Table 3: Top-ranked and bottom-ranked indicators of Portugal

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	ICT skills	48
e-commerce legislation	1	Happiness	48
Privacy protection by law content	1	Internet users	52
Fixed-broadband subscriptions	4	International Internet bandwidth	53
Computer software spending	8	Online access to financial account	54
ICT regulatory environment	11	Firms with website	57
SDG 3: Good Health and Well-Being	18	Gender gap in Internet use	57
Internet domain registrations	21	Medium and high-tech industry	60
SDG 11: Sustainable Cities and Communities	21	Active mobile-broadband subscriptions	70
Handset prices	22	High-tech exports	71

NRI 2020 At-A-Glance: Portugal

Network Readiness Index Rank: 31 (out of 134) Score: 64.40

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	27	62.07	C. Governance pillar	34	72.62
1st sub-pillar: Access	25	83.55	1st sub-pillar: Trust	43	56.69
2nd sub-pillar: Content	25	57.49	2nd sub-pillar: Regulation	14	85.95
3rd sub-pillar: Future Technologies	28	45.18	3rd sub-pillar: Inclusion	34	75.23
B. People pillar	34	58.93	D. Impact pillar	32	63.97
1st sub-pillar: Individuals	39	62.43	1st sub-pillar: Economy	51	31.60
2nd sub-pillar: Businesses	40	55.06	2nd sub-pillar: Quality of Life	26	78.56
3rd sub-pillar: Governments	27	59.32	3rd sub-pillar: SDG Contribution	13	81.73

The Network Readiness Index in detail

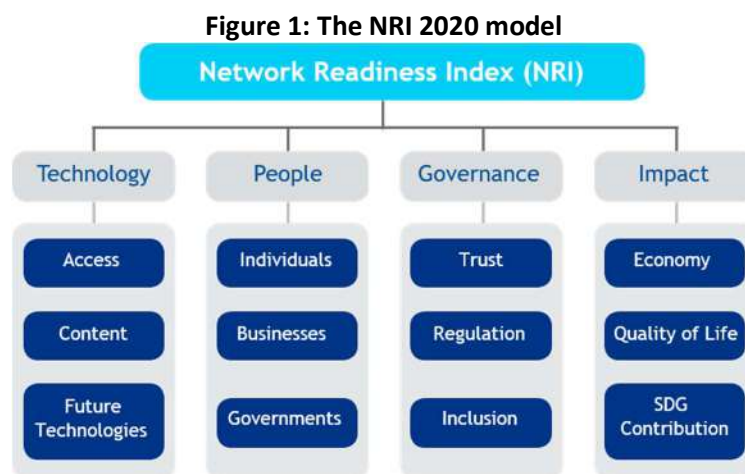| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	27	62.07	**C. Governance pillar**	34	72.62
1st sub-pillar: Access	25	83.55	*1st sub-pillar: Trust*	43	56.69
1.1.1 Mobile tariffs	47	70.08	3.1.1 Secure Internet servers	31	78.69
1.1.2 Handset prices	22	67.20	3.1.2 Cybersecurity	44	81.26
1.1.3 Internet access	48	79.37	3.1.3 Online access to financial account	54	34.56
1.1.4 4G mobile network coverage	22	99.20	3.1.4 Internet shopping	42	32.24
1.1.5 Fixed-broadband subscriptions	4	99.21	*2nd sub-pillar: Regulation*	14	85.95
1.1.6 International Internet bandwidth	53	69.81	3.2.1 Regulatory quality	35	71.02
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	11	96.14
2nd sub-pillar: Content	25	57.49	3.2.3 Legal framework's adaptability to emerging technologies	28	62.61
1.2.1 GitHub commits	26	30.57	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	23	79.87	3.2.5 Privacy protection by law content	1	100.00
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	34	75.23
1.2.4 Mobile apps development	34	78.76	3.3.1 E-Participation	41	81.48
3rd sub-pillar: Future Technologies	28	45.18	3.3.2 Socioeconomic gap in use of digital payments	36	82.32
1.3.1 Adoption of emerging technologies	27	70.91	3.3.3 Availability of local online content	36	77.58
1.3.2 Investment in emerging technologies	39	52.88	3.3.4 Gender gap in Internet use	57	58.97
1.3.3 ICT PCT patent applications	31	26.14	3.3.5 Rural gap in use of digital payments	26	75.82
1.3.4 Computer software spending	8	55.77	**D. Impact pillar**	32	63.97
1.3.5 Robot density	25	20.21	*1st sub-pillar: Economy*	51	31.60
B. People pillar	34	58.93	4.1.1 Medium and high-tech industry	60	32.55
1st sub-pillar: Individuals	39	62.43	4.1.2 High-tech exports	71	12.68
2.1.1 Internet users	52	74.23	4.1.3 PCT patent applications	31	5.54
2.1.2 Active mobile-broadband subscriptions	70	28.40	4.1.4 Labor productivity per employee	41	46.57
2.1.3 Use of virtual social networks	27	69.07	4.1.5 Prevalence of gig economy	36	60.68
2.1.4 Tertiary enrollment	41	46.48	*2nd sub-pillar: Quality of Life*	26	78.56
2.1.5 Adult literacy rate	41	95.06	4.2.1 Happiness	48	66.88
2.1.6 ICT skills	48	61.35	4.2.2 Freedom to make life choices	40	86.25
2nd sub-pillar: Businesses	40	55.06	4.2.3 Income inequality	43	75.26
2.2.1 Firms with website	57	57.01	4.2.4 Healthy life expectancy at birth	22	85.85
2.2.2 Ease of doing business	38	81.78	*3rd sub-pillar: SDG Contribution*	13	81.73
2.2.3 Professionals	24	46.70	4.3.1 SDG 3: Good Health and Well-Being	18	88.52
2.2.4 Technicians and associate professionals	47	47.38	4.3.2 SDG 4: Quality Education	27	62.86
2.2.5 Business use of digital tools	27	80.46	4.3.3 SDG 5: Gender Equality	41	79.98
2.2.6 R&D expenditure by businesses	31	17.00	4.3.4 SDG 7: Affordable and Clean Energy	30	87.07
3rd sub-pillar: Governments	27	59.32	.	.	.
2.3.1 Government online services	35	83.03			
2.3.2 Publication and use of open data	34	41.89			
2.3.3 Government promotion of investment in emerging tech	29	54.71			
2.3.4 R&D expenditure by governments and higher education	22	57.63			

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Network Readiness Index 2020
Qatar

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Qatar

Qatar ranks 38th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Qatar global ranking, overall and by pillar
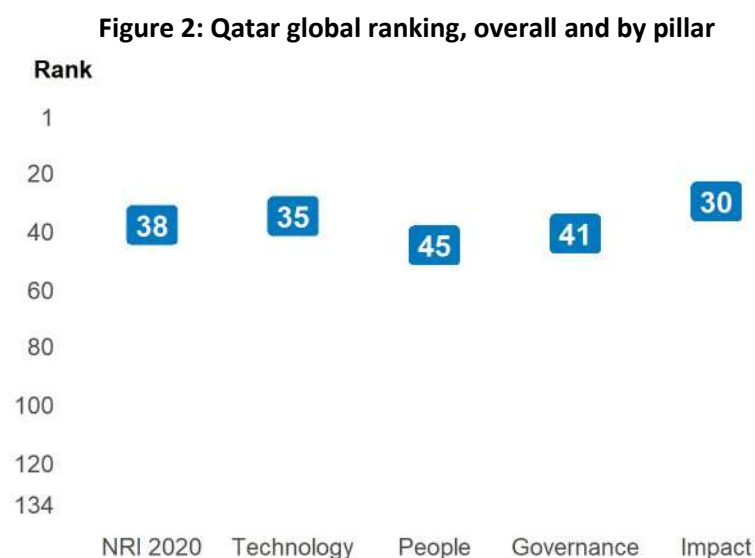
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Qatar relate to Access, Individuals and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Content, Businesses and SDG Contribution sub-pillars.

Table 1: Qatar rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Access	2	Inclusion	46
Individuals	10	Governments	47
Economy	16	Regulation	64
Quality of Life	22	Content	72
Trust	24	Businesses	79
Future Technologies	34	SDG Contribution	88

NRI score and income

Figure 3 shows the position of Qatar in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Qatar is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
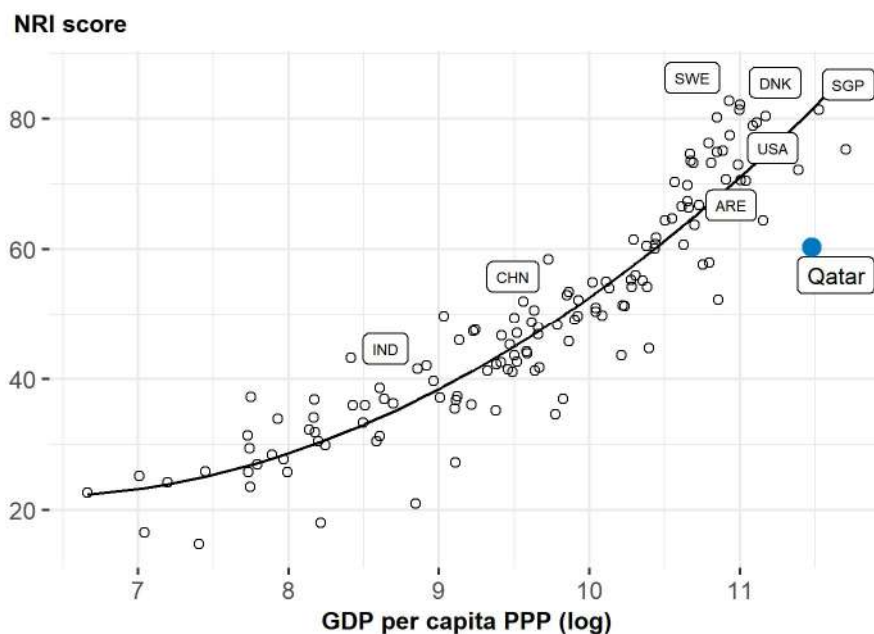
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Qatar belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Arab States-is United Arab Emirates (ARE).

Performance against its income group and region

High-income countries

Qatar is ranked 37th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in five of the twelve sub-pillars: Access, Individuals, Trust, Economy and Quality of Life.

Arab States

Qatar is ranked 2nd within Arab States (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Arab States in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Qatar against its income group and region, overall and by pillar

Table 2: Qatar scores vs. averages of its income group and region, overall and by pillar

Dimension	Qatar	High-income countries	Arab States
NRI	60.26	66.82	47.18
Technology	53.38	62.51	39.24
People	53.24	62.72	47.97
Governance	69.26	75.41	51.70
Impact	65.16	66.63	49.82

Strongest and weakest indicators

The indicators where Qatar performs particularly well include Handset prices, Internet access in schools, and Internet users (Table 3). By contrast, the economy's weakest indicators include High-tech exports, SDG 11: Sustainable Cities and Communities, and ICT regulatory environment.

Table 3: Top-ranked and bottom-ranked indicators of Qatar

Strongest indicators	Rank	Weakest indicators	Rank
Handset prices	1	Government online services	75
Internet access in schools	1	E-Participation	76
Internet users	1	SDG 3: Good Health and Well-Being	79
Use of virtual social networks	1	GitHub commits	84
e-commerce legislation	1	Wikipedia edits	85
SDG 5: Gender Equality	1	SDG 7: Affordable and Clean Energy	95
Labor productivity per employee	5	Tertiary enrollment	96
Medium and high-tech industry	9	ICT regulatory environment	102
ICT skills	11	SDG 11: Sustainable Cities and Communities	120
Prevalence of gig economy	13	High-tech exports	128

NRI 2020 At-A-Glance: Qatar

Network Readiness Index   Rank: 38 (out of 134)   Score: 60.26

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	35	53.38	C. Governance pillar	41	69.26
1st sub-pillar: Access	2	92.28	1st sub-pillar: Trust	24	70.41
2nd sub-pillar: Content	72	27.05	2nd sub-pillar: Regulation	64	66.85
3rd sub-pillar: Future Technologies	34	40.81	3rd sub-pillar: Inclusion	46	70.53
B. People pillar	45	53.24	D. Impact pillar	30	65.16
1st sub-pillar: Individuals	10	73.17	1st sub-pillar: Economy	16	56.52
2nd sub-pillar: Businesses	79	38.32	2nd sub-pillar: Quality of Life	22	80.09
3rd sub-pillar: Governments	47	48.23	3rd sub-pillar: SDG Contribution	88	58.87

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	35	53.38	**C. Governance pillar**	41	69.26
1st sub-pillar: Access	2	92.28	*1st sub-pillar: Trust*	24	70.41
1.1.1 Mobile tariffs	17	84.43	3.1.1 Secure Internet servers	73	48.50
1.1.2 Handset prices	1	100.00	3.1.2 Cybersecurity	19	92.31
1.1.3 Internet access	14	93.97	3.1.3 Online access to financial account	NA	NA
1.1.4 4G mobile network coverage	19	99.50	3.1.4 Internet shopping	NA	NA
1.1.5 Fixed-broadband subscriptions	19	95.48	*2nd sub-pillar: Regulation*	64	66.85
1.1.6 International Internet bandwidth	36	72.59	3.2.1 Regulatory quality	45	62.76
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	102	67.96
2nd sub-pillar: Content	72	27.05	3.2.3 Legal framework's adaptability to emerging technologies	22	65.84
1.2.1 GitHub commits	84	1.89	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	85	32.84	3.2.5 Privacy protection by law content	62	37.67
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	46	70.53
1.2.4 Mobile apps development	51	69.25	3.3.1 E-Participation	76	64.20
3rd sub-pillar: Future Technologies	34	40.81	3.3.2 Socioeconomic gap in use of digital payments	NA	NA
1.3.1 Adoption of emerging technologies	35	62.68	3.3.3 Availability of local online content	29	81.91
1.3.2 Investment in emerging technologies	17	71.18	3.3.4 Gender gap in Internet use	30	65.50
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	NA	NA
1.3.4 Computer software spending	31	29.26	**D. Impact pillar**	30	65.16
1.3.5 Robot density	67	0.10	*1st sub-pillar: Economy*	16	56.52
B. People pillar	45	53.24	4.1.1 Medium and high-tech industry	9	69.23
1st sub-pillar: Individuals	10	73.17	4.1.2 High-tech exports	128	0.00
2.1.1 Internet users	1	100.00	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	14	49.57	4.1.4 Labor productivity per employee	5	82.01
2.1.3 Use of virtual social networks	1	100.00	4.1.5 Prevalence of gig economy	13	74.83
2.1.4 Tertiary enrollment	96	12.55	*2nd sub-pillar: Quality of Life*	22	80.09
2.1.5 Adult literacy rate	57	91.62	4.2.1 Happiness	34	72.36
2.1.6 ICT skills	11	85.28	4.2.2 Freedom to make life choices	13	93.38
2nd sub-pillar: Businesses	79	38.32	4.2.3 Income inequality	NA	NA
2.2.1 Firms with website	NA	NA	4.2.4 Healthy life expectancy at birth	36	74.53
2.2.2 Ease of doing business	72	67.98	*3rd sub-pillar: SDG Contribution*	88	58.87
2.2.3 Professionals	72	21.46	4.3.1 SDG 3: Good Health and Well-Being	79	65.57
2.2.4 Technicians and associate professionals	74	28.83	4.3.2 SDG 4: Quality Education	60	33.47
2.2.5 Business use of digital tools	46	71.05	4.3.3 SDG 5: Gender Equality	1	100.00
2.2.6 R&D expenditure by businesses	65	2.28	4.3.4 SDG 7: Affordable and Clean Energy	95	68.86
3rd sub-pillar: Governments	47	48.23	.	.	.
2.3.1 Government online services	75	64.85			
2.3.2 Publication and use of open data	73	19.26			
2.3.3 Government promotion of investment in emerging tech	18	70.33			
2.3.4 R&D expenditure by governments and higher education	48	38.48			

* Confidential data

5

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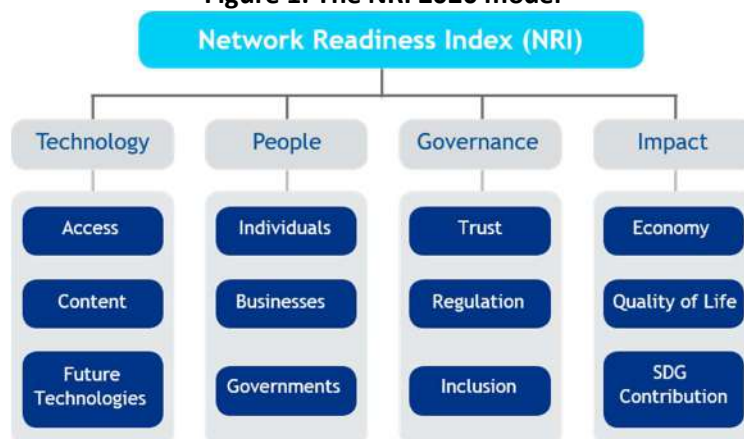
Network Readiness Index 2020 Romania

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
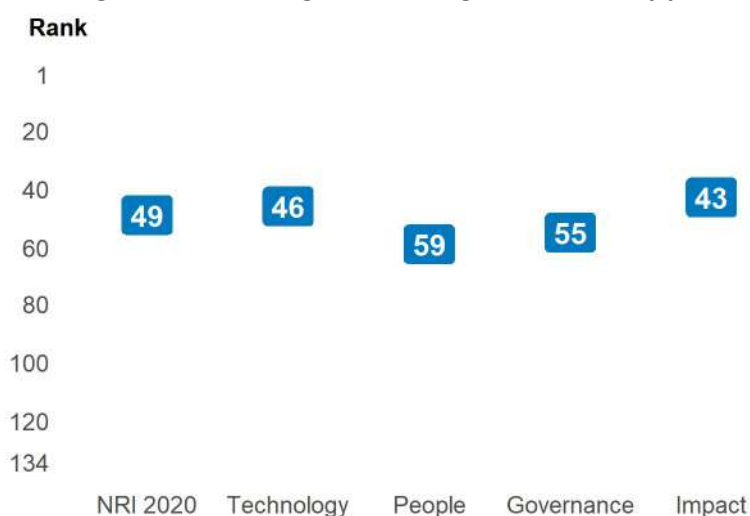
Figure 1: The NRI 2020 model

Global NRI position of Romania

Romania ranks 49th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Romania global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Romania relate to Access, SDG Contribution and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Governments, Inclusion and Future Technologies sub-pillars.

Table 1: Romania rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Access	18	Regulation	54
SDG Contribution	41	Economy	54
Content	48	Trust	59
Individuals	49	Governments	73
Businesses	49	Inclusion	78
Quality of Life	49	Future Technologies	82

NRI score and income

Figure 3 shows the position of Romania in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Romania is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
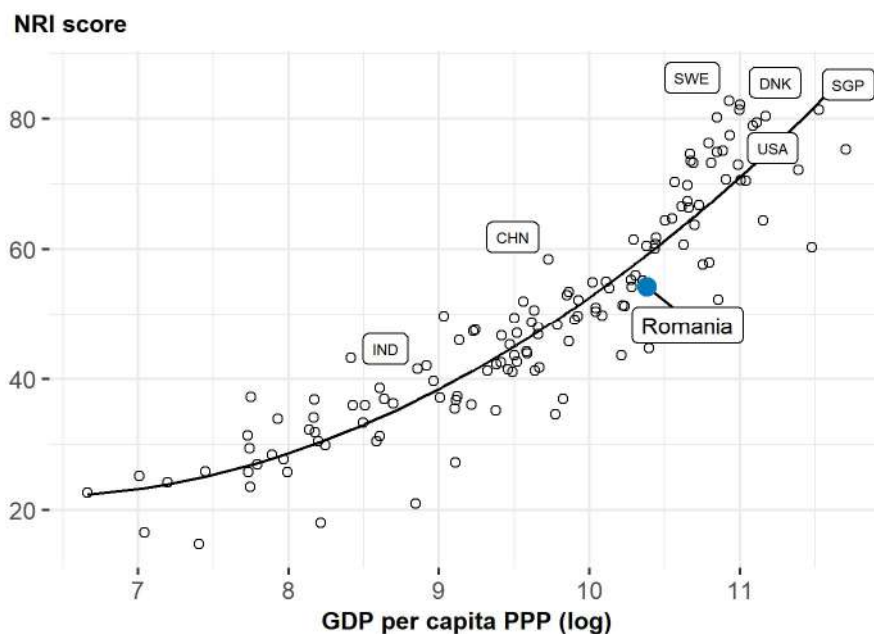
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Romania belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

2

Performance against its income group and region

High-income countries
Romania is ranked 45th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in one of the twelve sub-pillars: Access.

Europe
Romania is ranked 32nd within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in one of the twelve sub-pillars: Access.

Figure 4: Performance of Romania against its income group and region, overall and by pillar

Table 2: Romania scores vs. averages of its income group and region, overall and by pillar

Dimension	Romania	High-income countries	Europe
NRI	54.16	66.82	64.21
Technology	49.62	62.51	59.93
People	49.75	62.72	59.89
Governance	58.69	75.41	72.98
Impact	58.59	66.63	64.04

Strongest and weakest indicators

The indicators where Romania performs particularly well include Mobile tariffs, e-commerce legislation, and Handset prices (Table 3). By contrast, the economy's weakest indicators include Rural gap in use of digital payments, Socioeconomic gap in use of digital payments, and Investment in emerging technologies.

Table 3: Top-ranked and bottom-ranked indicators of Romania

Strongest indicators	Rank	Weakest indicators	Rank
Mobile tariffs	1	International Internet bandwidth	69
e-commerce legislation	1	Cybersecurity	74
Handset prices	9	Online access to financial account	75
Adult literacy rate	20	Prevalence of gig economy	75
ICT regulatory environment	23	Technicians and associate professionals	76
Medium and high-tech industry	23	R&D expenditure by governments and higher education	76
SDG 7: Affordable and Clean Energy	25	Government promotion of investment in emerging technologies	80
Fixed-broadband subscriptions	27	Investment in emerging technologies	94
Business use of digital tools	29	Socioeconomic gap in use of digital payments	103
Secure Internet servers	32	Rural gap in use of digital payments	104

NRI 2020 At-A-Glance: Romania

Network Readiness Index   Rank: 49 (out of 134)   Score: 54.16

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	46	49.62	C. Governance pillar	55	58.69
1st sub-pillar: Access	18	85.43	1st sub-pillar: Trust	59	45.73
2nd sub-pillar: Content	48	38.52	2nd sub-pillar: Regulation	54	69.31
3rd sub-pillar: Future Technologies	82	24.90	3rd sub-pillar: Inclusion	78	61.03
B. People pillar	59	49.75	D. Impact pillar	43	58.59
1st sub-pillar: Individuals	49	59.29	1st sub-pillar: Economy	54	31.57
2nd sub-pillar: Businesses	49	49.19	2nd sub-pillar: Quality of Life	49	71.32
3rd sub-pillar: Governments	73	40.77	3rd sub-pillar: SDG Contribution	41	72.87

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	46	49.62	**C. Governance pillar**	55	58.69
1st sub-pillar: Access	18	85.43	*1st sub-pillar: Trust*	59	45.73
1.1.1 Mobile tariffs	1	100.00	3.1.1 Secure Internet servers	32	78.69
1.1.2 Handset prices	9	78.47	3.1.2 Cybersecurity	74	60.67
1.1.3 Internet access	44	80.83	3.1.3 Online access to financial account	75	23.59
1.1.4 4G mobile network coverage	63	92.56	3.1.4 Internet shopping	59	19.99
1.1.5 Fixed-broadband subscriptions	27	92.92	*2nd sub-pillar: Regulation*	54	69.31
1.1.6 International Internet bandwidth	69	67.82	3.2.1 Regulatory quality	51	61.22
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	23	93.83
2nd sub-pillar: Content	48	38.52	3.2.3 Legal framework's adaptability to emerging technologies	52	47.35
1.2.1 GitHub commits	44	13.24	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	55	54.94	3.2.5 Privacy protection by law content	60	44.15
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	78	61.03
1.2.4 Mobile apps development	39	75.44	3.3.1 E-Participation	46	80.24
3rd sub-pillar: Future Technologies	82	24.90	3.3.2 Socioeconomic gap in use of digital payments	103	41.96
1.3.1 Adoption of emerging technologies	50	52.70	3.3.3 Availability of local online content	44	71.84
1.3.2 Investment in emerging technologies	94	31.16	3.3.4 Gender gap in Internet use	45	61.38
1.3.3 ICT PCT patent applications	47	9.70	3.3.5 Rural gap in use of digital payments	104	49.73
1.3.4 Computer software spending	45	24.69	**D. Impact pillar**	43	58.59
1.3.5 Robot density	38	6.25	*1st sub-pillar: Economy*	54	31.57
B. People pillar	59	49.75	4.1.1 Medium and high-tech industry	23	54.28
1st sub-pillar: Individuals	49	59.29	4.1.2 High-tech exports	43	20.98
2.1.1 Internet users	63	70.13	4.1.3 PCT patent applications	51	0.99
2.1.2 Active mobile-broadband subscriptions	46	34.14	4.1.4 Labor productivity per employee	43	43.29
2.1.3 Use of virtual social networks	61	56.70	4.1.5 Prevalence of gig economy	75	38.31
2.1.4 Tertiary enrollment	61	35.76	*2nd sub-pillar: Quality of Life*	49	71.32
2.1.5 Adult literacy rate	20	98.55	4.2.1 Happiness	46	67.56
2.1.6 ICT skills	50	60.43	4.2.2 Freedom to make life choices	56	80.34
2nd sub-pillar: Businesses	49	49.19	4.2.3 Income inequality	59	69.59
2.2.1 Firms with website	43	67.68	4.2.4 Healthy life expectancy at birth	59	67.81
2.2.2 Ease of doing business	54	76.24	*3rd sub-pillar: SDG Contribution*	41	72.87
2.2.3 Professionals	42	37.46	4.3.1 SDG 3: Good Health and Well-Being	54	75.41
2.2.4 Technicians and associate professionals	76	26.91	4.3.2 SDG 4: Quality Education	51	39.36
2.2.5 Business use of digital tools	29	79.57	4.3.3 SDG 5: Gender Equality	37	80.74
2.2.6 R&D expenditure by businesses	48	7.30	4.3.4 SDG 7: Affordable and Clean Energy	25	88.51
3rd sub-pillar: Governments	73	40.77	.	.	.
2.3.1 Government online services	60	71.51			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	80	32.57			
2.3.4 R&D expenditure by governments and higher education	76	18.23			

* Confidential data

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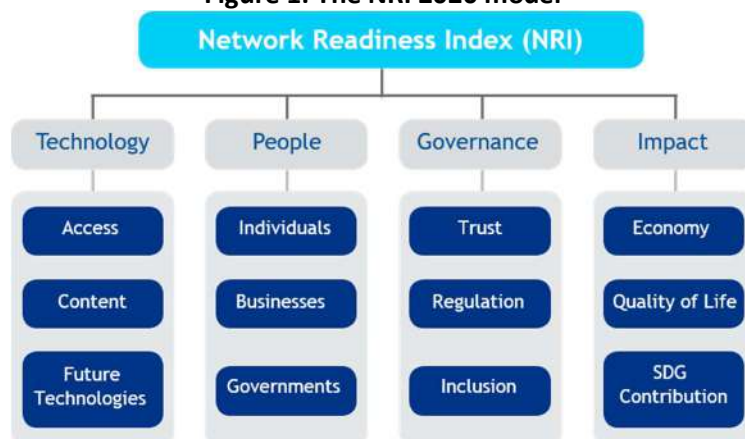
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Network Readiness Index 2020 Russia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
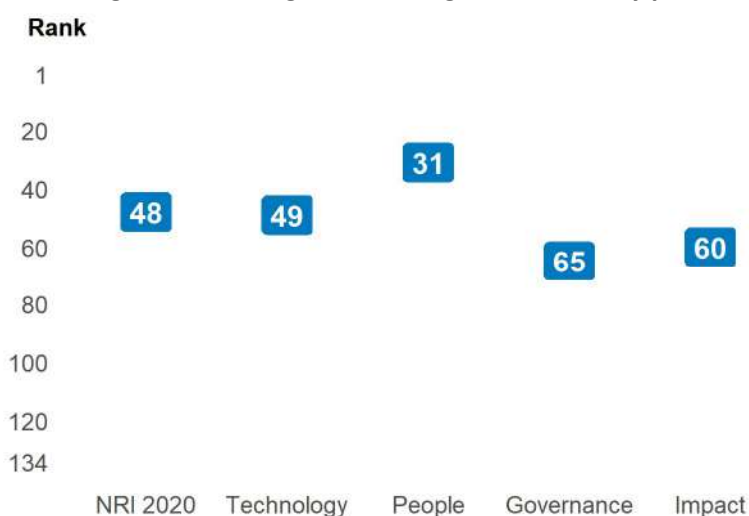
Figure 1: The NRI 2020 model

Global NRI position of Russia

Russia ranks 48th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Russia global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Russia relate to Individuals, Inclusion and Businesses, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Quality of Life and Regulation sub-pillars.

Table 1: Russia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	28	Economy	47
Inclusion	30	SDG Contribution	51
Businesses	34	Future Technologies	57
Governments	34	Access	59
Trust	40	Quality of Life	89
Content	45	Regulation	128

NRI score and income

Figure 3 shows the position of Russia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Russia is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
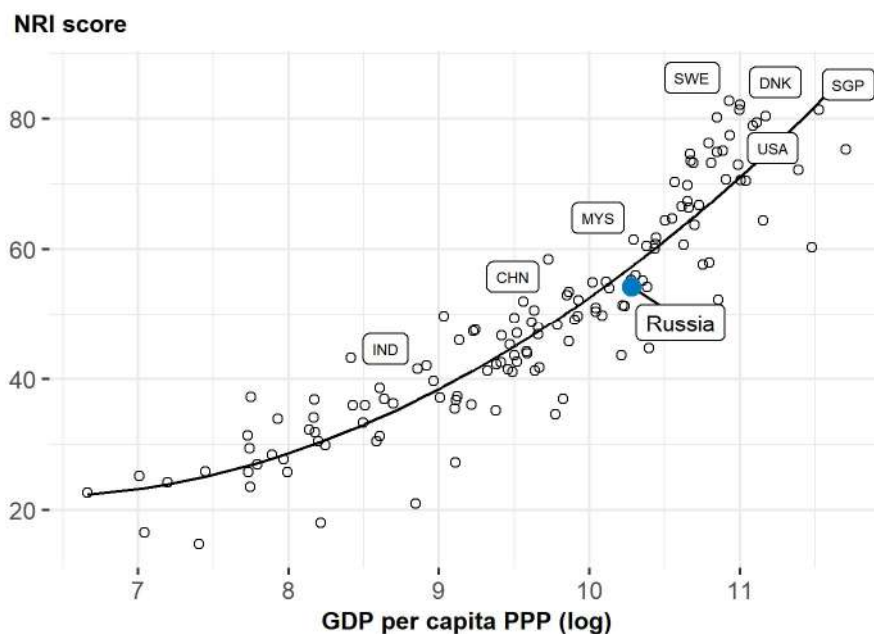
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Russia belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). It is the top performer of its region, the CIS.

2

Performance against its income group and region

Upper-middle-income countries
Russia is ranked 4th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in ten of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Inclusion, Economy and SDG Contribution.

CIS
Russia is ranked 1st within CIS (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in CIS in ten of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Inclusion, Economy and SDG Contribution.

Figure 4: Performance of Russia against its income group and region, overall and by pillar
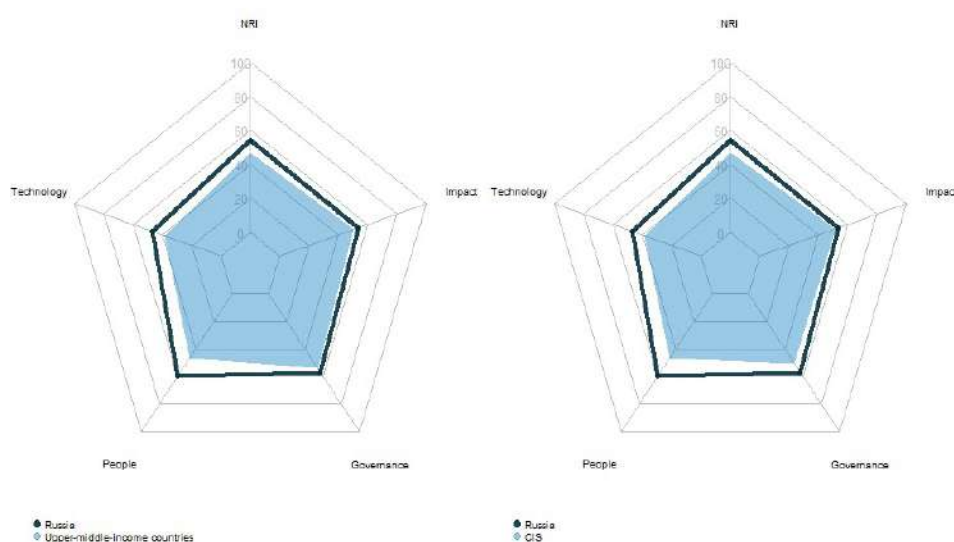
Table 2: Russia scores vs. averages of its income group and region, overall and by pillar

Dimension	Russia	Upper-middle-income countries	CIS
NRI	54.23	47.39	46.88
Technology	46.62	38.42	38.47
People	59.68	46.66	47.10
Governance	56.98	54.31	50.71
Impact	53.65	50.17	51.26

Strongest and weakest indicators

The indicators where Russia performs particularly well include SDG 5: Gender Equality, Adult literacy rate, and Professionals (Table 3). By contrast, the economy's weakest indicators include ICT regulatory environment, e-commerce legislation, and SDG 7: Affordable and Clean Energy.

Table 3: Top-ranked and bottom-ranked indicators of Russia

Strongest indicators	Rank	Weakest indicators	Rank
SDG 5: Gender Equality	8	Happiness	74
Adult literacy rate	10	Privacy protection by law content	78
Professionals	12	Use of virtual social networks	84
Tertiary enrollment	17	4G mobile network coverage	90
Publication and use of open data	25	Healthy life expectancy at birth	90
Prevalence of gig economy	25	Freedom to make life choices	98
ICT skills	26	Regulatory quality	105
Ease of doing business	27	SDG 7: Affordable and Clean Energy	123
E-Participation	27	e-commerce legislation	127
Cybersecurity	28	ICT regulatory environment	128

NRI 2020 At-A-Glance: Russia

Network Readiness Index   Rank: 48 (out of 134)   Score: 54.23

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	49	46.62	C. Governance pillar	65	56.98
1st sub-pillar: Access	59	69.68	1st sub-pillar: Trust	40	61.93
2nd sub-pillar: Content	45	40.48	2nd sub-pillar: Regulation	128	32.60
3rd sub-pillar: Future Technologies	57	29.70	3rd sub-pillar: Inclusion	30	76.39
B. People pillar	31	59.68	D. Impact pillar	60	53.65
1st sub-pillar: Individuals	28	65.88	1st sub-pillar: Economy	47	32.77
2nd sub-pillar: Businesses	34	57.80	2nd sub-pillar: Quality of Life	89	59.61
3rd sub-pillar: Governments	34	55.36	3rd sub-pillar: SDG Contribution	51	68.57

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	49	46.62	**C. Governance pillar**	65	56.98
1st sub-pillar: Access	59	69.68	*1st sub-pillar: Trust*	40	61.93
1.1.1 Mobile tariffs	59	66.09	3.1.1 Secure Internet servers	40	72.95
1.1.2 Handset prices	37	58.97	3.1.2 Cybersecurity	28	89.71
1.1.3 Internet access	52	76.52	3.1.3 Online access to financial account	34	50.60
1.1.4 4G mobile network coverage	90	70.00	3.1.4 Internet shopping	40	34.47
1.1.5 Fixed-broadband subscriptions	51	76.74	*2nd sub-pillar: Regulation*	128	32.60
1.1.6 International Internet bandwidth	54	69.78	3.2.1 Regulatory quality	105	39.51
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	128	35.91
2nd sub-pillar: Content	45	40.48	3.2.3 Legal framework's adaptability to emerging technologies	38	53.08
1.2.1 GitHub commits	41	13.87	3.2.4 e-commerce legislation	127	25.00
1.2.2 Wikipedia edits	46	64.10	3.2.5 Privacy protection by law content	78	9.50
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	30	76.39
1.2.4 Mobile apps development	43	73.15	3.3.1 E-Participation	27	86.42
3rd sub-pillar: Future Technologies	57	29.70	3.3.2 Socioeconomic gap in use of digital payments	33	83.18
1.3.1 Adoption of emerging technologies	42	58.81	3.3.3 Availability of local online content	39	76.58
1.3.2 Investment in emerging technologies	47	48.90	3.3.4 Gender gap in Internet use	35	63.10
1.3.3 ICT PCT patent applications	40	19.45	3.3.5 Rural gap in use of digital payments	47	72.70
1.3.4 Computer software spending	63	19.91	**D. Impact pillar**	60	53.65
1.3.5 Robot density	49	1.42	*1st sub-pillar: Economy*	47	32.77
B. People pillar	31	59.68	4.1.1 Medium and high-tech industry	49	38.54
1st sub-pillar: Individuals	28	65.88	4.1.2 High-tech exports	44	20.77
2.1.1 Internet users	36	80.63	4.1.3 PCT patent applications	44	2.19
2.1.2 Active mobile-broadband subscriptions	49	33.86	4.1.4 Labor productivity per employee	49	35.56
2.1.3 Use of virtual social networks	84	47.42	4.1.5 Prevalence of gig economy	25	66.77
2.1.4 Tertiary enrollment	17	59.72	*2nd sub-pillar: Quality of Life*	89	59.61
2.1.5 Adult literacy rate	10	99.69	4.2.1 Happiness	74	55.44
2.1.6 ICT skills	26	73.95	4.2.2 Freedom to make life choices	98	60.25
2nd sub-pillar: Businesses	34	57.80	4.2.3 Income inequality	67	65.72
2.2.1 Firms with website	58	56.89	4.2.4 Healthy life expectancy at birth	90	57.04
2.2.2 Ease of doing business	27	84.78	*3rd sub-pillar: SDG Contribution*	51	68.57
2.2.3 Professionals	12	59.70	4.3.1 SDG 3: Good Health and Well-Being	54	75.41
2.2.4 Technicians and associate professionals	32	55.73	4.3.2 SDG 4: Quality Education	29	61.09
2.2.5 Business use of digital tools	41	72.73	4.3.3 SDG 5: Gender Equality	8	90.43
2.2.6 R&D expenditure by businesses	32	17.00	4.3.4 SDG 7: Affordable and Clean Energy	123	49.13
3rd sub-pillar: Governments	34	55.36	.	.	.
2.3.1 Government online services	39	81.21			
2.3.2 Publication and use of open data	25	48.53			
2.3.3 Government promotion of investment in emerging tech	33	52.56			
2.3.4 R&D expenditure by governments and higher education	47	39.15			

* Confidential data

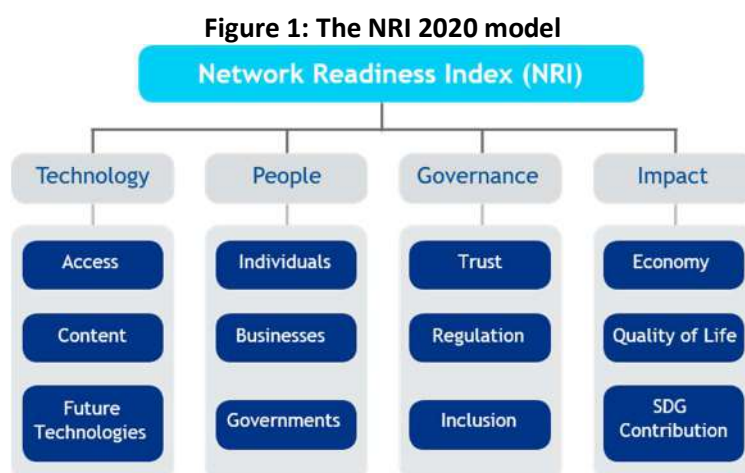**Sources**

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Network Readiness Index 2020 Rwanda

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Rwanda

Rwanda ranks 96th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Rwanda global ranking, overall and by pillar
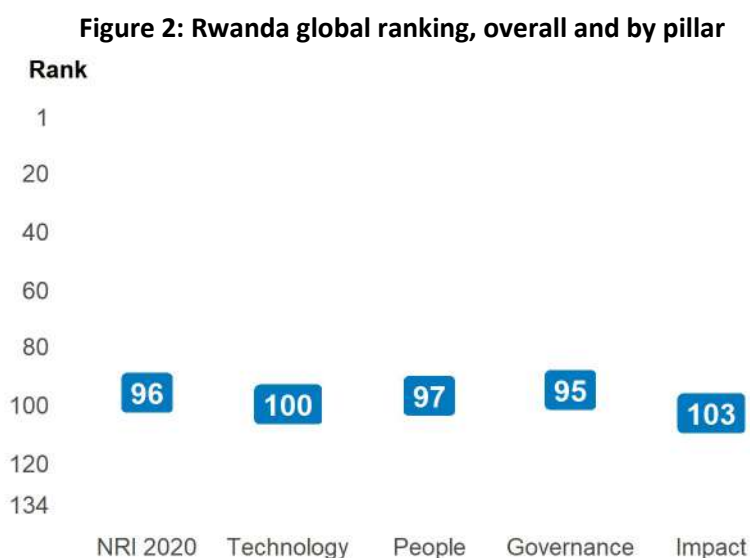
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Rwanda relate to Future Technologies, Governments and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Quality of Life, Individuals and Content sub-pillars.

Table 1: Rwanda rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	47	SDG Contribution	97
Governments	57	Access	99
Economy	84	Regulation	105
Inclusion	85	Quality of Life	110
Trust	87	Individuals	116
Businesses	94	Content	120

NRI score and income

Figure 3 shows the position of Rwanda in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Rwanda is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
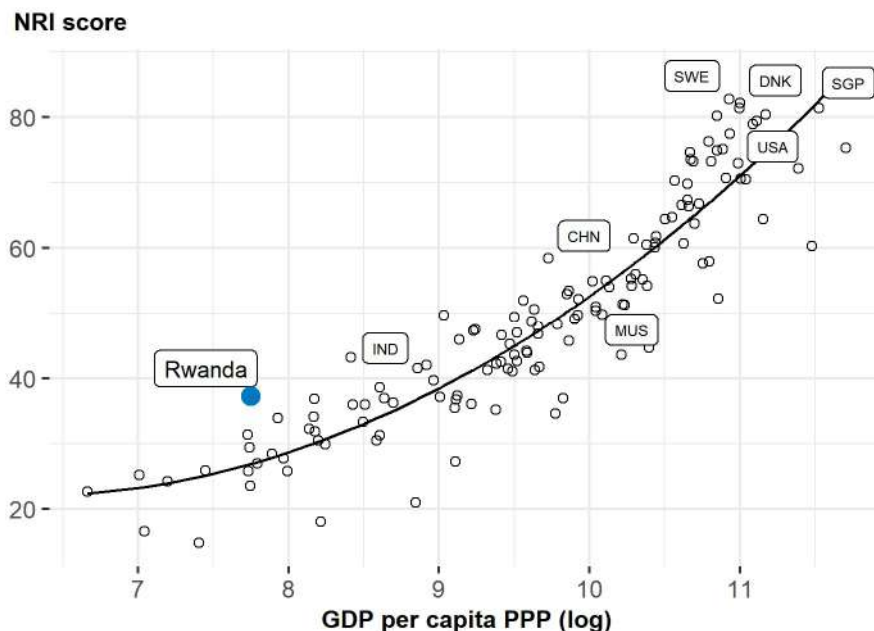
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Rwanda belongs to the group of low-income countries, where it is the best performer. The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Low-income countries

Rwanda is ranked 1st in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it has a higher score than the average of low-income countries in all of them.

Africa

Rwanda is ranked 5th within Africa (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in ten of the twelve sub-pillars: Access, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Rwanda against its income group and region, overall and by pillar

Table 2: Rwanda scores vs. averages of its income group and region, overall and by pillar

Dimension	Rwanda	Low-income countries	Africa
NRI	37.24	25.61	30.62
Technology	27.14	16.33	21.47
People	35.01	20.61	26.75
Governance	46.15	32.58	39.31
Impact	40.67	32.92	34.94

Strongest and weakest indicators

The indicators where Rwanda performs particularly well include R&D expenditure by governments and higher education, Government promotion of investment in emerging technologies, and Ease of doing business (Table 3). By contrast, the economy's weakest indicators include Happiness, Use of virtual social networks, and Handset prices.

