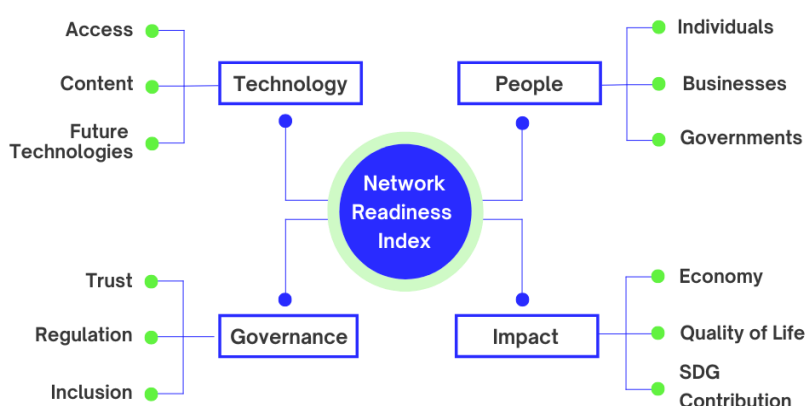


Network Readiness Index 2022 Indonesia

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 2022 the NRI Report maps the network-based readiness landscape of 131 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 58 variables.

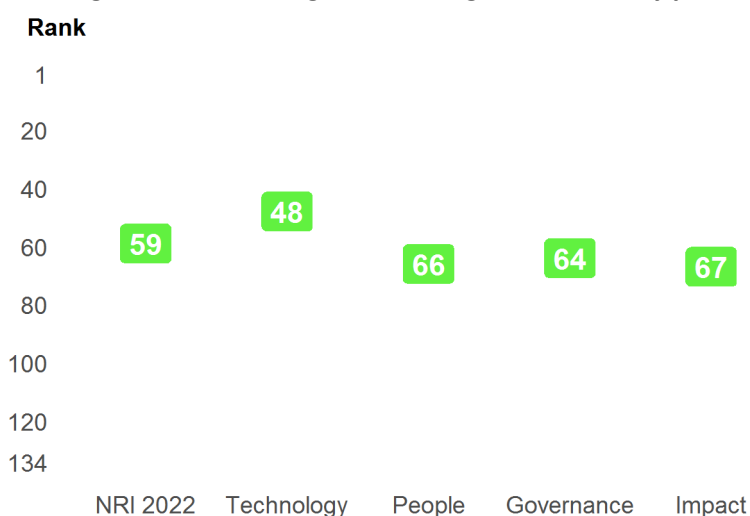
Figure 1: The NRI 2022 model



Global NRI position of Indonesia

Indonesia ranks 59th out of the 131 economies included in the NRI 2022 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Impact.

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 Individuals, Access and Economy, among others (Table 1). More could be done, though, to improve the economy's performances in the Regulation, SDG Contribution and Businesses sub-pillars.

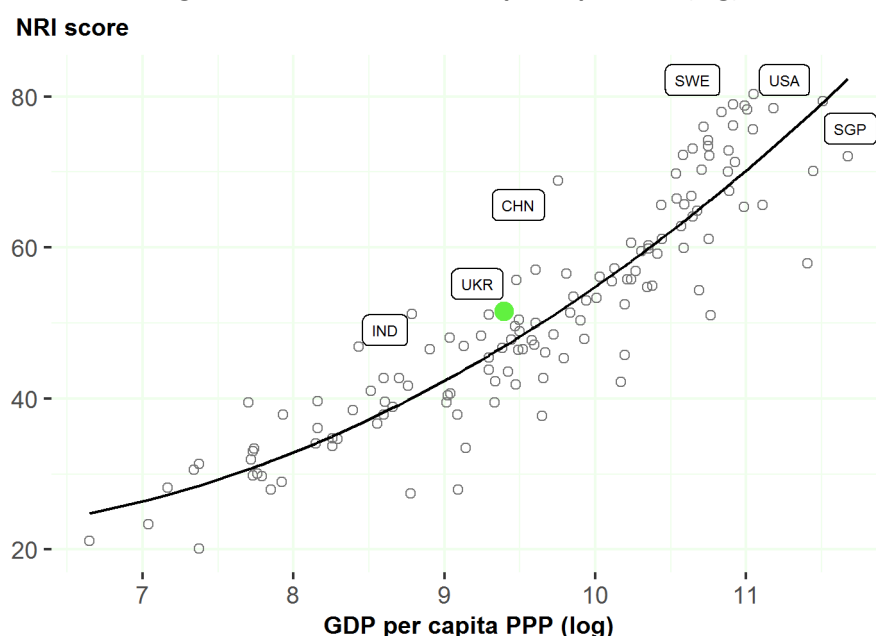
Table 1: Indonesia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	10	Quality of Life	65
Access	36	Content	66
Economy	44	Inclusion	70
Future Technologies	45	Regulation	79
Governments	56	SDG Contribution	97
Trust	64	Businesses	115

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: USA = United States (rank: 1), SGP = Singapore (rank: 2), SWE = Sweden (3), CHN = China (23), IND = India (61). Netherlands (NLD) is ranked 4th. Indonesia belongs to the group of lower-middle-income countries, where the best performer is Ukraine (UKR). The top performer of its region-Asia & Pacific-is Singapore (SGP).

