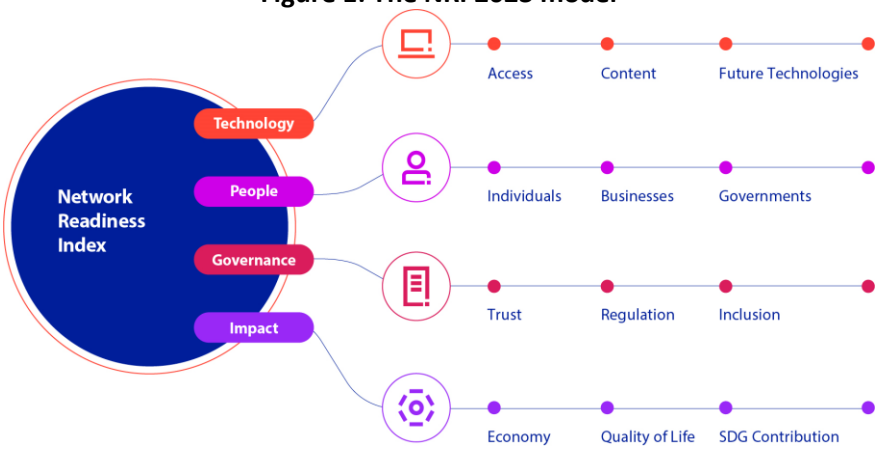
Iran, Islamic Rep.

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.

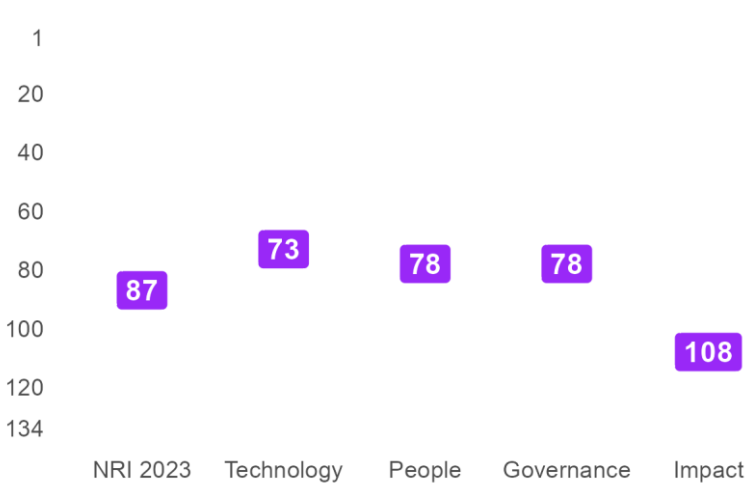
Figure 1: The NRI 2023 model



Global NRI position of Iran, Islamic Rep.

Iran, Islamic Rep. ranks 87th 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: Iran, Islamic Rep. global ranking, overall and by pillar



Performance at sub-pillar level

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

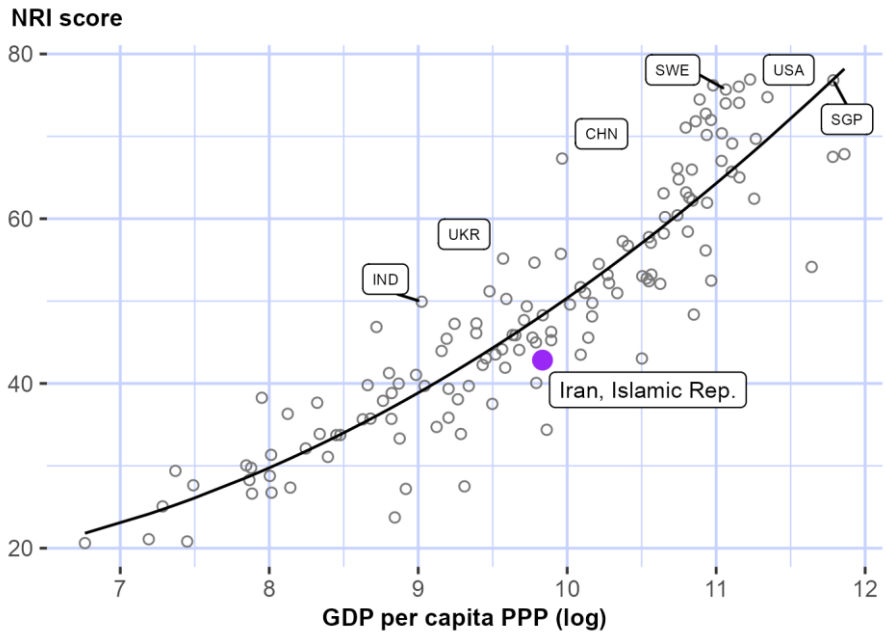
Table 1: Iran, Islamic Rep. rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	42	Businesses	80
Individuals	49	Governments	96
Trust	49	Access	103
Content	52	Quality of Life	104
Inclusion	72	SDG Contribution	118
Economy	79	Regulation	123