Table 3: Top-ranked and bottom-ranked indicators of Rwanda

Strongest indicators	Rank	Weakest indicators	Rank
R&D expenditure by governments and higher education	29	Internet users	117
Government promotion of investment in emerging technologies	31	Internet domain registrations	118
Ease of doing business	37	SDG 11: Sustainable Cities and Communities	121
High-tech exports	37	Technicians and associate professionals	122
Investment in emerging technologies	42	Internet shopping	122
Freedom to make life choices	47	Mobile apps development	124
4G mobile network coverage	50	Internet access	125
Internet access in schools	51	Handset prices	129
Cybersecurity	51	Use of virtual social networks	130
Prevalence of gig economy	55	Happiness	131

NRI 2020 At-A-Glance: Rwanda

Network Readiness Index   Rank: 96 (out of 134)   Score: 37.24

Pillar/sub-pillar	Rank	Score
A. Technology pillar	100	27.14
1st sub-pillar: Access	99	39.10
2nd sub-pillar: Content	120	10.51
3rd sub-pillar: Future Technologies	47	31.81
B. People pillar	97	35.01
1st sub-pillar: Individuals	116	25.25
2nd sub-pillar: Businesses	94	33.15
3rd sub-pillar: Governments	57	46.62

Pillar/sub-pillar	Rank	Score
C. Governance pillar	95	46.15
1st sub-pillar: Trust	87	31.08
2nd sub-pillar: Regulation	105	51.52
3rd sub-pillar: Inclusion	85	55.85
D. Impact pillar	103	40.67
1st sub-pillar: Economy	84	20.18
2nd sub-pillar: Quality of Life	110	47.52
3rd sub-pillar: SDG Contribution	97	54.30

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	100	27.14
1st sub-pillar: Access	99	39.10
1.1.1 Mobile tariffs	116	33.10
1.1.2 Handset prices	129	2.90
1.1.3 Internet access	125	9.05
1.1.4 4G mobile network coverage	50	96.60
1.1.5 Fixed-broadband subscriptions	76	45.37
1.1.6 International Internet bandwidth	115	56.67
1.1.7 Internet access in schools	51	30.01
2nd sub-pillar: Content	120	10.51
1.2.1 GitHub commits	111	0.40
1.2.2 Wikipedia edits	104	16.76
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	124	24.76
3rd sub-pillar: Future Technologies	47	31.81
1.3.1 Adoption of emerging technologies	77	41.88
1.3.2 Investment in emerging technologies	42	50.02
1.3.3 ICT PCT patent applications	NA	NA
1.3.4 Computer software spending	103	3.54
1.3.5 Robot density	NA	NA
B. People pillar	97	35.01
1st sub-pillar: Individuals	116	25.25
2.1.1 Internet users	117	19.70
2.1.2 Active mobile-broadband subscriptions	109	14.25
2.1.3 Use of virtual social networks	130	2.89
2.1.4 Tertiary enrollment	116	4.35
2.1.5 Adult literacy rate	91	65.54
2.1.6 ICT skills	81	44.78
2nd sub-pillar: Businesses	94	33.15
2.2.1 Firms with website	80	38.43
2.2.2 Ease of doing business	37	81.81
2.2.3 Professionals	95	14.49
2.2.4 Technicians and associate professionals	122	4.80
2.2.5 Business use of digital tools	68	58.23
2.2.6 R&D expenditure by businesses	73	1.16
3rd sub-pillar: Governments	57	46.62
2.3.1 Government online services	83	60.60
2.3.2 Publication and use of open data	72	19.62
2.3.3 Government promotion of investment in emerging tech	31	54.32
2.3.4 R&D expenditure by governments and higher education	29	51.92

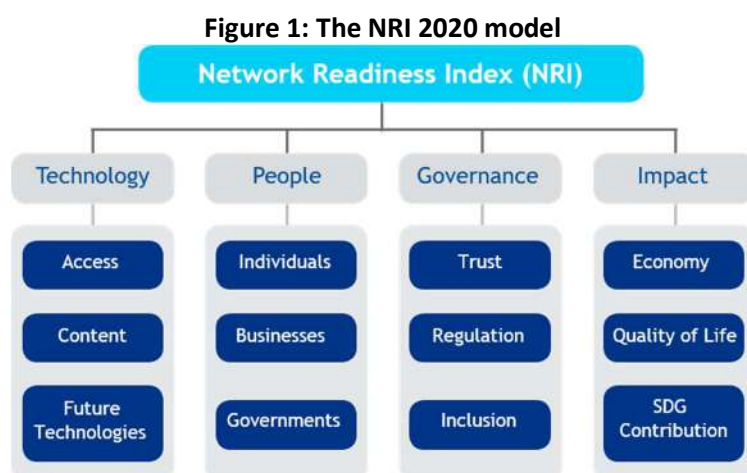| Indicator	Rank	Score
C. Governance pillar	95	46.15
1st sub-pillar: Trust	87	31.08
3.1.1 Secure Internet servers	106	34.08
3.1.2 Cybersecurity	51	74.65
3.1.3 Online access to financial account	95	14.35
3.1.4 Internet shopping	122	1.23
2nd sub-pillar: Regulation	105	51.52
3.2.1 Regulatory quality	64	53.27
3.2.2 ICT regulatory environment	71	82.62
3.2.3 Legal framework's adaptability to emerging technologies	57	44.54
3.2.4 e-commerce legislation	77	75.00
3.2.5 Privacy protection by law content	80	2.18
3rd sub-pillar: Inclusion	85	55.85
3.3.1 E-Participation	81	61.73
3.3.2 Socioeconomic gap in use of digital payments	111	40.63
3.3.3 Availability of local online content	85	51.40
3.3.4 Gender gap in Internet use	NA	NA
3.3.5 Rural gap in use of digital payments	59	69.65
D. Impact pillar	103	40.67
1st sub-pillar: Economy	84	20.18
4.1.1 Medium and high-tech industry	111	8.22
4.1.2 High-tech exports	37	23.77
4.1.3 PCT patent applications	NA	NA
4.1.4 Labor productivity per employee	113	1.61
4.1.5 Prevalence of gig economy	55	47.13
2nd sub-pillar: Quality of Life	110	47.52
4.2.1 Happiness	131	11.30
4.2.2 Freedom to make life choices	47	83.98
4.2.3 Income inequality	97	49.74
4.2.4 Healthy life expectancy at birth	101	45.06
3rd sub-pillar: SDG Contribution	97	54.30
4.3.1 SDG 3: Good Health and Well-Being	101	47.54
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 SDG 5: Gender Equality	89	66.14
4.3.4 SDG 7: Affordable and Clean Energy	71	77.60
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* Confidential data

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Wickham et al., (2019). Welcome to the tidyverse. Journal of Open Source Software, 4(43), 1686, URL: https://doi.org/10.21105/joss.01686

# Network Readiness Index 2020 Saudi Arabia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Saudi Arabia

Saudi Arabia ranks 41st out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Saudi Arabia global ranking, overall and by pillar
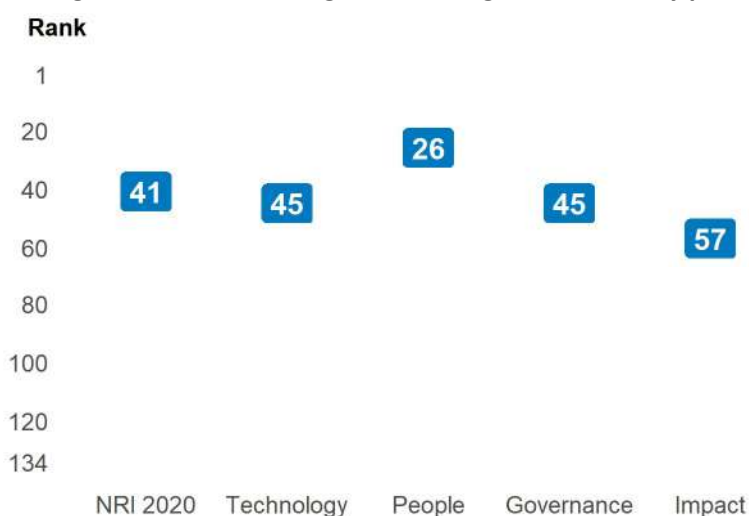
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Saudi Arabia relate to Individuals, Access and Businesses, among others (Table 1). More could be done, though, to improve the economy's performances in the Regulation, Content and SDG Contribution sub-pillars.

Table 1: Saudi Arabia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	12	Inclusion	38
Access	19	Future Technologies	39
Businesses	29	Trust	46
Economy	29	Regulation	60
Governments	32	Content	73
Quality of Life	32	SDG Contribution	118

NRI score and income

Figure 3 shows the position of Saudi Arabia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Saudi Arabia is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
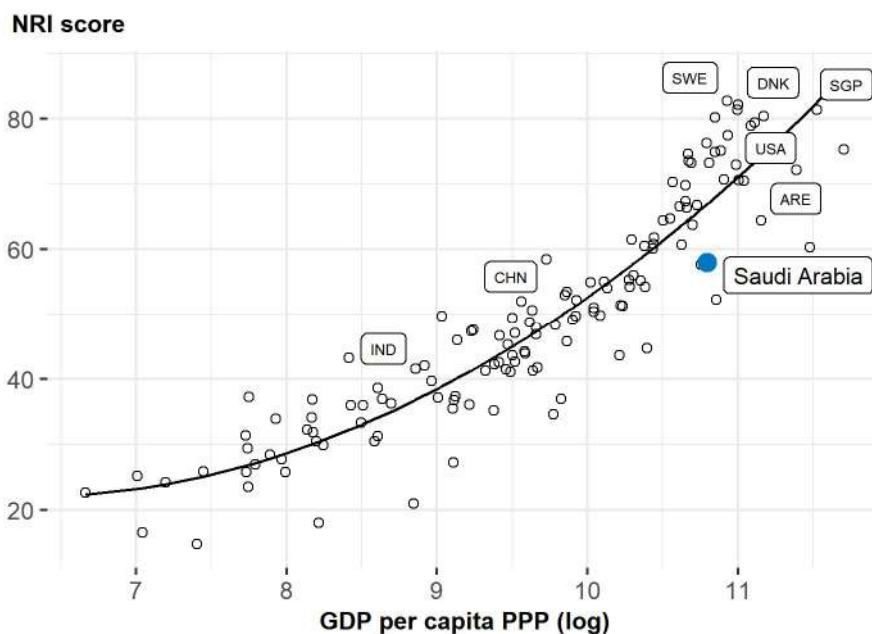
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Saudi Arabia belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Arab States-is United Arab Emirates (ARE).

Performance against its income group and region

High-income countries
Saudi Arabia is ranked 39th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: people. At the sub-pillar level, it outperforms high-income countries in two of the twelve sub-pillars: Access and Individuals.

Arab States
Saudi Arabia is ranked 3rd within Arab States (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Arab States in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Economy and Quality of Life.

Figure 4: Performance of Saudi Arabia against its income group and region, overall and by pillar

Table 2: Saudi Arabia scores vs. averages of its income group and region, overall and by pillar

Dimension	Saudi Arabia	High-income countries	Arab States
NRI	57.97	66.82	47.18
Technology	49.78	62.51	39.24
People	63.01	62.72	47.97
Governance	64.92	75.41	51.70
Impact	54.17	66.63	49.82

Strongest and weakest indicators

The indicators where Saudi Arabia performs particularly well include Internet access in schools, Government promotion of investment in emerging technologies, and Prevalence of gig economy (Table 3). By contrast, the economy's weakest indicators include SDG 11: Sustainable Cities and Communities, High-tech exports, and e-commerce legislation.

Table 3: Top-ranked and bottom-ranked indicators of Saudi Arabia

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	SDG 4: Quality Education	73
Government promotion of investment in emerging technologies	4	Publication and use of open data	75
Prevalence of gig economy	4	Internet domain registrations	82
Labor productivity per employee	8	SDG 7: Affordable and Clean Energy	90
Availability of local online content	10	Secure Internet servers	91
Internet access	12	GitHub commits	109
Internet users	12	SDG 5: Gender Equality	113
Legal framework's adaptability to emerging technologies	12	e-commerce legislation	115
International Internet bandwidth	13	High-tech exports	117
ICT skills	13	SDG 11: Sustainable Cities and Communities	129

![Portulans Institute logo]

NRI 2020 At-A-Glance: Saudi Arabia

Network Readiness Index   Rank: 41 (out of 134)   Score: 57.97

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	45	49.78	C. Governance pillar	45	64.92
1st sub-pillar: Access	19	84.80	1st sub-pillar: Trust	46	52.27
2nd sub-pillar: Content	73	26.91	2nd sub-pillar: Regulation	60	67.86
3rd sub-pillar: Future Technologies	39	37.62	3rd sub-pillar: Inclusion	38	74.64
B. People pillar	26	63.01	D. Impact pillar	57	54.17
1st sub-pillar: Individuals	12	72.97	1st sub-pillar: Economy	29	44.43
2nd sub-pillar: Businesses	29	59.09	2nd sub-pillar: Quality of Life	32	76.08
3rd sub-pillar: Governments	32	56.96	3rd sub-pillar: SDG Contribution	118	42.00

The Network Readiness Index in detail

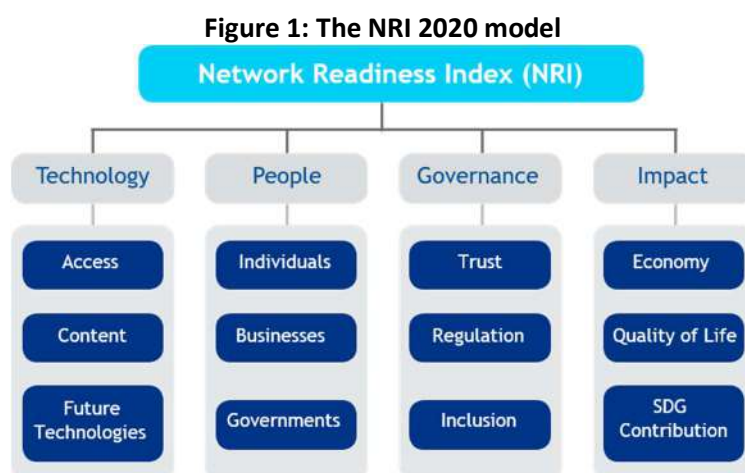| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	45	49.78	**C. Governance pillar**	45	64.92
1st sub-pillar: Access	19	84.80	*1st sub-pillar: Trust*	46	52.27
1.1.1 Mobile tariffs	20	83.49	3.1.1 Secure Internet servers	91	41.56
1.1.2 Handset prices	44	56.91	3.1.2 Cybersecurity	14	94.58
1.1.3 Internet access	12	94.52	3.1.3 Online access to financial account	45	40.98
1.1.4 4G mobile network coverage	60	93.10	3.1.4 Internet shopping	44	31.95
1.1.5 Fixed-broadband subscriptions	36	87.61	*2nd sub-pillar: Regulation*	60	67.86
1.1.6 International Internet bandwidth	13	77.96	3.2.1 Regulatory quality	72	50.40
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	23	93.83
2nd sub-pillar: Content	73	26.91	3.2.3 Legal framework's adaptability to emerging technologies	12	77.22
1.2.1 GitHub commits	109	0.46	3.2.4 e-commerce legislation	115	50.00
1.2.2 Wikipedia edits	64	44.49	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	38	74.64
1.2.4 Mobile apps development	70	60.75	3.3.1 E-Participation	65	70.37
3rd sub-pillar: Future Technologies	39	37.62	3.3.2 Socioeconomic gap in use of digital payments	43	79.32
1.3.1 Adoption of emerging technologies	23	72.31	3.3.3 Availability of local online content	10	91.10
1.3.2 Investment in emerging technologies	30	61.52	3.3.4 Gender gap in Internet use	50	60.82
1.3.3 ICT PCT patent applications	33	23.87	3.3.5 Rural gap in use of digital payments	49	71.56
1.3.4 Computer software spending	29	29.93	**D. Impact pillar**	57	54.17
1.3.5 Robot density	60	0.47	*1st sub-pillar: Economy*	29	44.43
B. People pillar	26	63.01	4.1.1 Medium and high-tech industry	34	48.32
1st sub-pillar: Individuals	12	72.97	4.1.2 High-tech exports	117	1.16
2.1.1 Internet users	12	93.46	4.1.3 PCT patent applications	33	5.12
2.1.2 Active mobile-broadband subscriptions	22	43.54	4.1.4 Labor productivity per employee	8	77.24
2.1.3 Use of virtual social networks	20	72.16	4.1.5 Prevalence of gig economy	4	90.33
2.1.4 Tertiary enrollment	33	49.50	*2nd sub-pillar: Quality of Life*	32	76.08
2.1.5 Adult literacy rate	47	94.02	4.2.1 Happiness	27	76.03
2.1.6 ICT skills	13	85.11	4.2.2 Freedom to make life choices	34	87.73
2nd sub-pillar: Businesses	29	59.09	4.2.3 Income inequality	NA	NA
2.2.1 Firms with website	NA	NA	4.2.4 Healthy life expectancy at birth	73	64.48
2.2.2 Ease of doing business	60	73.10	*3rd sub-pillar: SDG Contribution*	118	42.00
2.2.3 Professionals	58	27.85	4.3.1 SDG 3: Good Health and Well-Being	54	75.41
2.2.4 Technicians and associate professionals	40	49.70	4.3.2 SDG 4: Quality Education	73	18.08
2.2.5 Business use of digital tools	13	85.73	4.3.3 SDG 5: Gender Equality	113	44.61
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	90	71.89
3rd sub-pillar: Governments	32	56.96	.	.	.
2.3.1 Government online services	70	67.88			
2.3.2 Publication and use of open data	75	18.66			
2.3.3 Government promotion of investment in emerging tech	4	84.33			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

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Network Readiness Index 2020 Senegal

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Senegal

Senegal ranks 100th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Senegal global ranking, overall and by pillar
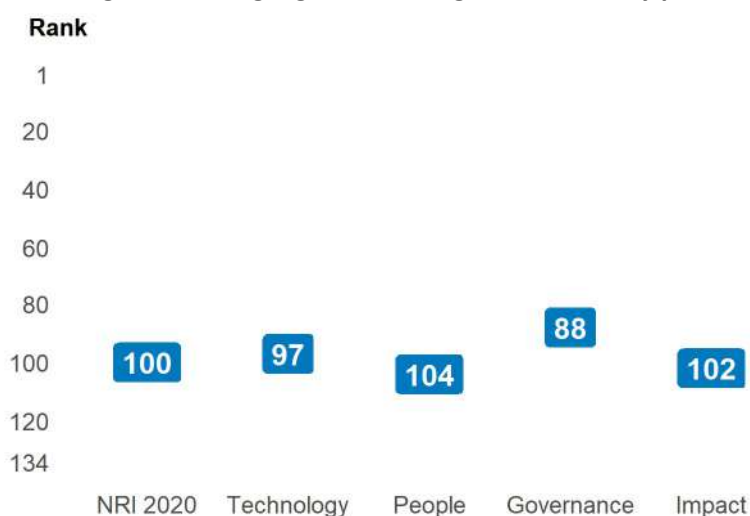
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Senegal relate to Future Technologies, Regulation and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Businesses and Content sub-pillars.

Table 1: Senegal rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	41	Individuals	110
Regulation	62	Access	111
Economy	80	Trust	111
Governments	84	SDG Contribution	112
Inclusion	89	Businesses	115
Quality of Life	99	Content	116

NRI score and income

Figure 3 shows the position of Senegal in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Senegal is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
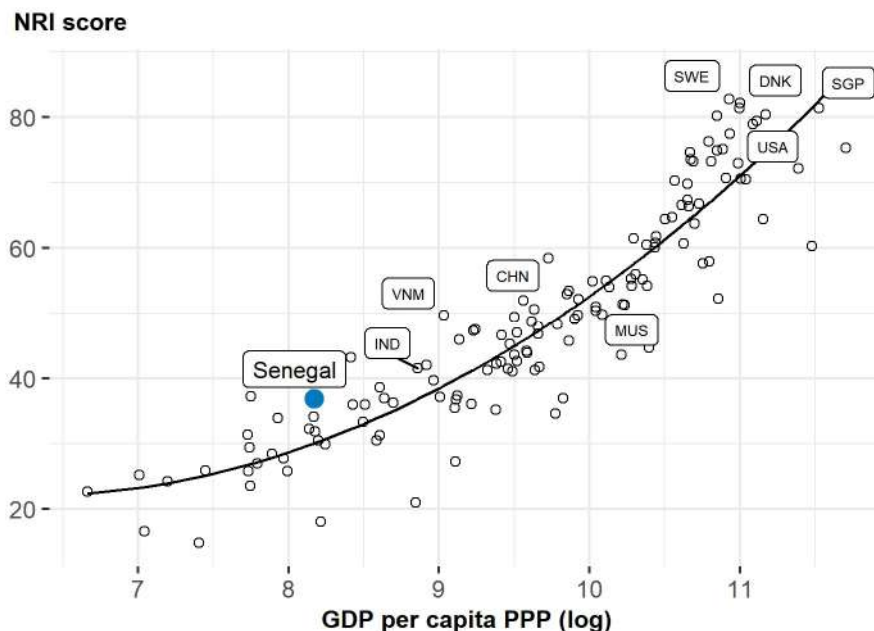
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Senegal belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries
Senegal is ranked 17th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: nri.score and governance. At the sub-pillar level, it outperforms lower-middle-income countries in six of the twelve sub-pillars: Future Technologies, Governments, Regulation, Inclusion, Economy and Quality of Life.

Africa
Senegal is ranked 8th within Africa (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in nine of the twelve sub-pillars: Access, Future Technologies, Individuals, Governments, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Senegal against its income group and region, overall and by pillar
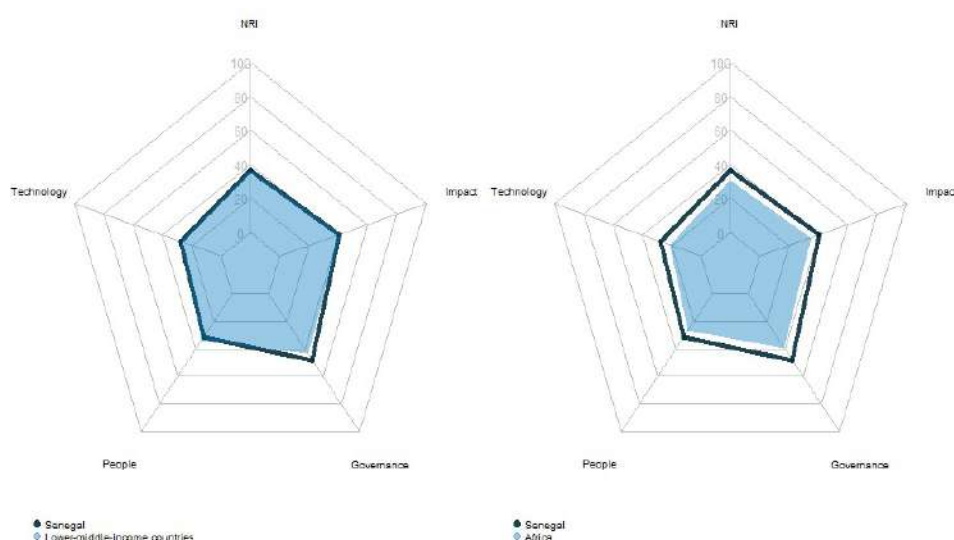
Table 2: Senegal scores vs. averages of its income group and region, overall and by pillar

Dimension	Senegal	Lower-middle-income countries	Africa
NRI	36.90	36.72	30.62
Technology	27.71	27.72	21.47
People	31.09	33.88	26.75
Governance	48.05	43.15	39.31
Impact	40.74	42.15	34.94

Strongest and weakest indicators

The indicators where Senegal performs particularly well include e-commerce legislation, R&D expenditure by governments and higher education, and Computer software spending (Table 3). By contrast, the economy's weakest indicators include International Internet bandwidth, Secure Internet servers, and Technicians and associate professionals.

Table 3: Top-ranked and bottom-ranked indicators of Senegal

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Internet shopping	110
R&D expenditure by governments and higher education	33	Professionals	112
Computer software spending	40	GitHub commits	114
Privacy protection by law content	40	High-tech exports	115
Prevalence of gig economy	54	Mobile apps development	117
Business use of digital tools	55	SDG 3: Good Health and Well-Being	117
Government promotion of investment in emerging technologies	55	SDG 5: Gender Equality	117
Internet access in schools	59	Technicians and associate professionals	119
Investment in emerging technologies	60	Secure Internet servers	121
Online access to financial account	62	International Internet bandwidth	125

NRI 2020 At-A-Glance: Senegal

Network Readiness Index   Rank: 100 (out of 134)   Score: 36.90

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	97	27.71	C. Governance pillar	88	48.05
1st sub-pillar: Access	111	34.36	1st sub-pillar: Trust	111	22.50
2nd sub-pillar: Content	116	11.75	2nd sub-pillar: Regulation	62	67.54
3rd sub-pillar: Future Technologies	41	37.03	3rd sub-pillar: Inclusion	89	54.10
B. People pillar	104	31.09	D. Impact pillar	102	40.74
1st sub-pillar: Individuals	110	29.74	1st sub-pillar: Economy	80	20.85
2nd sub-pillar: Businesses	115	26.62	2nd sub-pillar: Quality of Life	99	54.97
3rd sub-pillar: Governments	84	36.91	3rd sub-pillar: SDG Contribution	112	46.40

The Network Readiness Index in detail

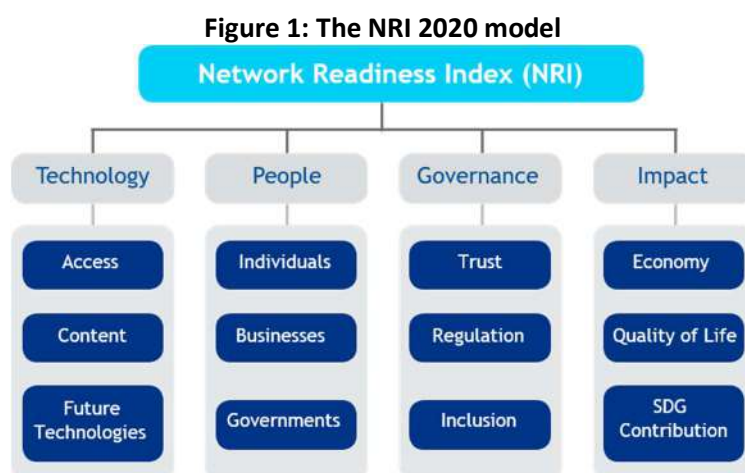| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	97	27.71	**C. Governance pillar**	88	48.05
1st sub-pillar: Access	111	34.36	*1st sub-pillar: Trust*	111	22.50
1.1.1 Mobile tariffs	100	46.44	3.1.1 Secure Internet servers	121	23.78
1.1.2 Handset prices	106	27.73	3.1.2 Cybersecurity	102	32.18
1.1.3 Internet access	104	23.95	3.1.3 Online access to financial account	62	30.80
1.1.4 4G mobile network coverage	98	62.00	3.1.4 Internet shopping	110	3.24
1.1.5 Fixed-broadband subscriptions	97	15.86	*2nd sub-pillar: Regulation*	62	67.54
1.1.6 International Internet bandwidth	125	51.87	3.2.1 Regulatory quality	79	49.04
1.1.7 Internet access in schools	59	12.66	3.2.2 ICT regulatory environment	82	79.93
2nd sub-pillar: Content	116	11.75	3.2.3 Legal framework's adaptability to emerging technologies	73	37.76
1.2.1 GitHub commits	114	0.33	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	109	14.11	3.2.5 Privacy protection by law content	40	70.96
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	89	54.10
1.2.4 Mobile apps development	117	32.07	3.3.1 E-Participation	108	41.98
3rd sub-pillar: Future Technologies	41	37.03	3.3.2 Socioeconomic gap in use of digital payments	62	70.00
1.3.1 Adoption of emerging technologies	73	43.93	3.3.3 Availability of local online content	91	49.61
1.3.2 Investment in emerging technologies	60	41.21	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	89	54.81
1.3.4 Computer software spending	40	25.94	**D. Impact pillar**	102	40.74
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	80	20.85
B. People pillar	104	31.09	4.1.1 Medium and high-tech industry	73	27.47
1st sub-pillar: Individuals	110	29.74	4.1.2 High-tech exports	115	1.77
2.1.1 Internet users	96	44.68	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	108	15.25	4.1.4 Labor productivity per employee	103	6.87
2.1.3 Use of virtual social networks	107	19.59	4.1.5 Prevalence of gig economy	54	47.27
2.1.4 Tertiary enrollment	100	8.79	*2nd sub-pillar: Quality of Life*	99	54.97
2.1.5 Adult literacy rate	100	38.10	4.2.1 Happiness	75	54.95
2.1.6 ICT skills	68	52.01	4.2.2 Freedom to make life choices	88	65.27
2nd sub-pillar: Businesses	115	26.62	4.2.3 Income inequality	78	58.51
2.2.1 Firms with website	97	29.14	4.2.4 Healthy life expectancy at birth	104	41.14
2.2.2 Ease of doing business	103	51.37	*3rd sub-pillar: SDG Contribution*	112	46.40
2.2.3 Professionals	112	9.09	4.3.1 SDG 3: Good Health and Well-Being	117	27.87
2.2.4 Technicians and associate professionals	119	5.51	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	55	64.58	4.3.3 SDG 5: Gender Equality	117	42.70
2.2.6 R&D expenditure by businesses	92	0.03	4.3.4 SDG 7: Affordable and Clean Energy	75	75.36
3rd sub-pillar: Governments	84	36.91	.	.	.
2.3.1 Government online services	105	47.88			
2.3.2 Publication and use of open data	96	8.74			
2.3.3 Government promotion of investment in emerging tech	55	40.95			
2.3.4 R&D expenditure by governments and higher education	33	50.07			

* Confidential data

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Network Readiness Index 2020 Serbia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Serbia

Serbia ranks 52nd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance and Impact.

Figure 2: Serbia global ranking, overall and by pillar
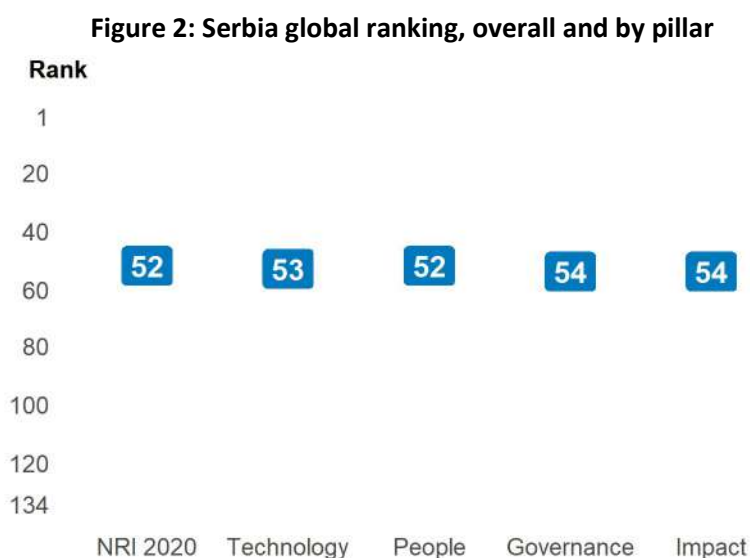
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Serbia relate to Content, Businesses and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, SDG Contribution and Future Technologies sub-pillars.

Table 1: Serbia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Content	42	Inclusion	56
Businesses	48	Trust	57
Economy	48	Regulation	63
Governments	49	Individuals	65
Access	51	SDG Contribution	73
Quality of Life	55	Future Technologies	103

NRI score and income

Figure 3 shows the position of Serbia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Serbia is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
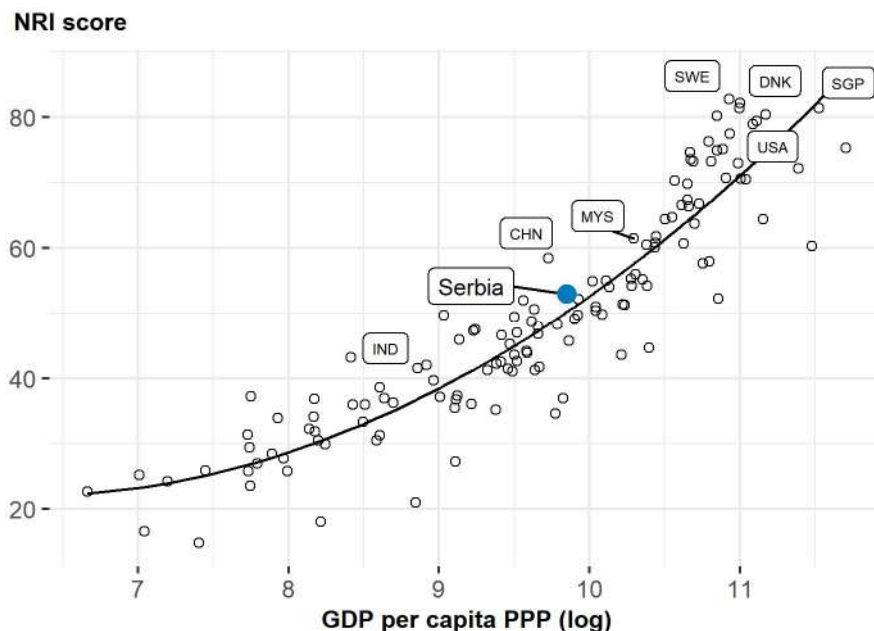
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Serbia belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Europe-is Sweden (SWE).

Performance against its income group and region

Upper-middle-income countries
Serbia is ranked 6th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in ten of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Economy and Quality of Life.

Europe
Serbia is ranked 33rd within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Serbia against its income group and region, overall and by pillar

Table 2: Serbia scores vs. averages of its income group and region, overall and by pillar

Dimension	Serbia	Upper-middle-income countries	Europe
NRI	52.96	47.39	64.21
Technology	44.89	38.42	59.93
People	51.53	46.66	59.89
Governance	59.99	54.31	72.98
Impact	55.41	50.17	64.04

Strongest and weakest indicators

The indicators where Serbia performs particularly well include Firms with website, Adult literacy rate, and ICT regulatory environment (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, Computer software spending, and Investment in emerging technologies.

Table 3: Top-ranked and bottom-ranked indicators of Serbia

Strongest indicators	Rank	Weakest indicators	Rank
Firms with website	19	Active mobile-broadband subscriptions	80
Adult literacy rate	21	Business use of digital tools	82
ICT regulatory environment	21	Online access to financial account	82
Fixed-broadband subscriptions	28	Prevalence of gig economy	82
R&D expenditure by governments and higher education	32	SDG 3: Good Health and Well-Being	88
Privacy protection by law content	33	Use of virtual social networks	91
Wikipedia edits	36	Freedom to make life choices	91
Tertiary enrollment	36	Investment in emerging technologies	93
GitHub commits	37	Computer software spending	106
E-Participation	41	SDG 7: Affordable and Clean Energy	109

NRI 2020 At-A-Glance: Serbia

Network Readiness Index   Rank: 52 (out of 134)   Score: 52.96

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	53	44.89	C. Governance pillar	54	59.99
1st sub-pillar: Access	51	74.08	1st sub-pillar: Trust	57	46.12
2nd sub-pillar: Content	42	41.63	2nd sub-pillar: Regulation	63	66.91
3rd sub-pillar: Future Technologies	103	18.97	3rd sub-pillar: Inclusion	56	66.94
B. People pillar	52	51.53	D. Impact pillar	54	55.41
1st sub-pillar: Individuals	65	55.95	1st sub-pillar: Economy	48	32.72
2nd sub-pillar: Businesses	48	50.79	2nd sub-pillar: Quality of Life	55	68.35
3rd sub-pillar: Governments	49	47.84	3rd sub-pillar: SDG Contribution	73	65.17

The Network Readiness Index in detail

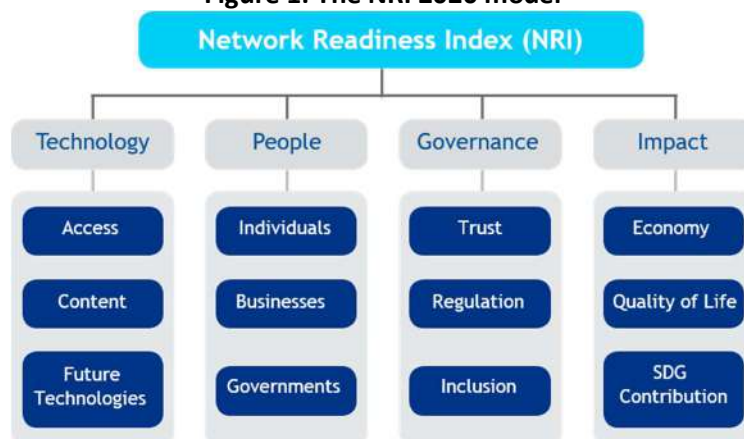| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	53	44.89	**C. Governance pillar**	54	59.99
1st sub-pillar: Access	51	74.08	*1st sub-pillar: Trust*	57	46.12
1.1.1 Mobile tariffs	58	66.86	3.1.1 Secure Internet servers	42	71.78
1.1.2 Handset prices	66	44.90	3.1.2 Cybersecurity	60	68.80
1.1.3 Internet access	58	72.83	3.1.3 Online access to financial account	82	18.74
1.1.4 4G mobile network coverage	49	96.70	3.1.4 Internet shopping	52	25.17
1.1.5 Fixed-broadband subscriptions	28	92.91	*2nd sub-pillar: Regulation*	63	66.91
1.1.6 International Internet bandwidth	49	70.29	3.2.1 Regulatory quality	67	51.58
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	21	94.41
2nd sub-pillar: Content	42	41.63	3.2.3 Legal framework's adaptability to emerging technologies	72	38.25
1.2.1 GitHub commits	37	16.73	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	36	71.04	3.2.5 Privacy protection by law content	33	75.34
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	56	66.94
1.2.4 Mobile apps development	42	73.77	3.3.1 E-Participation	41	81.48
3rd sub-pillar: Future Technologies	103	18.97	3.3.2 Socioeconomic gap in use of digital payments	55	73.24
1.3.1 Adoption of emerging technologies	80	40.36	3.3.3 Availability of local online content	52	66.45
1.3.2 Investment in emerging technologies	93	31.34	3.3.4 Gender gap in Internet use	72	51.52
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	78	62.00
1.3.4 Computer software spending	106	3.19	**D. Impact pillar**	54	55.41
1.3.5 Robot density	53	0.99	*1st sub-pillar: Economy*	48	32.72
B. People pillar	52	51.53	4.1.1 Medium and high-tech industry	57	33.50
1st sub-pillar: Individuals	65	55.95	4.1.2 High-tech exports	NA	NA
2.1.1 Internet users	56	72.89	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	80	25.63	4.1.4 Labor productivity per employee	65	27.67
2.1.3 Use of virtual social networks	91	41.24	4.1.5 Prevalence of gig economy	82	36.99
2.1.4 Tertiary enrollment	36	48.86	*2nd sub-pillar: Quality of Life*	55	68.35
2.1.5 Adult literacy rate	21	98.54	4.2.1 Happiness	41	69.75
2.1.6 ICT skills	74	48.56	4.2.2 Freedom to make life choices	91	64.19
2nd sub-pillar: Businesses	48	50.79	4.2.3 Income inequality	60	69.07
2.2.1 Firms with website	19	80.80	4.2.4 Healthy life expectancy at birth	49	70.37
2.2.2 Ease of doing business	43	80.34	*3rd sub-pillar: SDG Contribution*	73	65.17
2.2.3 Professionals	48	33.09	4.3.1 SDG 3: Good Health and Well-Being	88	60.66
2.2.4 Technicians and associate professionals	42	48.63	4.3.2 SDG 4: Quality Education	45	46.26
2.2.5 Business use of digital tools	82	52.69	4.3.3 SDG 5: Gender Equality	53	77.40
2.2.6 R&D expenditure by businesses	44	9.20	4.3.4 SDG 7: Affordable and Clean Energy	109	63.29
3rd sub-pillar: Governments	49	47.84	.	.	.
2.3.1 Government online services	42	78.79			
2.3.2 Publication and use of open data	65	22.77			
2.3.3 Government promotion of investment in emerging tech	60	38.78			
2.3.4 R&D expenditure by governments and higher education	32	51.00			

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Network Readiness Index 2020 Singapore

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
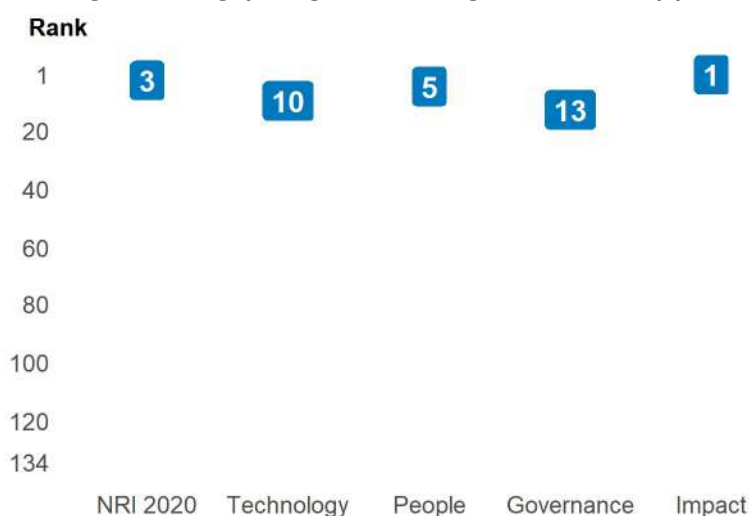
Figure 1: The NRI 2020 model

Global NRI position of Singapore

Singapore ranks 3rd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Singapore global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Singapore relate to Economy, SDG Contribution and Individuals, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Content and Regulation sub-pillars.

Table 1: Singapore rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Economy	1	Future Technologies	5
SDG Contribution	1	Quality of Life	8
Individuals	2	Businesses	11
Inclusion	3	Trust	18
Governments	4	Content	19
Access	5	Regulation	20

NRI score and income

Figure 3 shows the position of Singapore in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Singapore is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
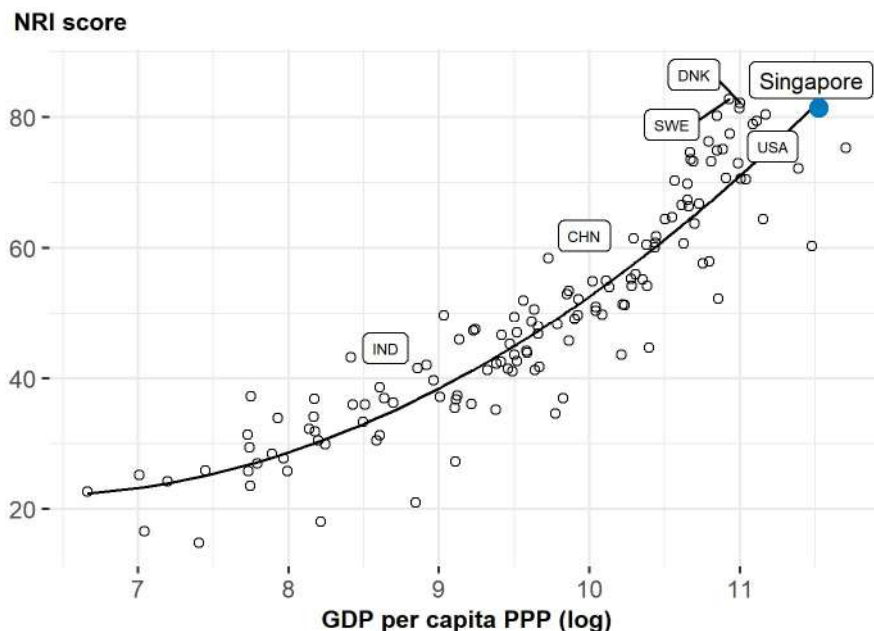
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), CHN = China (40), IND = India (88). USA is ranked 8th. Singapore belongs to the group of high-income countries, where the best performer is Sweden (SWE). Singapore is the top performer of its region, Asia & Pacific.

Performance against its income group and region

High-income countries
Singapore is ranked 3rd in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it has a higher score than the average of high-income countries in all of them.

Asia & Pacific
Singapore is ranked 1st within Asia & Pacific (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of Singapore against its income group and region, overall and by pillar
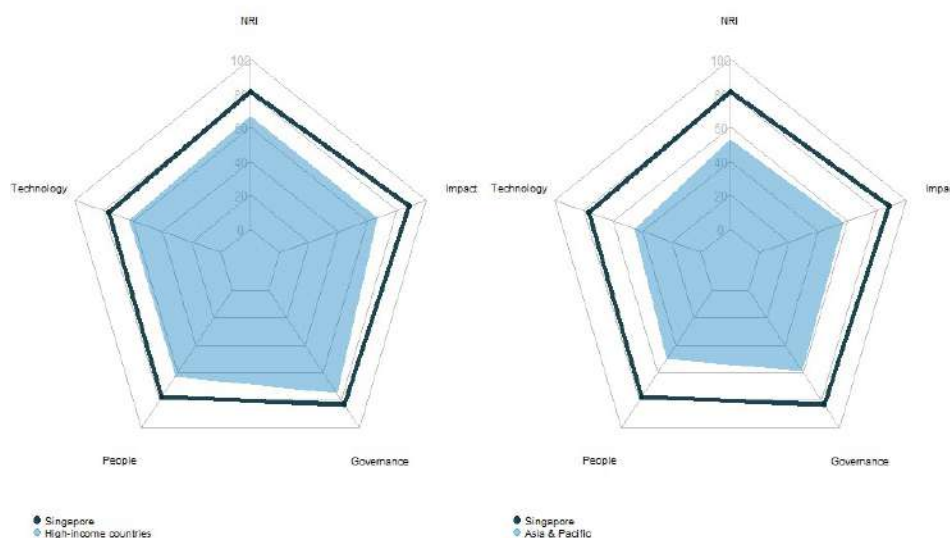
Table 2: Singapore scores vs. averages of its income group and region, overall and by pillar

Dimension	Singapore	High-income countries	Asia & Pacific
NRI	81.39	66.82	52.76
Technology	76.16	62.51	45.33
People	77.86	62.72	49.64
Governance	83.35	75.41	59.20
Impact	88.17	66.63	56.86

Strongest and weakest indicators

The indicators where Singapore performs particularly well include 4G mobile network coverage, Mobile apps development, and Robot density (Table 3). By contrast, the economy's weakest indicators include Privacy protection by law content, Computer software spending, and Adult literacy rate.

Table 3: Top-ranked and bottom-ranked indicators of Singapore

Strongest indicators	Rank	Weakest indicators	Rank
4G mobile network coverage	1	Handset prices	27
Mobile apps development	1	Online access to financial account	27
Robot density	1	Wikipedia edits	29
Government promotion of investment in emerging technologies	1	Internet domain registrations	31
e-commerce legislation	1	Gender gap in Internet use	33
Medium and high-tech industry	1	Happiness	33
Healthy life expectancy at birth	1	SDG 5: Gender Equality	34
Ease of doing business	2	Adult literacy rate	35
Regulatory quality	2	Computer software spending	42
Rural gap in use of digital payments	2	Privacy protection by law content	61

NRI 2020 At-A-Glance: Singapore

Network Readiness Index   Rank: 3 (out of 134)   Score: 81.39

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	10	76.16	C. Governance pillar	13	83.35
1st sub-pillar: Access	5	89.71	1st sub-pillar: Trust	18	77.10
2nd sub-pillar: Content	19	64.36	2nd sub-pillar: Regulation	20	84.33
3rd sub-pillar: Future Technologies	5	74.42	3rd sub-pillar: Inclusion	3	88.63
B. People pillar	5	77.86	D. Impact pillar	1	88.17
1st sub-pillar: Individuals	2	79.38	1st sub-pillar: Economy	1	84.71
2nd sub-pillar: Businesses	11	72.02	2nd sub-pillar: Quality of Life	8	89.38
3rd sub-pillar: Governments	4	82.17	3rd sub-pillar: SDG Contribution	1	90.43

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	10	76.16	**C. Governance pillar**	13	83.35
1st sub-pillar: Access	5	89.71	*1st sub-pillar: Trust*	18	77.10
1.1.1 Mobile tariffs	7	93.63	3.1.1 Secure Internet servers	4	93.48
1.1.2 Handset prices	27	64.61	3.1.2 Cybersecurity	6	96.42
1.1.3 Internet access	6	97.73	3.1.3 Online access to financial account	27	56.92
1.1.4 4G mobile network coverage	1	100.00	3.1.4 Internet shopping	22	61.58
1.1.5 Fixed-broadband subscriptions	15	95.90	*2nd sub-pillar: Regulation*	20	84.33
1.1.6 International Internet bandwidth	3	86.40	3.2.1 Regulatory quality	2	98.36
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	26	93.25
2nd sub-pillar: Content	19	64.36	3.2.3 Legal framework's adaptability to emerging technologies	4	86.76
1.2.1 GitHub commits	17	56.62	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	29	77.66	3.2.5 Privacy protection by law content	61	43.30
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	3	88.63
1.2.4 Mobile apps development	1	100.00	3.3.1 E-Participation	6	97.53
3rd sub-pillar: Future Technologies	5	74.42	3.3.2 Socioeconomic gap in use of digital payments	25	90.74
1.3.1 Adoption of emerging technologies	8	88.54	3.3.3 Availability of local online content	9	91.63
1.3.2 Investment in emerging technologies	13	78.60	3.3.4 Gender gap in Internet use	33	64.36
1.3.3 ICT PCT patent applications	6	79.45	3.3.5 Rural gap in use of digital payments	2	98.86
1.3.4 Computer software spending	42	25.50	**D. Impact pillar**	1	88.17
1.3.5 Robot density	1	100.00	*1st sub-pillar: Economy*	1	84.71
B. People pillar	5	77.86	4.1.1 Medium and high-tech industry	1	100.00
1st sub-pillar: Individuals	2	79.38	4.1.2 High-tech exports	5	98.01
2.1.1 Internet users	22	88.16	4.1.3 PCT patent applications	12	42.87
2.1.2 Active mobile-broadband subscriptions	6	57.60	4.1.4 Labor productivity per employee	3	97.14
2.1.3 Use of virtual social networks	10	79.38	4.1.5 Prevalence of gig economy	9	85.52
2.1.4 Tertiary enrollment	13	61.84	*2nd sub-pillar: Quality of Life*	8	89.38
2.1.5 Adult literacy rate	35	96.61	4.2.1 Happiness	33	72.44
2.1.6 ICT skills	5	92.69	4.2.2 Freedom to make life choices	9	95.71
2nd sub-pillar: Businesses	11	72.02	4.2.3 Income inequality	NA	NA
2.2.1 Firms with website	NA	NA	4.2.4 Healthy life expectancy at birth	1	100.00
2.2.2 Ease of doing business	2	99.00	*3rd sub-pillar: SDG Contribution*	1	90.43
2.2.3 Professionals	21	49.44	4.3.1 SDG 3: Good Health and Well-Being	6	95.08
2.2.4 Technicians and associate professionals	3	94.76	4.3.2 SDG 4: Quality Education	2	91.59
2.2.5 Business use of digital tools	19	83.57	4.3.3 SDG 5: Gender Equality	34	81.37
2.2.6 R&D expenditure by businesses	16	33.34	4.3.4 SDG 7: Affordable and Clean Energy	8	93.14
3rd sub-pillar: Governments	4	82.17	.	.	.
2.3.1 Government online services	5	96.36			
2.3.2 Publication and use of open data	23	52.69			
2.3.3 Government promotion of investment in emerging tech	1	100.00			
2.3.4 R&D expenditure by governments and higher education	9	79.62			

* Confidential data

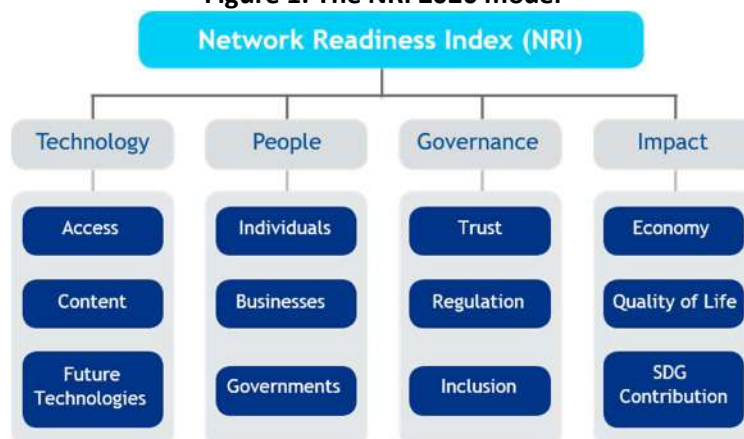**Sources**

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Network Readiness Index 2020 Slovakia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
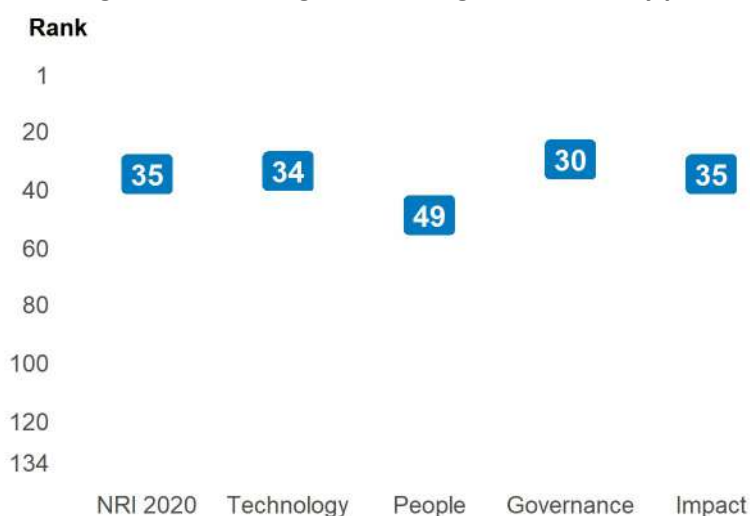
Figure 1: The NRI 2020 model

Global NRI position of Slovakia

Slovakia ranks 35th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Slovakia global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Slovakia relate to Businesses, Quality of Life and SDG Contribution, among others (Table 1). More could be done, though, to improve the economy's performances in the Economy, Governments and Individuals sub-pillars.