Performance against its income group and region

Lower-middle-income countries

Indonesia 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 outperforms lower-middle-income countries in ten of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Governments, Trust, Regulation, Inclusion, Economy and Quality of Life.

Asia & Pacific

Indonesia is ranked 10th 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 three of the twelve sub-pillars: Access, Individuals and Regulation.

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

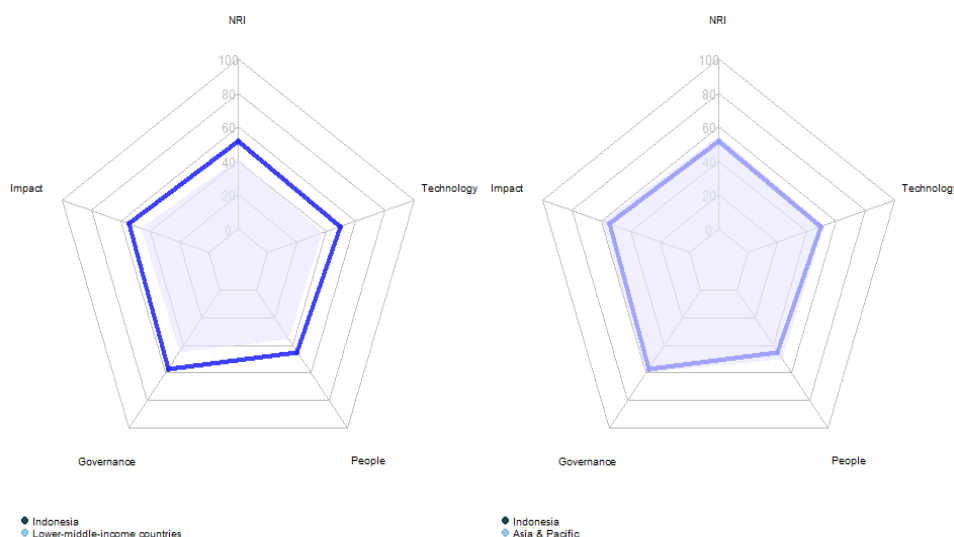


Table 2: Indonesia scores vs. averages of its income group and region, overall and by pillar

Dimension	Indonesia	Lower-middle-income countries	Asia & Pacific
NRI	51.51	40.94	55.18
Technology	49.82	37.28	51.78
People	45.05	35.42	50.21
Governance	56.93	45.00	59.66
Impact	54.26	46.09	59.07

Strongest and weakest indicators

The indicators where Indonesia performs particularly well include 3.2.4 E-commerce legislation, 2.1.1 Mobile broadband internet traffic within the country, and 1.1.3 FTTH/building Internet subscriptions (Table 3). By contrast, the economy's weakest indicators include 3.2.2 ICT regulatory environment, 2.2.1 Firms with website, and 3.3.5 Rural gap in use of digital payments.

Table 3: Strongest and weakest indicators of Indonesia

Strongest indicators	Rank	Weakest indicators	Rank
3.2.4 E-commerce legislation	1	1.3.3 Robot density	51
2.1.1 Mobile broadband internet traffic within the country	5	4.3.2 SDG 4: Quality Education	71
1.1.3 FTTH/building Internet subscriptions	7	3.3.5 Rural gap in use of digital payments	110
1.1.5 International Internet bandwidth	7	2.2.1 Firms with website	112
4.1.4 Domestic market size	7	3.2.2 ICT regulatory environment	122
2.2.4 Annual investment in telecommunication services	16		
4.1.5 Prevalence of gig economy	17		
2.1.2 ICT skills in the education system	19		
1.3.4 Computer software spending	24		
2.3.3 Government promotion of investment in emerging technologies	25		
1.3.2 Investment in emerging technologies	28		

NRI 2022 At-A-Glance: Indonesia

Network Readiness Index

Rank: 59 (out of 131)

