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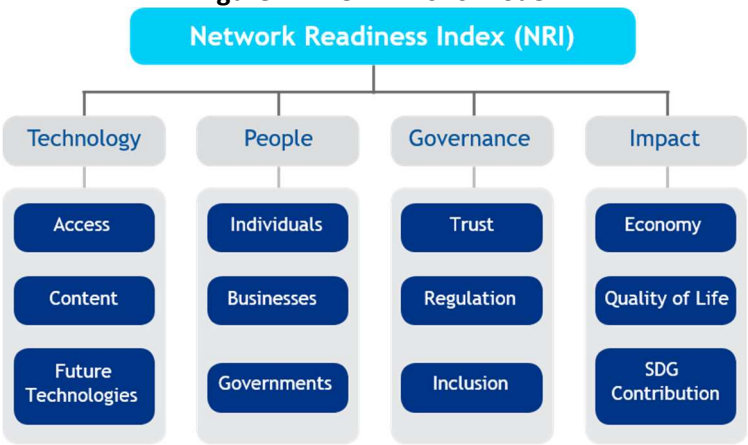
Network Readiness Index 2020 Yemen

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.

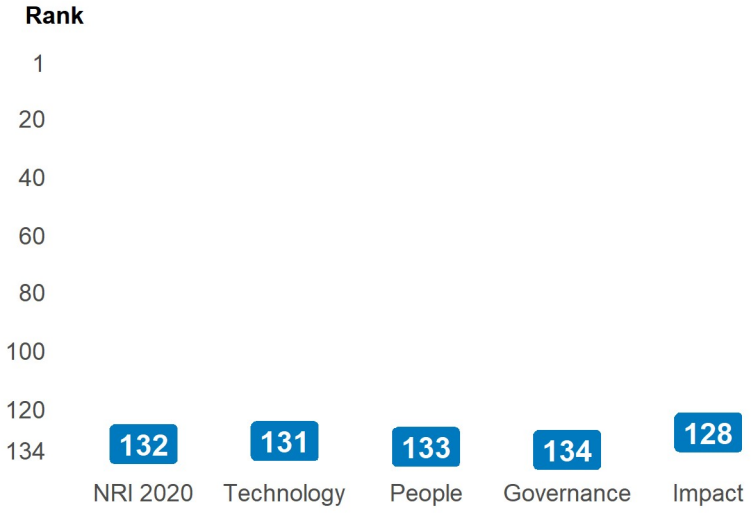
Figure 1: The NRI 2020 model



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.

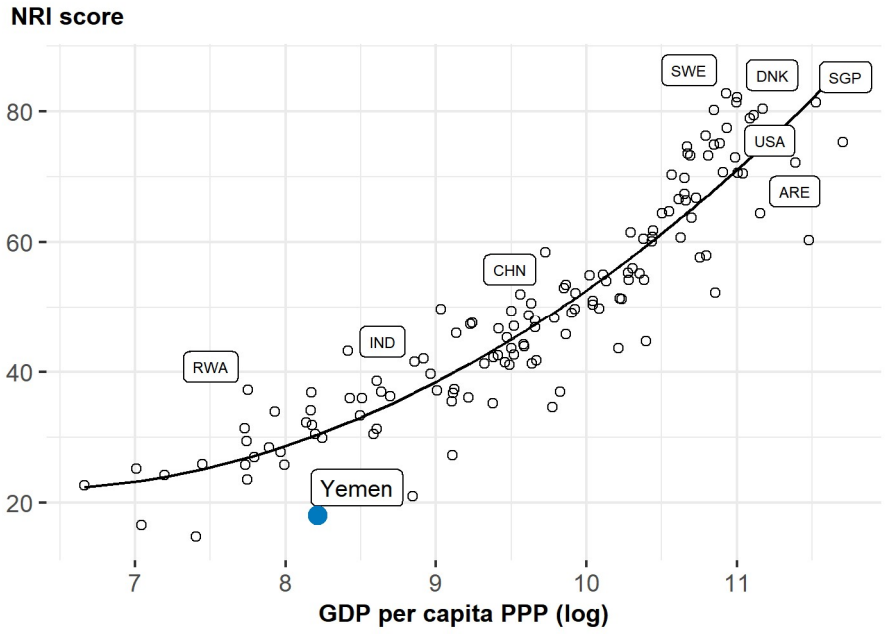
Table 1: Yemen rankings by sub-pillar

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).