Table 1: Slovakia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Businesses	30	Content	37
Quality of Life	30	Future Technologies	37
SDG Contribution	30	Access	38
Trust	31	Economy	40
Regulation	33	Governments	59
Inclusion	36	Individuals	80

NRI score and income

Figure 3 shows the position of Slovakia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Slovakia is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
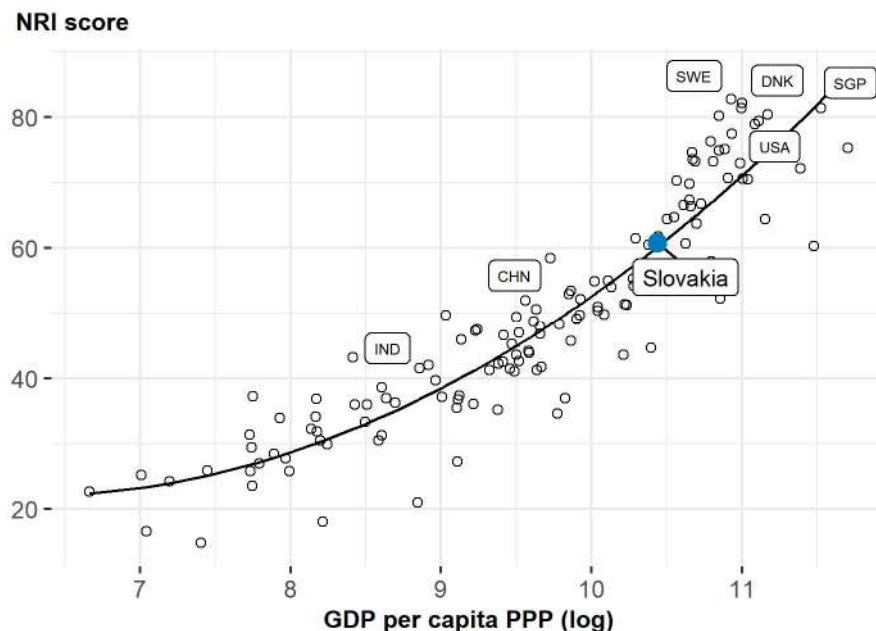
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Slovakia belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Slovakia is ranked 34th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in one of the twelve sub-pillars: SDG Contribution.

Europe
Slovakia is ranked 25th within Europe (Figure 4, right panel). It has a score above the regional average in one of the four pillars: governance. With regard to sub-pillars, it outperforms the average in Europe in four of the twelve sub-pillars: Trust, Inclusion, Quality of Life and SDG Contribution.

Figure 4: Performance of Slovakia against its income group and region, overall and by pillar

Table 2: Slovakia scores vs. averages of its income group and region, overall and by pillar

Dimension	Slovakia	High-income countries	Europe
NRI	60.78	66.82	64.21
Technology	54.14	62.51	59.93
People	52.13	62.72	59.89
Governance	73.69	75.41	72.98
Impact	63.15	66.63	64.04

3

Strongest and weakest indicators

The indicators where Slovakia performs particularly well include e-commerce legislation, Income inequality, and Medium and high-tech industry (Table 3). By contrast, the economy's weakest indicators include Government promotion of investment in emerging technologies, Freedom to make life choices, and Prevalence of gig economy.

Table 3: Top-ranked and bottom-ranked indicators of Slovakia

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	4G mobile network coverage	55
Income inequality	3	Fixed-broadband subscriptions	55
Medium and high-tech industry	12	Government online services	62
Business use of digital tools	14	Tertiary enrollment	65
Privacy protection by law content	14	SDG 7: Affordable and Clean Energy	65
Robot density	16	E-Participation	69
Technicians and associate professionals	19	Use of virtual social networks	74
Internet access in schools	24	Prevalence of gig economy	76
Online access to financial account	24	Freedom to make life choices	85
Gender gap in Internet use	24	Government promotion of investment in emerging technologies	88

NRI 2020 At-A-Glance: Slovakia

Network Readiness Index   Rank: 35 (out of 134)   Score: 60.78

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	34	54.14	C. Governance pillar	30	73.69
1st sub-pillar: Access	38	78.76	1st sub-pillar: Trust	31	67.41
2nd sub-pillar: Content	37	44.97	2nd sub-pillar: Regulation	33	78.77
3rd sub-pillar: Future Technologies	37	38.68	3rd sub-pillar: Inclusion	36	74.88
B. People pillar	49	52.13	D. Impact pillar	35	63.15
1st sub-pillar: Individuals	80	52.24	1st sub-pillar: Economy	40	34.75
2nd sub-pillar: Businesses	30	58.70	2nd sub-pillar: Quality of Life	30	76.97
3rd sub-pillar: Governments	59	45.44	3rd sub-pillar: SDG Contribution	30	77.73

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	34	54.14	**C. Governance pillar**	30	73.69
1st sub-pillar: Access	38	78.76	*1st sub-pillar: Trust*	31	67.41
1.1.1 Mobile tariffs	36	74.43	3.1.1 Secure Internet servers	28	79.06
1.1.2 Handset prices	48	55.08	3.1.2 Cybersecurity	47	78.11
1.1.3 Internet access	43	81.27	3.1.3 Online access to financial account	24	58.94
1.1.4 4G mobile network coverage	55	94.00	3.1.4 Internet shopping	31	53.52
1.1.5 Fixed-broadband subscriptions	55	74.89	*2nd sub-pillar: Regulation*	33	78.77
1.1.6 International Internet bandwidth	37	71.96	3.2.1 Regulatory quality	37	69.27
1.1.7 Internet access in schools	24	99.70	3.2.2 ICT regulatory environment	40	89.39
2nd sub-pillar: Content	37	44.97	3.2.3 Legal framework's adaptability to emerging technologies	50	48.15
1.2.1 GitHub commits	38	16.06	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	42	66.13	3.2.5 Privacy protection by law content	14	87.04
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	36	74.88
1.2.4 Mobile apps development	37	77.00	3.3.1 E-Participation	69	69.14
3rd sub-pillar: Future Technologies	37	38.68	3.3.2 Socioeconomic gap in use of digital payments	39	80.38
1.3.1 Adoption of emerging technologies	40	59.51	3.3.3 Availability of local online content	28	82.95
1.3.2 Investment in emerging technologies	44	49.41	3.3.4 Gender gap in Internet use	24	66.50
1.3.3 ICT PCT patent applications	48	9.12	3.3.5 Rural gap in use of digital payments	29	75.42
1.3.4 Computer software spending	39	26.61	**D. Impact pillar**	35	63.15
1.3.5 Robot density	16	48.76	*1st sub-pillar: Economy*	40	34.75
B. People pillar	49	52.13	4.1.1 Medium and high-tech industry	12	65.65
1st sub-pillar: Individuals	80	52.24	4.1.2 High-tech exports	46	20.14
2.1.1 Internet users	38	80.42	4.1.3 PCT patent applications	38	3.16
2.1.2 Active mobile-broadband subscriptions	52	33.33	4.1.4 Labor productivity per employee	40	46.82
2.1.3 Use of virtual social networks	74	50.52	4.1.5 Prevalence of gig economy	76	37.99
2.1.4 Tertiary enrollment	65	33.74	*2nd sub-pillar: Quality of Life*	30	76.97
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	39	69.79
2.1.6 ICT skills	45	63.21	4.2.2 Freedom to make life choices	85	67.36
2nd sub-pillar: Businesses	30	58.70	4.2.3 Income inequality	3	97.42
2.2.1 Firms with website	31	73.94	4.2.4 Healthy life expectancy at birth	40	73.30
2.2.2 Ease of doing business	44	80.22	*3rd sub-pillar: SDG Contribution*	30	77.73
2.2.3 Professionals	49	32.40	4.3.1 SDG 3: Good Health and Well-Being	34	80.33
2.2.4 Technicians and associate professionals	19	67.86	4.3.2 SDG 4: Quality Education	31	60.48
2.2.5 Business use of digital tools	14	85.56	4.3.3 SDG 5: Gender Equality	27	82.80
2.2.6 R&D expenditure by businesses	39	12.20	4.3.4 SDG 7: Affordable and Clean Energy	65	79.55
3rd sub-pillar: Governments	59	45.44	.	.	.
2.3.1 Government online services	62	70.90			
2.3.2 Publication and use of open data	30	44.90			
2.3.3 Government promotion of investment in emerging tech	88	30.15			
2.3.4 R&D expenditure by governments and higher education	50	35.81			

* Confidential data

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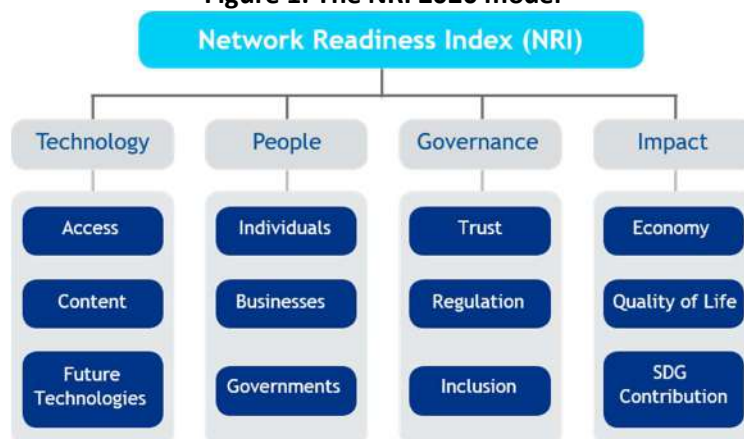
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Network Readiness Index 2020 Slovenia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
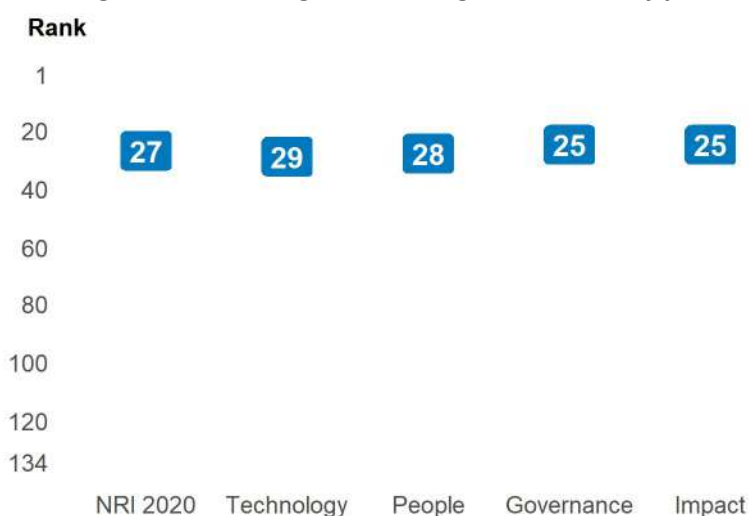
Figure 1: The NRI 2020 model

Global NRI position of Slovenia

Slovenia ranks 27th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance and Impact. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Slovenia global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Slovenia relate to Quality of Life, SDG Contribution and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, Future Technologies and Economy sub-pillars.

Table 1: Slovenia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	9	Trust	28
SDG Contribution	18	Governments	30
Regulation	21	Inclusion	31
Businesses	23	Individuals	34
Access	24	Future Technologies	35
Content	26	Economy	43

NRI score and income

Figure 3 shows the position of Slovenia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Slovenia is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
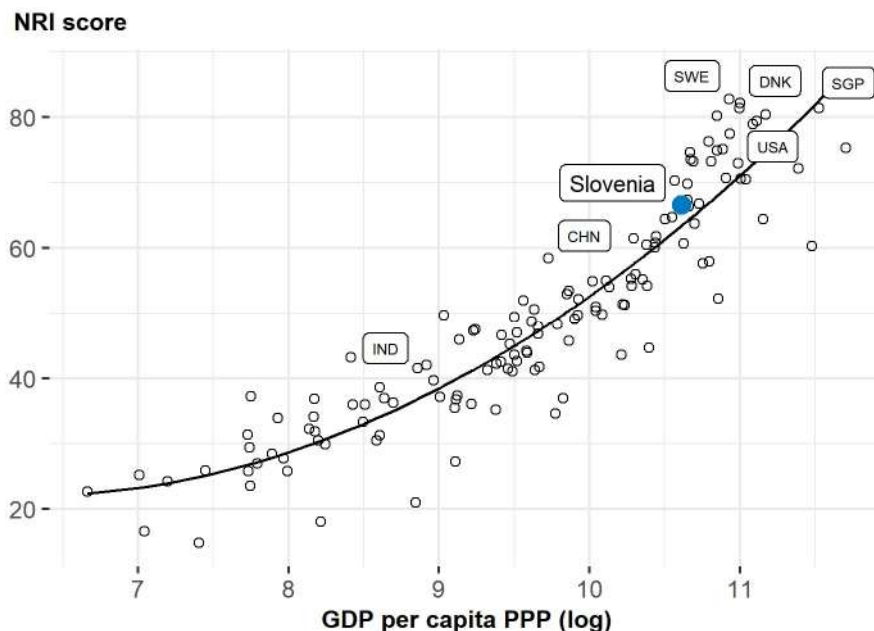
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Slovenia belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Slovenia is ranked 27th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: governance and impact. At the sub-pillar level, it outperforms high-income countries in five of the twelve sub-pillars: Access, Businesses, Regulation, Quality of Life and SDG Contribution.

Europe
Slovenia is ranked 19th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in nine of the twelve sub-pillars: Access, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Quality of Life and SDG Contribution.

Figure 4: Performance of Slovenia against its income group and region, overall and by pillar
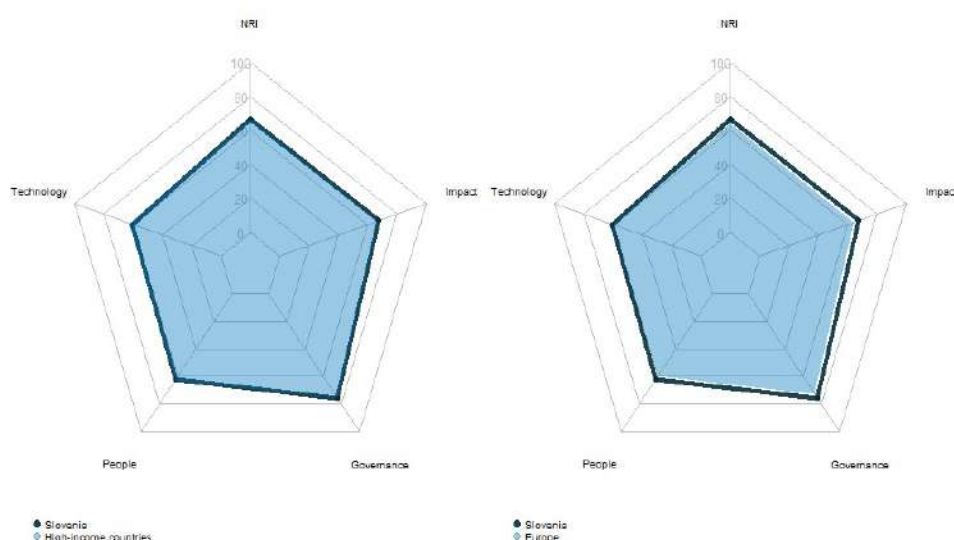
Table 2: Slovenia scores vs. averages of its income group and region, overall and by pillar

Dimension	Slovenia	High-income countries	Europe
NRI	66.58	66.82	64.21
Technology	60.31	62.51	59.93
People	62.53	62.72	59.89
Governance	75.81	75.41	72.98
Impact	67.67	66.63	64.04

Strongest and weakest indicators

The indicators where Slovenia performs particularly well include Internet access in schools, e-commerce legislation, and Income inequality (Table 3). By contrast, the economy's weakest indicators include Computer software spending, Prevalence of gig economy, and SDG 7: Affordable and Clean Energy.

Table 3: Top-ranked and bottom-ranked indicators of Slovenia

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	Government promotion of investment in emerging technologies	48
e-commerce legislation	1	Availability of local online content	48
Income inequality	1	Cybersecurity	50
Privacy protection by law content	3	Active mobile-broadband subscriptions	61
Freedom to make life choices	7	Gender gap in Internet use	64
Adult literacy rate	11	Use of virtual social networks	68
SDG 4: Quality Education	12	High-tech exports	69
Robot density	13	SDG 7: Affordable and Clean Energy	70
Secure Internet servers	13	Prevalence of gig economy	72
Firms with website	14	Computer software spending	90

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NRI 2020 At-A-Glance: Slovenia

Network Readiness Index   Rank: 27 (out of 134)   Score: 66.58

Pillar/sub-pillar	Rank	Score		Pillar/sub-pillar	Rank	Score
A. Technology pillar	29	60.31		C. Governance pillar	25	75.81
1st sub-pillar: Access	24	83.66		1st sub-pillar: Trust	28	67.70
2nd sub-pillar: Content	26	57.10		2nd sub-pillar: Regulation	21	83.57
3rd sub-pillar: Future Technologies	35	40.18		3rd sub-pillar: Inclusion	31	76.16
B. People pillar	28	62.53		D. Impact pillar	25	67.67
1st sub-pillar: Individuals	34	64.89		1st sub-pillar: Economy	43	33.47
2nd sub-pillar: Businesses	23	65.09		2nd sub-pillar: Quality of Life	9	88.97
3rd sub-pillar: Governments	30	57.63		3rd sub-pillar: SDG Contribution	18	80.57

The Network Readiness Index in detail

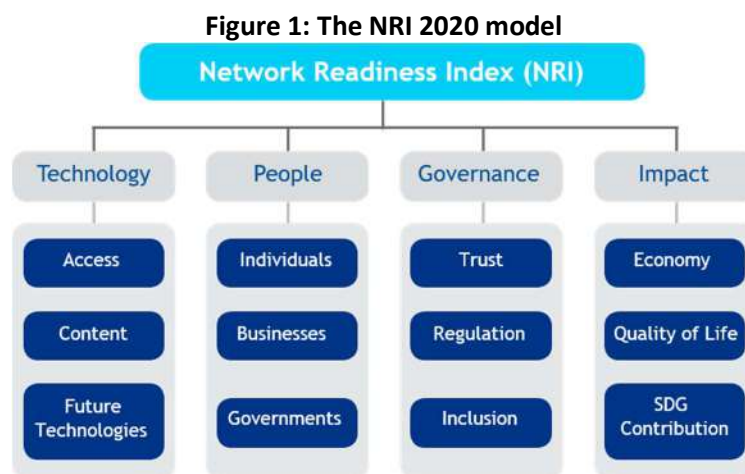| Indicator	Rank	Score		Indicator	Rank	Score
A. Technology pillar	29	60.31		**C. Governance pillar**	25	75.81
1st sub-pillar: Access	24	83.66		*1st sub-pillar: Trust*	28	67.70
1.1.1 Mobile tariffs	29	78.51		3.1.1 Secure Internet servers	13	85.05
1.1.2 Handset prices	38	58.52		3.1.2 Cybersecurity	50	75.08
1.1.3 Internet access	29	86.65		3.1.3 Online access to financial account	30	52.32
1.1.4 4G mobile network coverage	19	99.50		3.1.4 Internet shopping	27	58.35
1.1.5 Fixed-broadband subscriptions	37	87.57		*2nd sub-pillar: Regulation*	21	83.57
1.1.6 International Internet bandwidth	18	74.89		3.2.1 Regulatory quality	38	66.72
1.1.7 Internet access in schools	1	100.00		3.2.2 ICT regulatory environment	16	95.56
2nd sub-pillar: Content	26	57.10		3.2.3 Legal framework's adaptability to emerging technologies	34	58.57
1.2.1 GitHub commits	23	33.12		3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	19	81.99		3.2.5 Privacy protection by law content	3	97.02
1.2.3 Internet domain registrations	*	*		*3rd sub-pillar: Inclusion*	31	76.16
1.2.4 Mobile apps development	19	85.63		3.3.1 E-Participation	29	85.18
3rd sub-pillar: Future Technologies	35	40.18		3.3.2 Socioeconomic gap in use of digital payments	17	95.23
1.3.1 Adoption of emerging technologies	28	69.85		3.3.3 Availability of local online content	48	68.28
1.3.2 Investment in emerging technologies	41	51.61		3.3.4 Gender gap in Internet use	64	57.57
1.3.3 ICT PCT patent applications	37	20.41		3.3.5 Rural gap in use of digital payments	36	74.54
1.3.4 Computer software spending	90	7.50		**D. Impact pillar**	25	67.67
1.3.5 Robot density	13	51.53		*1st sub-pillar: Economy*	43	33.47
B. People pillar	28	62.53		4.1.1 Medium and high-tech industry	36	47.78
1st sub-pillar: Individuals	34	64.89		4.1.2 High-tech exports	69	12.91
2.1.1 Internet users	41	79.48		4.1.3 PCT patent applications	23	17.21
2.1.2 Active mobile-broadband subscriptions	61	29.96		4.1.4 Labor productivity per employee	34	49.99
2.1.3 Use of virtual social networks	68	52.58		4.1.5 Prevalence of gig economy	72	39.47
2.1.4 Tertiary enrollment	21	57.27		*2nd sub-pillar: Quality of Life*	9	88.97
2.1.5 Adult literacy rate	11	99.65		4.2.1 Happiness	25	78.08
2.1.6 ICT skills	36	70.42		4.2.2 Freedom to make life choices	7	96.96
2nd sub-pillar: Businesses	23	65.09		4.2.3 Income inequality	1	100.00
2.2.1 Firms with website	14	85.05		4.2.4 Healthy life expectancy at birth	29	80.85
2.2.2 Ease of doing business	36	81.87		*3rd sub-pillar: SDG Contribution*	18	80.57
2.2.3 Professionals	15	56.41		4.3.1 SDG 3: Good Health and Well-Being	25	83.61
2.2.4 Technicians and associate professionals	35	55.05		4.3.2 SDG 4: Quality Education	12	69.02
2.2.5 Business use of digital tools	34	76.57		4.3.3 SDG 5: Gender Equality	19	86.24
2.2.6 R&D expenditure by businesses	14	35.56		4.3.4 SDG 7: Affordable and Clean Energy	70	77.75
3rd sub-pillar: Governments	30	57.63		.	.	.
2.3.1 Government online services	24	84.84				
2.3.2 Publication and use of open data	NA	NA				
2.3.3 Government promotion of investment in emerging tech	48	46.03				
2.3.4 R&D expenditure by governments and higher education	44	42.00				

* Confidential data

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# Network Readiness Index 2020 South Africa

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of South Africa

South Africa ranks 76th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: South Africa global ranking, overall and by pillar
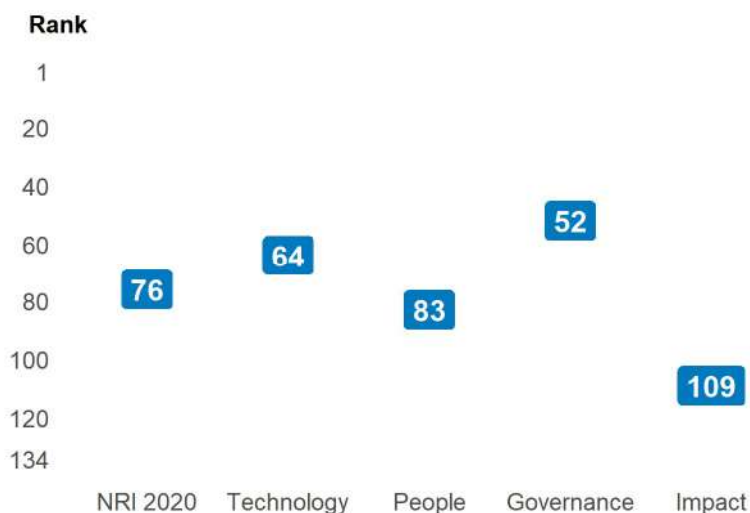
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of South Africa relate to Future Technologies, Inclusion and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Individuals and Quality of Life sub-pillars.

Table 1: South Africa rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	48	Content	71
Inclusion	52	Economy	78
Trust	58	Businesses	81
Regulation	59	SDG Contribution	86
Governments	62	Individuals	97
Access	69	Quality of Life	127

NRI score and income

Figure 3 shows the position of South Africa in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, South Africa is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
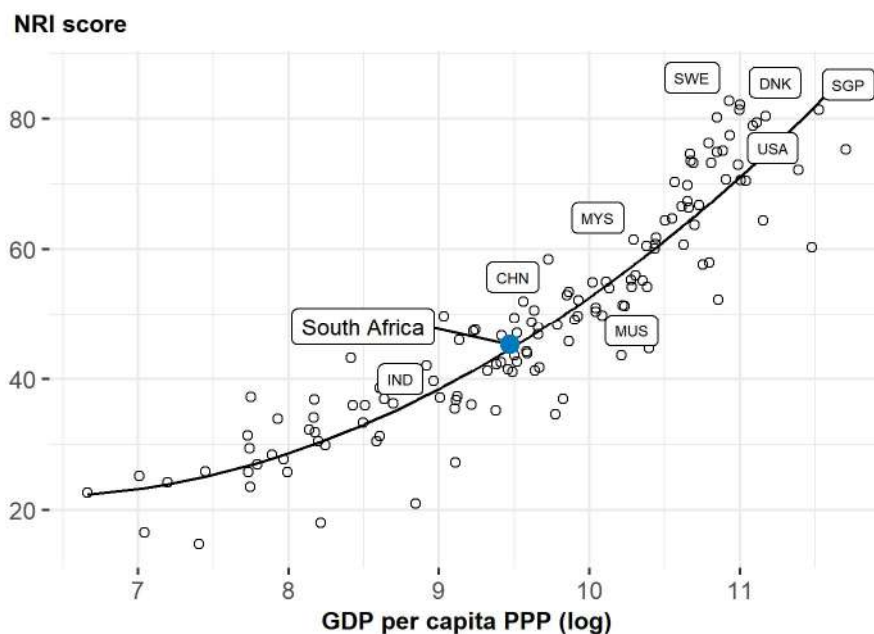
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. South Africa belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Upper-middle-income countries
South Africa is ranked 24th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in two of the four pillars: technology and governance. At the sub-pillar level, it outperforms upper-middle-income countries in six of the twelve sub-pillars: Access, Future Technologies, Governments, Trust, Regulation and Inclusion.

Africa
South Africa is ranked 2nd within Africa (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Economy and SDG Contribution.

Figure 4: Performance of South Africa against its income group and region, overall and by pillar

Table 2: South Africa scores vs. averages of its income group and region, overall and by pillar

Dimension	South Africa	Upper-middle-income countries	Africa
NRI	45.26	47.39	30.62
Technology	40.23	38.42	21.47
People	41.16	46.66	26.75
Governance	60.88	54.31	39.31
Impact	38.80	50.17	34.94

Strongest and weakest indicators

The indicators where South Africa performs particularly well include e-commerce legislation, Adoption of emerging technologies, and Rural gap in use of digital payments (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, ICT skills, and Income inequality.

Table 3: Top-ranked and bottom-ranked indicators of South Africa

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Firms with website	94
Adoption of emerging technologies	33	Freedom to make life choices	95
Rural gap in use of digital payments	35	Use of virtual social networks	98
Robot density	36	ICT regulatory environment	99
Secure Internet servers	36	Professionals	101
Investment in emerging technologies	40	International Internet bandwidth	113
SDG 5: Gender Equality	40	Healthy life expectancy at birth	115
Legal framework's adaptability to emerging technologies	41	ICT skills	121
ICT PCT patent applications	44	Income inequality	121
R&D expenditure by businesses	45	SDG 7: Affordable and Clean Energy	122

NRI 2020 At-A-Glance: South Africa

Network Readiness Index   Rank: 76 (out of 134)   Score: 45.26

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	64	40.23	C. Governance pillar	52	60.88
1st sub-pillar: Access	69	61.79	1st sub-pillar: Trust	58	46.08
2nd sub-pillar: Content	71	27.20	2nd sub-pillar: Regulation	59	68.11
3rd sub-pillar: Future Technologies	48	31.68	3rd sub-pillar: Inclusion	52	68.44
B. People pillar	83	41.16	D. Impact pillar	109	38.80
1st sub-pillar: Individuals	97	40.69	1st sub-pillar: Economy	78	21.27
2nd sub-pillar: Businesses	81	37.48	2nd sub-pillar: Quality of Life	127	34.66
3rd sub-pillar: Governments	62	45.30	3rd sub-pillar: SDG Contribution	86	60.46

The Network Readiness Index in detail

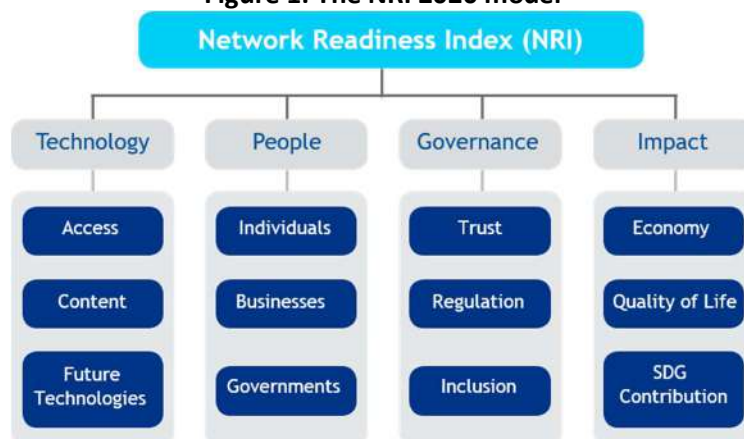| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	64	40.23	**C. Governance pillar**	52	60.88
1st sub-pillar: Access	69	61.79	*1st sub-pillar: Trust*	58	46.08
1.1.1 Mobile tariffs	63	64.43	3.1.1 Secure Internet servers	36	76.38
1.1.2 Handset prices	47	55.16	3.1.2 Cybersecurity	57	69.77
1.1.3 Internet access	73	61.73	3.1.3 Online access to financial account	67	28.13
1.1.4 4G mobile network coverage	65	90.32	3.1.4 Internet shopping	74	10.05
1.1.5 Fixed-broadband subscriptions	80	41.30	*2nd sub-pillar: Regulation*	59	68.11
1.1.6 International Internet bandwidth	113	57.78	3.2.1 Regulatory quality	60	55.20
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	99	69.88
2nd sub-pillar: Content	71	27.20	3.2.3 Legal framework's adaptability to emerging technologies	41	51.13
1.2.1 GitHub commits	58	4.77	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	83	33.93	3.2.5 Privacy protection by law content	46	64.33
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	52	68.44
1.2.4 Mobile apps development	67	63.11	3.3.1 E-Participation	56	74.07
3rd sub-pillar: Future Technologies	48	31.68	3.3.2 Socioeconomic gap in use of digital payments	52	74.94
1.3.1 Adoption of emerging technologies	33	64.29	3.3.3 Availability of local online content	90	49.81
1.3.2 Investment in emerging technologies	40	51.83	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	44	11.30	3.3.5 Rural gap in use of digital payments	35	74.94
1.3.4 Computer software spending	48	23.65	**D. Impact pillar**	109	38.80
1.3.5 Robot density	36	7.36	*1st sub-pillar: Economy*	78	21.27
B. People pillar	83	41.16	4.1.1 Medium and high-tech industry	64	31.04
1st sub-pillar: Individuals	97	40.69	4.1.2 High-tech exports	76	10.08
2.1.1 Internet users	87	55.17	4.1.3 PCT patent applications	47	1.30
2.1.2 Active mobile-broadband subscriptions	66	29.27	4.1.4 Labor productivity per employee	62	28.34
2.1.3 Use of virtual social networks	98	36.08	4.1.5 Prevalence of gig economy	85	35.60
2.1.4 Tertiary enrollment	91	15.87	*2nd sub-pillar: Quality of Life*	127	34.66
2.1.5 Adult literacy rate	70	83.35	4.2.1 Happiness	93	46.03
2.1.6 ICT skills	121	24.43	4.2.2 Freedom to make life choices	95	61.79
2nd sub-pillar: Businesses	81	37.48	4.2.3 Income inequality	121	0.00
2.2.1 Firms with website	94	30.77	4.2.4 Healthy life expectancy at birth	115	30.83
2.2.2 Ease of doing business	79	65.07	*3rd sub-pillar: SDG Contribution*	86	60.46
2.2.3 Professionals	101	12.95	4.3.1 SDG 3: Good Health and Well-Being	73	67.21
2.2.4 Technicians and associate professionals	57	36.99	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	49	70.45	4.3.3 SDG 5: Gender Equality	40	80.02
2.2.6 R&D expenditure by businesses	45	8.66	4.3.4 SDG 7: Affordable and Clean Energy	122	49.28
3rd sub-pillar: Governments	62	45.30	.	.	.
2.3.1 Government online services	54	73.94			
2.3.2 Publication and use of open data	46	34.43			
2.3.3 Government promotion of investment in emerging tech	83	31.77			
2.3.4 R&D expenditure by governments and higher education	45	41.05			

* Confidential data

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Network Readiness Index 2020 South Korea

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
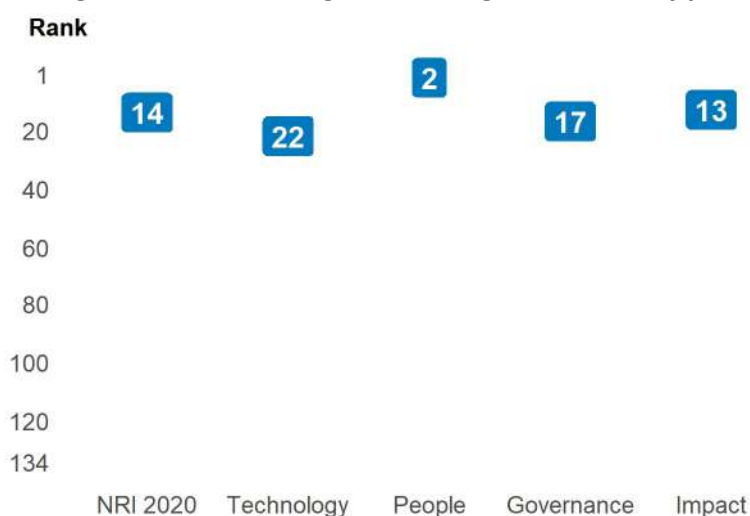
Figure 1: The NRI 2020 model

Global NRI position of South Korea

South Korea ranks 14th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: South Korea global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of South Korea relate to Governments, Economy and Businesses, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Content and Quality of Life sub-pillars.

Table 1: South Korea rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	2	Inclusion	18
Economy	2	Access	20
Businesses	3	Regulation	32
Individuals	5	SDG Contribution	37
Future Technologies	10	Content	44
Trust	11	Quality of Life	45

NRI score and income

Figure 3 shows the position of South Korea in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, South Korea is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
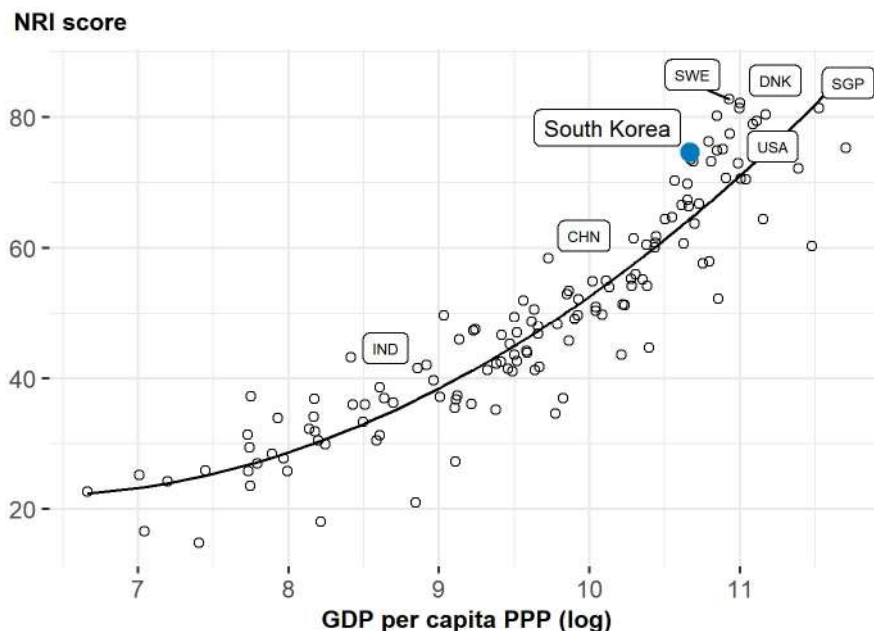
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. South Korea belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

High-income countries
South Korea is ranked 14th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in eight of the twelve sub-pillars: Access, Future Technologies, Individuals, Businesses, Governments, Trust, Inclusion and Economy.

Asia & Pacific
South Korea is ranked 3rd within Asia & Pacific (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of South Korea against its income group and region, overall and by pillar

Table 2: South Korea scores vs. averages of its income group and region, overall and by pillar

Dimension	South Korea	High-income countries	Asia & Pacific
NRI	74.60	66.82	52.76
Technology	65.02	62.51	45.33
People	79.60	62.72	49.64
Governance	81.44	75.41	59.20
Impact	72.33	66.63	56.86

Strongest and weakest indicators

The indicators where South Korea performs particularly well include Fixed-broadband subscriptions, Internet access in schools, and Robot density (Table 3). By contrast, the economy's weakest indicators include Freedom to make life choices, SDG 7: Affordable and Clean Energy, and SDG 5: Gender Equality.

Table 3: Top-ranked and bottom-ranked indicators of South Korea

Strongest indicators	Rank	Weakest indicators	Rank
Fixed-broadband subscriptions	1	Wikipedia edits	53
Internet access in schools	1	Computer software spending	62
Robot density	1	Happiness	63
Government online services	1	International Internet bandwidth	65
e-commerce legislation	1	Rural gap in use of digital payments	67
E-Participation	1	Mobile tariffs	71
Internet access	2	ICT regulatory environment	74
R&D expenditure by businesses	2	SDG 5: Gender Equality	97
ICT PCT patent applications	3	SDG 7: Affordable and Clean Energy	108
Tertiary enrollment	3	Freedom to make life choices	109

NRI 2020 At-A-Glance: South Korea

Network Readiness Index   Rank: 14 (out of 134)   Score: 74.60

Pillar/sub-pillar	Rank	Score
A. Technology pillar	22	65.02
1st sub-pillar: Access	20	84.49
2nd sub-pillar: Content	44	40.90
3rd sub-pillar: Future Technologies	10	69.69
B. People pillar	2	79.60
1st sub-pillar: Individuals	5	74.47
2nd sub-pillar: Businesses	3	79.42
3rd sub-pillar: Governments	2	84.91

Pillar/sub-pillar	Rank	Score
C. Governance pillar	17	81.44
1st sub-pillar: Trust	11	84.12
2nd sub-pillar: Regulation	32	79.58
3rd sub-pillar: Inclusion	18	80.62
D. Impact pillar	13	72.33
1st sub-pillar: Economy	2	70.46
2nd sub-pillar: Quality of Life	45	72.43
3rd sub-pillar: SDG Contribution	37	74.10

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	22	65.02
1st sub-pillar: Access	20	84.49
1.1.1 Mobile tariffs	71	60.65
1.1.2 Handset prices	32	63.16
1.1.3 Internet access	2	99.48
1.1.4 4G mobile network coverage	9	99.90
1.1.5 Fixed-broadband subscriptions	1	100.00
1.1.6 International Internet bandwidth	65	68.22
1.1.7 Internet access in schools	1	100.00
2nd sub-pillar: Content	44	40.90
1.2.1 GitHub commits	43	13.50
1.2.2 Wikipedia edits	53	56.58
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	26	83.40
3rd sub-pillar: Future Technologies	10	69.69
1.3.1 Adoption of emerging technologies	20	75.40
1.3.2 Investment in emerging technologies	34	59.48
1.3.3 ICT PCT patent applications	3	92.85
1.3.4 Computer software spending	62	20.70
1.3.5 Robot density	1	100.00
B. People pillar	2	79.60
1st sub-pillar: Individuals	5	74.47
2.1.1 Internet users	9	96.13
2.1.2 Active mobile-broadband subscriptions	20	44.56
2.1.3 Use of virtual social networks	5	87.63
2.1.4 Tertiary enrollment	3	68.88
2.1.5 Adult literacy rate	NA	NA
2.1.6 ICT skills	24	75.16
2nd sub-pillar: Businesses	3	79.42
2.2.1 Firms with website	47	64.94
2.2.2 Ease of doing business	5	95.11
2.2.3 Professionals	22	49.43
2.2.4 Technicians and associate professionals	11	75.43
2.2.5 Business use of digital tools	3	99.20
2.2.6 R&D expenditure by businesses	2	92.41
3rd sub-pillar: Governments	2	84.91
2.3.1 Government online services	1	100.00
2.3.2 Publication and use of open data	5	81.16
2.3.3 Government promotion of investment in emerging tech	9	77.75
2.3.4 R&D expenditure by governments and higher education	8	80.73

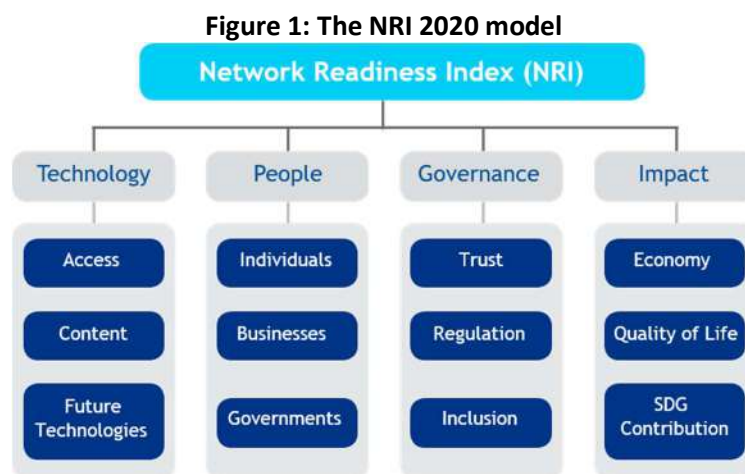| Indicator	Rank	Score
C. Governance pillar	17	81.44
1st sub-pillar: Trust	11	84.12
3.1.1 Secure Internet servers	48	67.20
3.1.2 Cybersecurity	17	93.72
3.1.3 Online access to financial account	9	82.64
3.1.4 Internet shopping	5	92.94
2nd sub-pillar: Regulation	32	79.58
3.2.1 Regulatory quality	30	75.53
3.2.2 ICT regulatory environment	74	81.86
3.2.3 Legal framework's adaptability to emerging technologies	20	67.46
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	39	73.04
3rd sub-pillar: Inclusion	18	80.62
3.3.1 E-Participation	1	100.00
3.3.2 Socioeconomic gap in use of digital payments	21	93.01
3.3.3 Availability of local online content	31	81.00
3.3.4 Gender gap in Internet use	39	62.42
3.3.5 Rural gap in use of digital payments	67	66.67
D. Impact pillar	13	72.33
1st sub-pillar: Economy	2	70.46
4.1.1 Medium and high-tech industry	3	81.42
4.1.2 High-tech exports	8	61.33
4.1.3 PCT patent applications	4	85.11
4.1.4 Labor productivity per employee	30	52.66
4.1.5 Prevalence of gig economy	19	71.77
2nd sub-pillar: Quality of Life	45	72.43
4.2.1 Happiness	63	63.09
4.2.2 Freedom to make life choices	109	56.30
4.2.3 Income inequality	25	80.93
4.2.4 Healthy life expectancy at birth	9	89.40
3rd sub-pillar: SDG Contribution	37	74.10
4.3.1 SDG 3: Good Health and Well-Being	6	95.08
4.3.2 SDG 4: Quality Education	5	75.42
4.3.3 SDG 5: Gender Equality	97	62.95
4.3.4 SDG 7: Affordable and Clean Energy	108	63.37
.	.	.

* Confidential data

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Network Readiness Index 2020 Spain

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Spain

Spain ranks 25th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People and Impact.

Figure 2: Spain global ranking, overall and by pillar
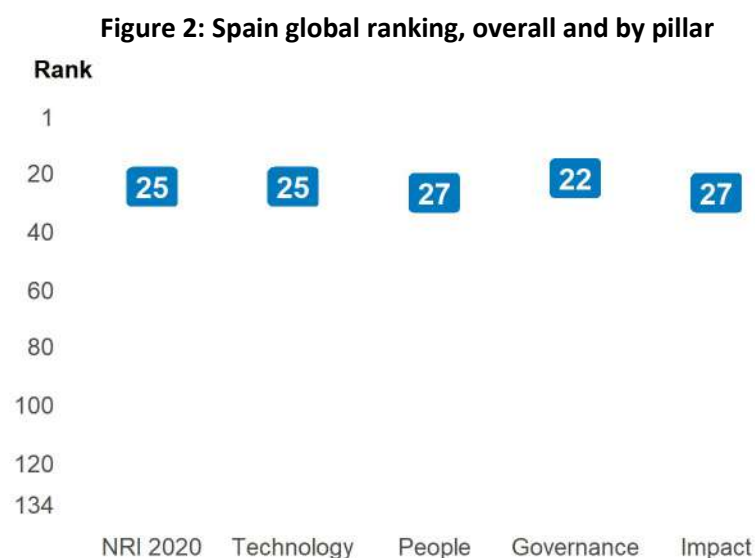
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Spain relate to SDG Contribution, Inclusion and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Quality of Life and Economy sub-pillars.

Table 1: Spain rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	11	Regulation	26
Inclusion	16	Individuals	27
Future Technologies	20	Content	30
Governments	21	Businesses	31
Access	23	Quality of Life	31
Trust	25	Economy	34

NRI score and income

Figure 3 shows the position of Spain in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Spain is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
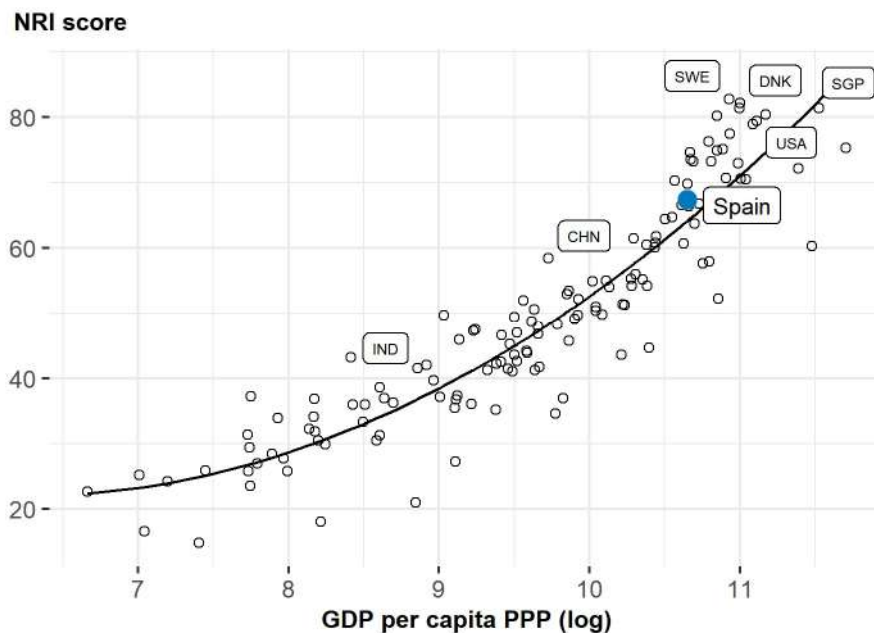
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Spain belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

2

Performance against its income group and region

High-income countries
Spain is ranked 25th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, people and governance. At the sub-pillar level, it outperforms high-income countries in eight of the twelve sub-pillars: Access, Future Technologies, Individuals, Governments, Trust, Regulation, Inclusion and SDG Contribution.