NRI score and income

Figure 3 shows the position of Iran, Islamic Rep. 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, Iran, Islamic Rep. is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of 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). Iran, Islamic Rep. 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

Iran, Islamic Rep. is ranked 12th 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 three of the four pillars: NRI, Technology, People and Governance. At the sub-pillar level, it outperforms lower-middle-income countries in eight of the twelve sub-pillars: Content, Future Technologies, Individuals, Businesses, Governments, Trust, Inclusion and Economy.

Asia & Pacific

Iran, Islamic Rep. is ranked 16th 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 one of the twelve sub-pillars: Trust.

Figure 4: Performance of Iran, Islamic Rep. against its income group and region, overall and by pillar

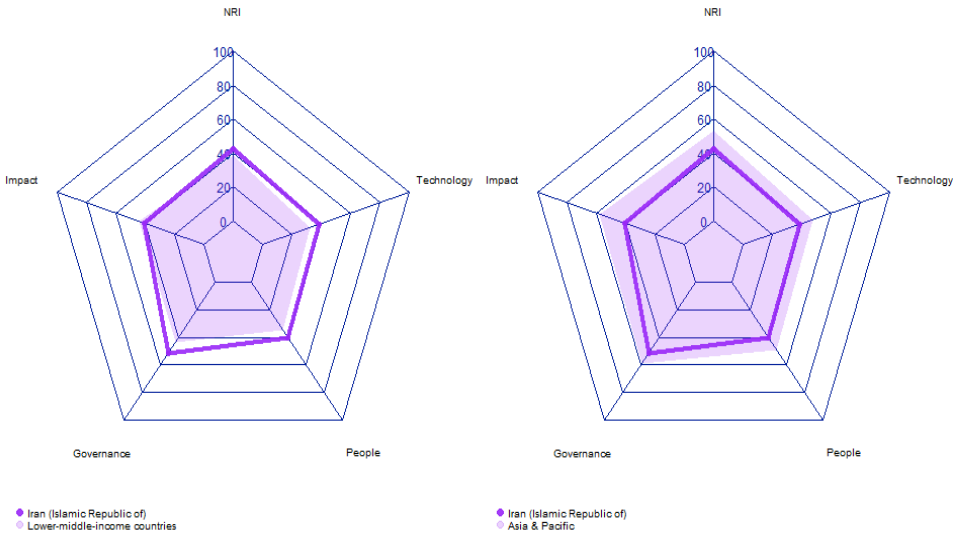


Table 2: Iran, Islamic Rep. scores vs. averages of its income group and region, overall and by pillar

Dimension	Iran, Islamic Rep.	Lower-middle-income countries	Asia & Pacific
NRI	42.83	38.41	53.28
Technology	38.86	32.12	47.34
People	39.99	34.38	48.95
Governance	51.58	43.27	59.22
Impact	40.91	43.89	57.62

Strongest and weakest indicators

The indicators where Iran, Islamic Rep. performs particularly well include 1.2.4 AI scientific publications, 3.3.5 Rural gap in use of digital payments, and 2.1.1 Mobile broadband internet traffic within the country (Table 3). By contrast, the economy's weakest indicators include 3.2.5 Privacy protection by law content, 3.2.1 Regulatory quality, and 4.3.3 SDG 5: Women's economic opportunity.

Table 3: Highlight of Strengths and Opportunities for Iran, Islamic Rep.

Strongest indicators	Rank	Weakest indicators	Rank
1.2.4 AI scientific publications	5	3.3.1 E-Participation	127
3.3.5 Rural gap in use of digital payments	9	4.3.4 SDG 7: Affordable and Clean Energy	129
2.1.1 Mobile broadband internet traffic within the country	14	3.2.1 Regulatory quality	133
2.2.4 Annual investment in telecommunication services	15	4.3.3 SDG 5: Women's economic opportunity	133
1.3.4 Computer software spending	16	3.2.5 Privacy protection by law content	134
1.1.5 International Internet bandwidth	20		
4.1.4 Domestic market size	20		
3.1.3 Online access to financial account	33		
3.3.2 Socioeconomic gap in use of digital payments	39		
4.3.1 SDG 3: Good Health and Well-Being	43		

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

NRI 2023 At-A-Glance: Iran, Islamic Rep.