Score: 51.51

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	48	49.82	C. Governance pillar	64	56.93
1st sub-pillar: Access	36	73.55	1st sub-pillar: Trust	64	47.73
2nd sub-pillar: Content	66	36.61	2nd sub-pillar: Regulation	79	60.71
3rd sub-pillar: Future Technologies	45	39.30	3rd sub-pillar: Inclusion	70	62.35
B. People pillar	66	45.05	D. Impact pillar	67	54.26
1st sub-pillar: Individuals	10	63.47	1st sub-pillar: Economy	44	40.72
2nd sub-pillar: Businesses	115	24.74	2nd sub-pillar: Quality of Life	65	67.80
3rd sub-pillar: Governments	56	46.94	3rd sub-pillar: SDG Contribution	97	54.25

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	48	49.82	C. Governance pillar	64	56.93
1st sub-pillar: Access	36	73.55	1st sub-pillar: Trust	64	47.73
1.1.1 Mobile tariffs	36	73.22	3.1.1 Secure Internet servers	58	60.15
1.1.2 Handset prices	100	38.29	3.1.2 Cybersecurity	31	94.79
1.1.3 FTTH/building Internet subscriptions	7	67.26	3.1.3 Online access to financial account	94	14.96
1.1.4 Population covered by at least a 3G mobile network	81	98.74	3.1.4 Internet shopping	61	21.01
1.1.5 International Internet bandwidth	7	90.25	2nd sub-pillar: Regulation	79	60.71
1.1.6 Internet access in schools	NA	NA	3.2.1 Regulatory quality	68	43.20
2nd sub-pillar: Content	66	36.61	3.2.2 ICT regulatory environment	122	56.47
1.2.1 GitHub commits	71	4.34	3.2.3 Regulation of emerging technologies	37	62.11
1.2.2 Internet domain registrations	95	1.07	3.2.4 E-commerce legislation	1	100.00
1.2.3 Mobile apps development	83	72.28	3.2.5 Privacy protection by law content	114	41.77
1.2.4 AI scientific publications	27	68.73	3rd sub-pillar: Inclusion	70	62.35
3rd sub-pillar: Future Technologies	45	39.30	3.3.1 E-Participation	56	74.07
1.3.1 Adoption of emerging technologies	41	59.47	3.3.2 Socioeconomic gap in use of digital payments	56	78.99
1.3.2 Investment in emerging technologies	28	62.75	3.3.3 Availability of local online content	46	70.19
1.3.3 Robot density	51	0.76	3.3.4 Gender gap in Internet use	87	57.52
1.3.4 Computer software spending	24	34.21	3.3.5 Rural gap in use of digital payments	110	30.99

Indicator	Rank	Score	Indicator	Rank	Score	
B. People pillar	66	45.05	D. Impact pillar	67	54.26	
<i>1st sub-pillar: Individuals</i>	10	63.47	<i>1st sub-pillar: Economy</i>	44	40.72	
2.1.1 Mobile broadband internet traffic within the country	5	62.86	• 4.1.1 High-tech and medium-high-tech manufacturing	43	38.29	
2.1.2 ICT skills in the education system	19	72.19	• 4.1.2 High-tech exports	45	40.31	
2.1.3 Use of virtual social networks	74	63.88	4.1.3 PCT patent applications	98	0.09	
2.1.4 Tertiary enrollment	77	23.56	4.1.4 Domestic market size	7	80.03	•
2.1.5 Adult literacy rate	41	94.88	4.1.5 Prevalence of gig economy	17	69.77	•
2.1.6 AI talent concentration	NA	NA	4.1.6 ICT services exports	89	15.83	
<i>2nd sub-pillar: Businesses</i>	115	24.74	<i>2nd sub-pillar: Quality of Life</i>	65	67.80	
2.2.1 Firms with website	112	12.71	○ 4.2.1 Happiness	76	57.95	
2.2.2 GERD financed by business enterprise	80	9.81	4.2.2 Freedom to make life choices	29	86.41	
2.2.3 Knowledge intensive employment	105	14.06	4.2.3 Income inequality	66	64.57	
2.2.4 Annual investment in telecommunication services	16	86.71	• 4.2.4 Healthy life expectancy at birth	92	62.27	
2.2.5 GERD performed by business enterprise	82	0.43	<i>3rd sub-pillar: SDG Contribution</i>	97	54.25	
<i>3rd sub-pillar: Governments</i>	56	46.94	4.3.1 SDG 3: Good Health and Well-Being	97	49.89	
2.3.1 Government online services	70	67.28	4.3.2 SDG 4: Quality Education	71	22.43	○
2.3.2 Publication and use of open data	36	42.65	4.3.3 SDG 5: Women's economic opportunity	113	50.00	
2.3.3 Government promotion of investment in emerging tech	25	60.34	4.3.4 SDG 7: Affordable and Clean Energy	39	84.63	
2.3.4 R&D expenditure by governments and higher education	76	17.50	4.3.5 SDG 11: Sustainable Cities and Communities	69	64.30	

NOTE: • a strength and ○ a weakness.

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