Europe
Spain is ranked 17th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in nine of the twelve sub-pillars: Access, Future Technologies, Individuals, Governments, Trust, Regulation, Inclusion, Quality of Life and SDG Contribution.

Figure 4: Performance of Spain against its income group and region, overall and by pillar

Table 2: Spain scores vs. averages of its income group and region, overall and by pillar

Dimension	Spain	High-income countries	Europe
NRI	67.31	66.82	64.21
Technology	62.96	62.51	59.93
People	62.82	62.72	59.89
Governance	77.76	75.41	72.98
Impact	65.68	66.63	64.04

Strongest and weakest indicators

The indicators where Spain performs particularly well include Internet access in schools, e-commerce legislation, and Healthy life expectancy at birth (Table 3). By contrast, the economy's weakest indicators include International Internet bandwidth, Freedom to make life choices, and High-tech exports.

Table 3: Top-ranked and bottom-ranked indicators of Spain

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	SDG 5: Gender Equality	47
e-commerce legislation	1	Online access to financial account	50
Healthy life expectancy at birth	3	Income inequality	50
Computer software spending	5	ICT regulatory environment	51
Tertiary enrollment	5	Investment in emerging technologies	56
Cybersecurity	7	ICT skills	58
SDG 11: Sustainable Cities and Communities	7	Government promotion of investment in emerging technologies	62
Socioeconomic gap in use of digital payments	9	High-tech exports	65
Publication and use of open data	12	Freedom to make life choices	80
SDG 3: Good Health and Well-Being	13	International Internet bandwidth	86

NRI 2020 At-A-Glance: Spain

Network Readiness Index   Rank: 25 (out of 134)   Score: 67.31

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	25	62.96	C. Governance pillar	22	77.76
1st sub-pillar: Access	23	83.99	1st sub-pillar: Trust	25	70.01
2nd sub-pillar: Content	30	54.08	2nd sub-pillar: Regulation	26	81.12
3rd sub-pillar: Future Technologies	20	50.82	3rd sub-pillar: Inclusion	16	82.14
B. People pillar	27	62.82	D. Impact pillar	27	65.68
1st sub-pillar: Individuals	27	67.52	1st sub-pillar: Economy	34	38.12
2nd sub-pillar: Businesses	31	58.65	2nd sub-pillar: Quality of Life	31	76.87
3rd sub-pillar: Governments	21	62.30	3rd sub-pillar: SDG Contribution	11	82.06

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	25	62.96	**C. Governance pillar**	22	77.76
1st sub-pillar: Access	23	83.99	*1st sub-pillar: Trust*	25	70.01
1.1.1 Mobile tariffs	28	79.58	3.1.1 Secure Internet servers	34	78.06
1.1.2 Handset prices	31	64.23	3.1.2 Cybersecurity	7	96.21
1.1.3 Internet access	30	86.36	3.1.3 Online access to financial account	50	36.31
1.1.4 4G mobile network coverage	43	97.80	3.1.4 Internet shopping	18	69.47
1.1.5 Fixed-broadband subscriptions	14	96.04	*2nd sub-pillar: Regulation*	26	81.12
1.1.6 International Internet bandwidth	86	63.88	3.2.1 Regulatory quality	33	72.23
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	51	86.88
2nd sub-pillar: Content	30	54.08	3.2.3 Legal framework's adaptability to emerging technologies	29	62.08
1.2.1 GitHub commits	30	28.23	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	25	79.36	3.2.5 Privacy protection by law content	17	84.39
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	16	82.14
1.2.4 Mobile apps development	25	83.71	3.3.1 E-Participation	36	83.95
3rd sub-pillar: Future Technologies	20	50.82	3.3.2 Socioeconomic gap in use of digital payments	9	97.21
1.3.1 Adoption of emerging technologies	29	68.80	3.3.3 Availability of local online content	21	85.49
1.3.2 Investment in emerging technologies	56	43.01	3.3.4 Gender gap in Internet use	21	66.71
1.3.3 ICT PCT patent applications	29	31.42	3.3.5 Rural gap in use of digital payments	15	77.36
1.3.4 Computer software spending	5	61.13	**D. Impact pillar**	27	65.68
1.3.5 Robot density	15	49.72	*1st sub-pillar: Economy*	34	38.12
B. People pillar	27	62.82	4.1.1 Medium and high-tech industry	30	50.84
1st sub-pillar: Individuals	27	67.52	4.1.2 High-tech exports	65	13.63
2.1.1 Internet users	26	86.03	4.1.3 PCT patent applications	28	9.98
2.1.2 Active mobile-broadband subscriptions	30	38.41	4.1.4 Labor productivity per employee	23	62.32
2.1.3 Use of virtual social networks	47	61.86	4.1.5 Prevalence of gig economy	47	53.85
2.1.4 Tertiary enrollment	5	64.83	*2nd sub-pillar: Quality of Life*	31	76.87
2.1.5 Adult literacy rate	25	98.02	4.2.1 Happiness	28	73.99
2.1.6 ICT skills	58	56.00	4.2.2 Freedom to make life choices	80	68.52
2nd sub-pillar: Businesses	31	58.65	4.2.3 Income inequality	50	72.94
2.2.1 Firms with website	27	77.05	4.2.4 Healthy life expectancy at birth	3	92.01
2.2.2 Ease of doing business	29	84.38	*3rd sub-pillar: SDG Contribution*	11	82.06
2.2.3 Professionals	30	44.82	4.3.1 SDG 3: Good Health and Well-Being	13	90.16
2.2.4 Technicians and associate professionals	43	48.54	4.3.2 SDG 4: Quality Education	33	58.69
2.2.5 Business use of digital tools	28	80.21	4.3.3 SDG 5: Gender Equality	47	78.85
2.2.6 R&D expenditure by businesses	33	16.90	4.3.4 SDG 7: Affordable and Clean Energy	29	87.57
3rd sub-pillar: Governments	21	62.30	.	.	.
2.3.1 Government online services	17	88.48			
2.3.2 Publication and use of open data	12	73.36			
2.3.3 Government promotion of investment in emerging tech	62	38.29			
2.3.4 R&D expenditure by governments and higher education	34	49.05			

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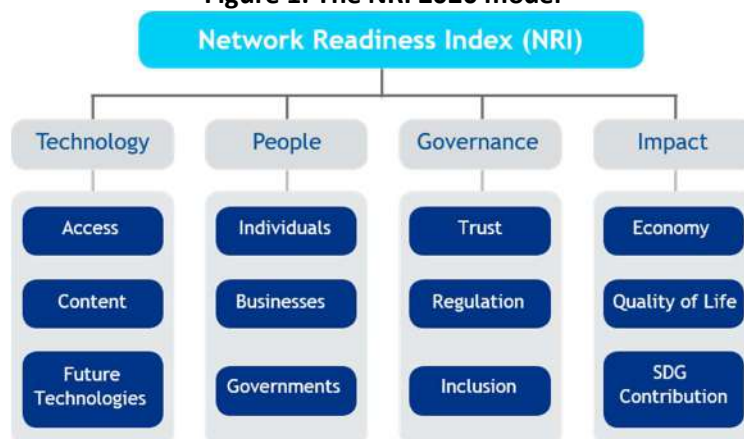
Network Readiness Index 2020 Sri Lanka

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
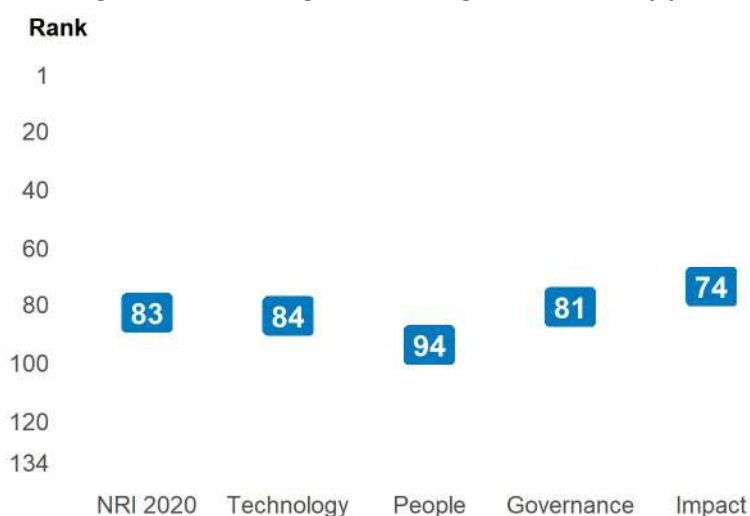
Figure 1: The NRI 2020 model

Global NRI position of Sri Lanka

Sri Lanka ranks 83rd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Sri Lanka global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Sri Lanka relate to SDG Contribution, Future Technologies and Inclusion, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Individuals and Businesses sub-pillars.

Table 1: Sri Lanka rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	39	Content	93
Future Technologies	46	Economy	95
Inclusion	57	Quality of Life	95
Governments	72	Trust	96
Regulation	87	Individuals	99
Access	88	Businesses	114

NRI score and income

Figure 3 shows the position of Sri Lanka in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Sri Lanka is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
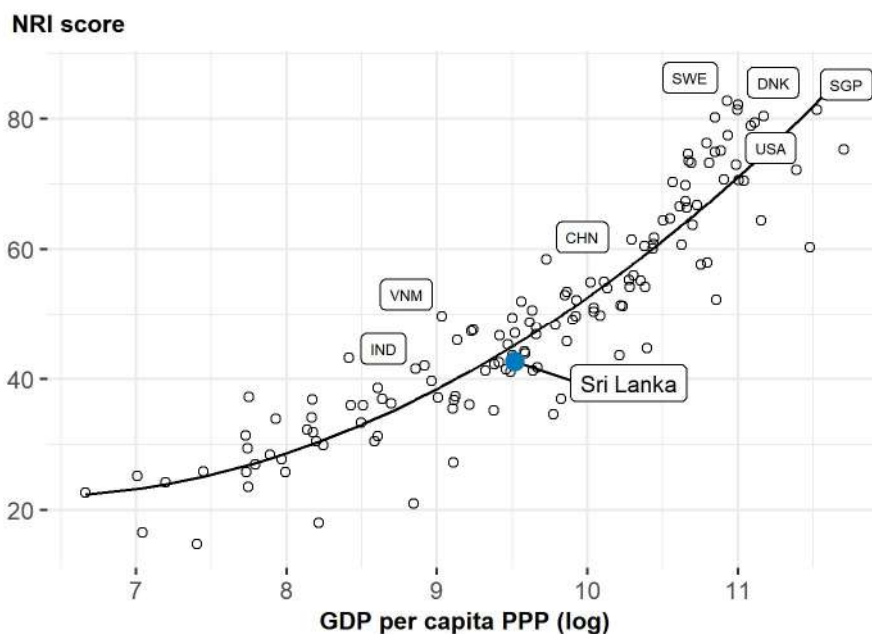
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Sri Lanka belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Lower-middle-income countries
Sri Lanka is ranked 6th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in nine of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Governments, Regulation, Inclusion, Quality of Life and SDG Contribution.

Asia & Pacific
Sri Lanka is ranked 14th within Asia & Pacific (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Asia & Pacific in two of the twelve sub-pillars: Inclusion and SDG Contribution.

Figure 4: Performance of Sri Lanka against its income group and region, overall and by pillar
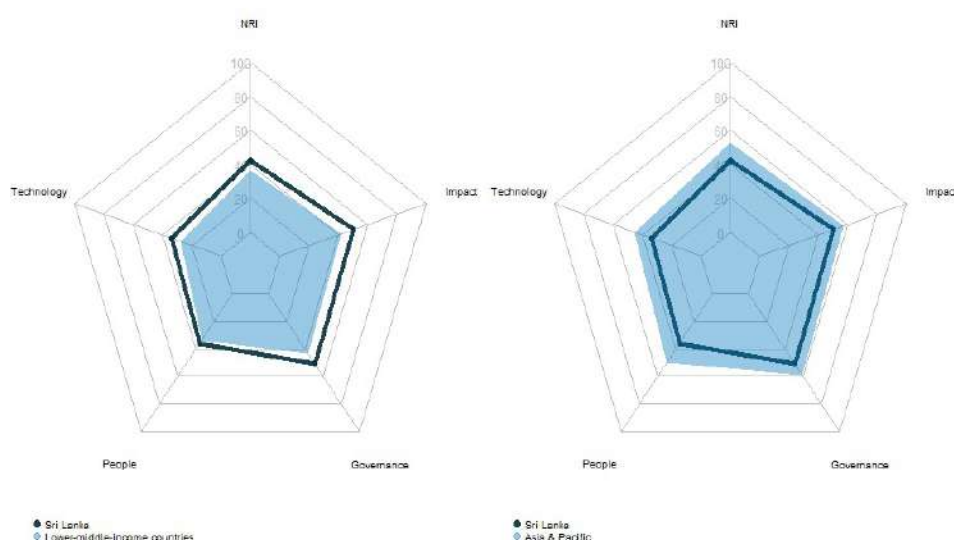
Table 2: Sri Lanka scores vs. averages of its income group and region, overall and by pillar

Dimension	Sri Lanka	Lower-middle-income countries	Asia & Pacific
NRI	42.65	36.72	52.76
Technology	33.48	27.72	45.33
People	36.15	33.88	49.64
Governance	50.91	43.15	59.20
Impact	50.05	42.15	56.86

Strongest and weakest indicators

The indicators where Sri Lanka performs particularly well include SDG 7: Affordable and Clean Energy, Mobile tariffs, and Computer software spending (Table 3). By contrast, the economy's weakest indicators include Happiness, Firms with website, and ICT regulatory environment.

Table 3: Top-ranked and bottom-ranked indicators of Sri Lanka

Strongest indicators	Rank	Weakest indicators	Rank
SDG 7: Affordable and Clean Energy	4	Internet access	103
Mobile tariffs	21	Internet users	104
Computer software spending	30	R&D expenditure by governments and higher education	104
Socioeconomic gap in use of digital payments	32	Medium and high-tech industry	106
Government promotion of investment in emerging technologies	40	Internet shopping	107
Legal framework's adaptability to emerging technologies	44	Online access to financial account	110
Prevalence of gig economy	44	High-tech exports	113
Adoption of emerging technologies	45	ICT regulatory environment	117
Privacy protection by law content	50	Firms with website	119
Healthy life expectancy at birth	56	Happiness	120

![Portulans Institute logo]

NRI 2020 At-A-Glance: Sri Lanka

Network Readiness Index — Rank: 83 (out of 134) — Score: 42.65

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	84	33.48	C. Governance pillar	81	50.91
1st sub-pillar: Access	88	47.49	1st sub-pillar: Trust	96	27.27
2nd sub-pillar: Content	93	21.10	2nd sub-pillar: Regulation	87	58.57
3rd sub-pillar: Future Technologies	46	31.86	3rd sub-pillar: Inclusion	57	66.89
B. People pillar	94	36.15	D. Impact pillar	74	50.05
1st sub-pillar: Individuals	99	39.90	1st sub-pillar: Economy	95	17.96
2nd sub-pillar: Businesses	114	27.02	2nd sub-pillar: Quality of Life	95	58.62
3rd sub-pillar: Governments	72	41.52	3rd sub-pillar: SDG Contribution	39	73.57

The Network Readiness Index in detail

| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	84	33.48	**C. Governance pillar**	81	50.91
1st sub-pillar: Access	88	47.49	*1st sub-pillar: Trust*	96	27.27
1.1.1 Mobile tariffs	21	83.17	3.1.1 Secure Internet servers	80	46.24
1.1.2 Handset prices	84	36.79	3.1.2 Cybersecurity	84	49.62
1.1.3 Internet access	103	24.15	3.1.3 Online access to financial account	110	9.76
1.1.4 4G mobile network coverage	64	91.00	3.1.4 Internet shopping	107	3.45
1.1.5 Fixed-broadband subscriptions	90	22.40	*2nd sub-pillar: Regulation*	87	58.57
1.1.6 International Internet bandwidth	93	62.98	3.2.1 Regulatory quality	82	48.06
1.1.7 Internet access in schools	60	11.90	3.2.2 ICT regulatory environment	117	59.46
2nd sub-pillar: Content	93	21.10	3.2.3 Legal framework's adaptability to emerging technologies	44	49.83
1.2.1 GitHub commits	61	4.28	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	94	25.80	3.2.5 Privacy protection by law content	50	60.48
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	57	66.89
1.2.4 Mobile apps development	87	53.51	3.3.1 E-Participation	65	70.37
3rd sub-pillar: Future Technologies	46	31.86	3.3.2 Socioeconomic gap in use of digital payments	32	83.98
1.3.1 Adoption of emerging technologies	45	56.01	3.3.3 Availability of local online content	94	47.12
1.3.2 Investment in emerging technologies	70	38.35	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	58	3.40	3.3.5 Rural gap in use of digital payments	68	66.10
1.3.4 Computer software spending	30	29.68	**D. Impact pillar**	74	50.05
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	95	17.96
B. People pillar	94	36.15	4.1.1 Medium and high-tech industry	106	9.39
1st sub-pillar: Individuals	99	39.90	4.1.2 High-tech exports	113	1.93
2.1.1 Internet users	104	32.43	4.1.3 PCT patent applications	69	0.34
2.1.2 Active mobile-broadband subscriptions	90	22.28	4.1.4 Labor productivity per employee	73	21.99
2.1.3 Use of virtual social networks	102	28.87	4.1.5 Prevalence of gig economy	44	56.16
2.1.4 Tertiary enrollment	94	13.85	*2nd sub-pillar: Quality of Life*	95	58.62
2.1.5 Adult literacy rate	62	89.36	4.2.1 Happiness	120	29.88
2.1.6 ICT skills	65	52.61	4.2.2 Freedom to make life choices	64	76.38
2nd sub-pillar: Businesses	114	27.02	4.2.3 Income inequality	77	59.79
2.2.1 Firms with website	119	10.56	4.2.4 Healthy life expectancy at birth	56	68.43
2.2.2 Ease of doing business	89	55.85	*3rd sub-pillar: SDG Contribution*	39	73.57
2.2.3 Professionals	89	16.28	4.3.1 SDG 3: Good Health and Well-Being	85	62.30
2.2.4 Technicians and associate professionals	58	35.21	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	102	43.30	4.3.3 SDG 5: Gender Equality	92	64.29
2.2.6 R&D expenditure by businesses	76	0.93	4.3.4 SDG 7: Affordable and Clean Energy	4	96.39
3rd sub-pillar: Governments	72	41.52	.	.	.
2.3.1 Government online services	62	70.90			
2.3.2 Publication and use of open data	NA	NA			
2.3.3 Government promotion of investment in emerging tech	40	49.22			
2.3.4 R&D expenditure by governments and higher education	104	4.44			

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Network Readiness Index 2020 Sweden

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model
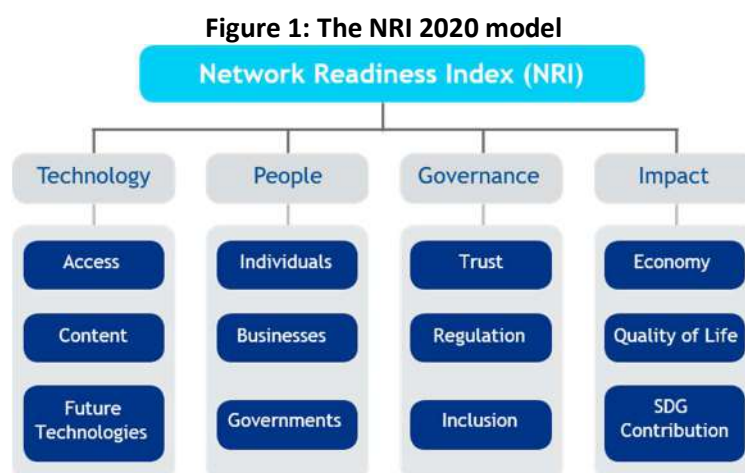
Global NRI position of Sweden

Sweden ranks 1st out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People and Governance.

Figure 2: Sweden global ranking, overall and by pillar
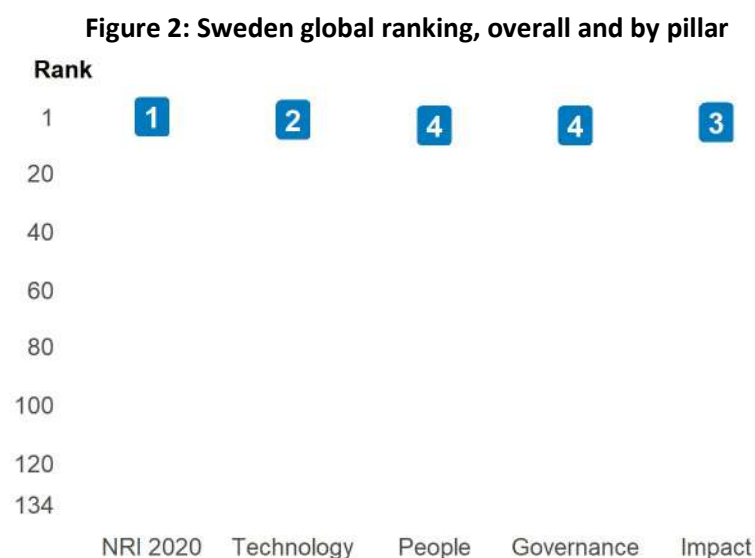
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Sweden relate to Future Technologies, Businesses and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Access and Individuals sub-pillars.

Table 1: Sweden rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	2	Content	6
Businesses	2	Governments	6
Regulation	3	Inclusion	6
Economy	4	SDG Contribution	8
Trust	5	Access	14
Quality of Life	5	Individuals	16

NRI score and income

Figure 3 shows the position of Sweden in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Sweden is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
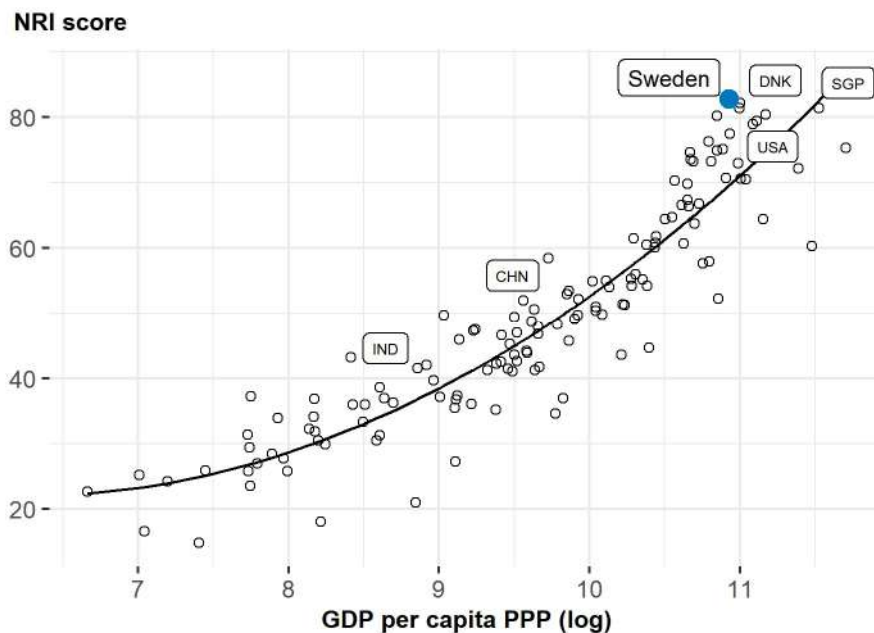
Note: DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th.

Performance against its income group and region

High-income countries
Sweden is ranked 1st in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it has a higher score than the average of high-income countries in all of them.

Europe
Sweden is ranked 1st within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of Sweden against its income group and region, overall and by pillar
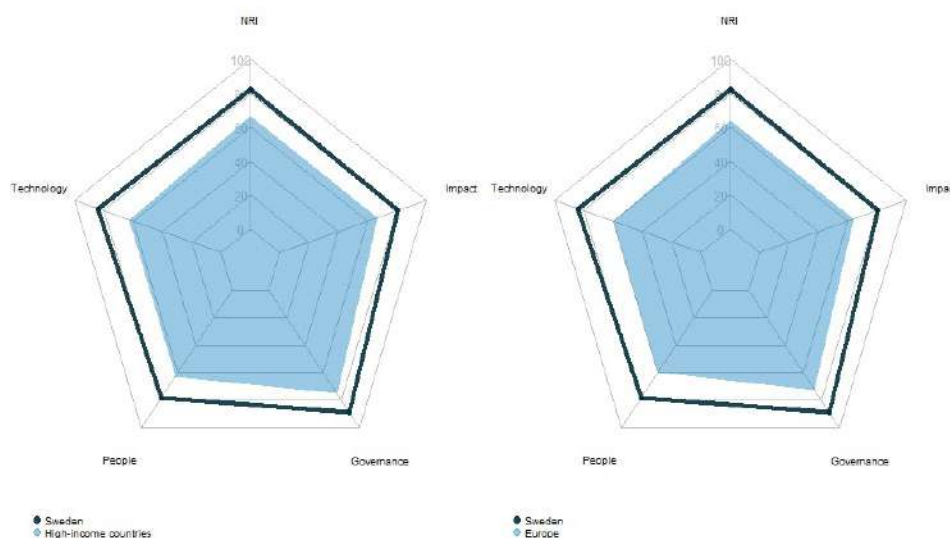
Table 2: Sweden scores vs. averages of its income group and region, overall and by pillar

Dimension	Sweden	High-income countries	Europe
NRI	82.75	66.82	64.21
Technology	83.82	62.51	59.93
People	78.07	62.72	59.89
Governance	88.88	75.41	72.98
Impact	80.23	66.63	64.04

Strongest and weakest indicators

The indicators where Sweden performs particularly well include 4G mobile network coverage, ICT PCT patent applications, and e-commerce legislation (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, International Internet bandwidth, and SDG 5: Gender Equality.

Table 3: Top-ranked and bottom-ranked indicators of Sweden

Strongest indicators	Rank	Weakest indicators	Rank
4G mobile network coverage	1	Rural gap in use of digital payments	24
ICT PCT patent applications	1	Fixed-broadband subscriptions	31
e-commerce legislation	1	ICT regulatory environment	33
Availability of local online content	1	High-tech exports	33
SDG 11: Sustainable Cities and Communities	1	Cybersecurity	34
Professionals	2	Tertiary enrollment	37
Privacy protection by law content	2	E-Participation	41
PCT patent applications	2	SDG 5: Gender Equality	46
GitHub commits	3	International Internet bandwidth	55
Investment in emerging technologies	3	SDG 7: Affordable and Clean Energy	67

NRI 2020 At-A-Glance: Sweden

Network Readiness Index   Rank: 1 (out of 134)   Score: 82.75

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	2	83.82	C. Governance pillar	4	88.88
1st sub-pillar: Access	14	86.59	1st sub-pillar: Trust	5	88.22
2nd sub-pillar: Content	6	81.66	2nd sub-pillar: Regulation	3	92.99
3rd sub-pillar: Future Technologies	2	83.20	3rd sub-pillar: Inclusion	6	85.44
B. People pillar	4	78.07	D. Impact pillar	3	80.23
1st sub-pillar: Individuals	16	71.54	1st sub-pillar: Economy	4	65.70
2nd sub-pillar: Businesses	2	82.16	2nd sub-pillar: Quality of Life	5	91.07
3rd sub-pillar: Governments	6	80.50	3rd sub-pillar: SDG Contribution	8	83.93

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	2	83.82	**C. Governance pillar**	4	88.88
1st sub-pillar: Access	14	86.59	*1st sub-pillar: Trust*	5	88.22
1.1.1 Mobile tariffs	8	92.50	3.1.1 Secure Internet servers	24	81.02
1.1.2 Handset prices	15	70.48	3.1.2 Cybersecurity	34	86.89
1.1.3 Internet access	11	94.72	3.1.3 Online access to financial account	4	93.08
1.1.4 4G mobile network coverage	1	100.00	3.1.4 Internet shopping	6	91.90
1.1.5 Fixed-broadband subscriptions	31	92.12	*2nd sub-pillar: Regulation*	3	92.99
1.1.6 International Internet bandwidth	55	69.75	3.2.1 Regulatory quality	6	91.06
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	33	90.35
2nd sub-pillar: Content	6	81.66	3.2.3 Legal framework's adaptability to emerging technologies	7	84.19
1.2.1 GitHub commits	3	84.98	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	4	93.45	3.2.5 Privacy protection by law content	2	99.35
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	6	85.44
1.2.4 Mobile apps development	13	88.66	3.3.1 E-Participation	41	81.48
3rd sub-pillar: Future Technologies	2	83.20	3.3.2 Socioeconomic gap in use of digital payments	7	97.28
1.3.1 Adoption of emerging technologies	5	96.31	3.3.3 Availability of local online content	1	100.00
1.3.2 Investment in emerging technologies	3	91.97	3.3.4 Gender gap in Internet use	5	72.47
1.3.3 ICT PCT patent applications	1	100.00	3.3.5 Rural gap in use of digital payments	24	75.98
1.3.4 Computer software spending	10	54.79	**D. Impact pillar**	3	80.23
1.3.5 Robot density	5	72.93	*1st sub-pillar: Economy*	4	65.70
B. People pillar	4	78.07	4.1.1 Medium and high-tech industry	10	67.74
1st sub-pillar: Individuals	16	71.54	4.1.2 High-tech exports	33	27.61
2.1.1 Internet users	13	92.26	4.1.3 PCT patent applications	2	91.27
2.1.2 Active mobile-broadband subscriptions	17	48.39	4.1.4 Labor productivity per employee	14	69.51
2.1.3 Use of virtual social networks	17	73.20	4.1.5 Prevalence of gig economy	18	72.37
2.1.4 Tertiary enrollment	37	48.73	*2nd sub-pillar: Quality of Life*	5	91.07
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	8	92.49
2.1.6 ICT skills	3	95.14	4.2.2 Freedom to make life choices	8	96.30
2nd sub-pillar: Businesses	2	82.16	4.2.3 Income inequality	16	88.14
2.2.1 Firms with website	6	93.05	4.2.4 Healthy life expectancy at birth	16	87.36
2.2.2 Ease of doing business	10	91.56	*3rd sub-pillar: SDG Contribution*	8	83.93
2.2.3 Professionals	2	72.42	4.3.1 SDG 3: Good Health and Well-Being	6	95.08
2.2.4 Technicians and associate professionals	8	79.53	4.3.2 SDG 4: Quality Education	15	66.58
2.2.5 Business use of digital tools	6	96.36	4.3.3 SDG 5: Gender Equality	46	79.24
2.2.6 R&D expenditure by businesses	5	60.02	4.3.4 SDG 7: Affordable and Clean Energy	67	78.76
3rd sub-pillar: Governments	6	80.50	.	.	.
2.3.1 Government online services	15	89.70			
2.3.2 Publication and use of open data	15	69.84			
2.3.3 Government promotion of investment in emerging tech	16	71.71			
2.3.4 R&D expenditure by governments and higher education	3	90.76			

* Confidential data

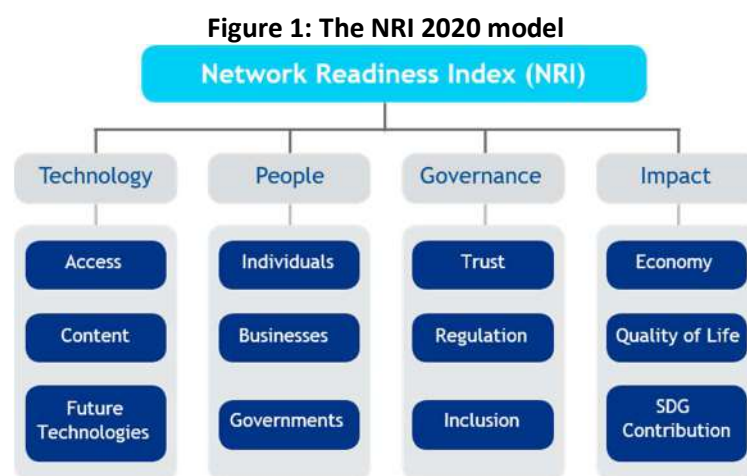**Sources**

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Network Readiness Index 2020 Switzerland

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Switzerland

Switzerland ranks 5th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Switzerland global ranking, overall and by pillar
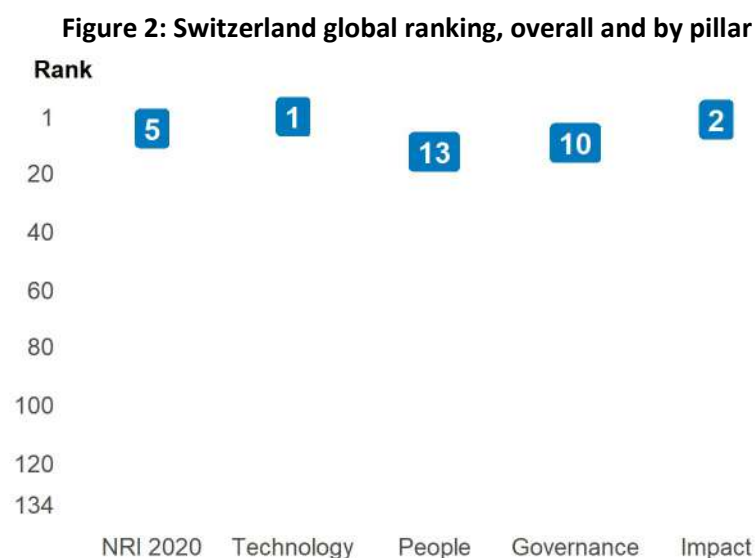
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Switzerland relate to Content, Economy and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Governments and Individuals sub-pillars.

Table 1: Switzerland rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Content	1	Future Technologies	7
Economy	3	Businesses	8
Access	4	Inclusion	12
Regulation	4	Trust	14
SDG Contribution	4	Governments	17
Quality of Life	6	Individuals	41

NRI score and income

Figure 3 shows the position of Switzerland in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Switzerland is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
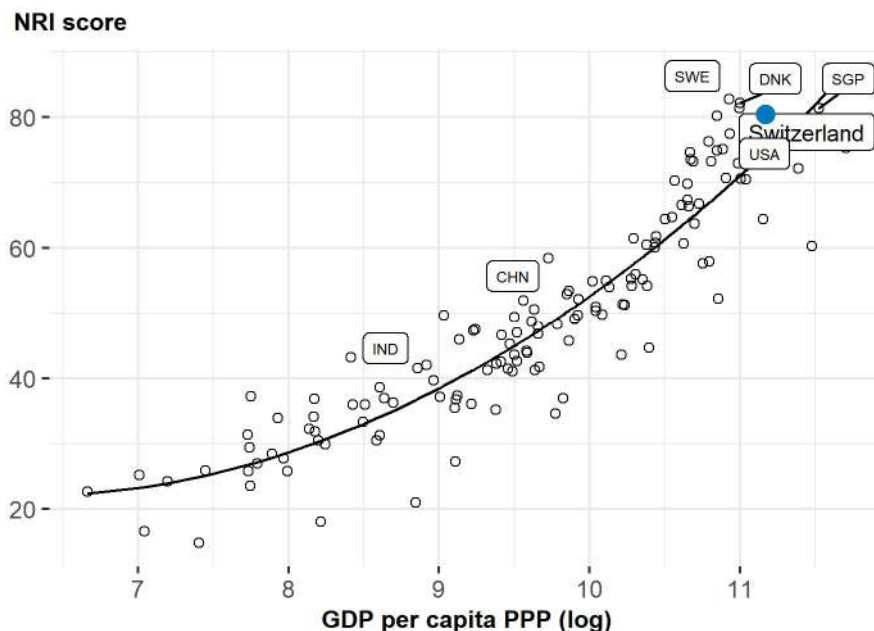
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Switzerland belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
Switzerland is ranked 5th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Europe
Switzerland is ranked 4th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Switzerland against its income group and region, overall and by pillar
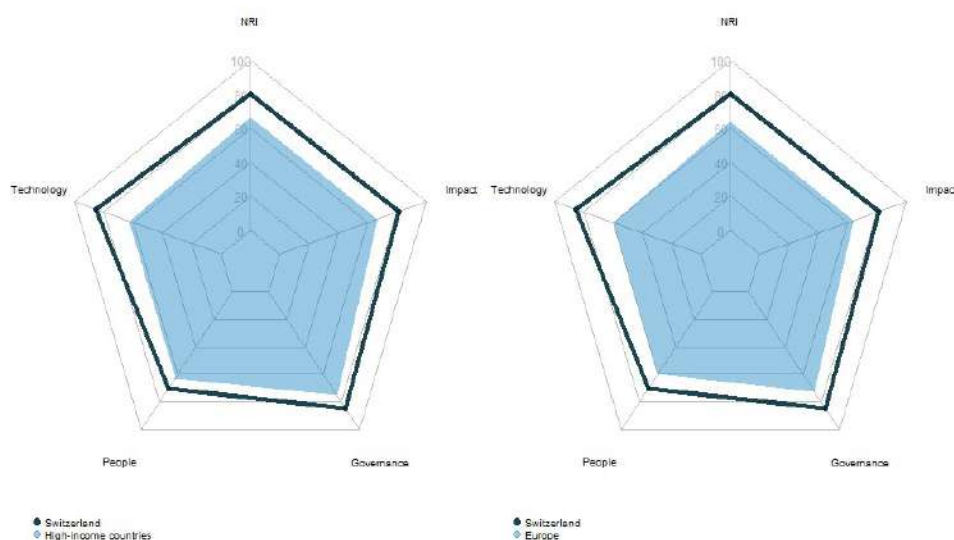
Table 2: Switzerland scores vs. averages of its income group and region, overall and by pillar

Dimension	Switzerland	High-income countries	Europe
NRI	80.41	66.82	64.21
Technology	85.67	62.51	59.93
People	70.02	62.72	59.89
Governance	85.04	75.41	72.98
Impact	80.93	66.63	64.04

3

Strongest and weakest indicators

The indicators where Switzerland performs particularly well include Internet access in schools, GitHub commits, and Internet domain registrations (Table 3). By contrast, the economy's weakest indicators include SDG 5: Gender Equality, Use of virtual social networks, and Tertiary enrollment.

Table 3: Top-ranked and bottom-ranked indicators of Switzerland

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	Income inequality	31
GitHub commits	1	Ease of doing business	35
Internet domain registrations	1	High-tech exports	35
e-commerce legislation	1	Government online services	36
Medium and high-tech industry	2	Cybersecurity	39
Happiness	2	Gender gap in Internet use	41
Computer software spending	3	International Internet bandwidth	43
PCT patent applications	3	Tertiary enrollment	49
SDG 11: Sustainable Cities and Communities	3	Use of virtual social networks	72
Investment in emerging technologies	4	SDG 5: Gender Equality	75

NRI 2020 At-A-Glance: Switzerland

Network Readiness Index   Rank: 5 (out of 134)   Score: 80.41

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	1	85.67	C. Governance pillar	10	85.04
1st sub-pillar: Access	4	90.35	1st sub-pillar: Trust	14	78.52
2nd sub-pillar: Content	1	93.45	2nd sub-pillar: Regulation	4	92.83
3rd sub-pillar: Future Technologies	7	73.21	3rd sub-pillar: Inclusion	12	83.76
B. People pillar	13	70.02	D. Impact pillar	2	80.93
1st sub-pillar: Individuals	41	62.41	1st sub-pillar: Economy	3	67.59
2nd sub-pillar: Businesses	8	76.78	2nd sub-pillar: Quality of Life	6	89.69
3rd sub-pillar: Governments	17	70.87	3rd sub-pillar: SDG Contribution	4	85.52

The Network Readiness Index in detail

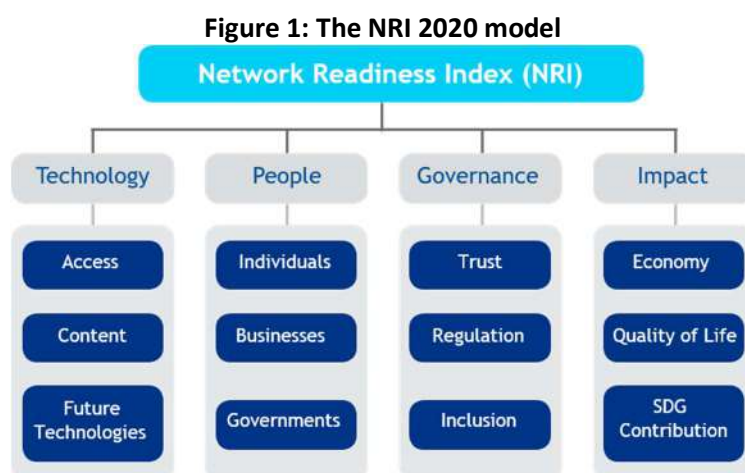| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	1	85.67	**C. Governance pillar**	10	85.04
1st sub-pillar: Access	4	90.35	*1st sub-pillar: Trust*	14	78.52
1.1.1 Mobile tariffs	6	93.92	3.1.1 Secure Internet servers	5	91.52
1.1.2 Handset prices	5	82.77	3.1.2 Cybersecurity	39	84.51
1.1.3 Internet access	22	88.54	3.1.3 Online access to financial account	19	66.23
1.1.4 4G mobile network coverage	24	99.00	3.1.4 Internet shopping	15	71.84
1.1.5 Fixed-broadband subscriptions	11	97.05	*2nd sub-pillar: Regulation*	4	92.83
1.1.6 International Internet bandwidth	43	71.15	3.2.1 Regulatory quality	8	90.63
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	16	95.56
2nd sub-pillar: Content	1	93.45	3.2.3 Legal framework's adaptability to emerging technologies	5	85.14
1.2.1 GitHub commits	1	100.00	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	16	83.14	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	12	83.76
1.2.4 Mobile apps development	9	90.67	3.3.1 E-Participation	18	90.13
3rd sub-pillar: Future Technologies	7	73.21	3.3.2 Socioeconomic gap in use of digital payments	15	95.67
1.3.1 Adoption of emerging technologies	6	93.09	3.3.3 Availability of local online content	5	95.34
1.3.2 Investment in emerging technologies	4	89.43	3.3.4 Gender gap in Internet use	41	62.12
1.3.3 ICT PCT patent applications	8	72.81	3.3.5 Rural gap in use of digital payments	28	75.53
1.3.4 Computer software spending	3	67.41	**D. Impact pillar**	2	80.93
1.3.5 Robot density	18	43.32	*1st sub-pillar: Economy*	3	67.59
B. People pillar	13	70.02	4.1.1 Medium and high-tech industry	2	82.59
1st sub-pillar: Individuals	41	62.41	4.1.2 High-tech exports	35	24.57
2.1.1 Internet users	17	89.72	4.1.3 PCT patent applications	3	89.42
2.1.2 Active mobile-broadband subscriptions	31	38.31	4.1.4 Labor productivity per employee	10	75.26
2.1.3 Use of virtual social networks	72	51.55	4.1.5 Prevalence of gig economy	27	66.09
2.1.4 Tertiary enrollment	49	43.26	*2nd sub-pillar: Quality of Life*	6	89.69
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	2	98.31
2.1.6 ICT skills	7	89.20	4.2.2 Freedom to make life choices	19	91.48
2nd sub-pillar: Businesses	8	76.78	4.2.3 Income inequality	31	78.09
2.2.1 Firms with website	5	95.48	4.2.4 Healthy life expectancy at birth	4	90.87
2.2.2 Ease of doing business	35	82.05	*3rd sub-pillar: SDG Contribution*	4	85.52
2.2.3 Professionals	6	64.46	4.3.1 SDG 3: Good Health and Well-Being	13	90.16
2.2.4 Technicians and associate professionals	14	73.98	4.3.2 SDG 4: Quality Education	9	71.43
2.2.5 Business use of digital tools	20	83.55	4.3.3 SDG 5: Gender Equality	75	73.02
2.2.6 R&D expenditure by businesses	4	61.17	4.3.4 SDG 7: Affordable and Clean Energy	5	95.95
3rd sub-pillar: Governments	17	70.87	.	.	.
2.3.1 Government online services	36	82.42			
2.3.2 Publication and use of open data	19	57.46			
2.3.3 Government promotion of investment in emerging tech	27	57.55			
2.3.4 R&D expenditure by governments and higher education	5	86.04			

* Confidential data

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# Network Readiness Index 2020 Tajikistan

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Tajikistan

Tajikistan ranks 109th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Tajikistan global ranking, overall and by pillar
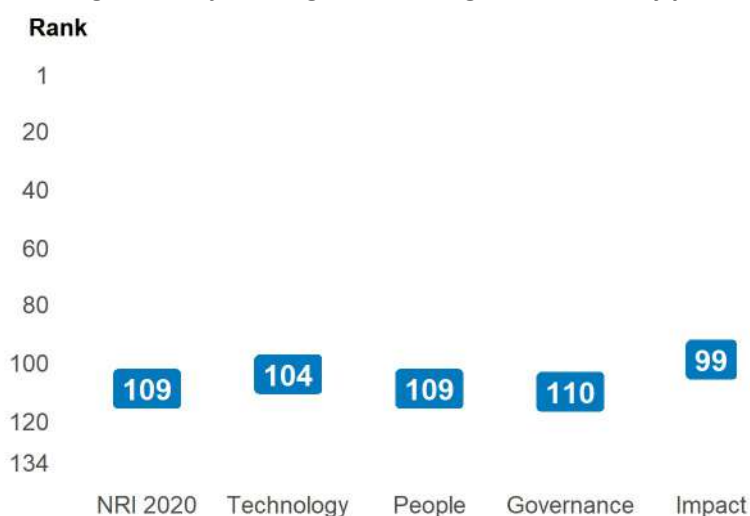
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Tajikistan relate to Quality of Life, Future Technologies and Inclusion, among others (Table 1). More could be done, though, to improve the economy's performances in the Economy, Governments and Regulation sub-pillars.

Table 1: Tajikistan rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	64	Content	107
Future Technologies	73	SDG Contribution	107
Inclusion	83	Trust	110
Businesses	93	Economy	120
Individuals	105	Governments	123
Access	107	Regulation	126

NRI score and income

Figure 3 shows the position of Tajikistan in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Tajikistan is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
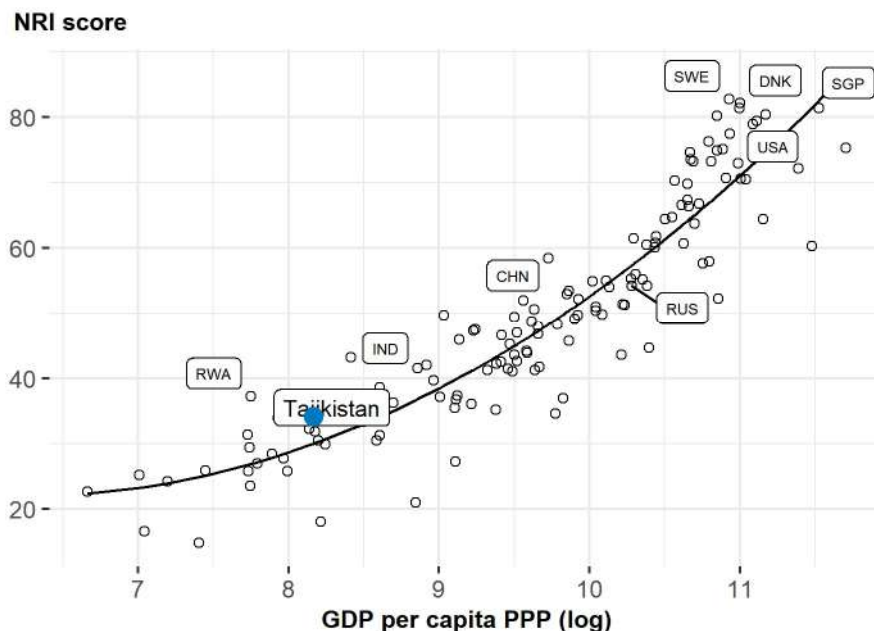
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Tajikistan belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-CIS-is Russia (RUS).

