Network Readiness Index 2023

Italy

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.
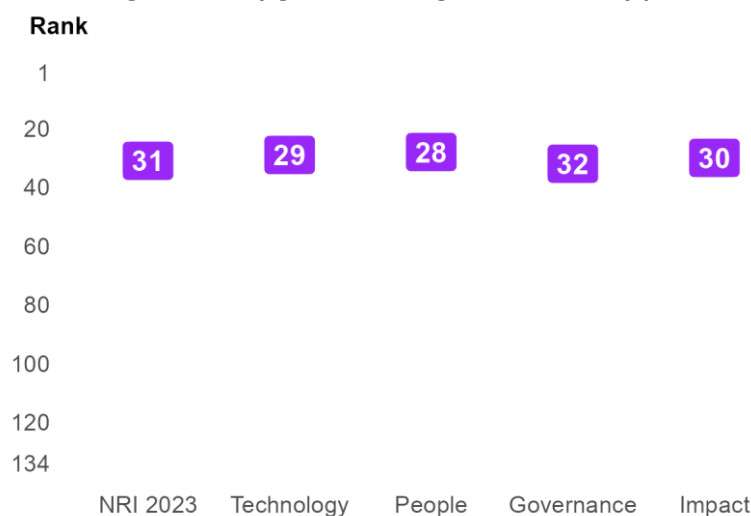
Figure 1: The NRI 2023 model

Global NRI position of Italy

Italy ranks 31st out of the 134 economies included in the NRI 2023 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.

Figure 2: Italy global ranking, overall and by pillar

Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Italy relate to SDG Contribution, Future Technologies and Businesses, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Access and Quality of Life sub-pillars.

Table 1: Italy rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
SDG Contribution	21	Regulation	30
Future Technologies	23	Individuals	32
Businesses	28	Content	35
Inclusion	28	Trust	40
Economy	28	Access	42
Governments	29	Quality of Life	53

NRI score and income

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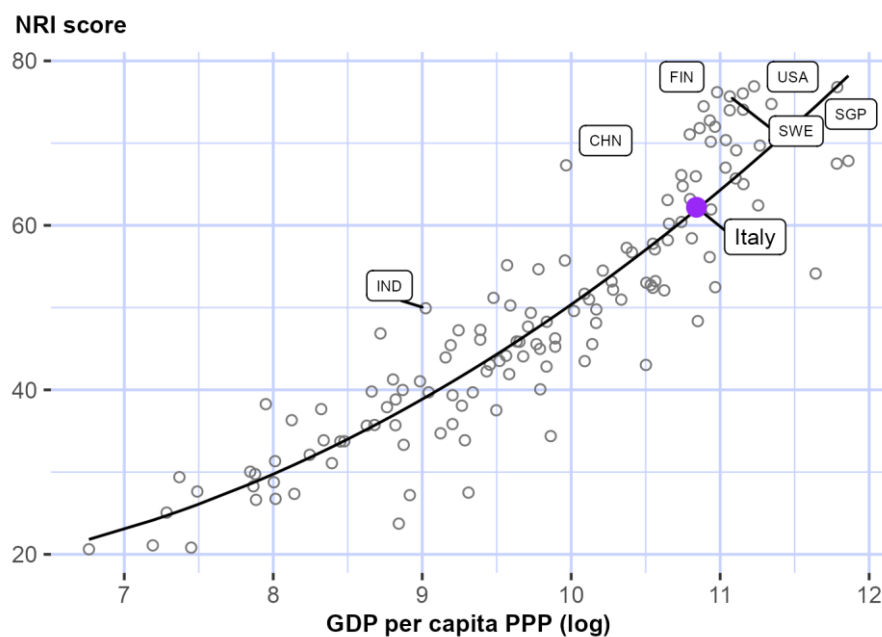
Note: USA = United States (rank: 1), SGP = Singapore (rank: 2), FIN = Finland (3), NLD = Netherlands (4), SWE = Sweden (5), CHN = China (20), IND = India (61). Italy belongs to the group of high-income countries, where the best performer is United States of America (USA). The top performer of its region-Europe-is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

Performance against its income group and region

High-income countries
Italy is ranked 30th in the group of high-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 high-income countries in five of the twelve sub-pillars: Future Technologies, Individuals, Businesses, Inclusion and SDG Contribution.

Europe
Italy is ranked 21st within Europe (Figure 4, right panel). It has a score above the regional average in three of the four pillars: NRI, Technology, People and Impact. With regard to sub-pillars, it outperforms the average in Europe in eight of the twelve sub-pillars: Access, Future Technologies, Individuals, Businesses, Governments, Inclusion, Economy and SDG Contribution.