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

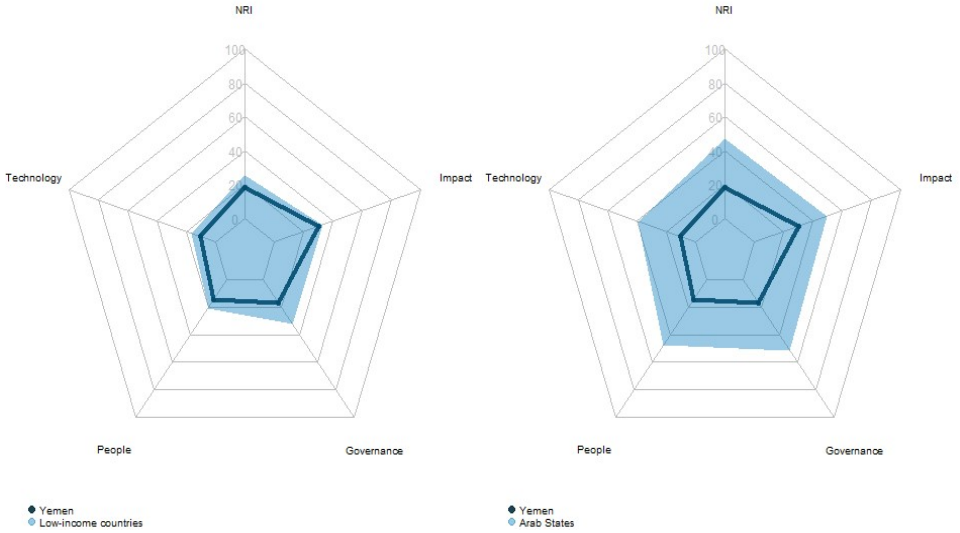


Table 2: Yemen scores vs. averages of its income group and region, overall and by pillar

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

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NRI 2020 At-A-Glance: Yemen

Network Readiness Index — Rank: 132 (out of 134) — Score: 18.00

Pillar/sub-pillar	Rank	Score
A. Technology pillar	131	10.63
1st sub-pillar: Access	132	13.10
2nd sub-pillar: Content	121	10.32
3rd sub-pillar: Future Technologies	131	8.47
B. People pillar	133	14.00
1st sub-pillar: Individuals	129	14.24
2nd sub-pillar: Businesses	132	13.43
3rd sub-pillar: Governments	132	14.34

Pillar/sub-pillar	Rank	Score
C. Governance pillar	134	16.95
1st sub-pillar: Trust	133	6.80
2nd sub-pillar: Regulation	134	20.05
3rd sub-pillar: Inclusion	131	24.00
D. Impact pillar	128	30.42
1st sub-pillar: Economy	122	10.63
2nd sub-pillar: Quality of Life	118	43.25
3rd sub-pillar: SDG Contribution	126	37.37

The Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	131	10.63
1st sub-pillar: Access	132	13.10
1.1.1 Mobile tariffs	132	0.33
1.1.2 Handset prices	118	19.34
1.1.3 Internet access	131	6.02
1.1.4 4G mobile network coverage	130	0.00
1.1.5 Fixed-broadband subscriptions	122	0.00
1.1.6 International Internet bandwidth	123	52.94
1.1.7 Internet access in schools	NA	NA
2nd sub-pillar: Content	121	10.32
1.2.1 GitHub commits	129	0.05
1.2.2 Wikipedia edits	106	15.93
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	122	25.13
3rd sub-pillar: Future Technologies	131	8.47
1.3.1 Adoption of emerging technologies	123	14.69
1.3.2 Investment in emerging technologies	130	7.80
1.3.3 ICT PCT patent applications	NA	NA
1.3.4 Computer software spending	107	2.93
1.3.5 Robot density	NA	NA
B. People pillar	133	14.00
1st sub-pillar: Individuals	129	14.24
2.1.1 Internet users	110	24.80
2.1.2 Active mobile-broadband subscriptions	133	0.83
2.1.3 Use of virtual social networks	119	6.70
2.1.4 Tertiary enrollment	108	6.87
2.1.5 Adult literacy rate	NA	NA
2.1.6 ICT skills	110	31.98
2nd sub-pillar: Businesses	132	13.43
2.2.1 Firms with website	114	13.35
2.2.2 Ease of doing business	132	2.70
2.2.3 Professionals	86	16.97
2.2.4 Technicians and associate professionals	105	14.20
2.2.5 Business use of digital tools	122	19.93
2.2.6 R&D expenditure by businesses	NA	NA
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

Indicator	Rank	Score
C. Governance pillar	134	16.95
1st sub-pillar: Trust	133	6.80
3.1.1 Secure Internet servers	130	12.41
3.1.2 Cybersecurity	132	1.19
3.1.3 Online access to financial account	NA	NA
3.1.4 Internet shopping	NA	NA
2nd sub-pillar: Regulation	134	20.05
3.2.1 Regulatory quality	132	17.58
3.2.2 ICT regulatory environment	134	0.00
3.2.3 Legal framework's adaptability to emerging technologies	114	12.62
3.2.4 e-commerce legislation	115	50.00
3.2.5 Privacy protection by law content	NA	NA
3rd sub-pillar: Inclusion	131	24.00
3.3.1 E-Participation	124	28.39
3.3.2 Socioeconomic gap in use of digital payments	128	0.00
3.3.3 Availability of local online content	115	29.18
3.3.4 Gender gap in Internet use	NA	NA
3.3.5 Rural gap in use of digital payments	115	38.40
D. Impact pillar	128	30.42
1st sub-pillar: Economy	122	10.63
4.1.1 Medium and high-tech industry	123	2.31
4.1.2 High-tech exports	61	15.19
4.1.3 PCT patent applications	NA	NA
4.1.4 Labor productivity per employee	100	7.51
4.1.5 Prevalence of gig economy	114	17.52
2nd sub-pillar: Quality of Life	118	43.25
4.2.1 Happiness	121	29.55
4.2.2 Freedom to make life choices	121	47.01
4.2.3 Income inequality	64	67.78
4.2.4 Healthy life expectancy at birth	116	28.67
3rd sub-pillar: SDG Contribution	126	37.37
4.3.1 SDG 3: Good Health and Well-Being	122	22.95
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 SDG 5: Gender Equality	133	0.00
4.3.4 SDG 7: Affordable and Clean Energy	20	89.16
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* Confidential data

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