Performance against its income group and region

Low-income countries

Tajikistan is ranked 2nd in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms low-income countries in nine of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Trust, Inclusion, Quality of Life and SDG Contribution.

CIS

Tajikistan is ranked 7th within CIS (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in CIS in one of the twelve sub-pillars: Future Technologies.

Figure 4: Performance of Tajikistan against its income group and region, overall and by pillar
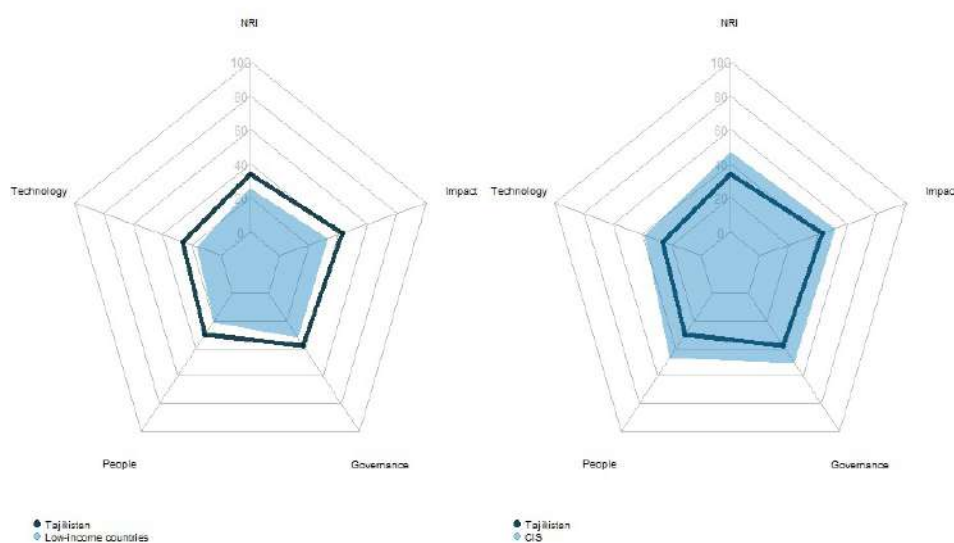
Table 2: Tajikistan scores vs. averages of its income group and region, overall and by pillar

Dimension	Tajikistan	Low-income countries	CIS
NRI	34.14	25.61	46.88
Technology	25.84	16.33	38.47
People	30.00	20.61	47.10
Governance	37.87	32.58	50.71
Impact	42.86	32.92	51.26

Strongest and weakest indicators

The indicators where Tajikistan performs particularly well include Adult literacy rate, Rural gap in use of digital payments, and Income inequality (Table 3). By contrast, the economy's weakest indicators include ICT regulatory environment, SDG 5: Gender Equality, and International Internet bandwidth.

Table 3: Top-ranked and bottom-ranked indicators of Tajikistan

Strongest indicators	Rank	Weakest indicators	Rank
Adult literacy rate	5	Active mobile-broadband subscriptions	122
Rural gap in use of digital payments	45	Medium and high-tech industry	122
Income inequality	45	Mobile tariffs	123
ICT skills	54	Government online services	124
Investment in emerging technologies	58	Use of virtual social networks	125
Freedom to make life choices	60	Regulatory quality	127
Socioeconomic gap in use of digital payments	65	GitHub commits	128
Government promotion of investment in emerging technologies	74	International Internet bandwidth	129
Internet shopping	75	SDG 5: Gender Equality	130
e-commerce legislation	77	ICT regulatory environment	133

NRI 2020 At-A-Glance: Tajikistan

Network Readiness Index   Rank: 109 (out of 134)   Score: 34.14

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	104	25.84	C. Governance pillar	110	37.87
1st sub-pillar: Access	107	36.13	1st sub-pillar: Trust	110	22.69
2nd sub-pillar: Content	107	14.83	2nd sub-pillar: Regulation	126	34.19
3rd sub-pillar: Future Technologies	73	26.56	3rd sub-pillar: Inclusion	83	56.74
B. People pillar	109	30.00	D. Impact pillar	99	42.86
1st sub-pillar: Individuals	105	35.65	1st sub-pillar: Economy	120	11.28
2nd sub-pillar: Businesses	93	34.30	2nd sub-pillar: Quality of Life	64	65.99
3rd sub-pillar: Governments	123	20.06	3rd sub-pillar: SDG Contribution	107	51.31

The Network Readiness Index in detail

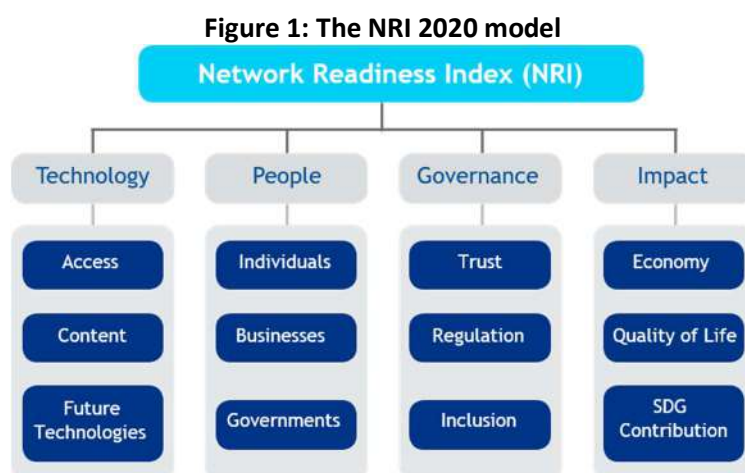| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	104	25.84	**C. Governance pillar**	110	37.87
1st sub-pillar: Access	107	36.13	*1st sub-pillar: Trust*	110	22.69
1.1.1 Mobile tariffs	123	25.50	3.1.1 Secure Internet servers	107	34.06
1.1.2 Handset prices	121	16.67	3.1.2 Cybersecurity	106	27.63
1.1.3 Internet access	120	11.61	3.1.3 Online access to financial account	81	19.40
1.1.4 4G mobile network coverage	80	80.00	3.1.4 Internet shopping	75	9.65
1.1.5 Fixed-broadband subscriptions	NA	NA	*2nd sub-pillar: Regulation*	126	34.19
1.1.6 International Internet bandwidth	129	46.89	3.2.1 Regulatory quality	127	28.32
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	133	3.48
2nd sub-pillar: Content	107	14.83	3.2.3 Legal framework's adaptability to emerging technologies	87	29.97
1.2.1 GitHub commits	128	0.05	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	99	20.34	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	83	56.74
1.2.4 Mobile apps development	109	38.71	3.3.1 E-Participation	117	32.10
3rd sub-pillar: Future Technologies	73	26.56	3.3.2 Socioeconomic gap in use of digital payments	65	68.11
1.3.1 Adoption of emerging technologies	100	31.62	3.3.3 Availability of local online content	79	53.71
1.3.2 Investment in emerging technologies	58	41.88	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	45	73.04
1.3.4 Computer software spending	94	6.19	**D. Impact pillar**	99	42.86
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	120	11.28
B. People pillar	109	30.00	4.1.1 Medium and high-tech industry	122	2.48
1st sub-pillar: Individuals	105	35.65	4.1.2 High-tech exports	NA	NA
2.1.1 Internet users	116	19.90	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	122	7.67	4.1.4 Labor productivity per employee	101	7.00
2.1.3 Use of virtual social networks	125	5.15	4.1.5 Prevalence of gig economy	105	24.36
2.1.4 Tertiary enrollment	81	22.41	*2nd sub-pillar: Quality of Life*	64	65.99
2.1.5 Adult literacy rate	5	99.78	4.2.1 Happiness	78	54.46
2.1.6 ICT skills	54	58.99	4.2.2 Freedom to make life choices	60	77.70
2nd sub-pillar: Businesses	93	34.30	4.2.3 Income inequality	45	74.74
2.2.1 Firms with website	105	21.71	4.2.4 Healthy life expectancy at birth	89	57.06
2.2.2 Ease of doing business	93	54.90	*3rd sub-pillar: SDG Contribution*	107	51.31
2.2.3 Professionals	83	17.78	4.3.1 SDG 3: Good Health and Well-Being	79	65.57
2.2.4 Technicians and associate professionals	82	24.29	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	81	52.81	4.3.3 SDG 5: Gender Equality	130	17.43
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	79	74.86
3rd sub-pillar: Governments	123	20.06	.	.	.
2.3.1 Government online services	124	29.69			
2.3.2 Publication and use of open data	94	9.70			
2.3.3 Government promotion of investment in emerging tech	74	34.01			
2.3.4 R&D expenditure by governments and higher education	96	6.84			

* Confidential data

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Network Readiness Index 2020 Tanzania

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Tanzania

Tanzania ranks 110th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Tanzania global ranking, overall and by pillar
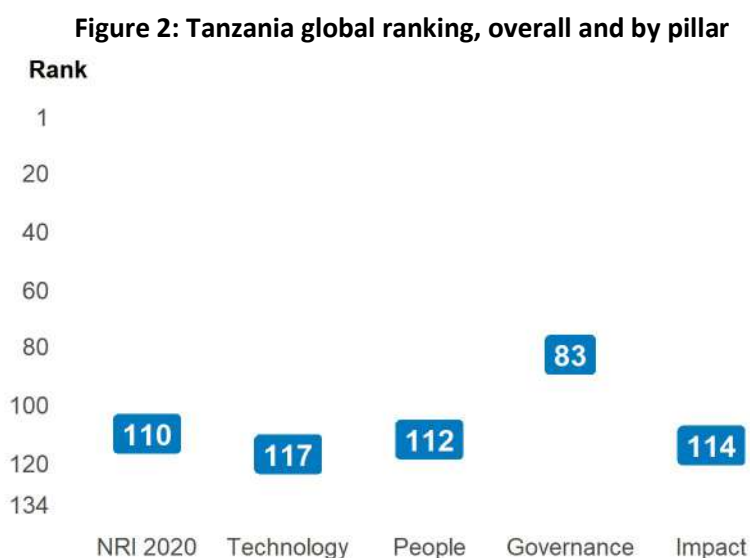
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Tanzania relate to Future Technologies, Trust and Governments, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Businesses and Content sub-pillars.

Table 1: Tanzania rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	74	Quality of Life	109
Trust	74	SDG Contribution	115
Governments	78	Individuals	118
Inclusion	82	Access	120
Regulation	89	Businesses	120
Economy	103	Content	125

NRI score and income

Figure 3 shows the position of Tanzania in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Tanzania is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
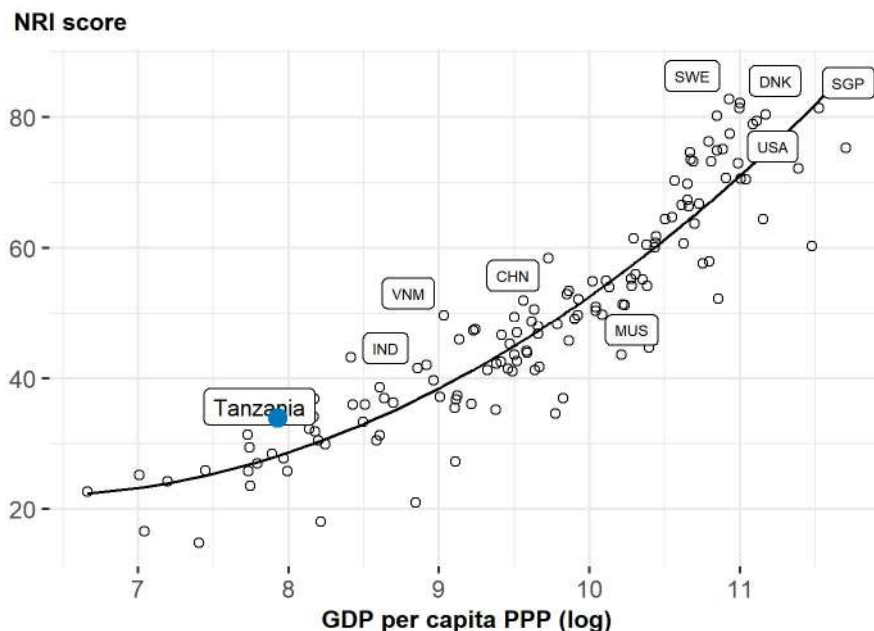
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Tanzania belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries
Tanzania is ranked 23rd in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: governance. At the sub-pillar level, it outperforms lower-middle-income countries in five of the twelve sub-pillars: Future Technologies, Governments, Trust, Regulation and Inclusion.

Africa
Tanzania is ranked 10th within Africa (Figure 4, right panel). It has a score above the regional average in three of the four pillars: nri.score, people, governance and impact. With regard to sub-pillars, it outperforms the average in Africa in six of the twelve sub-pillars: Future Technologies, Governments, Trust, Regulation, Inclusion and Quality of Life.

Figure 4: Performance of Tanzania against its income group and region, overall and by pillar

Table 2: Tanzania scores vs. averages of its income group and region, overall and by pillar

Dimension	Tanzania	Lower-middle-income countries	Africa
NRI	33.92	36.72	30.62
Technology	19.93	27.72	21.47
People	29.02	33.88	26.75
Governance	50.54	43.15	39.31
Impact	36.19	42.15	34.94

Strongest and weakest indicators

The indicators where Tanzania performs particularly well include R&D expenditure by governments and higher education, Online access to financial account, and Freedom to make life choices (Table 3). By contrast, the economy's weakest indicators include International Internet bandwidth, Active mobile-broadband subscriptions, and Happiness.

Table 3: Top-ranked and bottom-ranked indicators of Tanzania

Strongest indicators	Rank	Weakest indicators	Rank
R&D expenditure by governments and higher education	36	Wikipedia edits	121
Online access to financial account	52	SDG 3: Good Health and Well-Being	121
Freedom to make life choices	55	4G mobile network coverage	123
Rural gap in use of digital payments	58	Computer software spending	124
Investment in emerging technologies	59	Use of virtual social networks	124
ICT regulatory environment	61	Tertiary enrollment	124
Cybersecurity	62	Professionals	124
Publication and use of open data	66	Happiness	127
Socioeconomic gap in use of digital payments	66	Active mobile-broadband subscriptions	132
High-tech exports	68	International Internet bandwidth	133

NRI 2020 At-A-Glance: Tanzania

Network Readiness Index   Rank: 110 (out of 134)   Score: 33.92

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	117	19.93	C. Governance pillar	83	50.54
1st sub-pillar: Access	120	25.49	1st sub-pillar: Trust	74	35.13
2nd sub-pillar: Content	125	7.76	2nd sub-pillar: Regulation	89	57.44
3rd sub-pillar: Future Technologies	74	26.54	3rd sub-pillar: Inclusion	82	59.06
B. People pillar	112	29.02	D. Impact pillar	114	36.19
1st sub-pillar: Individuals	118	24.46	1st sub-pillar: Economy	103	15.97
2nd sub-pillar: Businesses	120	23.33	2nd sub-pillar: Quality of Life	109	47.70
3rd sub-pillar: Governments	78	39.27	3rd sub-pillar: SDG Contribution	115	44.90

The Network Readiness Index in detail

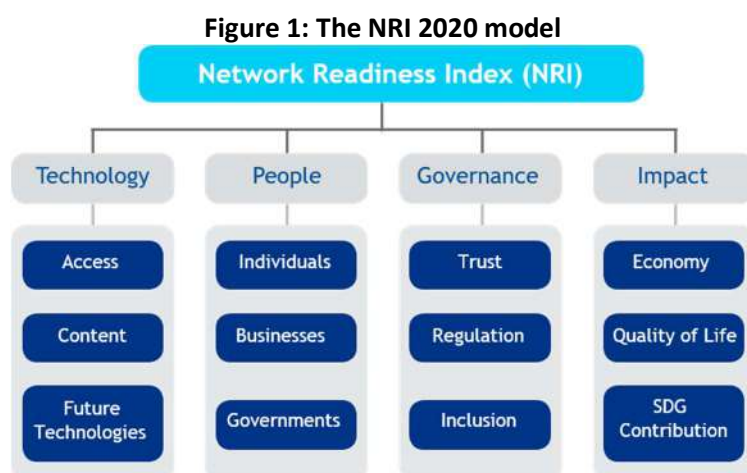| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	117	19.93	**C. Governance pillar**	83	50.54
1st sub-pillar: Access	120	25.49	*1st sub-pillar: Trust*	74	35.13
1.1.1 Mobile tariffs	109	36.07	3.1.1 Secure Internet servers	114	29.32
1.1.2 Handset prices	108	26.12	3.1.2 Cybersecurity	62	68.69
1.1.3 Internet access	117	14.17	3.1.3 Online access to financial account	52	35.69
1.1.4 4G mobile network coverage	123	13.00	3.1.4 Internet shopping	84	6.82
1.1.5 Fixed-broadband subscriptions	NA	NA	*2nd sub-pillar: Regulation*	89	57.44
1.1.6 International Internet bandwidth	133	38.08	3.2.1 Regulatory quality	108	37.92
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	61	85.72
2nd sub-pillar: Content	125	7.76	3.2.3 Legal framework's adaptability to emerging technologies	81	31.11
1.2.1 GitHub commits	116	0.24	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	121	0.00	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	82	59.06
1.2.4 Mobile apps development	118	30.64	3.3.1 E-Participation	92	54.32
3rd sub-pillar: Future Technologies	74	26.54	3.3.2 Socioeconomic gap in use of digital payments	66	67.56
1.3.1 Adoption of emerging technologies	87	37.57	3.3.3 Availability of local online content	96	44.69
1.3.2 Investment in emerging technologies	59	41.64	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	58	69.69
1.3.4 Computer software spending	124	0.39	**D. Impact pillar**	114	36.19
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	103	15.97
B. People pillar	112	29.02	4.1.1 Medium and high-tech industry	109	8.44
1st sub-pillar: Individuals	118	24.46	4.1.2 High-tech exports	68	13.05
2.1.1 Internet users	112	23.03	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	132	2.09	4.1.4 Labor productivity per employee	112	2.49
2.1.3 Use of virtual social networks	124	5.77	4.1.5 Prevalence of gig economy	69	39.92
2.1.4 Tertiary enrollment	124	2.35	*2nd sub-pillar: Quality of Life*	109	47.70
2.1.5 Adult literacy rate	82	71.56	4.2.1 Happiness	127	18.61
2.1.6 ICT skills	85	41.95	4.2.2 Freedom to make life choices	55	80.78
2nd sub-pillar: Businesses	120	23.33	4.2.3 Income inequality	80	57.99
2.2.1 Firms with website	110	15.21	4.2.4 Healthy life expectancy at birth	110	33.42
2.2.2 Ease of doing business	114	42.86	*3rd sub-pillar: SDG Contribution*	115	44.90
2.2.3 Professionals	124	1.17	4.3.1 SDG 3: Good Health and Well-Being	121	24.59
2.2.4 Technicians and associate professionals	115	8.09	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	92	49.31	4.3.3 SDG 5: Gender Equality	96	63.64
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	116	53.47
3rd sub-pillar: Governments	78	39.27	.	.	.
2.3.1 Government online services	93	53.94			
2.3.2 Publication and use of open data	66	21.73			
2.3.3 Government promotion of investment in emerging tech	72	34.83			
2.3.4 R&D expenditure by governments and higher education	36	46.58			

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Network Readiness Index 2020 Thailand

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Thailand

Thailand ranks 51st out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Thailand global ranking, overall and by pillar
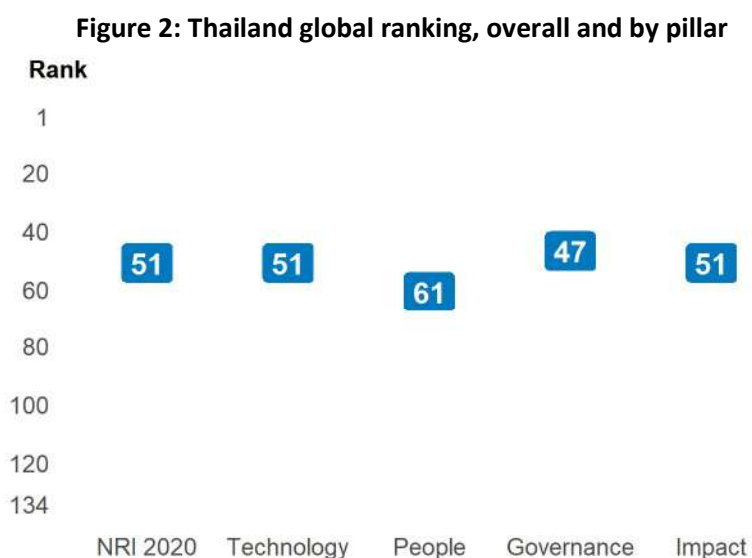
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Thailand relate to Access, Quality of Life and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Content and SDG Contribution sub-pillars.

Table 1: Thailand rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Access	39	Individuals	52
Quality of Life	41	Governments	55
Economy	42	Trust	55
Regulation	49	Businesses	66
Inclusion	49	Content	69
Future Technologies	51	SDG Contribution	84

NRI score and income

Figure 3 shows the position of Thailand in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Thailand is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
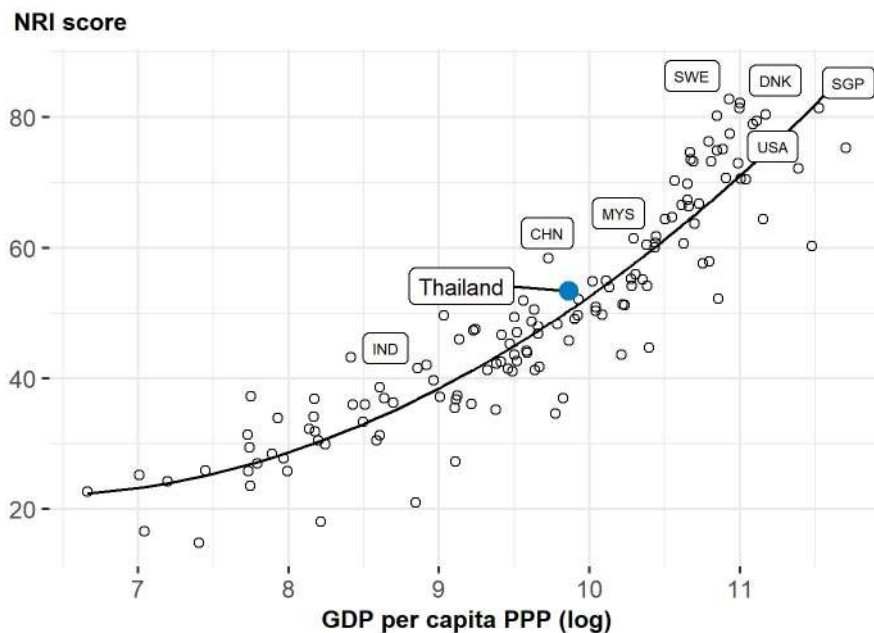
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Thailand belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Upper-middle-income countries
Thailand is ranked 5th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in nine of the twelve sub-pillars: Access, Future Technologies, Individuals, Governments, Trust, Regulation, Inclusion, Economy and Quality of Life.

Asia & Pacific
Thailand is ranked 9th within Asia & Pacific (Figure 4, right panel). It has a score above the regional average in two of the four pillars: nri.score, technology and governance. With regard to sub-pillars, it outperforms the average in Asia & Pacific in five of the twelve sub-pillars: Access, Individuals, Regulation, Inclusion and Quality of Life.

Figure 4: Performance of Thailand against its income group and region, overall and by pillar

Table 2: Thailand scores vs. averages of its income group and region, overall and by pillar

Dimension	Thailand	Upper-middle-income countries	Asia & Pacific
NRI	53.45	47.39	52.76
Technology	45.79	38.42	45.33
People	49.33	46.66	49.64
Governance	62.47	54.31	59.20
Impact	56.22	50.17	56.86

3

Strongest and weakest indicators

The indicators where Thailand performs particularly well include e-commerce legislation, Fixed-broadband subscriptions, and Use of virtual social networks (Table 3). By contrast, the economy's weakest indicators include SDG 11: Sustainable Cities and Communities, Professionals, and Technicians and associate professionals.

Table 3: Top-ranked and bottom-ranked indicators of Thailand

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Labor productivity per employee	75
Fixed-broadband subscriptions	9	ICT regulatory environment	76
Use of virtual social networks	15	Firms with website	77
High-tech exports	16	Online access to financial account	78
International Internet bandwidth	19	R&D expenditure by governments and higher education	81
Ease of doing business	20	Internet users	86
Government promotion of investment in emerging technologies	22	SDG 7: Affordable and Clean Energy	88
SDG 3: Good Health and Well-Being	23	Technicians and associate professionals	92
SDG 5: Gender Equality	23	Professionals	100
Active mobile-broadband subscriptions	25	SDG 11: Sustainable Cities and Communities	118

NRI 2020 At-A-Glance: Thailand

Network Readiness Index — Rank: 51 (out of 134) — Score: 53.45

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	51	45.79	C. Governance pillar	47	62.47
1st sub-pillar: Access	39	78.64	1st sub-pillar: Trust	55	46.81
2nd sub-pillar: Content	69	28.12	2nd sub-pillar: Regulation	49	70.96
3rd sub-pillar: Future Technologies	51	30.61	3rd sub-pillar: Inclusion	49	69.63
B. People pillar	61	49.33	D. Impact pillar	51	56.22
1st sub-pillar: Individuals	52	58.87	1st sub-pillar: Economy	42	34.29
2nd sub-pillar: Businesses	66	42.38	2nd sub-pillar: Quality of Life	41	72.85
3rd sub-pillar: Governments	55	46.74	3rd sub-pillar: SDG Contribution	84	61.51

The Network Readiness Index in detail

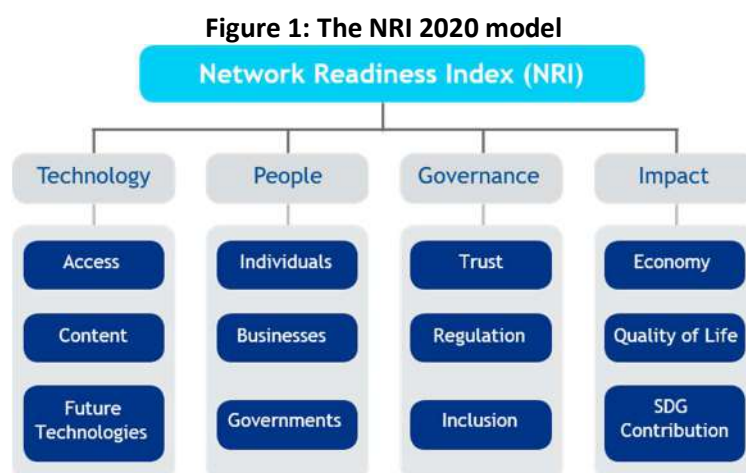| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	51	45.79	**C. Governance pillar**	47	62.47
1st sub-pillar: Access	39	78.64	*1st sub-pillar: Trust*	55	46.81
1.1.1 Mobile tariffs	72	60.55	3.1.1 Secure Internet servers	61	57.83
1.1.2 Handset prices	50	52.99	3.1.2 Cybersecurity	37	85.37
1.1.3 Internet access	69	67.62	3.1.3 Online access to financial account	78	22.52
1.1.4 4G mobile network coverage	38	98.00	3.1.4 Internet shopping	57	21.54
1.1.5 Fixed-broadband subscriptions	9	97.86	*2nd sub-pillar: Regulation*	49	70.96
1.1.6 International Internet bandwidth	19	74.69	3.2.1 Regulatory quality	63	53.87
1.1.7 Internet access in schools	26	98.80	3.2.2 ICT regulatory environment	76	81.47
2nd sub-pillar: Content	69	28.12	3.2.3 Legal framework's adaptability to emerging technologies	47	48.48
1.2.1 GitHub commits	75	2.74	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	67	43.41	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	49	69.63
1.2.4 Mobile apps development	68	63.08	3.3.1 E-Participation	50	76.54
3rd sub-pillar: Future Technologies	51	30.61	3.3.2 Socioeconomic gap in use of digital payments	42	79.33
1.3.1 Adoption of emerging technologies	39	60.58	3.3.3 Availability of local online content	59	64.00
1.3.2 Investment in emerging technologies	37	54.44	3.3.4 Gender gap in Internet use	48	60.99
1.3.3 ICT PCT patent applications	66	2.14	3.3.5 Rural gap in use of digital payments	64	67.30
1.3.4 Computer software spending	61	20.72	**D. Impact pillar**	51	56.22
1.3.5 Robot density	28	15.19	*1st sub-pillar: Economy*	42	34.29
B. People pillar	61	49.33	4.1.1 Medium and high-tech industry	28	51.95
1st sub-pillar: Individuals	52	58.87	4.1.2 High-tech exports	16	44.23
2.1.1 Internet users	86	55.84	4.1.3 PCT patent applications	64	0.48
2.1.2 Active mobile-broadband subscriptions	25	40.93	4.1.4 Labor productivity per employee	75	21.33
2.1.3 Use of virtual social networks	15	75.26	4.1.5 Prevalence of gig economy	48	53.47
2.1.4 Tertiary enrollment	62	35.69	*2nd sub-pillar: Quality of Life*	41	72.85
2.1.5 Adult literacy rate	56	92.01	4.2.1 Happiness	53	65.44
2.1.6 ICT skills	63	53.51	4.2.2 Freedom to make life choices	31	88.95
2nd sub-pillar: Businesses	66	42.38	4.2.3 Income inequality	61	68.56
2.2.1 Firms with website	77	41.79	4.2.4 Healthy life expectancy at birth	55	68.45
2.2.2 Ease of doing business	20	88.20	*3rd sub-pillar: SDG Contribution*	84	61.51
2.2.3 Professionals	100	12.97	4.3.1 SDG 3: Good Health and Well-Being	23	85.25
2.2.4 Technicians and associate professionals	92	18.68	4.3.2 SDG 4: Quality Education	56	35.09
2.2.5 Business use of digital tools	44	72.13	4.3.3 SDG 5: Gender Equality	23	83.85
2.2.6 R&D expenditure by businesses	27	20.52	4.3.4 SDG 7: Affordable and Clean Energy	88	72.25
3rd sub-pillar: Governments	55	46.74	.	.	.
2.3.1 Government online services	42	78.79			
2.3.2 Publication and use of open data	57	27.55			
2.3.3 Government promotion of investment in emerging tech	22	64.58			
2.3.4 R&D expenditure by governments and higher education	81	16.04			

* Confidential data

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# Network Readiness Index 2020
Trinidad and Tobago

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Trinidad and Tobago

Trinidad and Tobago ranks 81st out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Trinidad and Tobago global ranking, overall and by pillar
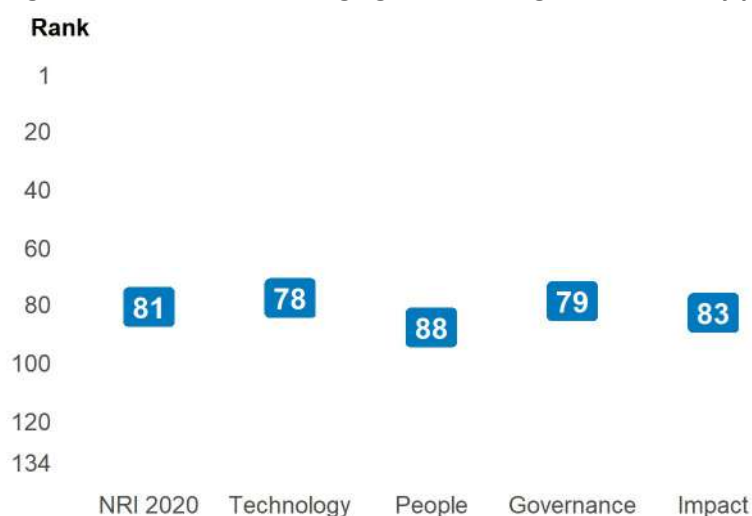
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Trinidad and Tobago relate to Individuals, Quality of Life and Inclusion, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Governments and Future Technologies sub-pillars.

Table 1: Trinidad and Tobago rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	51	Regulation	82
Quality of Life	54	SDG Contribution	99
Inclusion	55	Businesses	101
Access	65	Trust	103
Content	70	Governments	114
Economy	76	Future Technologies	116

NRI score and income

Figure 3 shows the position of Trinidad and Tobago in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Trinidad and Tobago is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
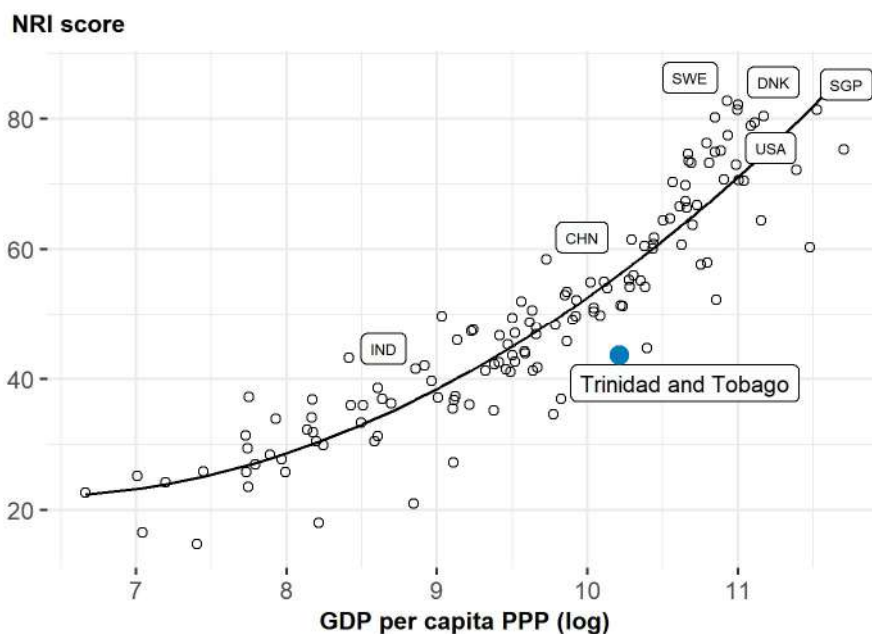
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Trinidad and Tobago belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

High-income countries
Trinidad and Tobago is ranked 50th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it trails high-income countries in all of them.

The Americas
Trinidad and Tobago is ranked 14th within The Americas (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in The Americas in four of the twelve sub-pillars: Access, Individuals, Inclusion and Quality of Life.

Figure 4: Performance of Trinidad and Tobago against its income group and region, overall and by pillar
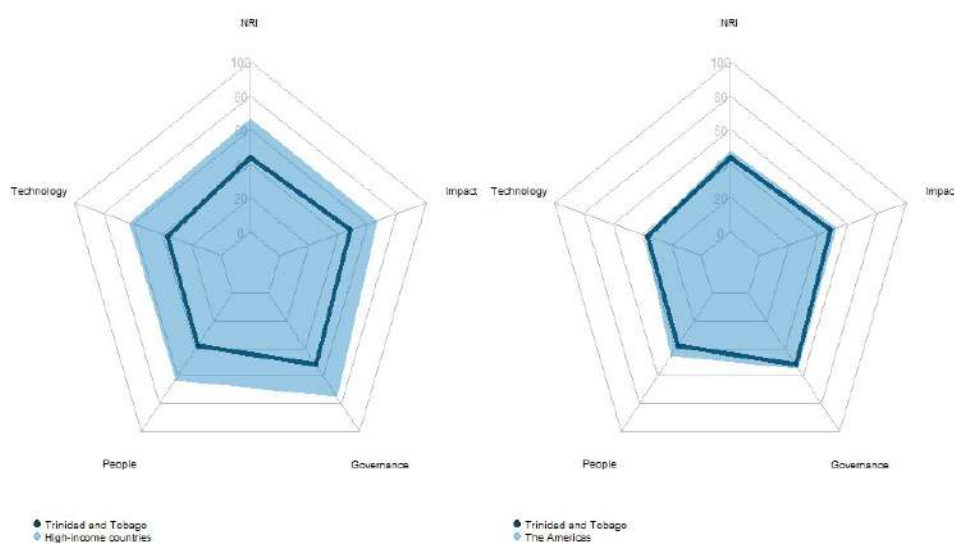
Table 2: Trinidad and Tobago scores vs. averages of its income group and region, overall and by pillar

Dimension	Trinidad and Tobago	High-income countries	The Americas
NRI	43.61	66.82	47.67
Technology	36.12	62.51	38.26
People	38.16	62.72	45.24
Governance	51.94	75.41	54.59
Impact	48.22	66.63	52.61

Strongest and weakest indicators

The indicators where Trinidad and Tobago performs particularly well include e-commerce legislation, International Internet bandwidth, and SDG 5: Gender Equality (Table 3). By contrast, the economy's weakest indicators include SDG 7: Affordable and Clean Energy, High-tech exports, and Legal framework's adaptability to emerging technologies.

Table 3: Top-ranked and bottom-ranked indicators of Trinidad and Tobago

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Adoption of emerging technologies	105
International Internet bandwidth	15	Mobile tariffs	111
SDG 5: Gender Equality	20	Business use of digital tools	111
Adult literacy rate	23	Prevalence of gig economy	111
Technicians and associate professionals	27	Government promotion of investment in emerging technologies	113
Socioeconomic gap in use of digital payments	30	Investment in emerging technologies	114
Medium and high-tech industry	32	Cybersecurity	116
Rural gap in use of digital payments	40	Legal framework's adaptability to emerging technologies	118
Happiness	44	High-tech exports	126
Use of virtual social networks	47	SDG 7: Affordable and Clean Energy	131

NRI 2020 At-A-Glance: Trinidad and Tobago

Network Readiness Index
Rank: 81 (out of 134)   Score: 43.61

Pillar/sub-pillar	Rank	Score
A. Technology pillar	78	36.12
1st sub-pillar: Access	65	64.19
2nd sub-pillar: Content	70	27.45
3rd sub-pillar: Future Technologies	116	16.73
B. People pillar	88	38.16
1st sub-pillar: Individuals	51	59.12
2nd sub-pillar: Businesses	101	31.02
3rd sub-pillar: Governments	114	24.34

Pillar/sub-pillar	Rank	Score
C. Governance pillar	79	51.94
1st sub-pillar: Trust	103	26.03
2nd sub-pillar: Regulation	82	62.00
3rd sub-pillar: Inclusion	55	67.78
D. Impact pillar	83	48.22
1st sub-pillar: Economy	76	22.02
2nd sub-pillar: Quality of Life	54	69.14
3rd sub-pillar: SDG Contribution	99	53.50

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	78	36.12
1st sub-pillar: Access	65	64.19
1.1.1 Mobile tariffs	111	35.40
1.1.2 Handset prices	57	48.96
1.1.3 Internet access	51	77.44
1.1.4 4G mobile network coverage	84	75.00
1.1.5 Fixed-broadband subscriptions	57	72.76
1.1.6 International Internet bandwidth	15	75.58
1.1.7 Internet access in schools	NA	NA
2nd sub-pillar: Content	70	27.45
1.2.1 GitHub commits	62	4.25
1.2.2 Wikipedia edits	61	46.27
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	80	56.08
3rd sub-pillar: Future Technologies	116	16.73
1.3.1 Adoption of emerging technologies	105	27.86
1.3.2 Investment in emerging technologies	114	22.32
1.3.3 ICT PCT patent applications	82	0.00
1.3.4 Computer software spending	NA	NA
1.3.5 Robot density	NA	NA
B. People pillar	88	38.16
1st sub-pillar: Individuals	51	59.12
2.1.1 Internet users	48	76.98
2.1.2 Active mobile-broadband subscriptions	103	17.15
2.1.3 Use of virtual social networks	47	61.86
2.1.4 Tertiary enrollment	NA	NA
2.1.5 Adult literacy rate	23	98.36
2.1.6 ICT skills	87	41.24
2nd sub-pillar: Businesses	101	31.02
2.2.1 Firms with website	102	24.73
2.2.2 Ease of doing business	92	54.94
2.2.3 Professionals	98	14.14
2.2.4 Technicians and associate professionals	27	57.30
2.2.5 Business use of digital tools	111	34.83
2.2.6 R&D expenditure by businesses	85	0.18
3rd sub-pillar: Governments	114	24.34
2.3.1 Government online services	84	60.00
2.3.2 Publication and use of open data	76	17.99
2.3.3 Government promotion of investment in emerging tech	113	13.71
2.3.4 R&D expenditure by governments and higher education	99	5.65

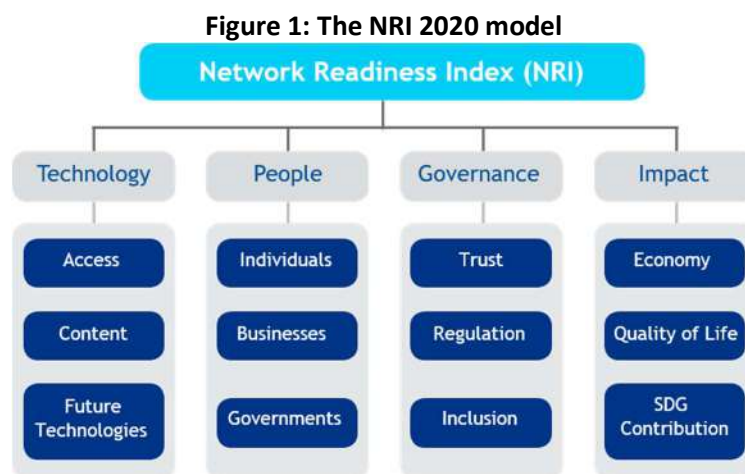| Indicator	Rank	Score
C. Governance pillar	79	51.94
1st sub-pillar: Trust	103	26.03
3.1.1 Secure Internet servers	82	45.85
3.1.2 Cybersecurity	116	19.50
3.1.3 Online access to financial account	84	17.67
3.1.4 Internet shopping	58	21.09
2nd sub-pillar: Regulation	82	62.00
3.2.1 Regulatory quality	68	50.96
3.2.2 ICT regulatory environment	60	86.10
3.2.3 Legal framework's adaptability to emerging technologies	118	10.95
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	55	67.78
3.3.1 E-Participation	83	60.49
3.3.2 Socioeconomic gap in use of digital payments	30	86.14
3.3.3 Availability of local online content	87	50.57
3.3.4 Gender gap in Internet use	NA	NA
3.3.5 Rural gap in use of digital payments	40	73.91
D. Impact pillar	83	48.22
1st sub-pillar: Economy	76	22.02
4.1.1 Medium and high-tech industry	32	50.52
4.1.2 High-tech exports	126	0.26
4.1.3 PCT patent applications	58	0.71
4.1.4 Labor productivity per employee	47	38.52
4.1.5 Prevalence of gig economy	111	20.09
2nd sub-pillar: Quality of Life	54	69.14
4.2.1 Happiness	44	68.77
4.2.2 Freedom to make life choices	51	82.31
4.2.3 Income inequality	NA	NA
4.2.4 Healthy life expectancy at birth	93	56.33
3rd sub-pillar: SDG Contribution	99	53.50
4.3.1 SDG 3: Good Health and Well-Being	54	75.41
4.3.2 SDG 4: Quality Education	59	34.60
4.3.3 SDG 5: Gender Equality	20	86.08
4.3.4 SDG 7: Affordable and Clean Energy	131	0.00
.	.	.

* Confidential data

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Network Readiness Index 2020 Tunisia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Tunisia

Tunisia ranks 91st out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Tunisia global ranking, overall and by pillar
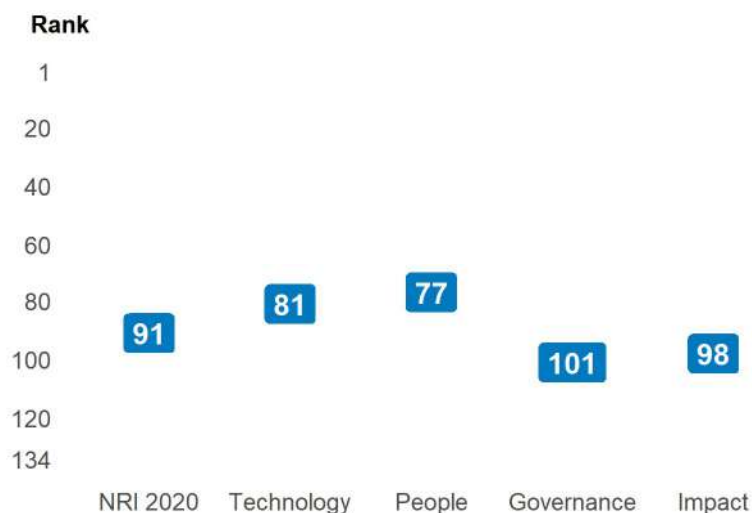
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Tunisia relate to Governments, Access and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Future Technologies, SDG Contribution and Inclusion sub-pillars.

Table 1: Tunisia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	56	Trust	90
Access	77	Regulation	92
Economy	82	Quality of Life	98
Content	84	Future Technologies	100
Businesses	84	SDG Contribution	105
Individuals	85	Inclusion	108

NRI score and income

Figure 3 shows the position of Tunisia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Tunisia is slightly below the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
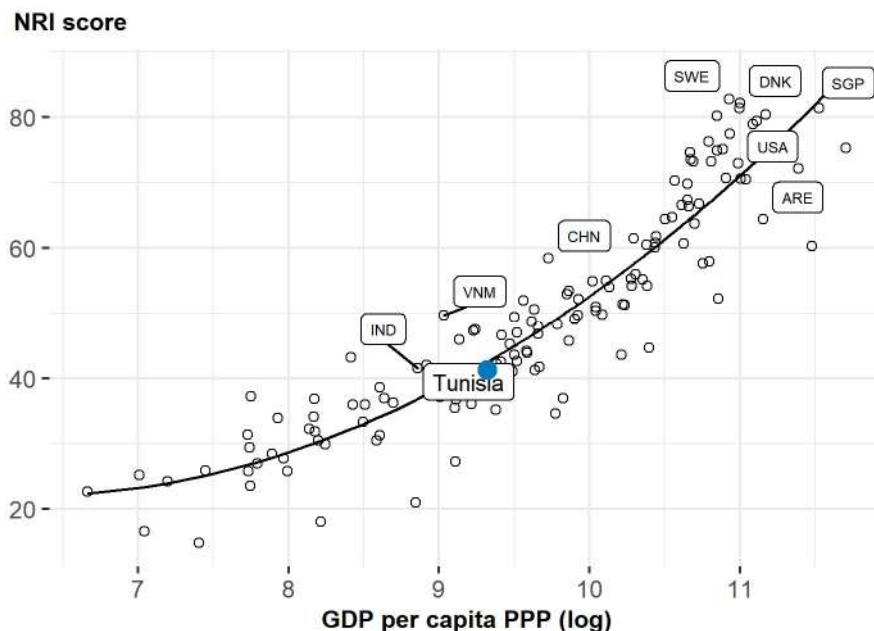
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Tunisia belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Arab States-is United Arab Emirates (ARE).

Performance against its income group and region

Lower-middle-income countries
Tunisia is ranked 11th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in nine of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Trust, Regulation, Economy and Quality of Life.

Arab States
Tunisia is ranked 10th within Arab States (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Arab States in one of the twelve sub-pillars: Governments.

Figure 4: Performance of Tunisia against its income group and region, overall and by pillar

Table 2: Tunisia scores vs. averages of its income group and region, overall and by pillar

Dimension	Tunisia	Lower-middle-income countries	Arab States
NRI	41.30	36.72	47.18
Technology	33.81	27.72	39.24
People	44.59	33.88	47.97
Governance	43.73	43.15	51.70
Impact	43.06	42.15	49.82

Strongest and weakest indicators

The indicators where Tunisia performs particularly well include Income inequality, Computer software spending, and R&D expenditure by governments and higher education (Table 3). By contrast, the economy's weakest indicators include Rural gap in use of digital payments, Freedom to make life choices, Socioeconomic gap in use of digital payments, and Happiness.