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

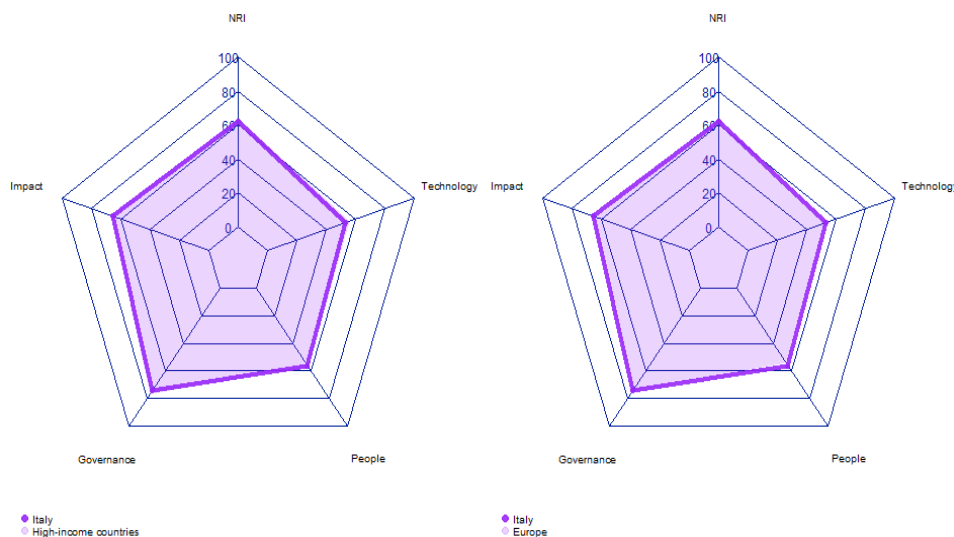**Table 2: Italy scores vs. averages of its income group and region, overall and by pillar**

Dimension	Italy	High-income countries	Europe
NRI	62.20	64.07	61.25
Technology	53.08	55.76	51.90
People	56.17	56.99	54.16
Governance	74.28	76.81	74.33
Impact	65.27	66.73	64.61

Strongest and weakest indicators

The indicators where Italy performs particularly well include 1.1.4 Population covered by at least a 3G mobile network, 3.2.2 ICT regulatory environment, and 3.2.4 E-commerce legislation (Table 3). By contrast, the economy's weakest indicators include 4.2.2 Freedom to make life choices, 3.1.3 Online access to financial account, and 3.3.4 Gender gap in Internet use.

Table 3: Highlight of Strengths and Opportunities for Italy

Strongest indicators	Rank	Weakest indicators	Rank
1.1.4 Population covered by at least a 3G mobile network	1	2.1.6 AI talent concentration	32
3.2.2 ICT regulatory environment	1	3.3.4 Gender gap in Internet use	66
3.2.4 E-commerce legislation	1	3.1.3 Online access to financial account	69
1.3.4 Computer software spending	3	4.2.2 Freedom to make life choices	106
3.3.5 Rural gap in use of digital payments	6		
2.2.4 Annual investment in telecommunication services	8		
4.2.4 Healthy life expectancy at birth	10		
4.1.4 Domestic market size	12		
1.2.4 AI scientific publications	13		
2.1.1 Mobile broadband internet traffic within the country	13		
4.3.4 SDG 7: Affordable and Clean Energy	16		
1.1.1 Mobile tariffs	19		

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

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PORTULANS INSTITUTE · UNIVERSITY OF OXFORD · Saïd Business School

NRI 2023 At-A-Glance: Italy

Network Readiness Index   Rank: 31 (out of 134)   Score: 62.20

Pillar/sub-pillar	Rank	Score		Pillar/sub-pillar	Rank	Score
A. Technology pillar	29	53.08		C. Governance pillar	32	74.28
1st sub-pillar: Access	42	71.79		1st sub-pillar: Trust	40	66.56
2nd sub-pillar: Content	35	36.96		2nd sub-pillar: Regulation	30	79.03
3rd sub-pillar: Future Technologies	23	50.48		3rd sub-pillar: Inclusion	28	77.26
B. People pillar	28	56.17		D. Impact pillar	30	65.27
1st sub-pillar: Individuals	32	54.44		1st sub-pillar: Economy	28	40.80
2nd sub-pillar: Businesses	28	61.78		2nd sub-pillar: Quality of Life	53	72.78
3rd sub-pillar: Governments	29	52.30		3rd sub-pillar: SDG Contribution	21	82.22

