



## 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 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.

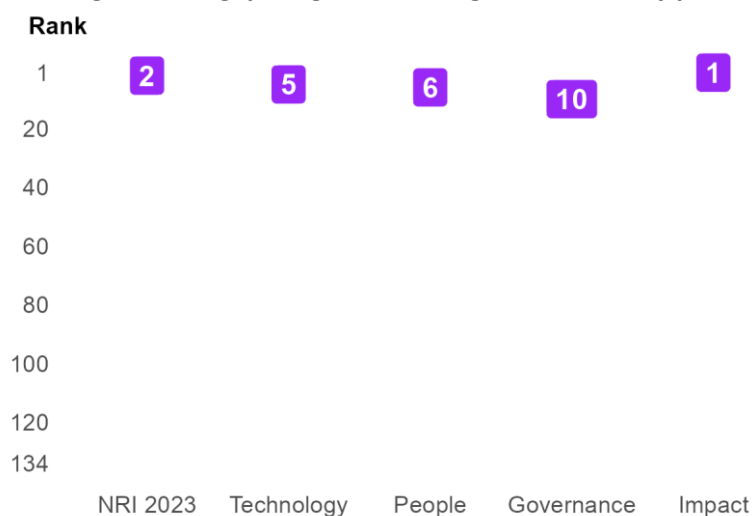
Figure 1: The NRI 2023 model



### Global NRI position of Singapore

Singapore ranks 2nd out of the 134 economies included in the NRI 2023 (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



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## Performance at sub-pillar level

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

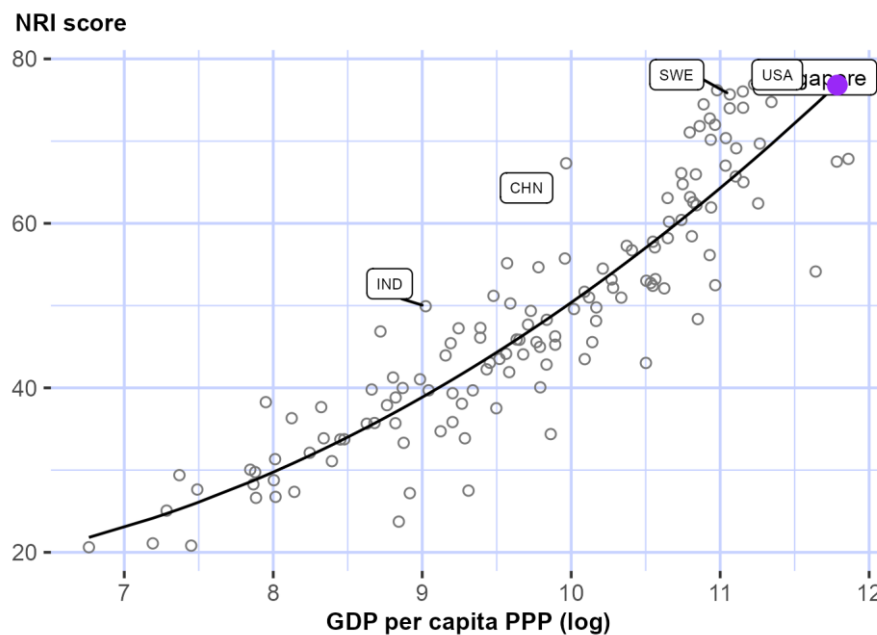
**Table 1: Singapore rankings by sub-pillar**

Sub-pillar	Rank	Sub-pillar	Rank
Inclusion	1	Regulation	10
Economy	1	Quality of Life	10
Access	2	Governments	11
Future Technologies	2	Content	13
Individuals	8	Businesses	15
SDG Contribution	8	Trust	17

## 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: USA = United States (rank: 1), SGP = Singapore (rank: 2), FIN = Finland (3), NLD = Netherlands (4), SWE = Sweden (5), CHN = China (20), IND = India (61). Singapore belongs to the group of high-income countries, where the best performer is United States of America (USA). The top performer of its region-Asia & Pacific-is Singapore (SGP).