Table 3: Top-ranked and bottom-ranked indicators of Tunisia

Strongest indicators	Rank	Weakest indicators	Rank
Income inequality	33	Regulatory quality	100
Computer software spending	34	Adoption of emerging technologies	103
R&D expenditure by governments and higher education	35	Online access to financial account	105
Internet access in schools	42	Prevalence of gig economy	107
Medium and high-tech industry	42	SDG 5: Gender Equality	108
SDG 7: Affordable and Clean Energy	44	Business use of digital tools	112
Firms with website	45	Socioeconomic gap in use of digital payments	117
Use of virtual social networks	47	Happiness	117
Government promotion of investment in emerging technologies	50	Freedom to make life choices	118
Privacy protection by law content	51	Rural gap in use of digital payments	119

NRI 2020 At-A-Glance: Tunisia

Network Readiness Index   Rank: 91 (out of 134)   Score: 41.30

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	81	33.81	C. Governance pillar	101	43.73
1st sub-pillar: Access	77	58.27	1st sub-pillar: Trust	90	29.56
2nd sub-pillar: Content	84	23.49	2nd sub-pillar: Regulation	92	56.08
3rd sub-pillar: Future Technologies	100	19.66	3rd sub-pillar: Inclusion	108	45.54
B. People pillar	77	44.59	D. Impact pillar	98	43.06
1st sub-pillar: Individuals	85	50.53	1st sub-pillar: Economy	82	20.67
2nd sub-pillar: Businesses	84	36.57	2nd sub-pillar: Quality of Life	98	56.17
3rd sub-pillar: Governments	56	46.67	3rd sub-pillar: SDG Contribution	105	52.33

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	81	33.81	**C. Governance pillar**	101	43.73
1st sub-pillar: Access	77	58.27	*1st sub-pillar: Trust*	90	29.56
1.1.1 Mobile tariffs	54	68.38	3.1.1 Secure Internet servers	85	44.71
1.1.2 Handset prices	76	41.27	3.1.2 Cybersecurity	77	57.20
1.1.3 Internet access	84	45.90	3.1.3 Online access to financial account	105	10.37
1.1.4 4G mobile network coverage	52	96.00	3.1.4 Internet shopping	89	5.96
1.1.5 Fixed-broadband subscriptions	81	40.64	*2nd sub-pillar: Regulation*	92	56.08
1.1.6 International Internet bandwidth	75	67.07	3.2.1 Regulatory quality	100	42.36
1.1.7 Internet access in schools	42	48.66	3.2.2 ICT regulatory environment	89	73.75
2nd sub-pillar: Content	84	23.49	3.2.3 Legal framework's adaptability to emerging technologies	85	30.45
1.2.1 GitHub commits	80	2.19	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	88	31.79	3.2.5 Privacy protection by law content	51	58.83
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	108	45.54
1.2.4 Mobile apps development	76	57.61	3.3.1 E-Participation	72	67.90
3rd sub-pillar: Future Technologies	100	19.66	3.3.2 Socioeconomic gap in use of digital payments	117	35.33
1.3.1 Adoption of emerging technologies	103	29.39	3.3.3 Availability of local online content	84	51.50
1.3.2 Investment in emerging technologies	80	35.63	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	56	4.65	3.3.5 Rural gap in use of digital payments	119	27.44
1.3.4 Computer software spending	34	27.67	**D. Impact pillar**	98	43.06
1.3.5 Robot density	54	0.95	*1st sub-pillar: Economy*	82	20.67
B. People pillar	77	44.59	4.1.1 Medium and high-tech industry	42	42.88
1st sub-pillar: Individuals	85	50.53	4.1.2 High-tech exports	62	14.01
2.1.1 Internet users	76	63.44	4.1.3 PCT patent applications	74	0.17
2.1.2 Active mobile-broadband subscriptions	65	29.31	4.1.4 Labor productivity per employee	72	23.00
2.1.3 Use of virtual social networks	47	61.86	4.1.5 Prevalence of gig economy	107	23.30
2.1.4 Tertiary enrollment	80	22.77	*2nd sub-pillar: Quality of Life*	98	56.17
2.1.5 Adult literacy rate	81	73.04	4.2.1 Happiness	117	31.89
2.1.6 ICT skills	64	52.77	4.2.2 Freedom to make life choices	118	48.37
2nd sub-pillar: Businesses	84	36.57	4.2.3 Income inequality	33	77.84
2.2.1 Firms with website	45	65.94	4.2.4 Healthy life expectancy at birth	65	66.58
2.2.2 Ease of doing business	73	67.97	*3rd sub-pillar: SDG Contribution*	105	52.33
2.2.3 Professionals	93	15.74	4.3.1 SDG 3: Good Health and Well-Being	69	68.85
2.2.4 Technicians and associate professionals	67	32.17	4.3.2 SDG 4: Quality Education	75	15.67
2.2.5 Business use of digital tools	112	34.51	4.3.3 SDG 5: Gender Equality	108	51.14
2.2.6 R&D expenditure by businesses	60	3.09	4.3.4 SDG 7: Affordable and Clean Energy	44	83.89
3rd sub-pillar: Governments	56	46.67	.	.	.
2.3.1 Government online services	81	61.21			
2.3.2 Publication and use of open data	52	32.17			
2.3.3 Government promotion of investment in emerging tech	50	44.95			
2.3.4 R&D expenditure by governments and higher education	35	48.36			

* Confidential data

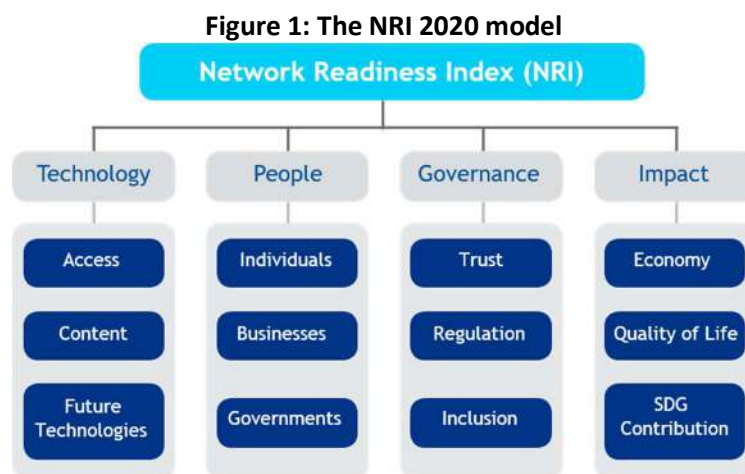**Sources**

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Network Readiness Index 2020 Turkey

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Turkey

Turkey ranks 57th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Turkey global ranking, overall and by pillar
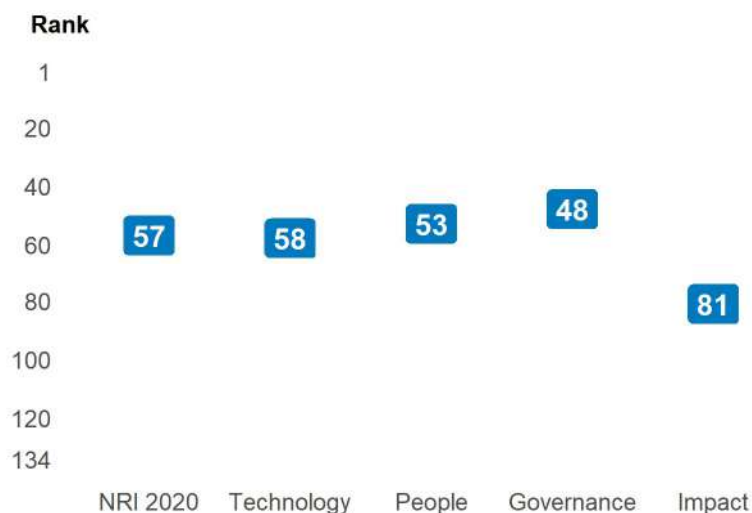
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Turkey relate to Governments, Trust and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Regulation, Content and Quality of Life sub-pillars.

Table 1: Turkey rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Governments	39	Inclusion	61
Trust	42	Businesses	63
Access	54	SDG Contribution	72
Future Technologies	55	Regulation	74
Individuals	57	Content	78
Economy	58	Quality of Life	103

NRI score and income

Figure 3 shows the position of Turkey in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Turkey is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
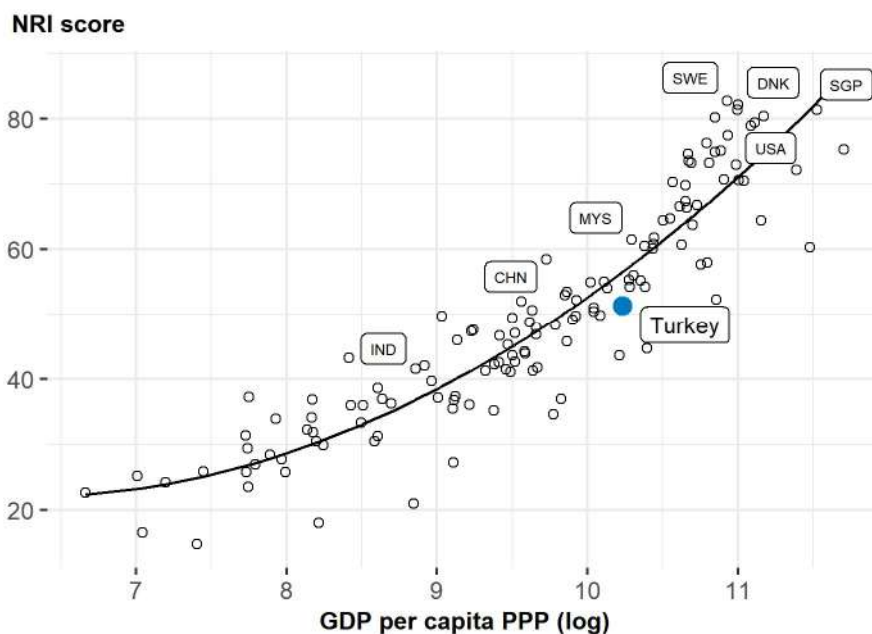
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Turkey belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-Europe-is Sweden (SWE).

Performance against its income group and region

Upper-middle-income countries
Turkey is ranked 10th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, people and governance. At the sub-pillar level, it outperforms upper-middle-income countries in nine of the twelve sub-pillars: Access, Future Technologies, Individuals, Governments, Trust, Regulation, Inclusion, Economy and SDG Contribution.

Europe
Turkey is ranked 34th within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Turkey against its income group and region, overall and by pillar
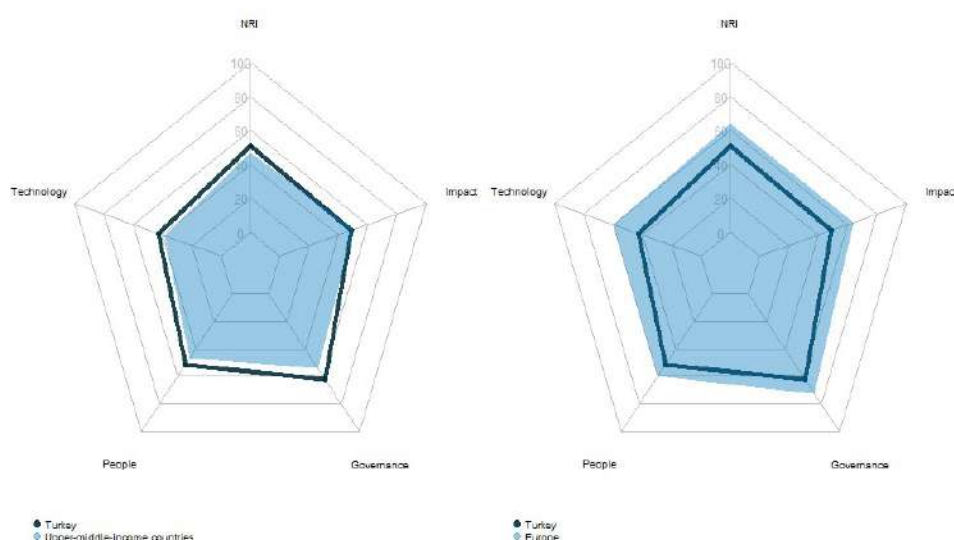
Table 2: Turkey scores vs. averages of its income group and region, overall and by pillar

Dimension	Turkey	Upper-middle-income countries	Europe
NRI	51.24	47.39	64.21
Technology	42.44	38.42	59.93
People	51.41	46.66	59.89
Governance	62.35	54.31	72.98
Impact	48.76	50.17	64.04

Strongest and weakest indicators

The indicators where Turkey performs particularly well include e-commerce legislation, ICT regulatory environment, and Computer software spending (Table 3). By contrast, the economy's weakest indicators include Freedom to make life choices, ICT skills, and Happiness.

Table 3: Top-ranked and bottom-ranked indicators of Turkey

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Gender gap in Internet use	81
ICT regulatory environment	8	Income inequality	87
Computer software spending	20	Handset prices	88
SDG 7: Affordable and Clean Energy	21	Wikipedia edits	100
Government online services	22	High-tech exports	102
Cybersecurity	22	SDG 5: Gender Equality	102
E-Participation	23	Investment in emerging technologies	103
Labor productivity per employee	29	Happiness	105
Ease of doing business	32	ICT skills	111
ICT PCT patent applications	35	Freedom to make life choices	124

NRI 2020 At-A-Glance: Turkey

Network Readiness Index Rank: 57 (out of 134) Score: 51.24

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	58	42.44	C. Governance pillar	48	62.35
1st sub-pillar: Access	54	71.81	1st sub-pillar: Trust	42	57.72
2nd sub-pillar: Content	78	25.36	2nd sub-pillar: Regulation	74	64.17
3rd sub-pillar: Future Technologies	55	30.15	3rd sub-pillar: Inclusion	61	65.17
B. People pillar	53	51.41	D. Impact pillar	81	48.76
1st sub-pillar: Individuals	57	57.98	1st sub-pillar: Economy	58	28.89
2nd sub-pillar: Businesses	63	43.80	2nd sub-pillar: Quality of Life	103	51.62
3rd sub-pillar: Governments	39	52.44	3rd sub-pillar: SDG Contribution	72	65.77

The Network Readiness Index in detail

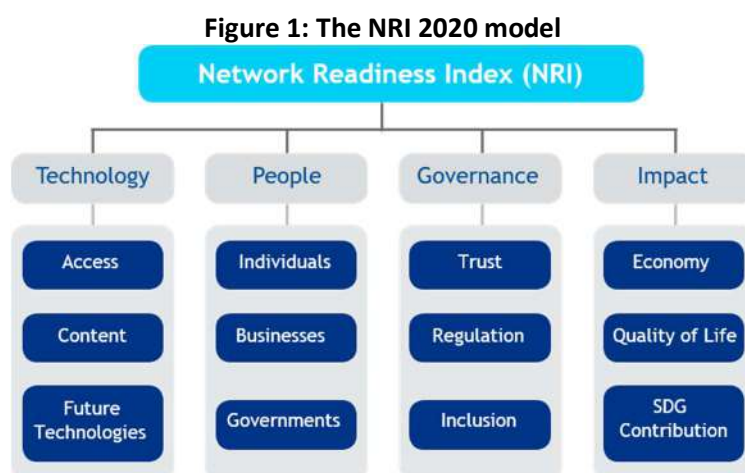| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	58	42.44	**C. Governance pillar**	48	62.35
1st sub-pillar: Access	54	71.81	*1st sub-pillar: Trust*	42	57.72
1.1.1 Mobile tariffs	49	69.79	3.1.1 Secure Internet servers	47	68.63
1.1.2 Handset prices	88	35.86	3.1.2 Cybersecurity	22	91.55
1.1.3 Internet access	37	83.75	3.1.3 Online access to financial account	43	43.39
1.1.4 4G mobile network coverage	59	93.17	3.1.4 Internet shopping	50	27.31
1.1.5 Fixed-broadband subscriptions	52	76.42	*2nd sub-pillar: Regulation*	74	64.17
1.1.6 International Internet bandwidth	39	71.89	3.2.1 Regulatory quality	73	50.37
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	8	96.72
2nd sub-pillar: Content	78	25.36	3.2.3 Legal framework's adaptability to emerging technologies	61	43.18
1.2.1 GitHub commits	65	3.71	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	100	19.70	3.2.5 Privacy protection by law content	67	30.57
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	61	65.17
1.2.4 Mobile apps development	48	70.78	3.3.1 E-Participation	23	88.89
3rd sub-pillar: Future Technologies	55	30.15	3.3.2 Socioeconomic gap in use of digital payments	63	68.25
1.3.1 Adoption of emerging technologies	58	49.37	3.3.3 Availability of local online content	46	69.95
1.3.2 Investment in emerging technologies	103	27.62	3.3.4 Gender gap in Internet use	81	38.99
1.3.3 ICT PCT patent applications	35	21.73	3.3.5 Rural gap in use of digital payments	79	59.78
1.3.4 Computer software spending	20	43.21	**D. Impact pillar**	81	48.76
1.3.5 Robot density	35	8.83	*1st sub-pillar: Economy*	58	28.89
B. People pillar	53	51.41	4.1.1 Medium and high-tech industry	45	40.05
1st sub-pillar: Individuals	57	57.98	4.1.2 High-tech exports	102	4.41
2.1.1 Internet users	62	70.50	4.1.3 PCT patent applications	35	3.73
2.1.2 Active mobile-broadband subscriptions	69	28.54	4.1.4 Labor productivity per employee	29	54.26
2.1.3 Use of virtual social networks	44	63.92	4.1.5 Prevalence of gig economy	65	42.00
2.1.4 Tertiary enrollment	NA	NA	*2nd sub-pillar: Quality of Life*	103	51.62
2.1.5 Adult literacy rate	40	95.08	4.2.1 Happiness	105	42.83
2.1.6 ICT skills	111	31.87	4.2.2 Freedom to make life choices	124	43.57
2nd sub-pillar: Businesses	63	43.80	4.2.3 Income inequality	87	54.38
2.2.1 Firms with website	66	48.78	4.2.4 Healthy life expectancy at birth	71	65.71
2.2.2 Ease of doing business	32	82.36	*3rd sub-pillar: SDG Contribution*	72	65.77
2.2.3 Professionals	60	26.88	4.3.1 SDG 3: Good Health and Well-Being	54	75.41
2.2.4 Technicians and associate professionals	79	25.85	4.3.2 SDG 4: Quality Education	41	48.22
2.2.5 Business use of digital tools	53	64.97	4.3.3 SDG 5: Gender Equality	102	59.69
2.2.6 R&D expenditure by businesses	37	13.96	4.3.4 SDG 7: Affordable and Clean Energy	21	89.09
3rd sub-pillar: Governments	39	52.44	.	.	.
2.3.1 Government online services	22	85.45			
2.3.2 Publication and use of open data	43	36.88			
2.3.3 Government promotion of investment in emerging tech	38	50.38			
2.3.4 R&D expenditure by governments and higher education	49	37.05			

* Confidential data

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Network Readiness Index 2020 Uganda

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Uganda

Uganda ranks 114th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Uganda global ranking, overall and by pillar
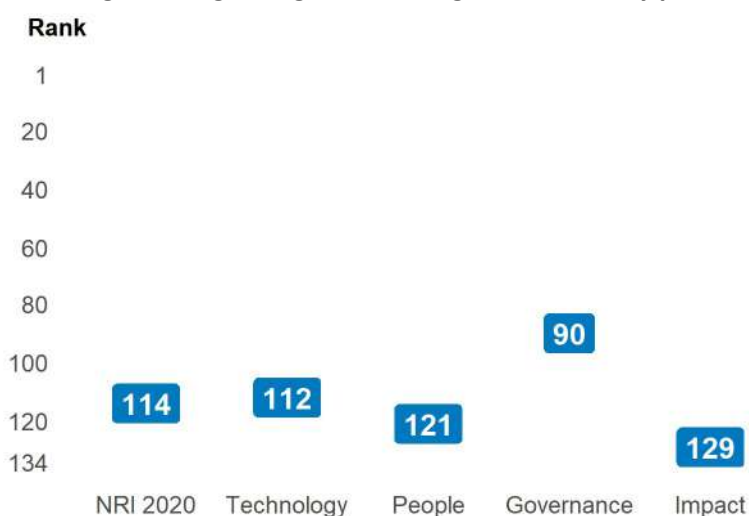
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Uganda relate to Trust, Inclusion and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Content and SDG Contribution sub-pillars.

Table 1: Uganda rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Trust	84	Quality of Life	115
Inclusion	87	Economy	116
Future Technologies	91	Individuals	120
Regulation	91	Businesses	121
Access	97	Content	123
Governments	103	SDG Contribution	130

NRI score and income

Figure 3 shows the position of Uganda in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Uganda is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
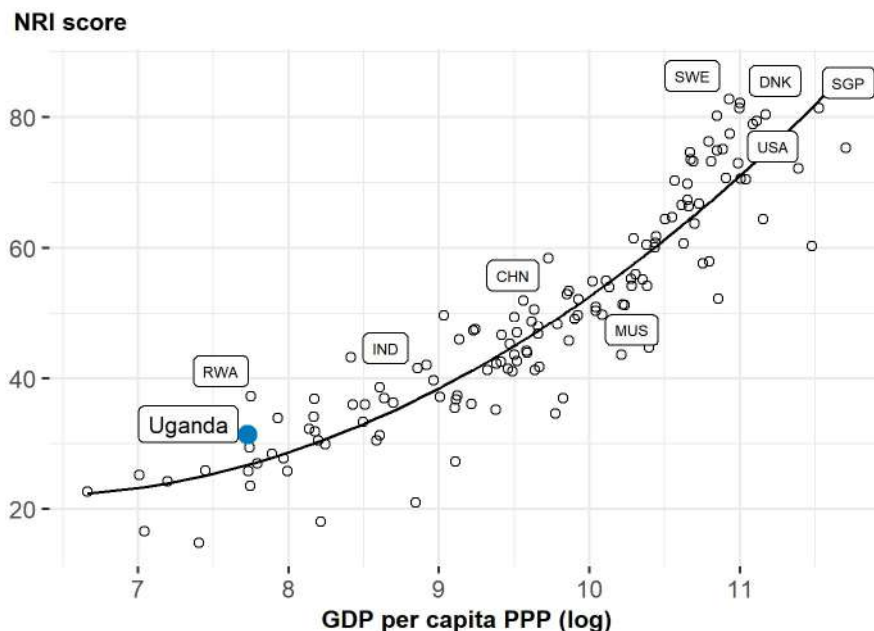
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Uganda belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region
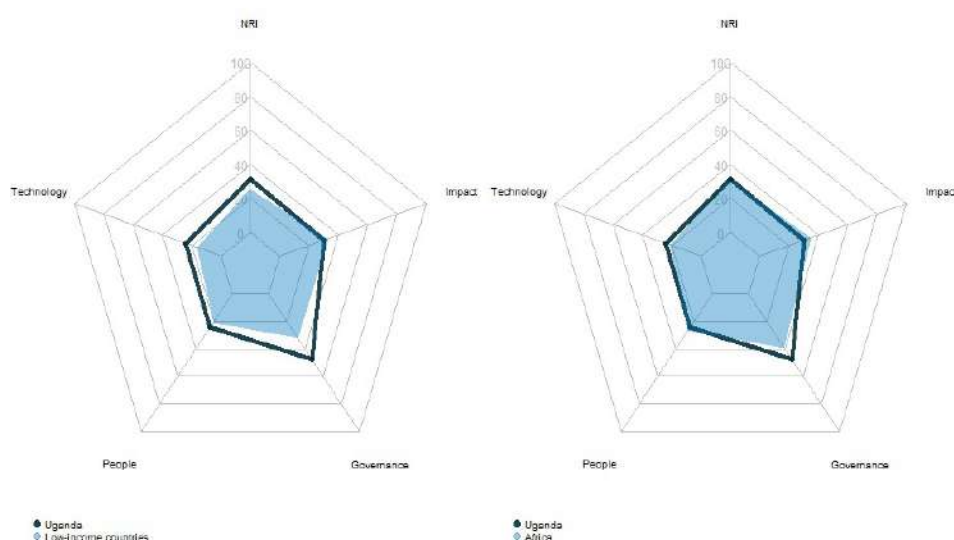
Low-income countries
Uganda is ranked 3rd in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in three of the four pillars: nri.score, technology, people and governance. At the sub-pillar level, it outperforms low-income countries in nine of the twelve sub-pillars: Access, Future Technologies, Individuals, Businesses, Governments, Trust, Regulation, Inclusion and Quality of Life.

Africa
Uganda is ranked 12th within Africa (Figure 4, right panel). It has a score above the regional average in two of the four pillars: nri.score, technology and governance. With regard to sub-pillars, it outperforms the average in Africa in six of the twelve sub-pillars: Access, Future Technologies, Trust, Regulation, Inclusion and Quality of Life.

Figure 4: Performance of Uganda against its income group and region, overall and by pillar

Table 2: Uganda scores vs. averages of its income group and region, overall and by pillar

Dimension	Uganda	Low-income countries	Africa
NRI	31.40	25.61	30.62
Technology	23.76	16.33	21.47
People	24.33	20.61	26.75
Governance	47.57	32.58	39.31
Impact	29.96	32.92	34.94

Strongest and weakest indicators

The indicators where Uganda performs particularly well include Rural gap in use of digital payments, ICT regulatory environment, and Fixed-broadband subscriptions (Table 3). By contrast, the economy's weakest indicators include Use of virtual social networks, SDG 7: Affordable and Clean Energy, and Internet access.

Table 3: Top-ranked and bottom-ranked indicators of Uganda

Strongest indicators	Rank	Weakest indicators	Rank
Rural gap in use of digital payments	38	Secure Internet servers	119
ICT regulatory environment	51	Mobile tariffs	121
Fixed-broadband subscriptions	60	Computer software spending	121
Online access to financial account	64	Tertiary enrollment	121
Cybersecurity	67	SDG 5: Gender Equality	122
Socioeconomic gap in use of digital payments	68	SDG 11: Sustainable Cities and Communities	122
Investment in emerging technologies	77	Availability of local online content	123
e-commerce legislation	77	Internet access	124
Adult literacy rate	86	SDG 7: Affordable and Clean Energy	126
R&D expenditure by businesses	86	Use of virtual social networks	128

NRI 2020 At-A-Glance: Uganda

Network Readiness Index   Rank: 114 (out of 134)   Score: 31.40

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	112	23.76	C. Governance pillar	90	47.57
1st sub-pillar: Access	97	40.76	1st sub-pillar: Trust	84	31.60
2nd sub-pillar: Content	123	8.28	2nd sub-pillar: Regulation	91	56.42
3rd sub-pillar: Future Technologies	91	22.23	3rd sub-pillar: Inclusion	87	54.69
B. People pillar	121	24.33	D. Impact pillar	129	29.96
1st sub-pillar: Individuals	120	23.18	1st sub-pillar: Economy	116	12.44
2nd sub-pillar: Businesses	121	22.68	2nd sub-pillar: Quality of Life	115	45.12
3rd sub-pillar: Governments	103	27.12	3rd sub-pillar: SDG Contribution	130	32.31

The Network Readiness Index in detail

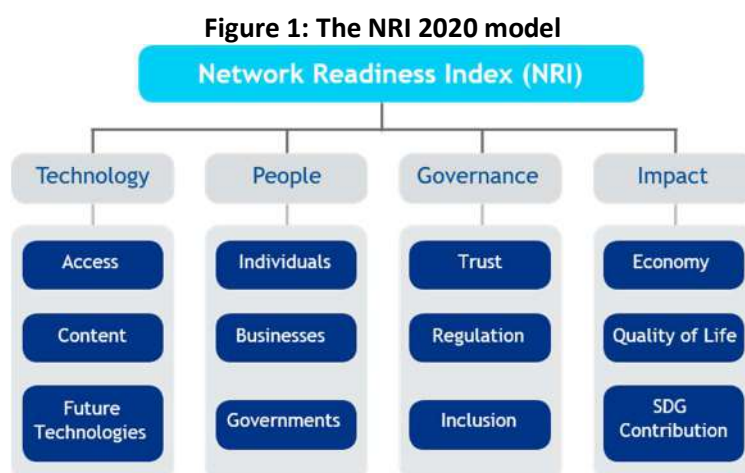| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	112	23.76	**C. Governance pillar**	90	47.57
1st sub-pillar: Access	97	40.76	*1st sub-pillar: Trust*	84	31.60
1.1.1 Mobile tariffs	121	28.67	3.1.1 Secure Internet servers	119	24.77
1.1.2 Handset prices	114	21.53	3.1.2 Cybersecurity	67	66.41
1.1.3 Internet access	124	10.52	3.1.3 Online access to financial account	64	30.31
1.1.4 4G mobile network coverage	100	57.00	3.1.4 Internet shopping	95	4.91
1.1.5 Fixed-broadband subscriptions	60	71.01	*2nd sub-pillar: Regulation*	91	56.42
1.1.6 International Internet bandwidth	116	55.80	3.2.1 Regulatory quality	92	45.88
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	51	86.88
2nd sub-pillar: Content	123	8.28	3.2.3 Legal framework's adaptability to emerging technologies	106	17.92
1.2.1 GitHub commits	105	0.75	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	119	3.00	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	87	54.69
1.2.4 Mobile apps development	119	29.26	3.3.1 E-Participation	90	55.55
3rd sub-pillar: Future Technologies	91	22.23	3.3.2 Socioeconomic gap in use of digital payments	68	65.42
1.3.1 Adoption of emerging technologies	101	29.80	3.3.3 Availability of local online content	123	23.57
1.3.2 Investment in emerging technologies	77	36.03	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	38	74.20
1.3.4 Computer software spending	121	0.86	**D. Impact pillar**	129	29.96
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	116	12.44
B. People pillar	121	24.33	4.1.1 Medium and high-tech industry	100	13.88
1st sub-pillar: Individuals	120	23.18	4.1.2 High-tech exports	93	6.70
2.1.1 Internet users	114	21.70	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	113	12.05	4.1.4 Labor productivity per employee	111	2.55
2.1.3 Use of virtual social networks	128	3.71	4.1.5 Prevalence of gig economy	101	26.61
2.1.4 Tertiary enrollment	121	2.96	*2nd sub-pillar: Quality of Life*	115	45.12
2.1.5 Adult literacy rate	86	69.81	4.2.1 Happiness	101	44.32
2.1.6 ICT skills	116	28.87	4.2.2 Freedom to make life choices	110	56.02
2nd sub-pillar: Businesses	121	22.68	4.2.3 Income inequality	92	52.06
2.2.1 Firms with website	116	11.26	4.2.4 Healthy life expectancy at birth	117	28.08
2.2.2 Ease of doing business	99	52.62	*3rd sub-pillar: SDG Contribution*	130	32.31
2.2.3 Professionals	96	14.26	4.3.1 SDG 3: Good Health and Well-Being	117	27.87
2.2.4 Technicians and associate professionals	109	11.61	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	98	46.18	4.3.3 SDG 5: Gender Equality	122	39.06
2.2.6 R&D expenditure by businesses	86	0.18	4.3.4 SDG 7: Affordable and Clean Energy	126	40.75
3rd sub-pillar: Governments	103	27.12	.	.	.
2.3.1 Government online services	88	56.98			
2.3.2 Publication and use of open data	89	11.59			
2.3.3 Government promotion of investment in emerging tech	96	27.21			
2.3.4 R&D expenditure by governments and higher education	87	12.71			

* Confidential data

5

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Network Readiness Index 2020
Ukraine

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Ukraine

Ukraine ranks 64th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Ukraine global ranking, overall and by pillar
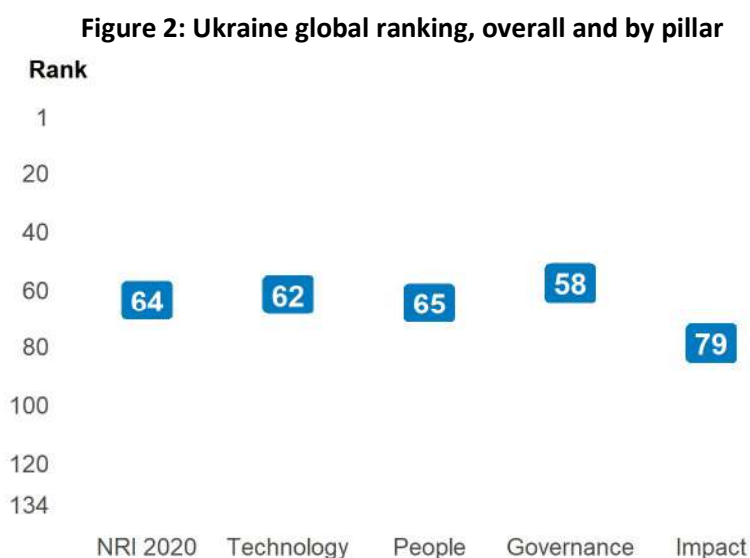
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Ukraine relate to Content, Trust and Businesses, among others (Table 1). More could be done, though, to improve the economy's performances in the Access, Regulation and SDG Contribution sub-pillars.

Table 1: Ukraine rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Content	46	Governments	71
Trust	49	Inclusion	72
Businesses	52	Quality of Life	77
Future Technologies	53	Access	79
Economy	62	Regulation	83
Individuals	63	SDG Contribution	91

NRI score and income

Figure 3 shows the position of Ukraine in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Ukraine is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
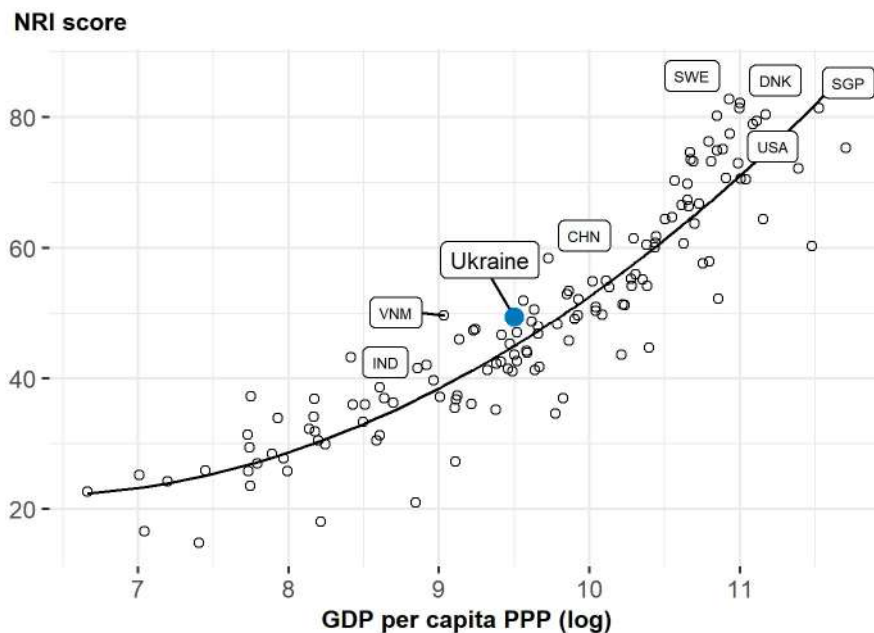
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Ukraine belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Europe-is Sweden (SWE).

Performance against its income group and region

Lower-middle-income countries
Ukraine is ranked 2nd in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it has a higher score than the average of lower-middle-income countries in all of them.

Europe
Ukraine is ranked 36th within Europe (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Ukraine against its income group and region, overall and by pillar

Table 2: Ukraine scores vs. averages of its income group and region, overall and by pillar

Dimension	Ukraine	Lower-middle-income countries	Europe
NRI	49.43	36.72	64.21
Technology	41.51	27.72	59.93
People	48.87	33.88	59.89
Governance	58.19	43.15	72.98
Impact	49.16	42.15	64.04

Strongest and weakest indicators

The indicators where Ukraine performs particularly well include Adult literacy rate, e-commerce legislation, and Income inequality (Table 3). By contrast, the economy's weakest indicators include 4G mobile network coverage, SDG 7: Affordable and Clean Energy, and Handset prices.

Table 3: Top-ranked and bottom-ranked indicators of Ukraine

Strongest indicators	Rank	Weakest indicators	Rank
Adult literacy rate	1	Healthy life expectancy at birth	86
e-commerce legislation	1	Regulatory quality	87
Income inequality	6	Use of virtual social networks	88
Tertiary enrollment	14	Rural gap in use of digital payments	93
Fixed-broadband subscriptions	16	Active mobile-broadband subscriptions	102
Computer software spending	19	Freedom to make life choices	105
SDG 5: Gender Equality	24	Happiness	109
Professionals	31	Handset prices	113
GitHub commits	34	SDG 7: Affordable and Clean Energy	128
Prevalence of gig economy	36	4G mobile network coverage	129

NRI 2020 At-A-Glance: Ukraine

Network Readiness Index   Rank: 64 (out of 134)   Score: 49.43

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	62	41.51	C. Governance pillar	58	58.19
1st sub-pillar: Access	79	54.12	1st sub-pillar: Trust	49	50.66
2nd sub-pillar: Content	46	39.90	2nd sub-pillar: Regulation	83	61.48
3rd sub-pillar: Future Technologies	53	30.50	3rd sub-pillar: Inclusion	72	62.42
B. People pillar	65	48.87	D. Impact pillar	79	49.16
1st sub-pillar: Individuals	63	56.22	1st sub-pillar: Economy	62	26.17
2nd sub-pillar: Businesses	52	48.53	2nd sub-pillar: Quality of Life	77	62.86
3rd sub-pillar: Governments	71	41.85	3rd sub-pillar: SDG Contribution	91	58.46

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	62	41.51	**C. Governance pillar**	58	58.19
1st sub-pillar: Access	79	54.12	*1st sub-pillar: Trust*	49	50.66
1.1.1 Mobile tariffs	46	70.14	3.1.1 Secure Internet servers	43	71.58
1.1.2 Handset prices	113	21.72	3.1.2 Cybersecurity	55	70.75
1.1.3 Internet access	76	60.16	3.1.3 Online access to financial account	58	32.53
1.1.4 4G mobile network coverage	129	3.00	3.1.4 Internet shopping	49	27.80
1.1.5 Fixed-broadband subscriptions	16	95.72	*2nd sub-pillar: Regulation*	83	61.48
1.1.6 International Internet bandwidth	50	70.28	3.2.1 Regulatory quality	87	46.57
1.1.7 Internet access in schools	40	57.79	3.2.2 ICT regulatory environment	75	81.66
2nd sub-pillar: Content	46	39.90	3.2.3 Legal framework's adaptability to emerging technologies	43	50.29
1.2.1 GitHub commits	34	21.80	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	43	65.94	3.2.5 Privacy protection by law content	68	28.89
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	72	62.42
1.2.4 Mobile apps development	61	66.34	3.3.1 E-Participation	46	80.24
3rd sub-pillar: Future Technologies	53	30.50	3.3.2 Socioeconomic gap in use of digital payments	58	71.47
1.3.1 Adoption of emerging technologies	49	53.00	3.3.3 Availability of local online content	75	54.32
1.3.2 Investment in emerging technologies	63	40.56	3.3.4 Gender gap in Internet use	71	52.09
1.3.3 ICT PCT patent applications	45	11.25	3.3.5 Rural gap in use of digital payments	93	53.97
1.3.4 Computer software spending	19	46.98	**D. Impact pillar**	79	49.16
1.3.5 Robot density	56	0.74	*1st sub-pillar: Economy*	62	26.17
B. People pillar	65	48.87	4.1.1 Medium and high-tech industry	48	38.65
1st sub-pillar: Individuals	63	56.22	4.1.2 High-tech exports	74	10.24
2.1.1 Internet users	81	57.97	4.1.3 PCT patent applications	53	0.96
2.1.2 Active mobile-broadband subscriptions	102	17.56	4.1.4 Labor productivity per employee	78	20.29
2.1.3 Use of virtual social networks	88	42.27	4.1.5 Prevalence of gig economy	36	60.68
2.1.4 Tertiary enrollment	14	60.28	*2nd sub-pillar: Quality of Life*	77	62.86
2.1.5 Adult literacy rate	1	100.00	4.2.1 Happiness	109	39.48
2.1.6 ICT skills	53	59.25	4.2.2 Freedom to make life choices	105	57.88
2nd sub-pillar: Businesses	52	48.53	4.2.3 Income inequality	6	95.10
2.2.1 Firms with website	49	63.16	4.2.4 Healthy life expectancy at birth	86	58.97
2.2.2 Ease of doing business	62	70.72	*3rd sub-pillar: SDG Contribution*	91	58.46
2.2.3 Professionals	31	44.51	4.3.1 SDG 3: Good Health and Well-Being	79	65.57
2.2.4 Technicians and associate professionals	44	48.09	4.3.2 SDG 4: Quality Education	42	48.07
2.2.5 Business use of digital tools	71	57.68	4.3.3 SDG 5: Gender Equality	24	83.72
2.2.6 R&D expenditure by businesses	49	7.04	4.3.4 SDG 7: Affordable and Clean Energy	128	23.70
3rd sub-pillar: Governments	71	41.85	.	.	.
2.3.1 Government online services	71	67.28			
2.3.2 Publication and use of open data	45	35.96			
2.3.3 Government promotion of investment in emerging tech	42	47.94			
2.3.4 R&D expenditure by governments and higher education	80	16.24			

* Confidential data

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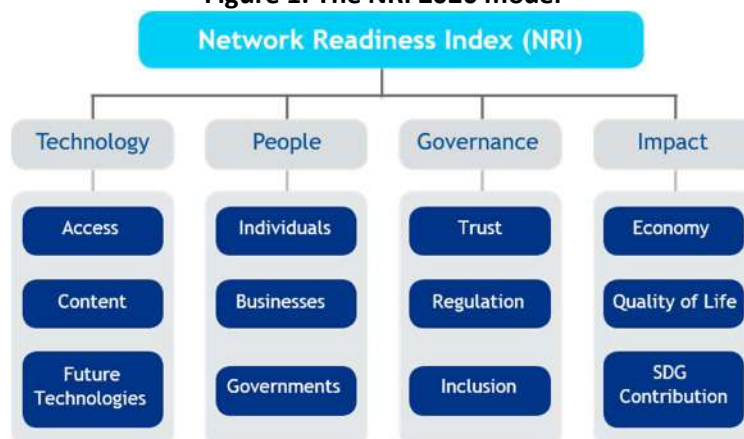
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Network Readiness Index 2020 United Arab Emirates

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
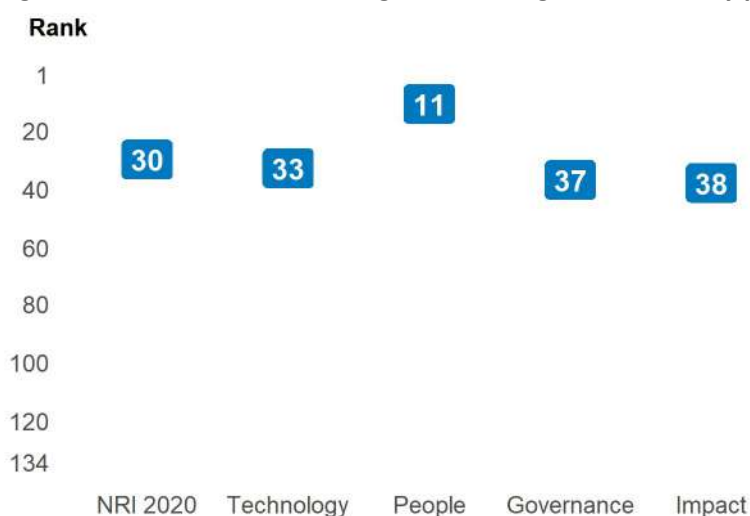
Figure 1: The NRI 2020 model

Global NRI position of United Arab Emirates

United Arab Emirates ranks 30th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: United Arab Emirates global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of United Arab Emirates relate to Individuals, Access and Quality of Life, among others (Table 1). More could be done, though, to improve the economy's performances in the Content, Regulation and SDG Contribution sub-pillars.

Table 1: United Arab Emirates rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	1	Economy	32
Access	10	Future Technologies	36
Quality of Life	24	Businesses	39
Governments	25	Content	52
Inclusion	26	Regulation	52
Trust	30	SDG Contribution	80

NRI score and income

Figure 3 shows the position of United Arab Emirates in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, United Arab Emirates is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
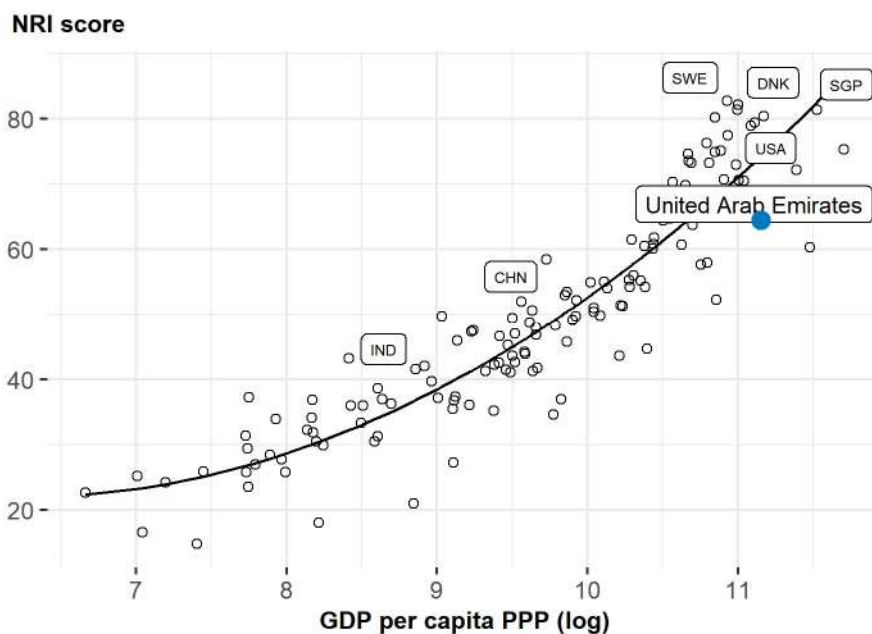
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. United Arab Emirates belongs to the group of high-income countries, where the best performer is Sweden (SWE). It is the top performer of its region, the Arab States.

Performance against its income group and region

High-income countries
United Arab Emirates is ranked 30th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in one of the four pillars: people. At the sub-pillar level, it outperforms high-income countries in five of the twelve sub-pillars: Access, Individuals, Governments, Inclusion and Quality of Life.

Arab States
United Arab Emirates is ranked 1st within Arab States (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of United Arab Emirates against its income group and region, overall and by pillar

Table 2: United Arab Emirates scores vs. averages of its income group and region, overall and by pillar

Dimension	United Arab Emirates	High-income countries	Arab States
NRI	64.42	66.82	47.18
Technology	54.50	62.51	39.24
People	70.62	62.72	47.97
Governance	71.55	75.41	51.70
Impact	61.02	66.63	49.82

Strongest and weakest indicators

The indicators where United Arab Emirates performs particularly well include Internet access in schools, Active mobile-broadband subscriptions, and Use of virtual social networks (Table 3). By contrast, the economy's weakest indicators include e-commerce legislation, Rural gap in use of digital payments, and SDG 11: Sustainable Cities and Communities.

