



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 2023 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 58 variables.

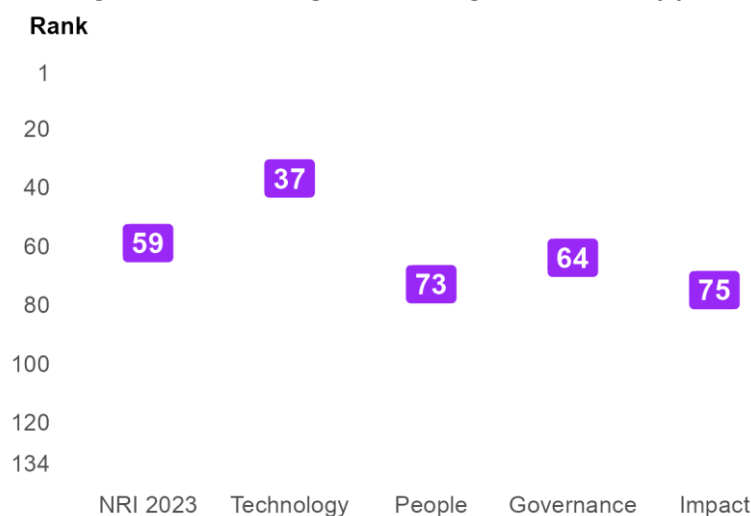
Figure 1: The NRI 2023 model



Global NRI position of Indonesia

Indonesia ranks 59th out of the 134 economies included in the NRI 2023 (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



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Performance at sub-pillar level

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

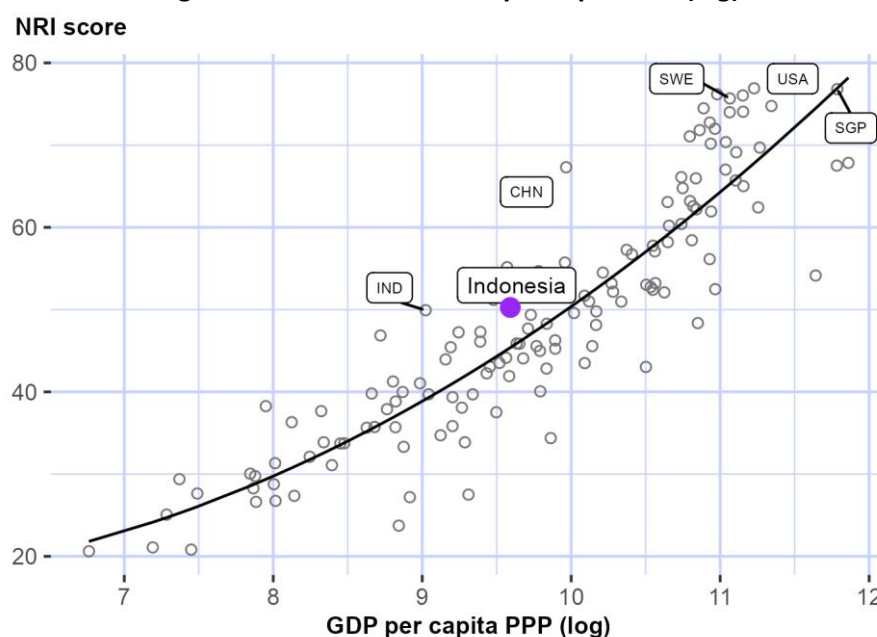
Table 1: Indonesia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Access	18	Trust	64
Individuals	29	Quality of Life	65
Content	43	Inclusion	66
Future Technologies	45	Regulation	72
Governments	47	SDG Contribution	99
Economy	48	Businesses	118

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), FIN = Finland (3), NLD = Netherlands (4), SWE = Sweden (5), CHN = China (20), IND = India (61). Indonesia belongs to the group of upper-middle-income countries, where the best performer is China (CHN). The top performer of its region-Asia & Pacific-is Singapore (SGP).

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Performance against its income group and region

Upper-middle-income countries

Indonesia 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 two of the four pillars: NRI, Technology and Governance. At the sub-pillar level, it outperforms upper-middle-income countries in nine of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Governments, Trust, Inclusion, Economy and Quality of Life.

Asia & Pacific

Indonesia is ranked 11th within Asia & Pacific (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 Asia & Pacific in four of the twelve sub-pillars: Access, Individuals, Regulation and Quality of Life.