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## Performance against its income group and region

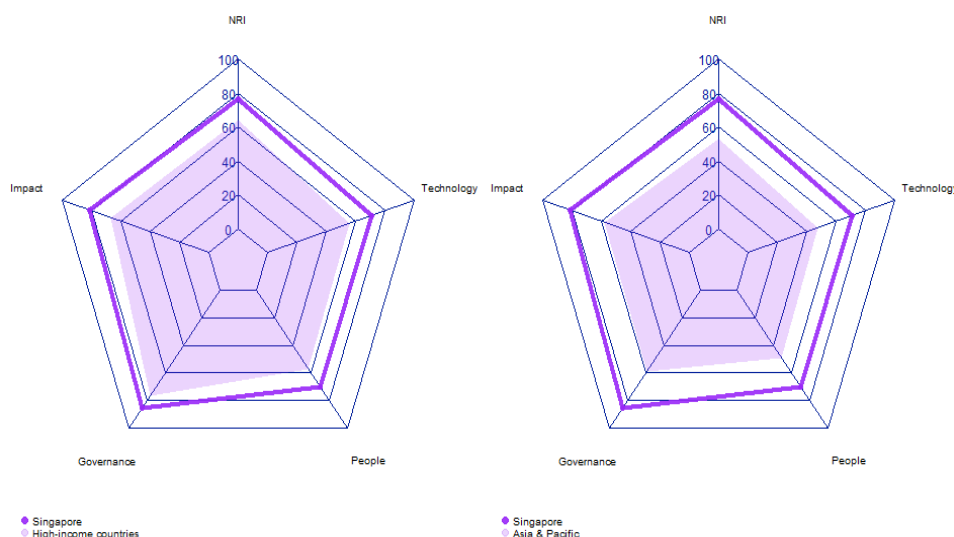
### High-income countries

Singapore 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.

### 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	76.81	64.07	53.28
Technology	70.57	55.76	47.34
People	69.89	56.99	48.95
Governance	85.58	76.81	59.22
Impact	81.20	66.73	57.62

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## Strongest and weakest indicators

The indicators where Singapore performs particularly well include 1.1.2 Handset prices, 1.1.4 Population covered by at least a 3G mobile network, and 1.1.6 Internet access in schools (Table 3). By contrast, the economy's weakest indicators include 3.2.5 Privacy protection by law content, 1.1.3 FTTH/building Internet subscriptions, and 4.3.3 SDG 5: Women's economic opportunity.

**Table 3: Highlight of Strengths and Opportunities for Singapore**

Strongest indicators	Rank	Weakest indicators	Rank
1.1.2 Handset prices	1	3.3.4 Gender gap in Internet use	56
1.1.4 Population covered by at least a 3G mobile network	1	4.3.3 SDG 5: Women's economic opportunity	71
1.1.6 Internet access in schools	1	1.1.3 FTTH/building Internet subscriptions	73
1.2.1 GitHub commits	1	3.2.5 Privacy protection by law content	93
1.3.3 Robot density	1		
3.2.1 Regulatory quality	1		
3.2.4 E-commerce legislation	1		
4.1.1 High-tech and medium-high-tech manufacturing	1		
4.1.2 High-tech exports	1		
2.2.3 Knowledge intensive employment	2		
2.3.3 Government promotion of investment in emerging technologies	2		
3.3.5 Rural gap in use of digital payments	2		
4.2.4 Healthy life expectancy at birth	2		
4.3.2 SDG 4: Quality Education	2		
2.1.2 ICT skills in the education system	3		
3.2.3 Regulation of emerging technologies	3		
3.3.1 E-Participation	3		

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

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## NRI 2023 At-A-Glance: Singapore

Network Readiness Index

Rank: 2 (out of 134)

Score: 76.81

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	5	70.57	C. Governance pillar	10	85.58
1st sub-pillar: Access	2	86.01	1st sub-pillar: Trust	17	79.12
2nd sub-pillar: Content	13	53.20	2nd sub-pillar: Regulation	10	87.76
3rd sub-pillar: Future Technologies	2	72.51	3rd sub-pillar: Inclusion	1	89.86
B. People pillar	6	69.89	D. Impact pillar	1	81.20
1st sub-pillar: Individuals	8	67.81	1st sub-pillar: Economy	1	70.45
2nd sub-pillar: Businesses	15	70.56	2nd sub-pillar: Quality of Life	10	86.95
3rd sub-pillar: Governments	11	71.30	3rd sub-pillar: SDG Contribution	8	86.22

