



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 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.

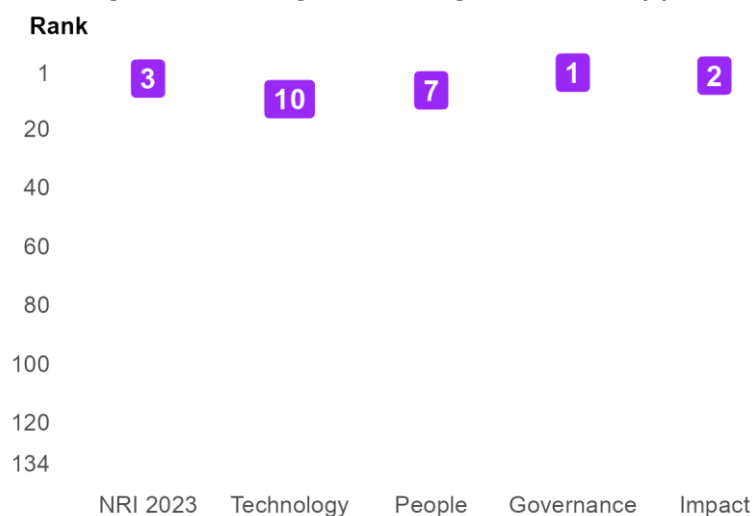
Figure 1: The NRI 2023 model



Global NRI position of Finland

Finland ranks 3rd out of the 134 economies included in the NRI 2023 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Finland 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 Finland relate to Quality of Life, Regulation and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, Content and SDG Contribution sub-pillars.

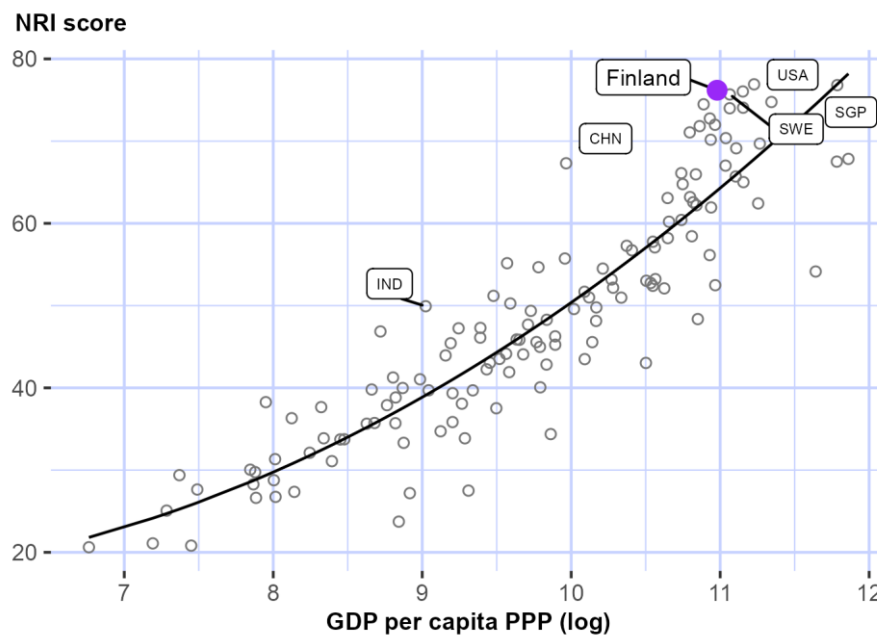
Table 1: Finland rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Quality of Life	1	Governments	7
Regulation	2	Businesses	8
Trust	6	Access	13
Inclusion	6	Individuals	13
Economy	6	Content	15
Future Technologies	7	SDG Contribution	19

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

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Performance against its income group and region

High-income countries

Finland 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.