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

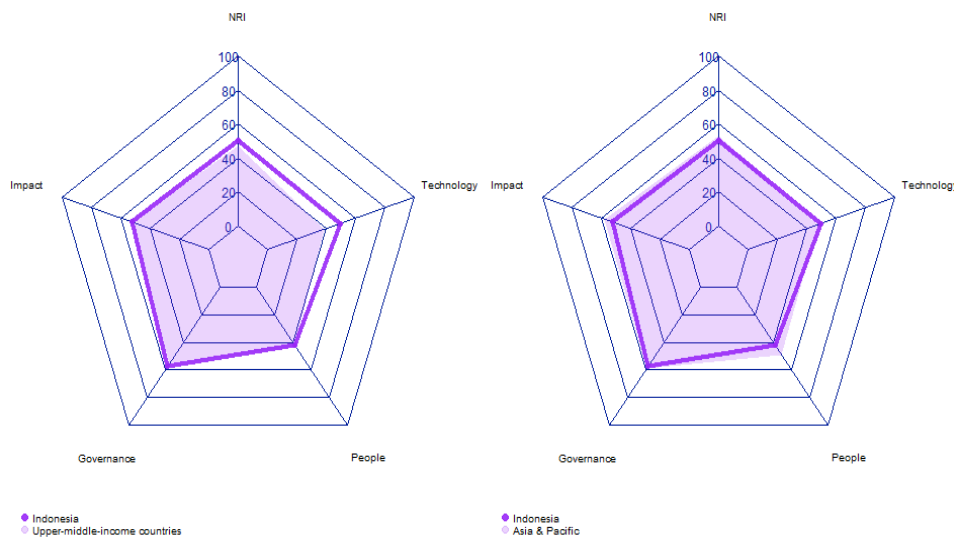


Table 2: Indonesia scores vs. averages of its income group and region, overall and by pillar

Dimension	Indonesia	Upper-middle-income countries	Asia & Pacific
NRI	50.26	47.35	53.28
Technology	49.35	38.48	47.34
People	41.94	42.59	48.95
Governance	57.59	55.90	59.22
Impact	52.16	52.43	57.62

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Strongest and weakest indicators

The indicators where Indonesia performs particularly well include 3.2.4 E-commerce legislation, 1.2.4 AI scientific publications, and 2.1.1 Mobile broadband internet traffic within the country (Table 3). By contrast, the economy's weakest indicators include 3.2.2 ICT regulatory environment, 3.3.5 Rural gap in use of digital payments, and 2.2.1 Firms with website.

Table 3: Highlight of Strengths and Opportunities for Indonesia

Strongest indicators	Rank	Weakest indicators	Rank
3.2.4 E-commerce legislation	1	1.3.3 Robot density	51
1.2.4 AI scientific publications	4	4.3.2 SDG 4: Quality Education	69
2.1.1 Mobile broadband internet traffic within the country	4	2.2.1 Firms with website	106
1.1.5 International Internet bandwidth	5	3.3.5 Rural gap in use of digital payments	111
2.1.2 ICT skills in the education system	5	3.2.2 ICT regulatory environment	123
1.1.3 FTTH/building Internet subscriptions	7		
4.1.4 Domestic market size	7		
2.2.4 Annual investment in telecommunication services	14		
4.1.5 Prevalence of gig economy	17		
4.2.2 Freedom to make life choices	23		
1.3.4 Computer software spending	25		

Note: For the full list of strengths and weaknesses, see At-A-Glance table.

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NRI 2023 At-A-Glance: Indonesia

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Rank: 59 (out of 134)

Score: 50.26

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	37	49.35	C. Governance pillar	64	57.59
1st sub-pillar: Access	18	76.59	1st sub-pillar: Trust	64	47.60
2nd sub-pillar: Content	43	31.79	2nd sub-pillar: Regulation	72	63.44
3rd sub-pillar: Future Technologies	45	39.66	3rd sub-pillar: Inclusion	66	61.72
B. People pillar	73	41.94	D. Impact pillar	75	52.16
1st sub-pillar: Individuals	29	55.35	1st sub-pillar: Economy	48	34.29
2nd sub-pillar: Businesses	118	25.01	2nd sub-pillar: Quality of Life	65	68.36
3rd sub-pillar: Governments	47	45.46	3rd sub-pillar: SDG Contribution	99	53.83