Table 3: Top-ranked and bottom-ranked indicators of United Arab Emirates

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	Adult literacy rate	59
Active mobile-broadband subscriptions	1	Publication and use of open data	60
Use of virtual social networks	1	Medium and high-tech industry	61
Government promotion of investment in emerging technologies	3	Wikipedia edits	63
Internet access	4	ICT regulatory environment	67
Internet users	5	SDG 5: Gender Equality	72
International Internet bandwidth	8	SDG 7: Affordable and Clean Energy	77
Prevalence of gig economy	10	SDG 11: Sustainable Cities and Communities	86
Investment in emerging technologies	11	Rural gap in use of digital payments	100
Handset prices	12	e-commerce legislation	115

NRI 2020 At-A-Glance: United Arab Emirates

Network Readiness Index   Rank: 30 (out of 134)   Score: 64.42

Pillar/sub-pillar	Rank	Score
A. Technology pillar	33	54.50
1st sub-pillar: Access	10	87.79
2nd sub-pillar: Content	52	35.60
3rd sub-pillar: Future Technologies	36	40.11
B. People pillar	11	70.62
1st sub-pillar: Individuals	1	95.00
2nd sub-pillar: Businesses	39	55.52
3rd sub-pillar: Governments	25	61.34

Pillar/sub-pillar	Rank	Score
C. Governance pillar	37	71.55
1st sub-pillar: Trust	30	67.41
2nd sub-pillar: Regulation	52	70.09
3rd sub-pillar: Inclusion	26	77.13
D. Impact pillar	38	61.02
1st sub-pillar: Economy	32	40.59
2nd sub-pillar: Quality of Life	24	79.17
3rd sub-pillar: SDG Contribution	80	63.30

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	33	54.50
1st sub-pillar: Access	10	87.79
1.1.1 Mobile tariffs	43	71.25
1.1.2 Handset prices	12	73.52
1.1.3 Internet access	4	98.40
1.1.4 4G mobile network coverage	14	99.73
1.1.5 Fixed-broadband subscriptions	32	91.39
1.1.6 International Internet bandwidth	8	80.24
1.1.7 Internet access in schools	1	100.00
2nd sub-pillar: Content	52	35.60
1.2.1 GitHub commits	57	5.42
1.2.2 Wikipedia edits	63	45.10
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	32	79.42
3rd sub-pillar: Future Technologies	36	40.11
1.3.1 Adoption of emerging technologies	17	78.00
1.3.2 Investment in emerging technologies	11	79.57
1.3.3 ICT PCT patent applications	41	18.63
1.3.4 Computer software spending	49	23.49
1.3.5 Robot density	55	0.90
B. People pillar	11	70.62
1st sub-pillar: Individuals	1	95.00
2.1.1 Internet users	5	98.76
2.1.2 Active mobile-broadband subscriptions	1	100.00
2.1.3 Use of virtual social networks	1	100.00
2.1.4 Tertiary enrollment	NA	NA
2.1.5 Adult literacy rate	59	91.31
2.1.6 ICT skills	14	84.93
2nd sub-pillar: Businesses	39	55.52
2.2.1 Firms with website	NA	NA
2.2.2 Ease of doing business	15	89.65
2.2.3 Professionals	43	37.29
2.2.4 Technicians and associate professionals	46	47.61
2.2.5 Business use of digital tools	21	82.41
2.2.6 R&D expenditure by businesses	26	20.62
3rd sub-pillar: Governments	25	61.34
2.3.1 Government online services	15	89.70
2.3.2 Publication and use of open data	60	26.17
2.3.3 Government promotion of investment in emerging tech	3	84.66
2.3.4 R&D expenditure by governments and higher education	41	44.83

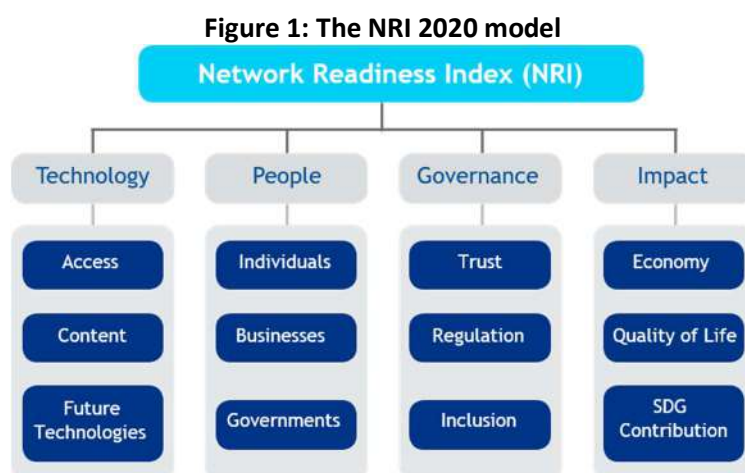| Indicator	Rank	Score
C. Governance pillar	37	71.55
1st sub-pillar: Trust	30	67.41
3.1.1 Secure Internet servers	56	60.29
3.1.2 Cybersecurity	35	86.57
3.1.3 Online access to financial account	23	59.16
3.1.4 Internet shopping	21	63.63
2nd sub-pillar: Regulation	52	70.09
3.2.1 Regulatory quality	34	71.93
3.2.2 ICT regulatory environment	67	83.40
3.2.3 Legal framework's adaptability to emerging technologies	13	75.04
3.2.4 e-commerce legislation	115	50.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	26	77.13
3.3.1 E-Participation	16	93.83
3.3.2 Socioeconomic gap in use of digital payments	31	86.01
3.3.3 Availability of local online content	20	85.87
3.3.4 Gender gap in Internet use	15	67.60
3.3.5 Rural gap in use of digital payments	100	52.36
D. Impact pillar	38	61.02
1st sub-pillar: Economy	32	40.59
4.1.1 Medium and high-tech industry	61	32.36
4.1.2 High-tech exports	45	20.44
4.1.3 PCT patent applications	42	2.50
4.1.4 Labor productivity per employee	22	63.85
4.1.5 Prevalence of gig economy	10	83.82
2nd sub-pillar: Quality of Life	24	79.17
4.2.1 Happiness	23	78.97
4.2.2 Freedom to make life choices	22	91.19
4.2.3 Income inequality	30	78.61
4.2.4 Healthy life expectancy at birth	58	67.91
3rd sub-pillar: SDG Contribution	80	63.30
4.3.1 SDG 3: Good Health and Well-Being	39	78.69
4.3.2 SDG 4: Quality Education	49	41.25
4.3.3 SDG 5: Gender Equality	72	73.61
4.3.4 SDG 7: Affordable and Clean Energy	77	75.14
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* Confidential data

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# Network Readiness Index 2020 United Kingdom

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of United Kingdom

United Kingdom ranks 10th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People and Governance.

Figure 2: United Kingdom global ranking, overall and by pillar
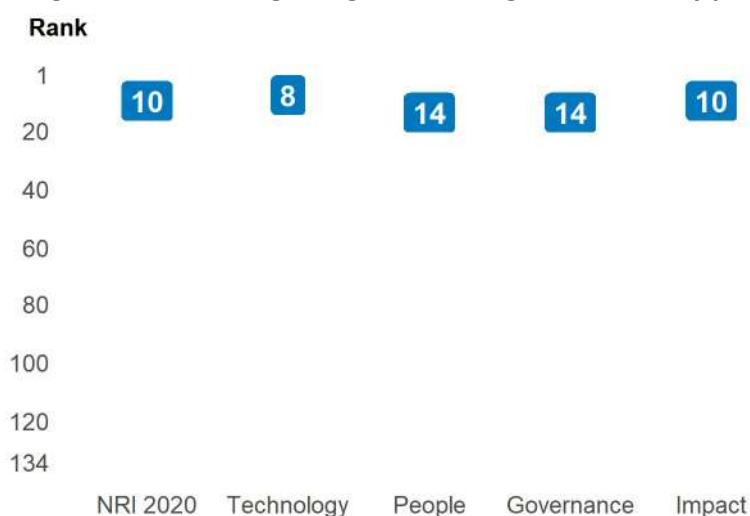
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of United Kingdom relate to Access, SDG Contribution and Inclusion, among others (Table 1). More could be done, though, to improve the economy's performances in the Quality of Life, Regulation and Individuals sub-pillars.

Table 1: United Kingdom rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Access	3	Future Technologies	14
SDG Contribution	5	Economy	15
Inclusion	7	Businesses	16
Content	8	Quality of Life	19
Governments	10	Regulation	34
Trust	12	Individuals	37

NRI score and income

Figure 3 shows the position of United Kingdom in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, United Kingdom is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
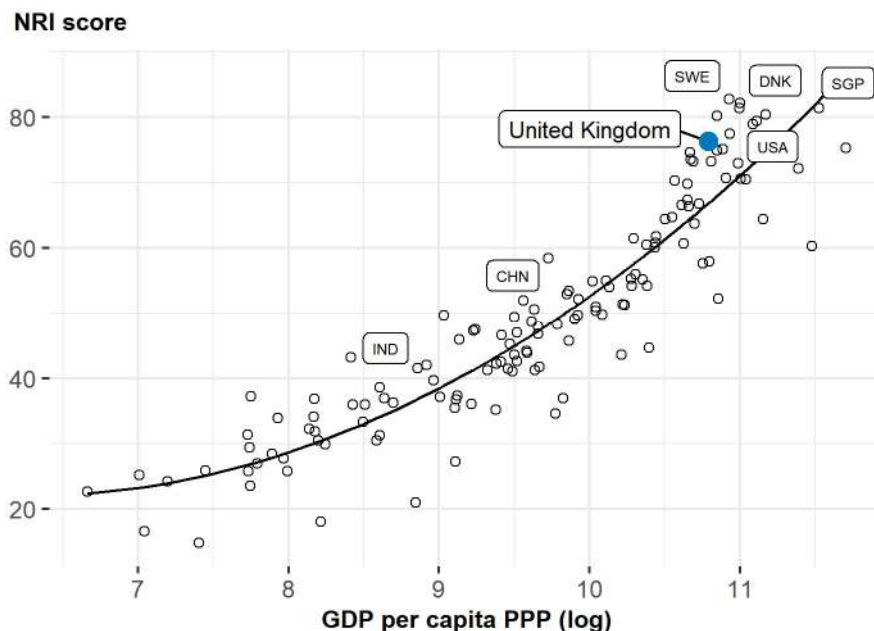
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. United Kingdom belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-Europe-is also Sweden (SWE).

Performance against its income group and region

High-income countries
United Kingdom is ranked 10th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in ten of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Inclusion, Economy, Quality of Life and SDG Contribution.

Europe
United Kingdom is ranked 8th within Europe (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Europe in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Inclusion, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of United Kingdom against its income group and region, overall and by pillar
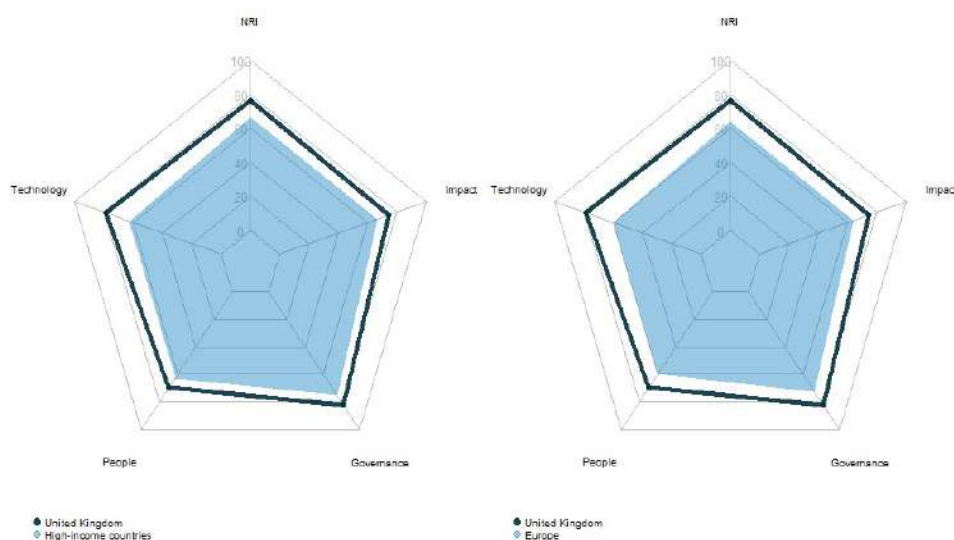
Table 2: United Kingdom scores vs. averages of its income group and region, overall and by pillar

Dimension	United Kingdom	High-income countries	Europe
NRI	76.27	66.82	64.21
Technology	78.34	62.51	59.93
People	69.69	62.72	59.89
Governance	82.65	75.41	72.98
Impact	74.40	66.63	64.04

Strongest and weakest indicators

The indicators where United Kingdom performs particularly well include Publication and use of open data, Cybersecurity, and e-commerce legislation (Table 3). By contrast, the economy's weakest indicators include SDG 5: Gender Equality, Privacy protection by law content, and Freedom to make life choices.

Table 3: Top-ranked and bottom-ranked indicators of United Kingdom

Strongest indicators	Rank	Weakest indicators	Rank
Publication and use of open data	1	Online access to financial account	28
Cybersecurity	1	Active mobile-broadband subscriptions	33
e-commerce legislation	1	Technicians and associate professionals	36
SDG 3: Good Health and Well-Being	2	Use of virtual social networks	37
Prevalence of gig economy	3	R&D expenditure by governments and higher education	38
Computer software spending	4	Tertiary enrollment	47
Internet shopping	4	Income inequality	51
ICT regulatory environment	5	Freedom to make life choices	53
SDG 11: Sustainable Cities and Communities	5	Privacy protection by law content	66
International Internet bandwidth	6	SDG 5: Gender Equality	68

NRI 2020 At-A-Glance: United Kingdom

Network Readiness Index   Rank: 10 (out of 134)   Score: 76.27

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	8	78.34	C. Governance pillar	14	82.65
1st sub-pillar: Access	3	90.38	1st sub-pillar: Trust	12	83.85
2nd sub-pillar: Content	8	80.88	2nd sub-pillar: Regulation	34	78.72
3rd sub-pillar: Future Technologies	14	63.77	3rd sub-pillar: Inclusion	7	85.37
B. People pillar	14	69.69	D. Impact pillar	10	74.40
1st sub-pillar: Individuals	37	63.20	1st sub-pillar: Economy	15	56.64
2nd sub-pillar: Businesses	16	68.87	2nd sub-pillar: Quality of Life	19	81.89
3rd sub-pillar: Governments	10	76.98	3rd sub-pillar: SDG Contribution	5	84.66

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	8	78.34	**C. Governance pillar**	14	82.65
1st sub-pillar: Access	3	90.38	*1st sub-pillar: Trust*	12	83.85
1.1.1 Mobile tariffs	12	89.21	3.1.1 Secure Internet servers	18	83.71
1.1.2 Handset prices	8	80.12	3.1.2 Cybersecurity	1	100.00
1.1.3 Internet access	13	93.97	3.1.3 Online access to financial account	28	55.84
1.1.4 4G mobile network coverage	17	99.70	3.1.4 Internet shopping	4	95.86
1.1.5 Fixed-broadband subscriptions	8	98.04	*2nd sub-pillar: Regulation*	34	78.72
1.1.6 International Internet bandwidth	6	81.22	3.2.1 Regulatory quality	9	90.22
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	5	97.30
2nd sub-pillar: Content	8	80.88	3.2.3 Legal framework's adaptability to emerging technologies	14	74.30
1.2.1 GitHub commits	10	69.26	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	15	84.06	3.2.5 Privacy protection by law content	66	31.79
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	7	85.37
1.2.4 Mobile apps development	14	88.41	3.3.1 E-Participation	6	97.53
3rd sub-pillar: Future Technologies	14	63.77	3.3.2 Socioeconomic gap in use of digital payments	20	94.21
1.3.1 Adoption of emerging technologies	12	84.23	3.3.3 Availability of local online content	11	90.87
1.3.2 Investment in emerging technologies	8	82.43	3.3.4 Gender gap in Internet use	12	68.19
1.3.3 ICT PCT patent applications	16	62.28	3.3.5 Rural gap in use of digital payments	23	76.06
1.3.4 Computer software spending	4	62.95	**D. Impact pillar**	10	74.40
1.3.5 Robot density	22	26.94	*1st sub-pillar: Economy*	15	56.64
B. People pillar	14	69.69	4.1.1 Medium and high-tech industry	18	58.01
1st sub-pillar: Individuals	37	63.20	4.1.2 High-tech exports	15	44.37
2.1.1 Internet users	10	95.10	4.1.3 PCT patent applications	20	25.88
2.1.2 Active mobile-broadband subscriptions	33	37.76	4.1.4 Labor productivity per employee	25	61.14
2.1.3 Use of virtual social networks	37	65.98	4.1.5 Prevalence of gig economy	3	93.80
2.1.4 Tertiary enrollment	47	43.58	*2nd sub-pillar: Quality of Life*	19	81.89
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	13	87.75
2.1.6 ICT skills	28	73.58	4.2.2 Freedom to make life choices	53	81.44
2nd sub-pillar: Businesses	16	68.87	4.2.3 Income inequality	51	72.68
2.2.1 Firms with website	10	86.35	4.2.4 Healthy life expectancy at birth	23	85.67
2.2.2 Ease of doing business	8	94.31	*3rd sub-pillar: SDG Contribution*	5	84.66
2.2.3 Professionals	7	64.22	4.3.1 SDG 3: Good Health and Well-Being	2	96.72
2.2.4 Technicians and associate professionals	36	53.07	4.3.2 SDG 4: Quality Education	16	66.34
2.2.5 Business use of digital tools	11	86.57	4.3.3 SDG 5: Gender Equality	68	74.14
2.2.6 R&D expenditure by businesses	19	28.73	4.3.4 SDG 7: Affordable and Clean Energy	18	90.03
3rd sub-pillar: Governments	10	76.98	.	.	.
2.3.1 Government online services	6	95.76			
2.3.2 Publication and use of open data	1	100.00			
2.3.3 Government promotion of investment in emerging tech	21	66.69			
2.3.4 R&D expenditure by governments and higher education	38	45.48			

* Confidential data

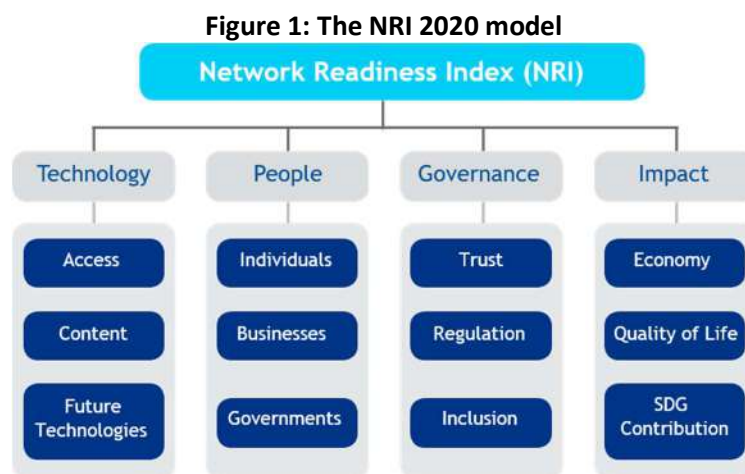**Sources**

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Network Readiness Index 2020
United States

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of United States

United States ranks 8th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: United States global ranking, overall and by pillar
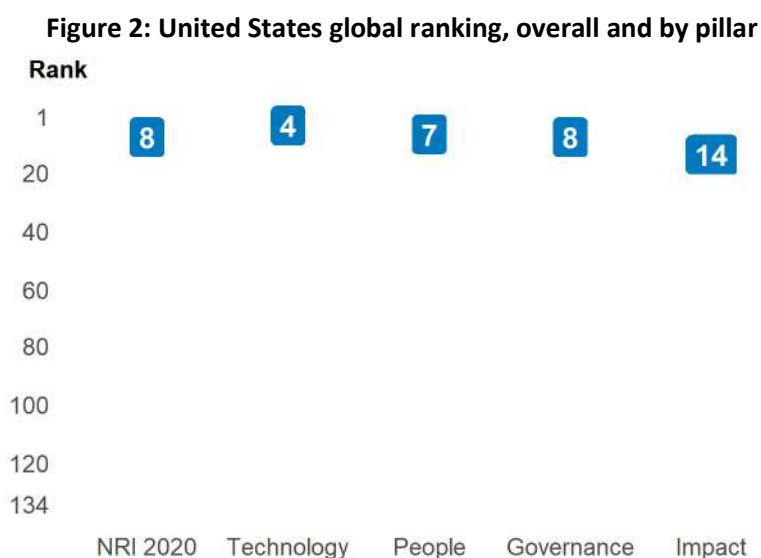
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of United States relate to Future Technologies, Trust and Inclusion, among others (Table 1). More could be done, though, to improve the economy's performances in the Regulation, SDG Contribution and Quality of Life sub-pillars.

Table 1: United States rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	1	Businesses	10
Trust	4	Individuals	14
Inclusion	4	Access	28
Economy	5	Regulation	30
Content	9	SDG Contribution	31
Governments	9	Quality of Life	40

NRI score and income

Figure 3 shows the position of United States in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, United States is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
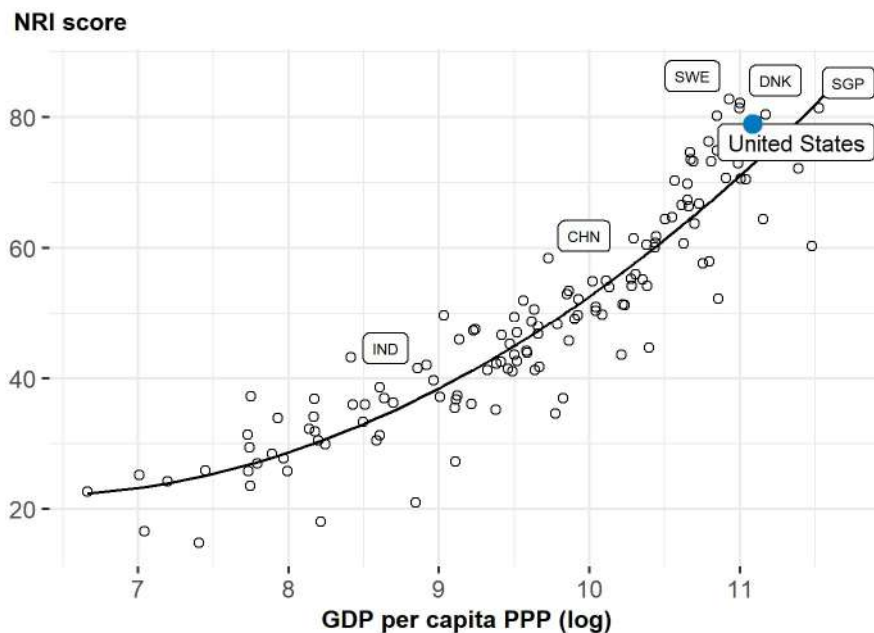
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). United States belongs to the group of high-income countries, where the best performer is Sweden (SWE). It is the top performer of its region, The Americas.

Performance against its income group and region

High-income countries
United States is ranked 8th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it outperforms high-income countries in nine of the twelve sub-pillars: Content, Future Technologies, Individuals, Businesses, Governments, Trust, Inclusion, Economy and SDG Contribution.

The Americas
United States is ranked 1st within The Americas (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

Figure 4: Performance of United States against its income group and region, overall and by pillar

Table 2: United States scores vs. averages of its income group and region, overall and by pillar

Dimension	United States	High-income countries	The Americas
NRI	78.91	66.82	47.67
Technology	82.88	62.51	38.26
People	74.59	62.72	45.24
Governance	86.23	75.41	54.59
Impact	71.96	66.63	52.61

3

Strongest and weakest indicators

The indicators where United States performs particularly well include Investment in emerging technologies, Computer software spending, and Business use of digital tools (Table 3). By contrast, the economy's weakest indicators include Income inequality, SDG 7: Affordable and Clean Energy, and Mobile tariffs.

Table 3: Top-ranked and bottom-ranked indicators of United States

Strongest indicators	Rank	Weakest indicators	Rank
Investment in emerging technologies	1	SDG 4: Quality Education	36
Computer software spending	1	Fixed-broadband subscriptions	38
Business use of digital tools	1	Healthy life expectancy at birth	38
e-commerce legislation	1	Socioeconomic gap in use of digital payments	40
E-Participation	1	Rural gap in use of digital payments	41
Prevalence of gig economy	1	Freedom to make life choices	58
Adoption of emerging technologies	2	Privacy protection by law content	63
Cybersecurity	2	Mobile tariffs	70
Secure Internet servers	3	Income inequality	84
Legal framework's adaptability to emerging technologies	3	SDG 7: Affordable and Clean Energy	84

NRI 2020 At-A-Glance: United States

Network Readiness Index   Rank: 8 (out of 134)   Score: 78.91

Pillar/sub-pillar	Rank	Score
A. Technology pillar	4	82.88
1st sub-pillar: Access	28	81.59
2nd sub-pillar: Content	9	78.42
3rd sub-pillar: Future Technologies	1	88.62
B. People pillar	7	74.59
1st sub-pillar: Individuals	14	72.63
2nd sub-pillar: Businesses	10	72.88
3rd sub-pillar: Governments	9	78.27

Pillar/sub-pillar	Rank	Score
C. Governance pillar	8	86.23
1st sub-pillar: Trust	4	91.94
2nd sub-pillar: Regulation	30	79.97
3rd sub-pillar: Inclusion	4	86.77
D. Impact pillar	14	71.96
1st sub-pillar: Economy	5	65.67
2nd sub-pillar: Quality of Life	40	72.93
3rd sub-pillar: SDG Contribution	31	77.28

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	4	82.88
1st sub-pillar: Access	28	81.59
1.1.1 Mobile tariffs	70	60.72
1.1.2 Handset prices	4	85.02
1.1.3 Internet access	36	83.80
1.1.4 4G mobile network coverage	12	99.80
1.1.5 Fixed-broadband subscriptions	38	87.49
1.1.6 International Internet bandwidth	35	72.69
1.1.7 Internet access in schools	NA	NA
2nd sub-pillar: Content	9	78.42
1.2.1 GitHub commits	8	71.54
1.2.2 Wikipedia edits	34	72.47
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	6	94.51
3rd sub-pillar: Future Technologies	1	88.62
1.3.1 Adoption of emerging technologies	2	99.75
1.3.2 Investment in emerging technologies	1	100.00
1.3.3 ICT PCT patent applications	7	79.30
1.3.4 Computer software spending	1	100.00
1.3.5 Robot density	8	64.06
B. People pillar	7	74.59
1st sub-pillar: Individuals	14	72.63
2.1.1 Internet users	24	87.23
2.1.2 Active mobile-broadband subscriptions	7	56.29
2.1.3 Use of virtual social networks	24	70.10
2.1.4 Tertiary enrollment	8	64.33
2.1.5 Adult literacy rate	NA	NA
2.1.6 ICT skills	12	85.19
2nd sub-pillar: Businesses	10	72.88
2.2.1 Firms with website	32	73.55
2.2.2 Ease of doing business	6	95.10
2.2.3 Professionals	16	54.97
2.2.4 Technicians and associate professionals	24	61.60
2.2.5 Business use of digital tools	1	100.00
2.2.6 R&D expenditure by businesses	8	52.08
3rd sub-pillar: Governments	9	78.27
2.3.1 Government online services	7	94.55
2.3.2 Publication and use of open data	4	81.62
2.3.3 Government promotion of investment in emerging tech	7	78.86
2.3.4 R&D expenditure by governments and higher education	21	58.04

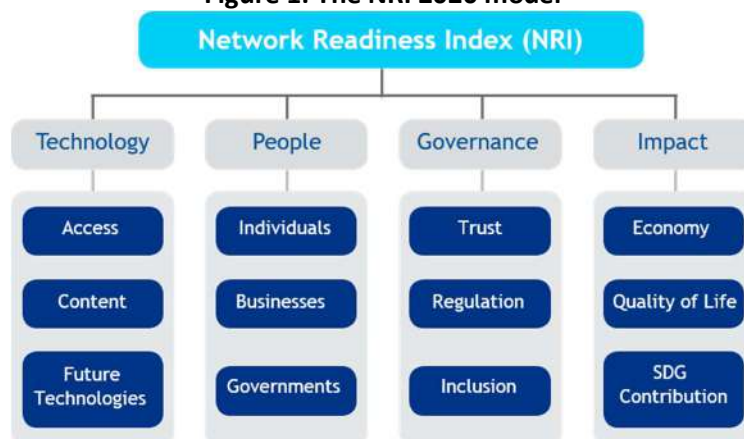| Indicator	Rank	Score
C. Governance pillar	8	86.23
1st sub-pillar: Trust	4	91.94
3.1.1 Secure Internet servers	3	93.58
3.1.2 Cybersecurity	2	99.46
3.1.3 Online access to financial account	7	84.40
3.1.4 Internet shopping	7	90.33
2nd sub-pillar: Regulation	30	79.97
3.2.1 Regulatory quality	16	86.17
3.2.2 ICT regulatory environment	35	89.77
3.2.3 Legal framework's adaptability to emerging technologies	3	88.10
3.2.4 e-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	63	35.82
3rd sub-pillar: Inclusion	4	86.77
3.3.1 E-Participation	1	100.00
3.3.2 Socioeconomic gap in use of digital payments	40	79.64
3.3.3 Availability of local online content	6	93.52
3.3.4 Gender gap in Internet use	NA	NA
3.3.5 Rural gap in use of digital payments	41	73.90
D. Impact pillar	14	71.96
1st sub-pillar: Economy	5	65.67
4.1.1 Medium and high-tech industry	16	61.01
4.1.2 High-tech exports	23	36.18
4.1.3 PCT patent applications	11	46.46
4.1.4 Labor productivity per employee	4	84.69
4.1.5 Prevalence of gig economy	1	100.00
2nd sub-pillar: Quality of Life	40	72.93
4.2.1 Happiness	18	83.55
4.2.2 Freedom to make life choices	58	78.40
4.2.3 Income inequality	84	55.67
4.2.4 Healthy life expectancy at birth	38	74.10
3rd sub-pillar: SDG Contribution	31	77.28
4.3.1 SDG 3: Good Health and Well-Being	10	91.80
4.3.2 SDG 4: Quality Education	36	57.51
4.3.3 SDG 5: Gender Equality	28	82.48
4.3.4 SDG 7: Affordable and Clean Energy	84	73.05
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* Confidential data

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Network Readiness Index 2020 Uruguay

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
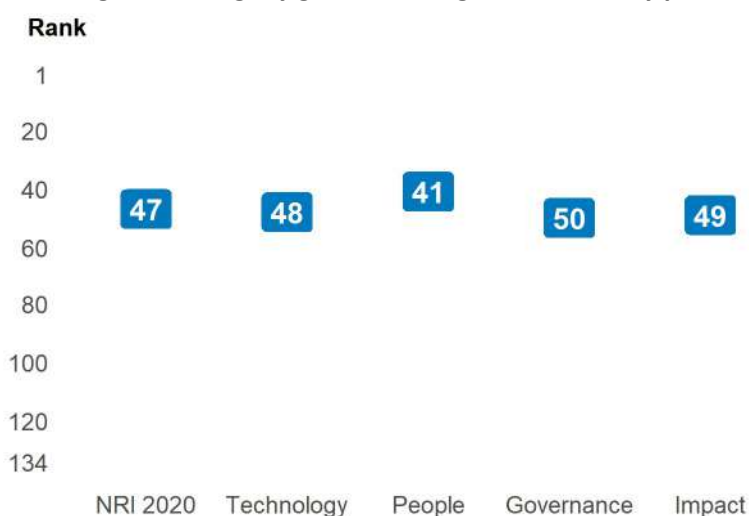
Figure 1: The NRI 2020 model

Global NRI position of Uruguay

Uruguay ranks 47th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Uruguay global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Uruguay relate to Individuals, Quality of Life and Governments, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Future Technologies and Economy sub-pillars.

Table 1: Uruguay rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	31	Regulation	48
Quality of Life	33	Trust	53
Governments	35	Inclusion	62
SDG Contribution	36	Businesses	64
Content	43	Future Technologies	84
Access	46	Economy	93

NRI score and income

Figure 3 shows the position of Uruguay in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Uruguay is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
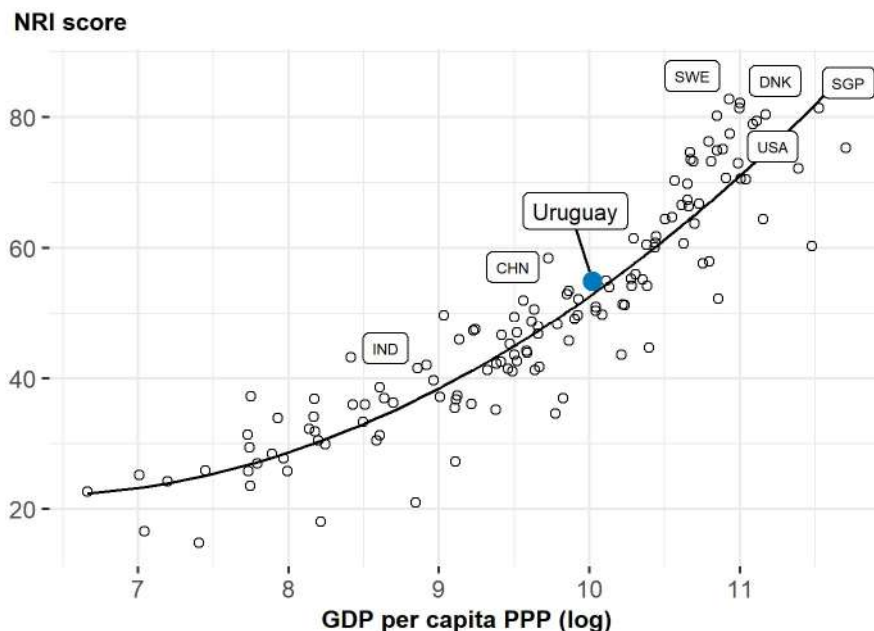
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Uruguay belongs to the group of high-income countries, where the best performer is Sweden (SWE). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region

High-income countries
Uruguay is ranked 44th in the group of high-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it trails high-income countries in all of them.

The Americas
Uruguay is ranked 3rd within The Americas (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in The Americas in ten of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Quality of Life and SDG Contribution.

Figure 4: Performance of Uruguay against its income group and region, overall and by pillar

Table 2: Uruguay scores vs. averages of its income group and region, overall and by pillar

Dimension	Uruguay	High-income countries	The Americas
NRI	54.87	66.82	47.67
Technology	46.96	62.51	38.26
People	54.63	62.72	45.24
Governance	61.40	75.41	54.59
Impact	56.49	66.63	52.61

Strongest and weakest indicators

The indicators where Uruguay performs particularly well include Internet access in schools, e-commerce legislation, and SDG 5: Gender Equality (Table 3). By contrast, the economy's weakest indicators include ICT regulatory environment, Investment in emerging technologies, and Prevalence of gig economy.

Table 3: Top-ranked and bottom-ranked indicators of Uruguay

Strongest indicators	Rank	Weakest indicators	Rank
Internet access in schools	1	Internet access	72
e-commerce legislation	1	4G mobile network coverage	73
SDG 5: Gender Equality	6	Income inequality	76
Gender gap in Internet use	9	Socioeconomic gap in use of digital payments	85
Use of virtual social networks	12	Medium and high-tech industry	88
Active mobile-broadband subscriptions	16	Ease of doing business	90
Publication and use of open data	17	Rural gap in use of digital payments	91
Adult literacy rate	22	Prevalence of gig economy	97
SDG 3: Good Health and Well-Being	23	Investment in emerging technologies	104
Happiness	26	ICT regulatory environment	108

NRI 2020 At-A-Glance: Uruguay

Network Readiness Index   Rank: 47 (out of 134)   Score: 54.87

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	48	46.96	C. Governance pillar	50	61.40
1st sub-pillar: Access	46	75.76	1st sub-pillar: Trust	53	47.94
2nd sub-pillar: Content	43	40.92	2nd sub-pillar: Regulation	48	71.17
3rd sub-pillar: Future Technologies	84	24.22	3rd sub-pillar: Inclusion	62	65.09
B. People pillar	41	54.63	D. Impact pillar	49	56.49
1st sub-pillar: Individuals	31	65.44	1st sub-pillar: Economy	93	18.46
2nd sub-pillar: Businesses	64	43.31	2nd sub-pillar: Quality of Life	33	75.45
3rd sub-pillar: Governments	35	55.13	3rd sub-pillar: SDG Contribution	36	75.56

The Network Readiness Index in detail

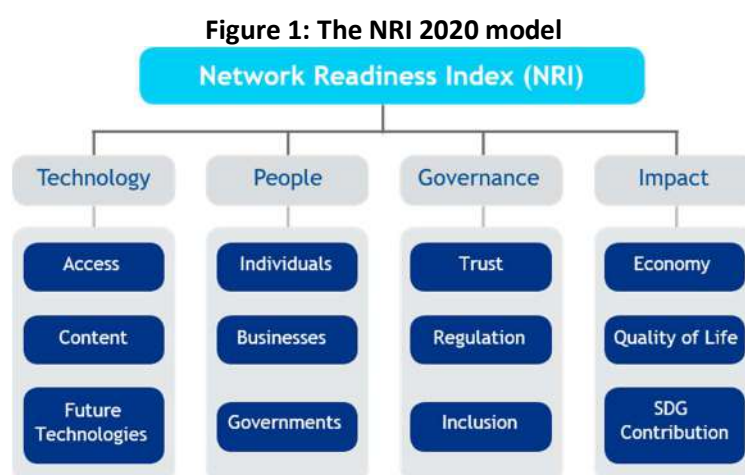| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	48	46.96	**C. Governance pillar**	50	61.40
1st sub-pillar: Access	46	75.76	*1st sub-pillar: Trust*	53	47.94
1.1.1 Mobile tariffs	39	72.91	3.1.1 Secure Internet servers	58	59.85
1.1.2 Handset prices	33	62.73	3.1.2 Cybersecurity	53	72.91
1.1.3 Internet access	72	63.92	3.1.3 Online access to financial account	68	27.88
1.1.4 4G mobile network coverage	73	86.20	3.1.4 Internet shopping	45	31.10
1.1.5 Fixed-broadband subscriptions	59	71.71	*2nd sub-pillar: Regulation*	48	71.17
1.1.6 International Internet bandwidth	33	72.83	3.2.1 Regulatory quality	46	62.41
1.1.7 Internet access in schools	1	100.00	3.2.2 ICT regulatory environment	108	64.87
2nd sub-pillar: Content	43	40.92	3.2.3 Legal framework's adaptability to emerging technologies	40	51.41
1.2.1 GitHub commits	42	13.73	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	39	68.66	3.2.5 Privacy protection by law content	31	77.16
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	62	65.09
1.2.4 Mobile apps development	45	71.53	3.3.1 E-Participation	29	85.18
3rd sub-pillar: Future Technologies	84	24.22	3.3.2 Socioeconomic gap in use of digital payments	85	54.89
1.3.1 Adoption of emerging technologies	54	51.47	3.3.3 Availability of local online content	62	61.70
1.3.2 Investment in emerging technologies	104	26.97	3.3.4 Gender gap in Internet use	9	69.30
1.3.3 ICT PCT patent applications	67	1.85	3.3.5 Rural gap in use of digital payments	91	54.37
1.3.4 Computer software spending	68	16.57	**D. Impact pillar**	49	56.49
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	93	18.46
B. People pillar	41	54.63	4.1.1 Medium and high-tech industry	88	19.30
1st sub-pillar: Individuals	31	65.44	4.1.2 High-tech exports	64	13.64
2.1.1 Internet users	67	67.65	4.1.3 PCT patent applications	54	0.83
2.1.2 Active mobile-broadband subscriptions	16	48.72	4.1.4 Labor productivity per employee	57	29.47
2.1.3 Use of virtual social networks	12	78.35	4.1.5 Prevalence of gig economy	97	29.09
2.1.4 Tertiary enrollment	44	45.88	*2nd sub-pillar: Quality of Life*	33	75.45
2.1.5 Adult literacy rate	22	98.36	4.2.1 Happiness	26	76.80
2.1.6 ICT skills	62	53.65	4.2.2 Freedom to make life choices	28	89.70
2nd sub-pillar: Businesses	64	43.31	4.2.3 Income inequality	76	60.05
2.2.1 Firms with website	40	69.19	4.2.4 Healthy life expectancy at birth	34	75.23
2.2.2 Ease of doing business	90	55.38	*3rd sub-pillar: SDG Contribution*	36	75.56
2.2.3 Professionals	55	29.11	4.3.1 SDG 3: Good Health and Well-Being	23	85.25
2.2.4 Technicians and associate professionals	66	32.23	4.3.2 SDG 4: Quality Education	57	34.76
2.2.5 Business use of digital tools	47	71.02	4.3.3 SDG 5: Gender Equality	6	90.79
2.2.6 R&D expenditure by businesses	61	2.95	4.3.4 SDG 7: Affordable and Clean Energy	28	88.15
3rd sub-pillar: Governments	35	55.13	.	.	.
2.3.1 Government online services	31	83.64			
2.3.2 Publication and use of open data	17	60.85			
2.3.3 Government promotion of investment in emerging tech	51	43.69			
2.3.4 R&D expenditure by governments and higher education	56	32.33			

* Confidential data

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Network Readiness Index 2020 Venezuela

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Venezuela

Venezuela ranks 108th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Venezuela global ranking, overall and by pillar
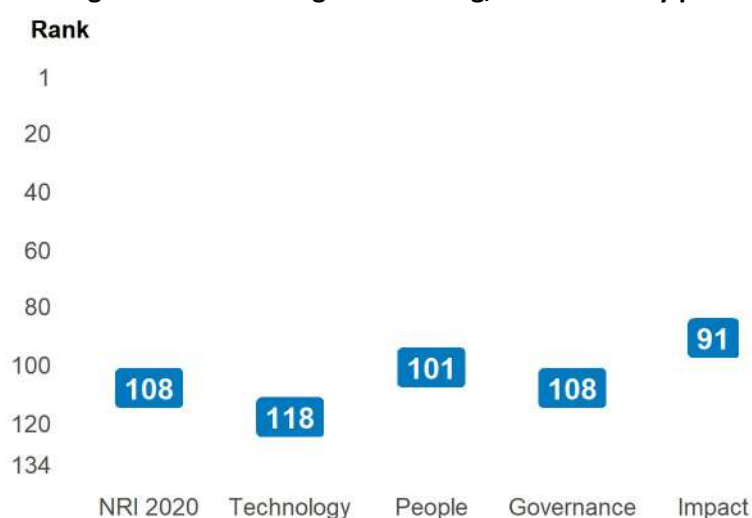
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Venezuela relate to SDG Contribution, Trust and Individuals, among others (Table 1). More could be done, though, to improve the economy's performances in the Regulation, Future Technologies and Governments sub-pillars.

Table 1: Venezuela rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	55	Content	103
Trust	72	Inclusion	104
Individuals	76	Access	115
Businesses	96	Regulation	123
Economy	102	Future Technologies	128
Quality of Life	102	Governments	133

NRI score and income

Figure 3 shows the position of Venezuela in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Venezuela is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
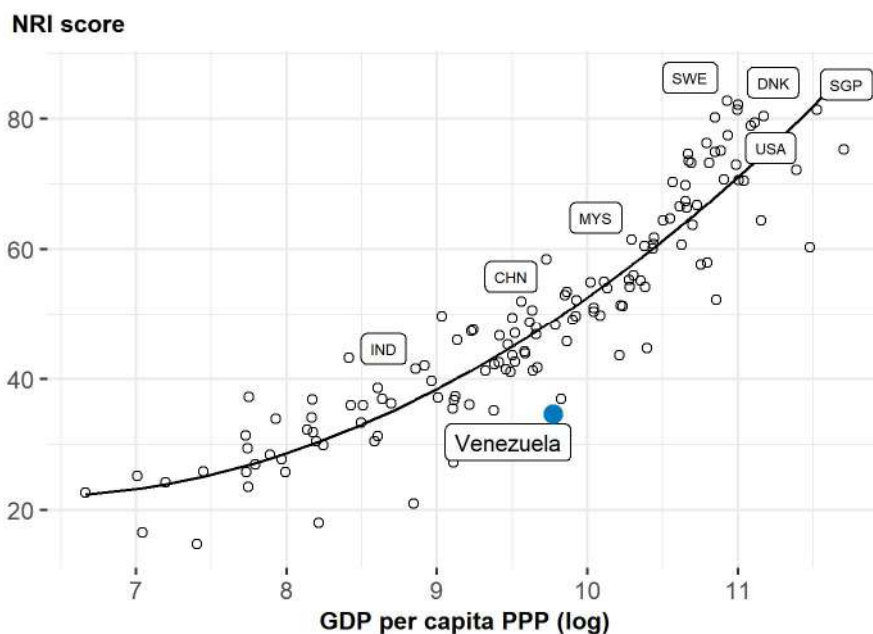
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Venezuela belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region-The Americas-is United States (USA).

Performance against its income group and region
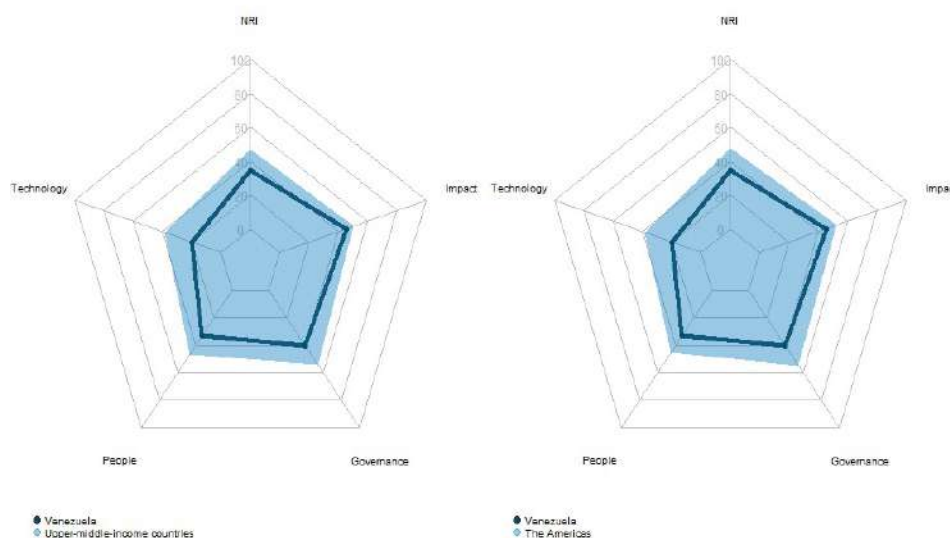
Upper-middle-income countries
Venezuela is ranked 35th in the group of upper-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in one of the twelve sub-pillars: SDG Contribution.

The Americas
Venezuela is ranked 21st within The Americas (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Venezuela against its income group and region, overall and by pillar

Table 2: Venezuela scores vs. averages of its income group and region, overall and by pillar

Dimension	Venezuela	Upper-middle-income countries	The Americas
NRI	34.57	47.39	47.67
Technology	19.61	38.42	38.26
People	33.34	46.66	45.24
Governance	40.02	54.31	54.59
Impact	45.33	50.17	52.61

Strongest and weakest indicators

The indicators where Venezuela performs particularly well include SDG 5: Gender Equality, Tertiary enrollment, and Adult literacy rate (Table 3). By contrast, the economy's weakest indicators include Regulatory quality, Mobile tariffs, and Ease of doing business.

