

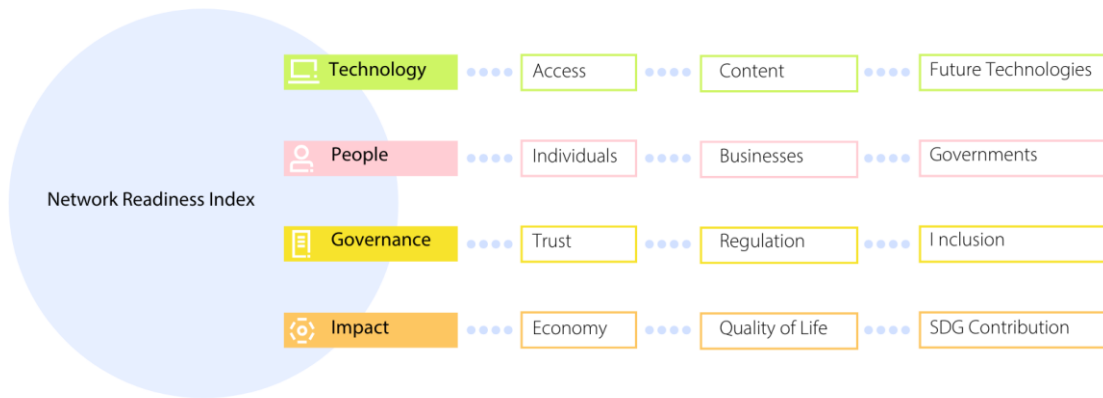
Network Readiness Index 2024



Bahrain

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 2024 the NRI Report maps the network-based readiness landscape of 133 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 54 variables.

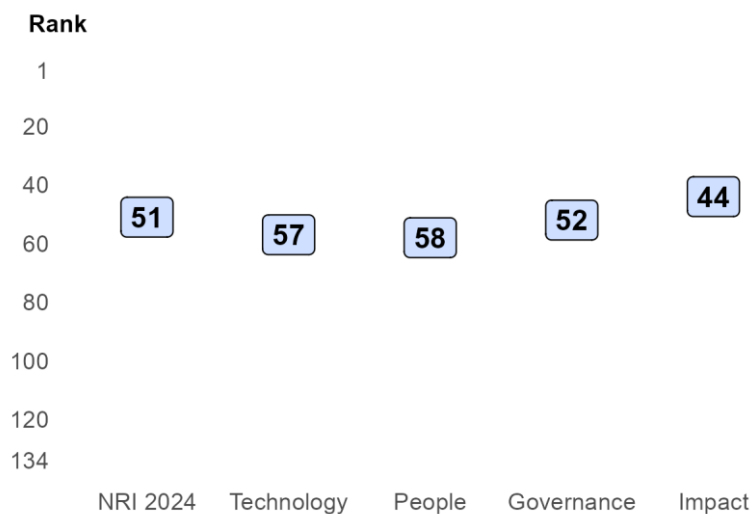
Figure 1: The NRI 2024 model



Global NRI position of Bahrain

Bahrain ranks 51st out of the 133 economies included in the NRI 2024 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Bahrain 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 Bahrain relate to Individuals, Economy and Future Technologies, among others (Table 1). More could be done, though, to improve the economy's performances in the SDG Contribution, Content and Businesses sub-pillars.