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	37	49.35	C. Governance pillar	64	57.59
1st sub-pillar: Access	18	76.59	1st sub-pillar: Trust	64	47.60
1.1.1 Mobile tariffs	39	75.32	3.1.1 Secure Internet servers	57	60.20
1.1.2 Handset prices	61	50.22	3.1.2 Cybersecurity	31	94.79
1.1.3 FTTH/building Internet subscriptions	7	67.28	3.1.3 Online access to financial account	95	14.96
1.1.4 Population covered by at least a 3G mobile network	83	98.99	3.1.4 Internet shopping	69	20.45
1.1.5 International Internet bandwidth	5	91.10	2nd sub-pillar: Regulation	72	63.44
1.1.6 Internet access in schools	NA	NA	3.2.1 Regulatory quality	55	56.34
2nd sub-pillar: Content	43	31.79	3.2.2 ICT regulatory environment	123	56.47
1.2.1 GitHub commits	59	8.42	3.2.3 Regulation of emerging technologies	37	62.60
1.2.2 Internet domain registrations	91	1.40	3.2.4 E-commerce legislation	1	100.00
1.2.3 Mobile apps development	61	67.17	3.2.5 Privacy protection by law content	114	41.77
1.2.4 AI scientific publications	4	50.18	3rd sub-pillar: Inclusion	66	61.72
3rd sub-pillar: Future Technologies	45	39.66	3.3.1 E-Participation	37	70.93
1.3.1 Adoption of emerging technologies	41	59.47	3.3.2 Socioeconomic gap in use of digital payments	60	78.99
1.3.2 Investment in emerging technologies	28	62.75	3.3.3 Availability of local online content	46	70.19

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Indicator	Rank	Score	Indicator	Rank	Score
1.3.3 Robot density	51	0.70	3.3.4 Gender gap in Internet use	88	57.51
1.3.4 Computer software spending	25	35.74	3.3.5 Rural gap in use of digital payments	111	30.99
B. People pillar	73	41.94	D. Impact pillar	75	52.16
<i>1st sub-pillar: Individuals</i>	29	55.35	<i>1st sub-pillar: Economy</i>	48	34.29
2.1.1 Mobile broadband internet traffic within the country	4	61.91	4.1.1 High-tech and medium-high-tech manufacturing	39	36.43
2.1.2 ICT skills in the education system	5	87.76	4.1.2 High-tech exports	62	12.82
2.1.3 Use of virtual social networks	79	56.40	4.1.3 PCT patent applications	98	0.09
2.1.4 Tertiary enrollment	80	22.67	4.1.4 Domestic market size	7	80.48
2.1.5 Adult literacy rate	43	94.54	4.1.5 Prevalence of gig economy	17	69.77
2.1.6 AI talent concentration	37	8.80	4.1.6 ICT services exports	93	6.16
<i>2nd sub-pillar: Businesses</i>	118	25.01	<i>2nd sub-pillar: Quality of Life</i>	65	68.36
2.2.1 Firms with website	106	12.71	4.2.1 Happiness	77	60.12
2.2.2 GERD financed by business enterprise	78	9.86	4.2.2 Freedom to make life choices	23	87.99
2.2.3 Knowledge intensive employment	103	13.22	4.2.3 Income inequality	66	63.07
2.2.4 Annual investment in telecommunication services	14	88.88	4.2.4 Healthy life expectancy at birth	94	62.27
2.2.5 GERD performed by business enterprise	81	0.40	<i>3rd sub-pillar: SDG Contribution</i>	99	53.83
<i>3rd sub-pillar: Governments</i>	47	45.46	4.3.1 SDG 3: Good Health and Well-Being	99	49.89
2.3.1 Government online services	51	73.96	4.3.2 SDG 4: Quality Education	69	19.51
2.3.2 Publication and use of open data	36	42.65	4.3.3 SDG 5: Women's economic opportunity	110	58.41
2.3.3 Government promotion of investment in emerging tech	25	60.36	4.3.4 SDG 7: Affordable and Clean Energy	41	77.02
2.3.4 R&D expenditure by governments and higher education	81	4.88	4.3.5 SDG 11: Sustainable Cities and Communities	70	64.30

NOTE: ● a strength and ○ a weakness.

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