The Network Readiness Index in detail

Indicator	Rank	Score		Indicator	Rank	Score	
A. Technology pillar	29	53.08		**C. Governance pillar**	32	74.28	
1st sub-pillar: Access	42	71.79		*1st sub-pillar: Trust*	40	66.56	
1.1.1 Mobile tariffs	19	84.58	●	3.1.1 Secure Internet servers	34	79.29	
1.1.2 Handset prices	44	61.96		3.1.2 Cybersecurity	27	96.06	
1.1.3 FTTH/building Internet subscriptions	33	39.94		3.1.3 Online access to financial account	69	26.71	○
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●	3.1.4 Internet shopping	29	64.19	
1.1.5 International Internet bandwidth	50	74.25		*2nd sub-pillar: Regulation*	30	79.03	
1.1.6 Internet access in schools	47	70.00		3.2.1 Regulatory quality	44	61.92	
2nd sub-pillar: Content	35	36.96		3.2.2 ICT regulatory environment	1	100.00	●
1.2.1 GitHub commits	45	19.16		3.2.3 Regulation of emerging technologies	38	62.34	
1.2.2 Internet domain registrations	28	26.51		3.2.4 E-commerce legislation	1	100.00	●
1.2.3 Mobile apps development	59	68.17		3.2.5 Privacy protection by law content	54	70.88	
1.2.4 AI scientific publications	13	34.01	●	*3rd sub-pillar: Inclusion*	28	77.26	
3rd sub-pillar: Future Technologies	23	50.48		3.3.1 E-Participation	32	72.10	
1.3.1 Adoption of emerging technologies	32	65.18		3.3.2 Socioeconomic gap in use of digital payments	29	92.67	
1.3.2 Investment in emerging technologies	62	41.00		3.3.3 Availability of local online content	41	75.00	

Indicator	Rank	Score	
1.3.3 Robot density	13	29.88	
1.3.4 Computer software spending	3	65.85	●
B. People pillar	28	56.17	
1st sub-pillar: Individuals	32	54.44	
2.1.1 Mobile broadband internet traffic within the country	13	44.55	●
2.1.2 ICT skills in the education system	49	55.71	
2.1.3 Use of virtual social networks	44	70.19	
2.1.4 Tertiary enrollment	38	45.05	
2.1.5 Adult literacy rate	18	99.11	
2.1.6 AI talent concentration	32	12.02	○
2nd sub-pillar: Businesses	28	61.78	
2.2.1 Firms with website	27	75.40	
2.2.2 GERD financed by business enterprise	23	65.37	
2.2.3 Knowledge intensive employment	39	53.65	
2.2.4 Annual investment in telecommunication services	8	91.16	●
2.2.5 GERD performed by business enterprise	25	23.33	
3rd sub-pillar: Governments	29	52.30	
2.3.1 Government online services	23	85.18	
2.3.2 Publication and use of open data	20	61.76	
2.3.3 Government promotion of investment in emerging tech	69	35.69	
2.3.4 R&D expenditure by governments and higher education	27	26.56	

Indicator	Rank	Score	
3.3.4 Gender gap in Internet use	66	66.76	○
3.3.5 Rural gap in use of digital payments	6	79.77	●
D. Impact pillar	30	65.27	
1st sub-pillar: Economy	28	40.80	
4.1.1 High-tech and medium-high-tech manufacturing	27	47.52	
4.1.2 High-tech exports	59	14.63	
4.1.3 PCT patent applications	26	32.13	
4.1.4 Domestic market size	12	77.71	●
4.1.5 Prevalence of gig economy	32	61.34	
4.1.6 ICT services exports	72	11.51	
2nd sub-pillar: Quality of Life	53	72.78	
4.2.1 Happiness	41	72.65	
4.2.2 Freedom to make life choices	106	55.92	○
4.2.3 Income inequality	53	69.85	
4.2.4 Healthy life expectancy at birth	10	92.72	●
3rd sub-pillar: SDG Contribution	21	82.22	
4.3.1 SDG 3: Good Health and Well-Being	21	90.22	
4.3.2 SDG 4: Quality Education	34	58.33	
4.3.3 SDG 5: Women's economic opportunity	15	96.46	
4.3.4 SDG 7: Affordable and Clean Energy	16	82.15	●
4.3.5 SDG 11: Sustainable Cities and Communities	30	83.93	

NOTE: ● a strength and ○ a weakness.

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