Europe

Finland 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 Finland against its income group and region, overall and by pillar

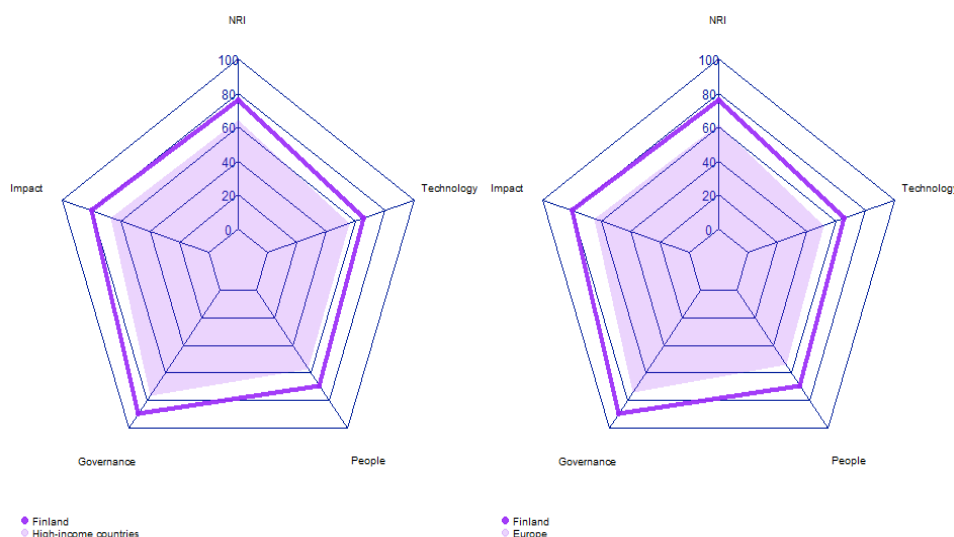


Table 2: Finland scores vs. averages of its income group and region, overall and by pillar

Dimension	Finland	High-income countries	Europe
NRI	76.19	64.07	61.25
Technology	65.50	55.76	51.90
People	69.42	56.99	54.16
Governance	89.94	76.81	74.33
Impact	79.90	66.73	64.61

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Strongest and weakest indicators

The indicators where Finland performs particularly well include 1.1.6 Internet access in schools, 2.1.2 ICT skills in the education system, and 2.2.1 Firms with website (Table 3). By contrast, the economy's weakest indicators include 4.3.4 SDG 7: Affordable and Clean Energy, 1.1.5 International Internet bandwidth, and 1.1.3 FTTH/building Internet subscriptions.

Table 3: Highlight of Strengths and Opportunities for Finland

Strongest indicators	Rank	Weakest indicators	Rank
1.1.6 Internet access in schools	1	4.1.4 Domestic market size	57
2.1.2 ICT skills in the education system	1	1.1.3 FTTH/building Internet subscriptions	59
2.2.1 Firms with website	1	1.1.5 International Internet bandwidth	86
3.2.4 E-commerce legislation	1	4.3.4 SDG 7: Affordable and Clean Energy	99
4.1.6 ICT services exports	1		
4.2.1 Happiness	1		
2.3.1 Government online services	2		
3.2.3 Regulation of emerging technologies	2		
1.3.1 Adoption of emerging technologies	3		
3.1.3 Online access to financial account	3		
3.2.1 Regulatory quality	3		
3.2.2 ICT regulatory environment	3		
4.2.2 Freedom to make life choices	3		

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

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NRI 2023 At-A-Glance: Finland

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Rank: 3 (out of 134)

Score: 76.19

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	10	65.50	C. Governance pillar	1	89.94
1st sub-pillar: Access	13	78.60	1st sub-pillar: Trust	6	90.25
2nd sub-pillar: Content	15	51.55	2nd sub-pillar: Regulation	2	93.75
3rd sub-pillar: Future Technologies	7	66.35	3rd sub-pillar: Inclusion	6	85.80
B. People pillar	7	69.42	D. Impact pillar	2	79.90
1st sub-pillar: Individuals	13	60.11	1st sub-pillar: Economy	6	61.61
2nd sub-pillar: Businesses	8	75.08	2nd sub-pillar: Quality of Life	1	94.26
3rd sub-pillar: Governments	7	73.08	3rd sub-pillar: SDG Contribution	19	83.82