Network Readiness Index Rank: 87 (out of 134) Score: 42.83

Pillar/sub-pillar	Rank	Score
A. Technology pillar	73	38.86
1st sub-pillar: Access	103	47.66
2nd sub-pillar: Content	52	27.39
3rd sub-pillar: Future Technologies	42	41.52
B. People pillar	78	39.99
1st sub-pillar: Individuals	49	51.41
2nd sub-pillar: Businesses	80	40.70
3rd sub-pillar: Governments	96	27.87

Pillar/sub-pillar	Rank	Score
C. Governance pillar	78	51.58
1st sub-pillar: Trust	49	57.26
2nd sub-pillar: Regulation	123	37.54
3rd sub-pillar: Inclusion	72	59.93
D. Impact pillar	108	40.91
1st sub-pillar: Economy	79	23.96
2nd sub-pillar: Quality of Life	104	52.66
3rd sub-pillar: SDG Contribution	118	46.10

The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	73	38.86	
1st sub-pillar: Access	103	47.66	
1.1.1 Mobile tariffs	79	54.10	
1.1.2 Handset prices	118	21.62	
1.1.3 FTTH/building Internet subscriptions	80	24.28	
1.1.4 Population covered by at least a 3G mobile network	114	94.47	
1.1.5 International Internet bandwidth	20	80.92	•
1.1.6 Internet access in schools	71	10.55	
2nd sub-pillar: Content	52	27.39	
1.2.1 GitHub commits	104	1.80	
1.2.2 Internet domain registrations	61	4.87	
1.2.3 Mobile apps development	90	58.57	
1.2.4 AI scientific publications	5	44.33	•
3rd sub-pillar: Future Technologies	42	41.52	
1.3.1 Adoption of emerging technologies	82	39.26	
1.3.2 Investment in emerging technologies	104	27.75	

Indicator	Rank	Score	
C. Governance pillar	78	51.58	
1st sub-pillar: Trust	49	57.26	
3.1.1 Secure Internet servers	55	61.87	
3.1.2 Cybersecurity	62	80.74	
3.1.3 Online access to financial account	33	50.73	•
3.1.4 Internet shopping	55	35.68	
2nd sub-pillar: Regulation	123	37.54	
3.2.1 Regulatory quality	133	12.95	○
3.2.2 ICT regulatory environment	58	84.71	
3.2.3 Regulation of emerging technologies	101	23.38	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	134	0.00	○
3rd sub-pillar: Inclusion	72	59.93	
3.3.1 E-Participation	127	16.28	○
3.3.2 Socioeconomic gap in use of digital payments	39	88.98	•
3.3.3 Availability of local online content	91	47.84	

Indicator	Rank	Score	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	16	57.55	●
B. People pillar	78	39.99	
1st sub-pillar: Individuals	49	51.41	
2.1.1 Mobile broadband internet traffic within the country	14	44.46	●
2.1.2 ICT skills in the education system	78	40.37	
2.1.3 Use of virtual social networks	86	50.15	
2.1.4 Tertiary enrollment	54	37.46	
2.1.5 Adult literacy rate	68	84.63	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	80	40.70	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	73	27.99	
2.2.4 Annual investment in telecommunication services	15	88.78	●
2.2.5 GERD performed by business enterprise	52	5.32	
3rd sub-pillar: Governments	96	27.87	
2.3.1 Government online services	111	35.85	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	76	33.74	
2.3.4 R&D expenditure by governments and higher education	46	14.03	

Indicator	Rank	Score	
3.3.4 Gender gap in Internet use	60	67.81	
3.3.5 Rural gap in use of digital payments	9	78.75	●
D. Impact pillar	108	40.91	
1st sub-pillar: Economy	79	23.96	
4.1.1 High-tech and medium-high-tech manufacturing	43	34.91	
4.1.2 High-tech exports	119	1.07	
4.1.3 PCT patent applications	41	8.84	
4.1.4 Domestic market size	20	71.52	●
4.1.5 Prevalence of gig economy	101	26.16	
4.1.6 ICT services exports	124	1.28	
2nd sub-pillar: Quality of Life	104	52.66	
4.2.1 Happiness	90	48.81	
4.2.2 Freedom to make life choices	123	32.56	
4.2.3 Income inequality	84	55.53	
4.2.4 Healthy life expectancy at birth	61	73.75	
3rd sub-pillar: SDG Contribution	118	46.10	
4.3.1 SDG 3: Good Health and Well-Being	43	79.11	●
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	133	2.65	○
4.3.4 SDG 7: Affordable and Clean Energy	129	34.39	○
4.3.5 SDG 11: Sustainable Cities and Communities	61	68.25	

NOTE: ● a strength and ○ a weakness.

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