### The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
<b>A. Technology pillar</b>	5	70.57	<b>C. Governance pillar</b>	10	85.58
1st sub-pillar: Access	2	86.01	1st sub-pillar: Trust	17	79.12
1.1.1 Mobile tariffs	4	97.76	3.1.1 Secure Internet servers	4	93.86
1.1.2 Handset prices	1	100.00	3.1.2 Cybersecurity	5	98.49
1.1.3 FTTH/building Internet subscriptions	73	25.95	3.1.3 Online access to financial account	26	56.92
1.1.4 Population covered by at least a 3G mobile network	1	100.00	3.1.4 Internet shopping	25	67.20
1.1.5 International Internet bandwidth	4	92.37	2nd sub-pillar: Regulation	10	87.76
1.1.6 Internet access in schools	1	100.00	3.2.1 Regulatory quality	1	100.00
2nd sub-pillar: Content	13	53.20	3.2.2 ICT regulatory environment	21	93.53
1.2.1 GitHub commits	1	100.00	3.2.3 Regulation of emerging technologies	3	93.77
1.2.2 Internet domain registrations	33	20.33	3.2.4 E-commerce legislation	1	100.00
1.2.3 Mobile apps development	4	85.46	3.2.5 Privacy protection by law content	93	51.49
1.2.4 AI scientific publications	60	7.01	3rd sub-pillar: Inclusion	1	89.86
3rd sub-pillar: Future Technologies	2	72.51	3.3.1 E-Participation	3	97.68
1.3.1 Adoption of emerging technologies	8	88.54	3.3.2 Socioeconomic gap in use of digital payments	28	92.85
1.3.2 Investment in emerging technologies	13	78.50	3.3.3 Availability of local online content	10	91.59
1.3.3 Robot density	1	100.00	3.3.4 Gender gap in Internet use	56	68.31

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Indicator	Rank	Score	Indicator	Rank	Score
1.3.4 Computer software spending	59	22.99	3.3.5 Rural gap in use of digital payments	2	98.86 ●
<b>B. People pillar</b>	6	69.89	<b>D. Impact pillar</b>	1	81.20
<i>1st sub-pillar: Individuals</i>	8	67.81	<i>1st sub-pillar: Economy</i>	1	70.45
2.1.1 Mobile broadband internet traffic within the country	53	11.92	4.1.1 High-tech and medium-high-tech manufacturing	1	100.00 ●
2.1.2 ICT skills in the education system	3	89.85 ●	4.1.2 High-tech exports	1	100.00 ●
2.1.3 Use of virtual social networks	14	80.16	4.1.3 PCT patent applications	11	54.87
2.1.4 Tertiary enrollment	9	61.03	4.1.4 Domestic market size	37	63.49
2.1.5 Adult literacy rate	37	96.08	4.1.5 Prevalence of gig economy	10	81.40
2.1.6 AI talent concentration	NA	NA	4.1.6 ICT services exports	46	22.92
<i>2nd sub-pillar: Businesses</i>	15	70.56	<i>2nd sub-pillar: Quality of Life</i>	10	86.95
2.2.1 Firms with website	NA	NA	4.2.1 Happiness	28	78.75
2.2.2 GERD financed by business enterprise	16	72.11	4.2.2 Freedom to make life choices	34	83.91
2.2.3 Knowledge intensive employment	2	93.05 ●	4.2.3 Income inequality	NA	NA
2.2.4 Annual investment in telecommunication services	47	81.04	4.2.4 Healthy life expectancy at birth	2	98.18 ●
2.2.5 GERD performed by business enterprise	18	36.03	<i>3rd sub-pillar: SDG Contribution</i>	8	86.22
<i>3rd sub-pillar: Governments</i>	11	71.30	4.3.1 SDG 3: Good Health and Well-Being	10	94.30
2.3.1 Government online services	5	95.80	4.3.2 SDG 4: Quality Education	2	90.79 ●
2.3.2 Publication and use of open data	27	50.00	4.3.3 SDG 5: Women's economic opportunity	71	75.22 ○
2.3.3 Government promotion of investment in emerging tech	2	99.63 ●	4.3.4 SDG 7: Affordable and Clean Energy	30	79.26
2.3.4 R&D expenditure by governments and higher education	16	39.78	4.3.5 SDG 11: Sustainable Cities and Communities	18	91.51

NOTE: ● a strength and ○ a weakness.

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