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	10	65.50	C. Governance pillar	1	89.94
1st sub-pillar: Access	13	78.60	1st sub-pillar: Trust	6	90.25
1.1.1 Mobile tariffs	17	84.75	3.1.1 Secure Internet servers	9	90.25
1.1.2 Handset prices	8	88.47	3.1.2 Cybersecurity	29	95.71
1.1.3 FTTH/building Internet subscriptions	59	30.28	3.1.3 Online access to financial account	3	93.95
1.1.4 Population covered by at least a 3G mobile network	22	100.00	3.1.4 Internet shopping	13	81.10
1.1.5 International Internet bandwidth	86	68.07	2nd sub-pillar: Regulation	2	93.75
1.1.6 Internet access in schools	1	100.00	3.2.1 Regulatory quality	3	92.48
2nd sub-pillar: Content	15	51.55	3.2.2 ICT regulatory environment	3	97.65
1.2.1 GitHub commits	10	75.17	3.2.3 Regulation of emerging technologies	2	94.55
1.2.2 Internet domain registrations	23	39.49	3.2.4 E-commerce legislation	1	100.00
1.2.3 Mobile apps development	9	81.17	3.2.5 Privacy protection by law content	22	84.09
1.2.4 AI scientific publications	46	10.37	3rd sub-pillar: Inclusion	6	85.80
3rd sub-pillar: Future Technologies	7	66.35	3.3.1 E-Participation	6	95.34
1.3.1 Adoption of emerging technologies	3	96.95	3.3.2 Socioeconomic gap in use of digital payments	22	95.97
1.3.2 Investment in emerging technologies	5	87.75	3.3.3 Availability of local online content	13	90.14
1.3.3 Robot density	20	22.90	3.3.4 Gender gap in Internet use	34	70.84

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Indicator	Rank	Score	Indicator	Rank	Score
1.3.4 Computer software spending	14	57.79	3.3.5 Rural gap in use of digital payments	13	76.73
B. People pillar	7	69.42	D. Impact pillar	2	79.90
<i>1st sub-pillar: Individuals</i>	13	60.11	<i>1st sub-pillar: Economy</i>	6	61.61
2.1.1 Mobile broadband internet traffic within the country	28	28.99	4.1.1 High-tech and medium-high-tech manufacturing	28	47.24
2.1.2 ICT skills in the education system	1	100.00	4.1.2 High-tech exports	46	18.43
2.1.3 Use of virtual social networks	20	78.79	4.1.3 PCT patent applications	5	83.21
2.1.4 Tertiary enrollment	7	62.32	4.1.4 Domestic market size	57	55.97
2.1.5 Adult literacy rate	NA	NA	4.1.5 Prevalence of gig economy	23	64.83
2.1.6 AI talent concentration	13	30.47	4.1.6 ICT services exports	1	100.00
<i>2nd sub-pillar: Businesses</i>	8	75.08	<i>2nd sub-pillar: Quality of Life</i>	1	94.26
2.2.1 Firms with website	1	100.00	4.2.1 Happiness	1	100.00
2.2.2 GERD financed by business enterprise	20	69.22	4.2.2 Freedom to make life choices	3	97.20
2.2.3 Knowledge intensive employment	15	72.77	4.2.3 Income inequality	10	90.20
2.2.4 Annual investment in telecommunication services	49	80.69	4.2.4 Healthy life expectancy at birth	19	89.62
2.2.5 GERD performed by business enterprise	11	52.70	<i>3rd sub-pillar: SDG Contribution</i>	19	83.82
<i>3rd sub-pillar: Governments</i>	7	73.08	4.3.1 SDG 3: Good Health and Well-Being	22	89.99
2.3.1 Government online services	2	98.15	4.3.2 SDG 4: Quality Education	8	74.44
2.3.2 Publication and use of open data	23	57.35	4.3.3 SDG 5: Women's economic opportunity	15	96.46
2.3.3 Government promotion of investment in emerging tech	7	83.09	4.3.4 SDG 7: Affordable and Clean Energy	99	61.34
2.3.4 R&D expenditure by governments and higher education	10	53.71	4.3.5 SDG 11: Sustainable Cities and Communities	5	96.88

NOTE: ● a strength and ○ a weakness.

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