Table 3: Top-ranked and bottom-ranked indicators of Venezuela

Strongest indicators	Rank	Weakest indicators	Rank
SDG 5: Gender Equality	9	Legal framework's adaptability to emerging technologies	121
Tertiary enrollment	20	Government online services	124
Adult literacy rate	36	Freedom to make life choices	125
Online access to financial account	37	Government promotion of investment in emerging technologies	127
Medium and high-tech industry	41	Investment in emerging technologies	129
Professionals	45	E-Participation	129
Rural gap in use of digital payments	53	Handset prices	132
SDG 3: Good Health and Well-Being	54	Mobile tariffs	133
Internet users	59	Ease of doing business	133
Internet shopping	66	Regulatory quality	134

NRI 2020 At-A-Glance: Venezuela

Network Readiness Index   Rank: 108 (out of 134)   Score: 34.57

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	118	19.61	C. Governance pillar	108	40.02
1st sub-pillar: Access	115	30.48	1st sub-pillar: Trust	72	35.82
2nd sub-pillar: Content	103	16.39	2nd sub-pillar: Regulation	123	38.20
3rd sub-pillar: Future Technologies	128	11.95	3rd sub-pillar: Inclusion	104	46.05
B. People pillar	101	33.34	D. Impact pillar	91	45.33
1st sub-pillar: Individuals	76	53.42	1st sub-pillar: Economy	102	16.45
2nd sub-pillar: Businesses	96	32.82	2nd sub-pillar: Quality of Life	102	51.83
3rd sub-pillar: Governments	133	13.77	3rd sub-pillar: SDG Contribution	55	67.72

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	118	19.61	**C. Governance pillar**	108	40.02
1st sub-pillar: Access	115	30.48	*1st sub-pillar: Trust*	72	35.82
1.1.1 Mobile tariffs	133	0.00	3.1.1 Secure Internet servers	87	42.94
1.1.2 Handset prices	132	0.00	3.1.2 Cybersecurity	101	37.49
1.1.3 Internet access	92	33.32	3.1.3 Online access to financial account	37	46.32
1.1.4 4G mobile network coverage	77	82.00	3.1.4 Internet shopping	66	16.52
1.1.5 Fixed-broadband subscriptions	107	5.96	*2nd sub-pillar: Regulation*	123	38.20
1.1.6 International Internet bandwidth	102	61.57	3.2.1 Regulatory quality	134	0.00
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	70	82.82
2nd sub-pillar: Content	103	16.39	3.2.3 Legal framework's adaptability to emerging technologies	121	9.42
1.2.1 GitHub commits	70	3.28	3.2.4 e-commerce legislation	77	75.00
1.2.2 Wikipedia edits	NA	NA	3.2.5 Privacy protection by law content	74	23.76
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	104	46.05
1.2.4 Mobile apps development	104	43.59	3.3.1 E-Participation	129	20.99
3rd sub-pillar: Future Technologies	128	11.95	3.3.2 Socioeconomic gap in use of digital payments	77	60.92
1.3.1 Adoption of emerging technologies	97	32.25	3.3.3 Availability of local online content	111	31.77
1.3.2 Investment in emerging technologies	129	10.78	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	79	0.22	3.3.5 Rural gap in use of digital payments	53	70.54
1.3.4 Computer software spending	69	16.48	**D. Impact pillar**	91	45.33
1.3.5 Robot density	69	0.03	*1st sub-pillar: Economy*	102	16.45
B. People pillar	101	33.34	4.1.1 Medium and high-tech industry	41	43.69
1st sub-pillar: Individuals	76	53.42	4.1.2 High-tech exports	NA	NA
2.1.1 Internet users	59	71.49	4.1.3 PCT patent applications	85	0.02
2.1.2 Active mobile-broadband subscriptions	96	20.55	4.1.4 Labor productivity per employee	99	7.54
2.1.3 Use of virtual social networks	91	41.24	4.1.5 Prevalence of gig economy	117	14.55
2.1.4 Tertiary enrollment	20	57.80	*2nd sub-pillar: Quality of Life*	102	51.83
2.1.5 Adult literacy rate	36	96.33	4.2.1 Happiness	90	46.93
2.1.6 ICT skills	108	33.10	4.2.2 Freedom to make life choices	125	42.63
2nd sub-pillar: Businesses	96	32.82	4.2.3 Income inequality	NA	NA
2.2.1 Firms with website	67	48.76	4.2.4 Healthy life expectancy at birth	67	65.94
2.2.2 Ease of doing business	133	0.00	*3rd sub-pillar: SDG Contribution*	55	67.72
2.2.3 Professionals	45	36.12	4.3.1 SDG 3: Good Health and Well-Being	54	75.41
2.2.4 Technicians and associate professionals	NA	NA	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	97	46.40	4.3.3 SDG 5: Gender Equality	9	89.66
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	95	68.86
3rd sub-pillar: Governments	133	13.77	.	.	.
2.3.1 Government online services	124	29.69			
2.3.2 Publication and use of open data	88	11.62			
2.3.3 Government promotion of investment in emerging tech	127	0.00			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

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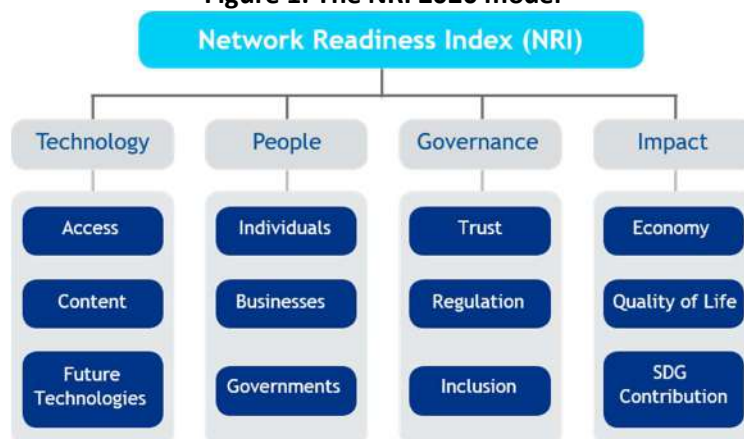
Network Readiness Index 2020 Viet Nam

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
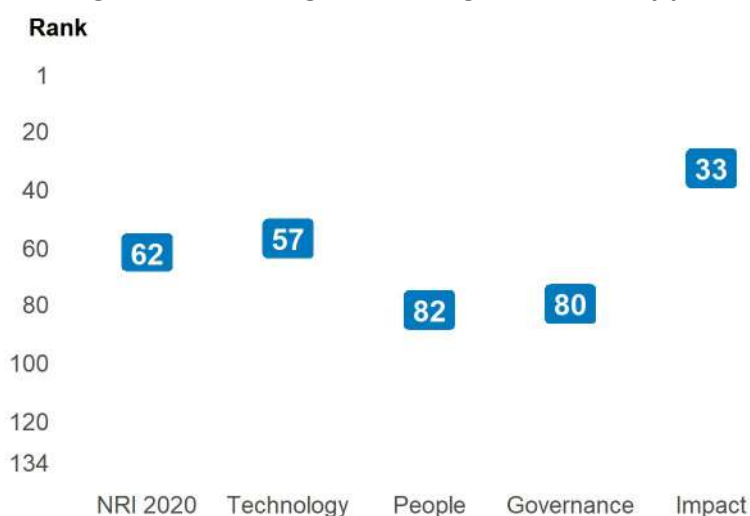
Figure 1: The NRI 2020 model

Global NRI position of Viet Nam

Viet Nam ranks 62nd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Viet Nam global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Viet Nam relate to Economy, Quality of Life and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Inclusion and Regulation sub-pillars.

Table 1: Viet Nam rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Economy	19	SDG Contribution	66
Quality of Life	38	Individuals	77
Trust	54	Governments	87
Future Technologies	56	Businesses	89
Access	60	Inclusion	97
Content	65	Regulation	98

NRI score and income

Figure 3 shows the position of Viet Nam in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Viet Nam is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
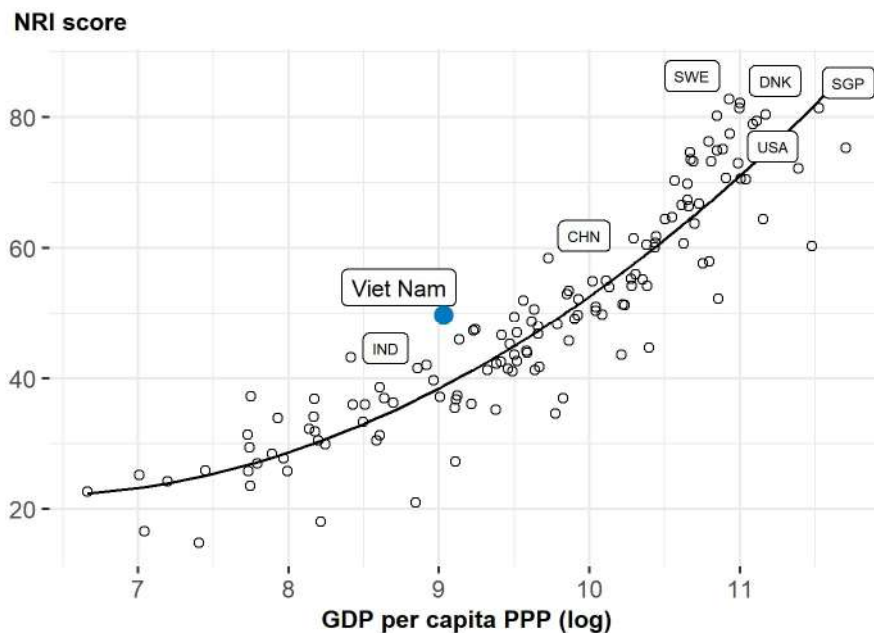
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Viet Nam belongs to the group of lower-middle-income countries, where it is the best performer. The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Lower-middle-income countries
Viet Nam is ranked 1st in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score higher than the income group average in each of the four pillars. At the sub-pillar level, it has a higher score than the average of lower-middle-income countries in all of them.

Asia & Pacific
Viet Nam is ranked 10th within Asia & Pacific (Figure 4, right panel). It has a score above the regional average in one of the four pillars: impact. With regard to sub-pillars, it outperforms the average in Asia & Pacific in four of the twelve sub-pillars: Access, Economy, Quality of Life and SDG Contribution.

Figure 4: Performance of Viet Nam against its income group and region, overall and by pillar
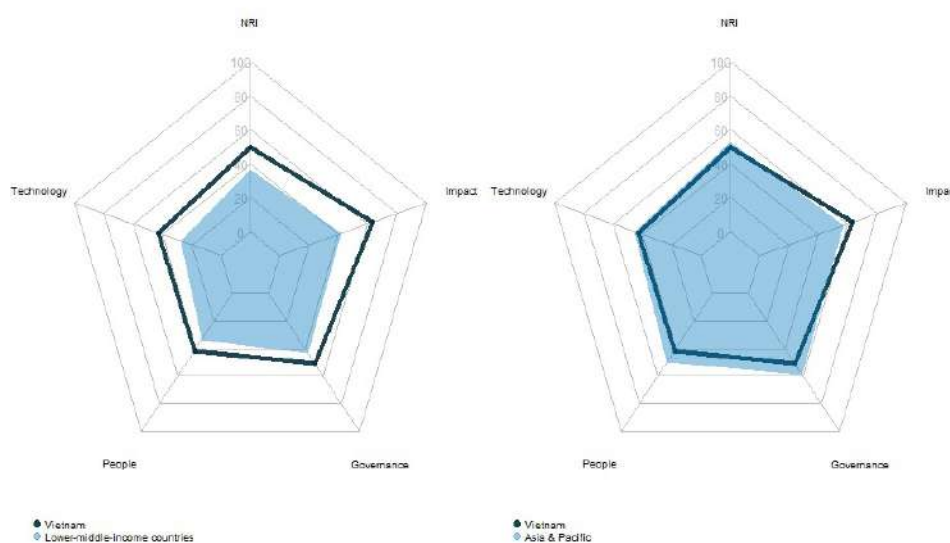
Table 2: Viet Nam scores vs. averages of its income group and region, overall and by pillar

Dimension	Viet Nam	Lower-middle-income countries	Asia & Pacific
NRI	49.68	36.72	52.76
Technology	42.51	27.72	45.33
People	41.63	33.88	49.64
Governance	51.01	43.15	59.20
Impact	63.58	42.15	56.86

3

Strongest and weakest indicators

The indicators where Viet Nam performs particularly well include e-commerce legislation, Freedom to make life choices, and High-tech exports (Table 3). By contrast, the economy's weakest indicators include Socioeconomic gap in use of digital payments, Rural gap in use of digital payments, Technicians and associate professionals, and ICT regulatory environment.

Table 3: Top-ranked and bottom-ranked indicators of Viet Nam

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	ICT skills	92
Freedom to make life choices	5	Professionals	94
High-tech exports	6	Labor productivity per employee	97
Fixed-broadband subscriptions	13	Regulatory quality	98
SDG 5: Gender Equality	18	SDG 7: Affordable and Clean Energy	101
Prevalence of gig economy	21	SDG 11: Sustainable Cities and Communities	102
SDG 4: Quality Education	23	Technicians and associate professionals	110
Government promotion of investment in emerging technologies	30	ICT regulatory environment	110
Use of virtual social networks	34	Rural gap in use of digital payments	111
Medium and high-tech industry	35	Socioeconomic gap in use of digital payments	118

NRI 2020 At-A-Glance: Viet Nam

Network Readiness Index   Rank: 62 (out of 134)   Score: 49.68

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	57	42.51	C. Governance pillar	80	51.01
1st sub-pillar: Access	60	69.14	1st sub-pillar: Trust	54	47.31
2nd sub-pillar: Content	65	28.42	2nd sub-pillar: Regulation	98	54.26
3rd sub-pillar: Future Technologies	56	29.96	3rd sub-pillar: Inclusion	97	51.48
B. People pillar	82	41.63	D. Impact pillar	33	63.58
1st sub-pillar: Individuals	77	52.90	1st sub-pillar: Economy	19	50.50
2nd sub-pillar: Businesses	89	35.41	2nd sub-pillar: Quality of Life	38	73.43
3rd sub-pillar: Governments	87	36.58	3rd sub-pillar: SDG Contribution	66	66.80

The Network Readiness Index in detail

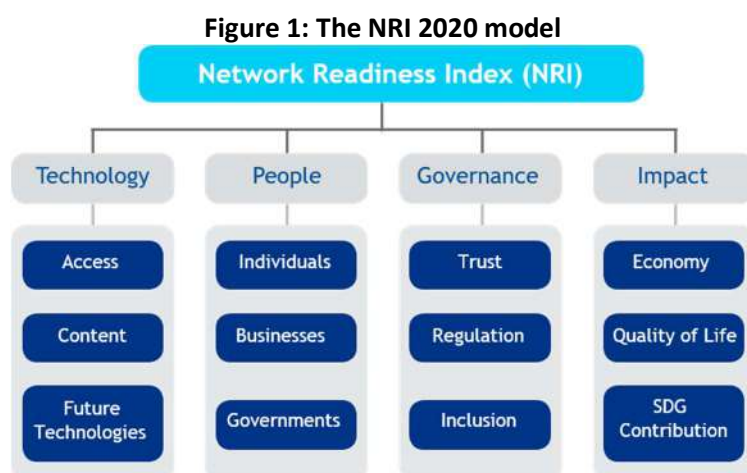| Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	57	42.51	**C. Governance pillar**	80	51.01
1st sub-pillar: Access	60	69.14	*1st sub-pillar: Trust*	54	47.31
1.1.1 Mobile tariffs	51	69.30	3.1.1 Secure Internet servers	54	62.74
1.1.2 Handset prices	80	38.84	3.1.2 Cybersecurity	52	74.21
1.1.3 Internet access	83	46.91	3.1.3 Online access to financial account	66	28.29
1.1.4 4G mobile network coverage	57	93.89	3.1.4 Internet shopping	53	24.00
1.1.5 Fixed-broadband subscriptions	13	96.44	*2nd sub-pillar: Regulation*	98	54.26
1.1.6 International Internet bandwidth	58	69.45	3.2.1 Regulatory quality	98	42.92
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	110	63.71
2nd sub-pillar: Content	65	28.42	3.2.3 Legal framework's adaptability to emerging technologies	54	45.96
1.2.1 GitHub commits	66	3.50	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	74	40.45	3.2.5 Privacy protection by law content	76	18.71
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	97	51.48
1.2.4 Mobile apps development	57	67.10	3.3.1 E-Participation	69	69.14
3rd sub-pillar: Future Technologies	56	29.96	3.3.2 Socioeconomic gap in use of digital payments	118	33.44
1.3.1 Adoption of emerging technologies	56	50.09	3.3.3 Availability of local online content	64	61.05
1.3.2 Investment in emerging technologies	68	38.57	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	111	42.27
1.3.4 Computer software spending	37	26.81	**D. Impact pillar**	33	63.58
1.3.5 Robot density	42	4.36	*1st sub-pillar: Economy*	19	50.50
B. People pillar	82	41.63	4.1.1 Medium and high-tech industry	35	48.17
1st sub-pillar: Individuals	77	52.90	4.1.2 High-tech exports	6	76.10
2.1.1 Internet users	64	69.79	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	73	27.61	4.1.4 Labor productivity per employee	97	8.28
2.1.3 Use of virtual social networks	34	67.01	4.1.5 Prevalence of gig economy	21	69.47
2.1.4 Tertiary enrollment	83	20.42	*2nd sub-pillar: Quality of Life*	38	73.43
2.1.5 Adult literacy rate	50	93.60	4.2.1 Happiness	77	54.53
2.1.6 ICT skills	92	38.98	4.2.2 Freedom to make life choices	5	98.16
2nd sub-pillar: Businesses	89	35.41	4.2.3 Income inequality	56	70.36
2.2.1 Firms with website	72	45.39	4.2.4 Healthy life expectancy at birth	47	70.67
2.2.2 Ease of doing business	65	69.93	*3rd sub-pillar: SDG Contribution*	66	66.80
2.2.3 Professionals	94	15.28	4.3.1 SDG 3: Good Health and Well-Being	50	77.05
2.2.4 Technicians and associate professionals	110	11.24	4.3.2 SDG 4: Quality Education	23	64.06
2.2.5 Business use of digital tools	63	60.78	4.3.3 SDG 5: Gender Equality	18	86.29
2.2.6 R&D expenditure by businesses	43	9.83	4.3.4 SDG 7: Affordable and Clean Energy	101	66.62
3rd sub-pillar: Governments	87	36.58	.	.	.
2.3.1 Government online services	77	64.24			
2.3.2 Publication and use of open data	79	16.79			
2.3.3 Government promotion of investment in emerging tech	30	54.36			
2.3.4 R&D expenditure by governments and higher education	89	10.94			

* Confidential data

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Network Readiness Index 2020 Yemen

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Yemen

Yemen ranks 132nd out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Yemen global ranking, overall and by pillar
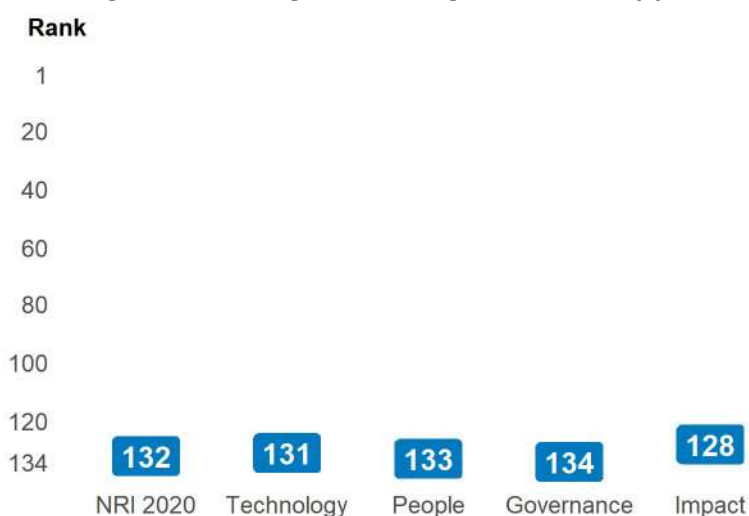
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Yemen relate to Quality of Life, Content and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Governments, Trust and Regulation sub-pillars.

Table 1: Yemen rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	118	Inclusion	131
Content	121	Access	132
Economy	122	Businesses	132
SDG Contribution	126	Governments	132
Individuals	129	Trust	133
Future Technologies	131	Regulation	134

NRI score and income

Figure 3 shows the position of Yemen in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Yemen is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
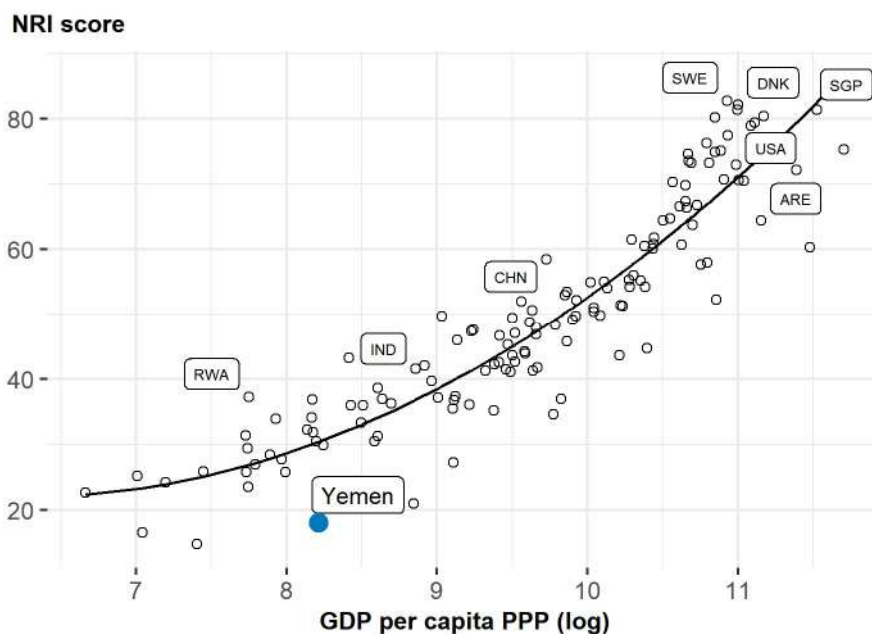
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Yemen belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Arab States-is United Arab Emirates (ARE).

2

Performance against its income group and region

Low-income countries
Yemen is ranked 13th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms low-income countries in one of the twelve sub-pillars: Content.

Arab States
Yemen is ranked 13th within Arab States (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it trails the regional average in each of them.

Figure 4: Performance of Yemen against its income group and region, overall and by pillar

Table 2: Yemen scores vs. averages of its income group and region, overall and by pillar

Dimension	Yemen	Low-income countries	Arab States
NRI	18.00	25.61	47.18
Technology	10.63	16.33	39.24
People	14.00	20.61	47.97
Governance	16.95	32.58	51.70
Impact	30.42	32.92	49.82

Strongest and weakest indicators

The indicators where Yemen performs particularly well include SDG 7: Affordable and Clean Energy, High-tech exports, and Income inequality (Table 3). By contrast, the economy's weakest indicators include ICT regulatory environment, Active mobile-broadband subscriptions, and SDG 5: Gender Equality.

Table 3: Top-ranked and bottom-ranked indicators of Yemen

Strongest indicators	Rank	Weakest indicators	Rank
SDG 7: Affordable and Clean Energy	20	Investment in emerging technologies	130
High-tech exports	61	Secure Internet servers	130
Income inequality	64	Internet access	131
Professionals	86	Mobile tariffs	132
Labor productivity per employee	100	Ease of doing business	132
Technicians and associate professionals	105	Cybersecurity	132
Wikipedia edits	106	Regulatory quality	132
Computer software spending	107	Active mobile-broadband subscriptions	133
Tertiary enrollment	108	SDG 5: Gender Equality	133
Publication and use of open data	108	ICT regulatory environment	134

NRI 2020 At-A-Glance: Yemen

Network Readiness Index   Rank: 132 (out of 134)   Score: 18.00

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	131	10.63	C. Governance pillar	134	16.95
1st sub-pillar: Access	132	13.10	1st sub-pillar: Trust	133	6.80
2nd sub-pillar: Content	121	10.32	2nd sub-pillar: Regulation	134	20.05
3rd sub-pillar: Future Technologies	131	8.47	3rd sub-pillar: Inclusion	131	24.00
B. People pillar	133	14.00	D. Impact pillar	128	30.42
1st sub-pillar: Individuals	129	14.24	1st sub-pillar: Economy	122	10.63
2nd sub-pillar: Businesses	132	13.43	2nd sub-pillar: Quality of Life	118	43.25
3rd sub-pillar: Governments	132	14.34	3rd sub-pillar: SDG Contribution	126	37.37

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	131	10.63	**C. Governance pillar**	134	16.95
1st sub-pillar: Access	132	13.10	*1st sub-pillar: Trust*	133	6.80
1.1.1 Mobile tariffs	132	0.33	3.1.1 Secure Internet servers	130	12.41
1.1.2 Handset prices	118	19.34	3.1.2 Cybersecurity	132	1.19
1.1.3 Internet access	131	6.02	3.1.3 Online access to financial account	NA	NA
1.1.4 4G mobile network coverage	130	0.00	3.1.4 Internet shopping	NA	NA
1.1.5 Fixed-broadband subscriptions	122	0.00	*2nd sub-pillar: Regulation*	134	20.05
1.1.6 International Internet bandwidth	123	52.94	3.2.1 Regulatory quality	132	17.58
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	134	0.00
2nd sub-pillar: Content	121	10.32	3.2.3 Legal framework's adaptability to emerging technologies	114	12.62
1.2.1 GitHub commits	129	0.05	3.2.4 e-commerce legislation	115	50.00
1.2.2 Wikipedia edits	106	15.93	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	131	24.00
1.2.4 Mobile apps development	122	25.13	3.3.1 E-Participation	124	28.39
3rd sub-pillar: Future Technologies	131	8.47	3.3.2 Socioeconomic gap in use of digital payments	128	0.00
1.3.1 Adoption of emerging technologies	123	14.69	3.3.3 Availability of local online content	115	29.18
1.3.2 Investment in emerging technologies	130	7.80	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	115	38.40
1.3.4 Computer software spending	107	2.93	**D. Impact pillar**	128	30.42
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	122	10.63
B. People pillar	133	14.00	4.1.1 Medium and high-tech industry	123	2.31
1st sub-pillar: Individuals	129	14.24	4.1.2 High-tech exports	61	15.19
2.1.1 Internet users	110	24.80	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	133	0.83	4.1.4 Labor productivity per employee	100	7.51
2.1.3 Use of virtual social networks	119	6.70	4.1.5 Prevalence of gig economy	114	17.52
2.1.4 Tertiary enrollment	108	6.87	*2nd sub-pillar: Quality of Life*	118	43.25
2.1.5 Adult literacy rate	NA	NA	4.2.1 Happiness	121	29.55
2.1.6 ICT skills	110	31.98	4.2.2 Freedom to make life choices	121	47.01
2nd sub-pillar: Businesses	132	13.43	4.2.3 Income inequality	64	67.78
2.2.1 Firms with website	114	13.35	4.2.4 Healthy life expectancy at birth	116	28.67
2.2.2 Ease of doing business	132	2.70	*3rd sub-pillar: SDG Contribution*	126	37.37
2.2.3 Professionals	86	16.97	4.3.1 SDG 3: Good Health and Well-Being	122	22.95
2.2.4 Technicians and associate professionals	105	14.20	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	122	19.93	4.3.3 SDG 5: Gender Equality	133	0.00
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	20	89.16
3rd sub-pillar: Governments	132	14.34	.	.	.
2.3.1 Government online services	123	30.30			
2.3.2 Publication and use of open data	108	0.00			
2.3.3 Government promotion of investment in emerging tech	115	12.71			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

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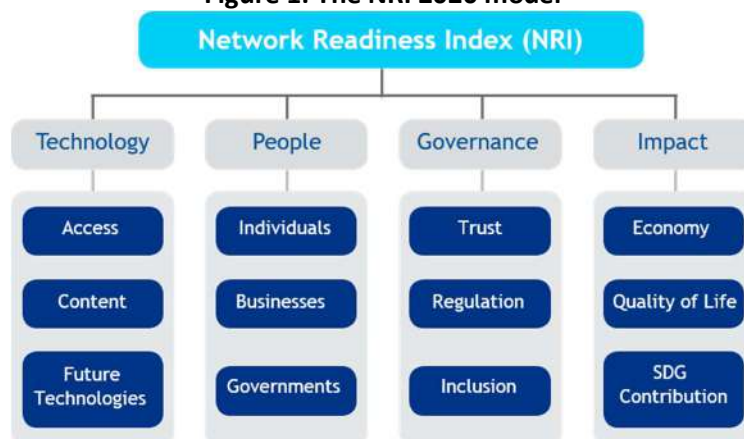
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Network Readiness Index 2020 Zambia

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.
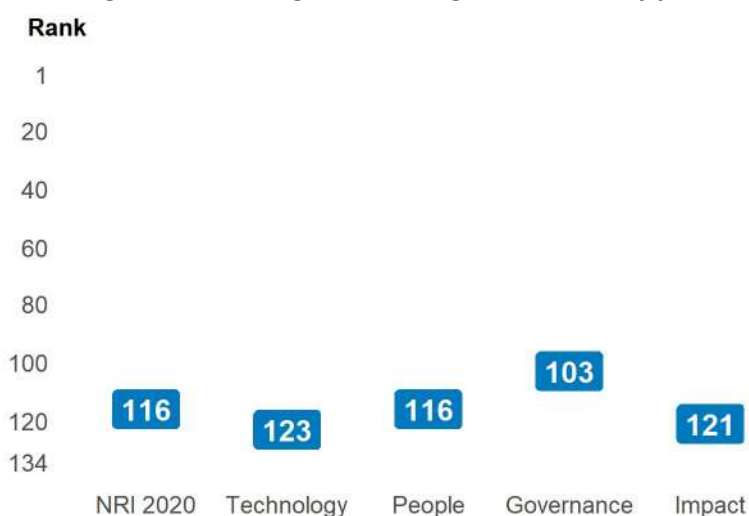
Figure 1: The NRI 2020 model

Global NRI position of Zambia

Zambia ranks 116th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Zambia global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Zambia relate to Businesses, Trust and Regulation, among others (Table 1). More could be done, though, to improve the economy's performances in the Content, Quality of Life and Governments sub-pillars.

Table 1: Zambia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Businesses	70	Individuals	114
Trust	88	Access	118
Regulation	90	Inclusion	119
SDG Contribution	96	Content	124
Future Technologies	98	Quality of Life	129
Economy	108	Governments	131

NRI score and income

Figure 3 shows the position of Zambia in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Zambia is slightly above the trend line, which suggests that its network readiness is more or less in line with what would be expected given its income level.

Figure 3: NRI score and GDP per capita PPP (log)
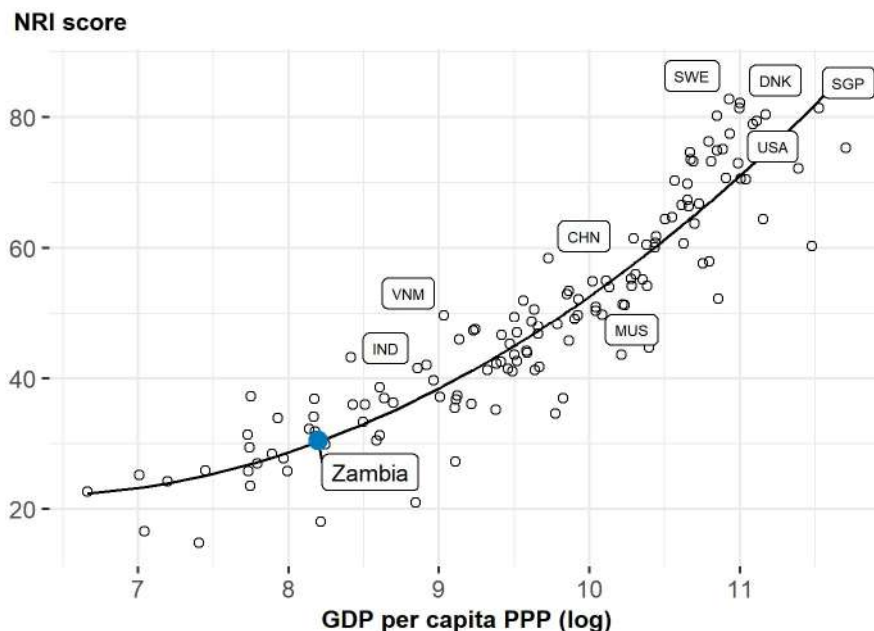
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Zambia belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries
Zambia is ranked 28th in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in four of the twelve sub-pillars: Businesses, Trust, Regulation and SDG Contribution.

Africa
Zambia is ranked 14th within Africa (Figure 4, right panel). It has a score above the regional average in two of the four pillars: people and governance. With regard to sub-pillars, it outperforms the average in Africa in five of the twelve sub-pillars: Individuals, Businesses, Trust, Regulation and SDG Contribution.

Figure 4: Performance of Zambia against its income group and region, overall and by pillar

Table 2: Zambia scores vs. averages of its income group and region, overall and by pillar

Dimension	Zambia	Lower-middle-income countries	Africa
NRI	30.54	36.72	30.62
Technology	18.76	27.72	21.47
People	27.68	33.88	26.75
Governance	41.95	43.15	39.31
Impact	33.75	42.15	34.94

Strongest and weakest indicators

The indicators where Zambia performs particularly well include e-commerce legislation, Online access to financial account, and Firms with website (Table 3). By contrast, the economy's weakest indicators include Happiness, Government online services, Mobile apps development, Internet users, and Availability of local online content.

Table 3: Top-ranked and bottom-ranked indicators of Zambia

Strongest indicators	Rank	Weakest indicators	Rank
e-commerce legislation	1	Income inequality	119
Online access to financial account	46	Healthy life expectancy at birth	120
Firms with website	56	Internet domain registrations	121
Internet access in schools	65	Tertiary enrollment	123
Freedom to make life choices	70	E-Participation	124
Adult literacy rate	73	Mobile apps development	127
Professionals	73	Internet users	127
Medium and high-tech industry	75	Availability of local online content	127
Ease of doing business	80	Government online services	128
Gender gap in Internet use	80	Happiness	130

NRI 2020 At-A-Glance: Zambia

Network Readiness Index   Rank: 116 (out of 134)   Score: 30.54

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	123	18.76	C. Governance pillar	103	41.95
1st sub-pillar: Access	118	28.27	1st sub-pillar: Trust	88	30.51
2nd sub-pillar: Content	124	8.15	2nd sub-pillar: Regulation	90	56.75
3rd sub-pillar: Future Technologies	98	19.85	3rd sub-pillar: Inclusion	119	38.59
B. People pillar	116	27.68	D. Impact pillar	121	33.75
1st sub-pillar: Individuals	114	26.88	1st sub-pillar: Economy	108	14.45
2nd sub-pillar: Businesses	70	41.05	2nd sub-pillar: Quality of Life	129	31.90
3rd sub-pillar: Governments	131	15.11	3rd sub-pillar: SDG Contribution	96	54.90

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	123	18.76	**C. Governance pillar**	103	41.95
1st sub-pillar: Access	118	28.27	*1st sub-pillar: Trust*	88	30.51
1.1.1 Mobile tariffs	112	35.21	3.1.1 Secure Internet servers	115	28.72
1.1.2 Handset prices	103	29.32	3.1.2 Cybersecurity	90	46.37
1.1.3 Internet access	113	17.47	3.1.3 Online access to financial account	46	40.46
1.1.4 4G mobile network coverage	106	43.41	3.1.4 Internet shopping	86	6.50
1.1.5 Fixed-broadband subscriptions	104	6.65	*2nd sub-pillar: Regulation*	90	56.75
1.1.6 International Internet bandwidth	107	60.02	3.2.1 Regulatory quality	101	41.67
1.1.7 Internet access in schools	65	5.81	3.2.2 ICT regulatory environment	97	70.28
2nd sub-pillar: Content	124	8.15	3.2.3 Legal framework's adaptability to emerging technologies	109	15.07
1.2.1 GitHub commits	115	0.31	3.2.4 e-commerce legislation	1	100.00
1.2.2 Wikipedia edits	110	13.17	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	119	38.59
1.2.4 Mobile apps development	127	19.03	3.3.1 E-Participation	124	28.39
3rd sub-pillar: Future Technologies	98	19.85	3.3.2 Socioeconomic gap in use of digital payments	94	49.51
1.3.1 Adoption of emerging technologies	114	25.44	3.3.3 Availability of local online content	127	21.37
1.3.2 Investment in emerging technologies	91	31.39	3.3.4 Gender gap in Internet use	80	40.88
1.3.3 ICT PCT patent applications	NA	NA	3.3.5 Rural gap in use of digital payments	97	52.80
1.3.4 Computer software spending	109	2.72	**D. Impact pillar**	121	33.75
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	108	14.45
B. People pillar	116	27.68	4.1.1 Medium and high-tech industry	75	26.74
1st sub-pillar: Individuals	114	26.88	4.1.2 High-tech exports	104	4.38
2.1.1 Internet users	127	12.00	4.1.3 PCT patent applications	NA	NA
2.1.2 Active mobile-broadband subscriptions	92	21.40	4.1.4 Labor productivity per employee	104	6.66
2.1.3 Use of virtual social networks	116	11.34	4.1.5 Prevalence of gig economy	112	20.04
2.1.4 Tertiary enrollment	123	2.42	*2nd sub-pillar: Quality of Life*	129	31.90
2.1.5 Adult literacy rate	73	82.97	4.2.1 Happiness	130	12.06
2.1.6 ICT skills	113	31.17	4.2.2 Freedom to make life choices	70	74.14
2nd sub-pillar: Businesses	70	41.05	4.2.3 Income inequality	119	15.21
2.2.1 Firms with website	56	57.47	4.2.4 Healthy life expectancy at birth	120	26.21
2.2.2 Ease of doing business	80	64.92	*3rd sub-pillar: SDG Contribution*	96	54.90
2.2.3 Professionals	73	21.10	4.3.1 SDG 3: Good Health and Well-Being	107	40.98
2.2.4 Technicians and associate professionals	93	18.65	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	104	43.11	4.3.3 SDG 5: Gender Equality	85	68.29
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	115	55.42
3rd sub-pillar: Governments	131	15.11	.	.	.
2.3.1 Government online services	128	23.63			
2.3.2 Publication and use of open data	102	3.82			
2.3.3 Government promotion of investment in emerging tech	108	17.87			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

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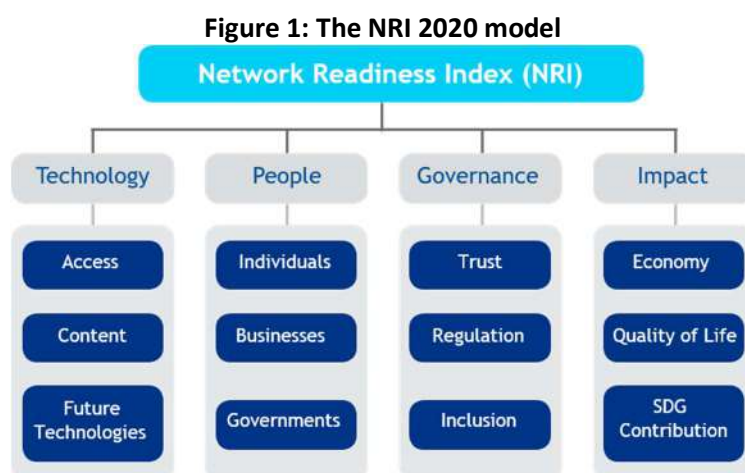**Sources**

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Network Readiness Index 2020 Zimbabwe

The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2020 the NRI Report maps the network-based readiness landscape of 134 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 60 variables.

Figure 1: The NRI 2020 model

Global NRI position of Zimbabwe

Zimbabwe ranks 126th out of the 134 economies included in the NRI 2020 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Zimbabwe global ranking, overall and by pillar
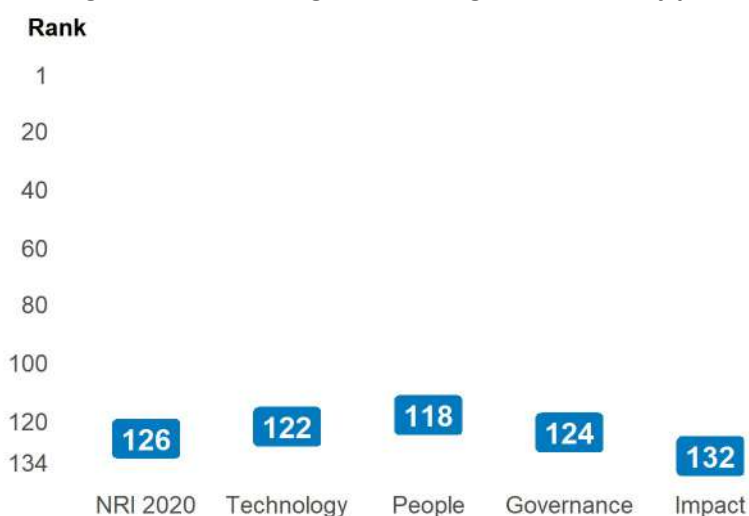
Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Zimbabwe relate to Future Technologies, Trust and Inclusion, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Regulation and Quality of Life sub-pillars.

Table 1: Zimbabwe rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	105	Governments	119
Trust	105	Access	124
Inclusion	106	Economy	128
Content	109	SDG Contribution	129
Individuals	109	Regulation	130
Businesses	113	Quality of Life	131

NRI score and income

Figure 3 shows the position of Zimbabwe in terms of both NRI score and GDP per capita (PPP). The trend line shows the expected NRI score given an economy's income level. As can be seen, Zimbabwe is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of its income level.

Figure 3: NRI score and GDP per capita PPP (log)
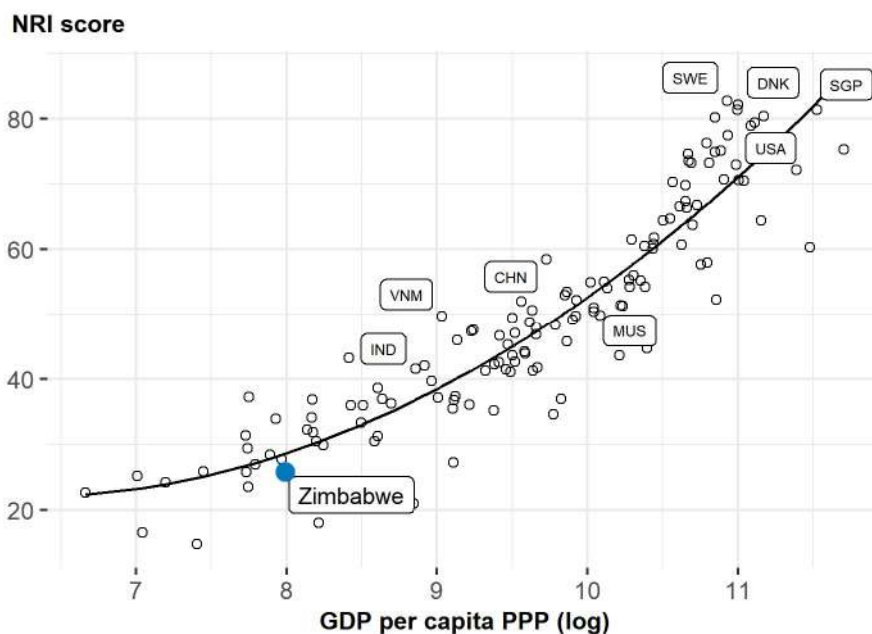
Note: SWE = Sweden (rank: 1), DNK = Denmark (2), SGP = Singapore (3), CHN = China (40), IND = India (88). USA is ranked 8th. Zimbabwe belongs to the group of lower-middle-income countries, where the best performer is Vietnam (VNM). The top performer of its region-Africa-is Mauritius (MUS).

Performance against its income group and region

Lower-middle-income countries
Zimbabwe is ranked 33rd in the group of lower-middle-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it trails lower-middle-income countries in all of them.

Africa
Zimbabwe is ranked 24th within Africa (Figure 4, right panel). It lags behind its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Africa in four of the twelve sub-pillars: Content, Individuals, Trust and Inclusion.

Figure 4: Performance of Zimbabwe against its income group and region, overall and by pillar
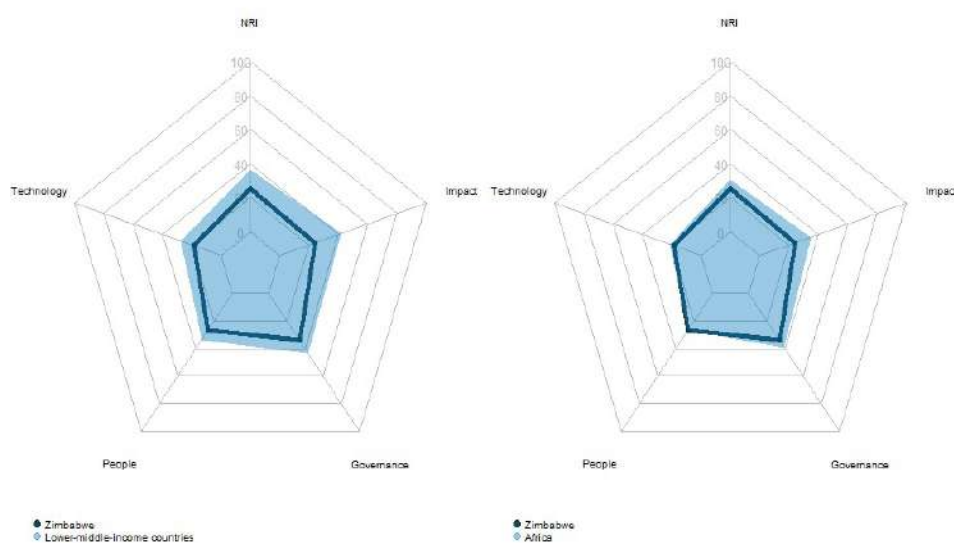
Table 2: Zimbabwe scores vs. averages of its income group and region, overall and by pillar

Dimension	Zimbabwe	Lower-middle-income countries	Africa
NRI	25.78	36.72	30.62
Technology	18.80	27.72	21.47
People	26.38	33.88	26.75
Governance	34.11	43.15	39.31
Impact	23.82	42.15	34.94

Strongest and weakest indicators

The indicators where Zimbabwe performs particularly well include Computer software spending, Online access to financial account, and Adult literacy rate (Table 3). By contrast, the economy's weakest indicators include Regulatory quality, Happiness, and Handset prices.

Table 3: Top-ranked and bottom-ranked indicators of Zimbabwe

Strongest indicators	Rank	Weakest indicators	Rank
Computer software spending	22	Freedom to make life choices	123
Online access to financial account	39	Mobile tariffs	126
Adult literacy rate	66	Investment in emerging technologies	126
Socioeconomic gap in use of digital payments	69	Use of virtual social networks	127
Medium and high-tech industry	72	e-commerce legislation	127
ICT PCT patent applications	82	Prevalence of gig economy	127
ICT skills	83	SDG 7: Affordable and Clean Energy	131
PCT patent applications	84	Handset prices	132
High-tech exports	85	Regulatory quality	133
Firms with website	89	Happiness	133

NRI 2020 At-A-Glance: Zimbabwe

Network Readiness Index · Rank: 126 (out of 134) · Score: 25.78

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	122	18.80	C. Governance pillar	124	34.11
1st sub-pillar: Access	124	23.87	1st sub-pillar: Trust	105	25.51
2nd sub-pillar: Content	109	13.90	2nd sub-pillar: Regulation	130	31.05
3rd sub-pillar: Future Technologies	105	18.62	3rd sub-pillar: Inclusion	106	45.78
B. People pillar	118	26.38	D. Impact pillar	132	23.82
1st sub-pillar: Individuals	109	30.77	1st sub-pillar: Economy	128	8.10
2nd sub-pillar: Businesses	113	27.15	2nd sub-pillar: Quality of Life	131	29.58
3rd sub-pillar: Governments	119	21.22	3rd sub-pillar: SDG Contribution	129	33.80

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	122	18.80	**C. Governance pillar**	124	34.11
1st sub-pillar: Access	124	23.87	*1st sub-pillar: Trust*	105	25.51
1.1.1 Mobile tariffs	126	20.44	3.1.1 Secure Internet servers	108	33.67
1.1.2 Handset prices	132	0.00	3.1.2 Cybersecurity	117	19.28
1.1.3 Internet access	105	23.78	3.1.3 Online access to financial account	39	44.27
1.1.4 4G mobile network coverage	111	35.00	3.1.4 Internet shopping	96	4.83
1.1.5 Fixed-broadband subscriptions	108	5.11	*2nd sub-pillar: Regulation*	130	31.05
1.1.6 International Internet bandwidth	110	58.88	3.2.1 Regulatory quality	133	16.53
1.1.7 Internet access in schools	NA	NA	3.2.2 ICT regulatory environment	92	72.98
2nd sub-pillar: Content	109	13.90	3.2.3 Legal framework's adaptability to emerging technologies	120	9.68
1.2.1 GitHub commits	112	0.34	3.2.4 e-commerce legislation	127	25.00
1.2.2 Wikipedia edits	107	15.35	3.2.5 Privacy protection by law content	NA	NA
1.2.3 Internet domain registrations	*	*	*3rd sub-pillar: Inclusion*	106	45.78
1.2.4 Mobile apps development	107	39.31	3.3.1 E-Participation	105	43.21
3rd sub-pillar: Future Technologies	105	18.62	3.3.2 Socioeconomic gap in use of digital payments	69	65.03
1.3.1 Adoption of emerging technologies	111	26.03	3.3.3 Availability of local online content	117	27.72
1.3.2 Investment in emerging technologies	126	12.22	3.3.4 Gender gap in Internet use	NA	NA
1.3.3 ICT PCT patent applications	82	0.00	3.3.5 Rural gap in use of digital payments	106	47.15
1.3.4 Computer software spending	22	36.23	**D. Impact pillar**	132	23.82
1.3.5 Robot density	NA	NA	*1st sub-pillar: Economy*	128	8.10
B. People pillar	118	26.38	4.1.1 Medium and high-tech industry	72	27.69
1st sub-pillar: Individuals	109	30.77	4.1.2 High-tech exports	85	9.07
2.1.1 Internet users	109	25.15	4.1.3 PCT patent applications	84	0.02
2.1.2 Active mobile-broadband subscriptions	99	19.64	4.1.4 Labor productivity per employee	107	3.72
2.1.3 Use of virtual social networks	127	4.74	4.1.5 Prevalence of gig economy	127	0.00
2.1.4 Tertiary enrollment	109	6.76	*2nd sub-pillar: Quality of Life*	131	29.58
2.1.5 Adult literacy rate	66	85.47	4.2.1 Happiness	133	0.00
2.1.6 ICT skills	83	42.83	4.2.2 Freedom to make life choices	123	43.71
2nd sub-pillar: Businesses	113	27.15	4.2.3 Income inequality	99	48.20
2.2.1 Firms with website	89	33.90	4.2.4 Healthy life expectancy at birth	119	26.41
2.2.2 Ease of doing business	113	42.87	*3rd sub-pillar: SDG Contribution*	129	33.80
2.2.3 Professionals	113	7.68	4.3.1 SDG 3: Good Health and Well-Being	106	42.62
2.2.4 Technicians and associate professionals	118	5.99	4.3.2 SDG 4: Quality Education	NA	NA
2.2.5 Business use of digital tools	99	45.31	4.3.3 SDG 5: Gender Equality	101	60.03
2.2.6 R&D expenditure by businesses	NA	NA	4.3.4 SDG 7: Affordable and Clean Energy	131	0.00
3rd sub-pillar: Governments	119	21.22	.	.	.
2.3.1 Government online services	97	50.91			
2.3.2 Publication and use of open data	106	1.87			
2.3.3 Government promotion of investment in emerging tech	116	10.90			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

* Confidential data

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