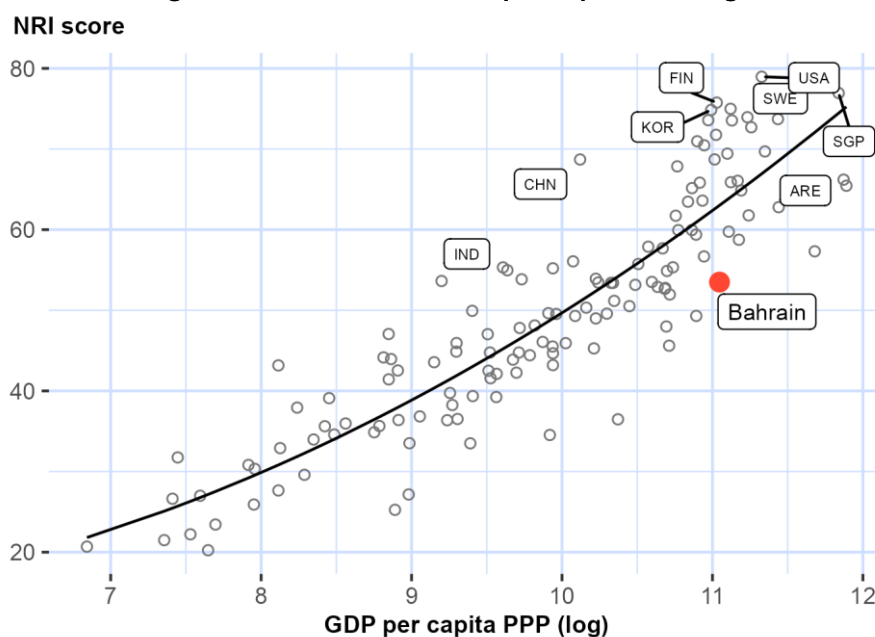
Table 1: Bahrain rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	14	Access	51
Economy	21	Trust	63
Future Technologies	37	Governments	68
Regulation	42	SDG Contribution	85
Inclusion	47	Content	94
Quality of Life	49	Businesses	115

NRI score and income

Figure 3 shows the position of Bahrain 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, Bahrain 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), SWE = Sweden (4), KOR = Republic of Korea (5), CHN = China (17), and IND = India (49). Bahrain belongs to the group of high-income countries, where the best performer is United States of America (USA). The top performer of its region-Arab States-is United Arab Emirates (ARE).

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Performance against its income group and region

High-income countries

Bahrain is ranked 42nd 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 two of the twelve sub-pillars: Individuals and Economy.

Arab States

Bahrain is ranked 5th within Arab States (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in Arab States in ten of the twelve sub-pillars: Access, Future Technologies, Individuals, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

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

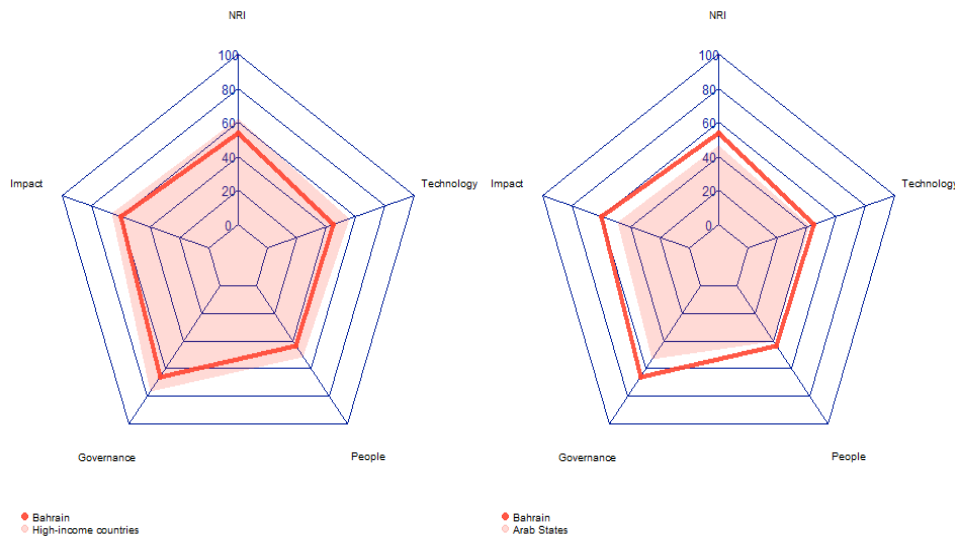


Table 2: Bahrain scores vs. averages of its income group and region, overall and by pillar

Dimension	Bahrain	High-income countries	Arab States
NRI	53.50	62.50	46.21
Technology	44.78	55.84	42.21
People	43.38	51.81	40.51
Governance	65.98	76.61	52.98
Impact	59.85	65.73	49.15

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Strongest and weakest indicators

The indicators where Bahrain performs particularly well include 1.1.4 Population covered by at least a 3G mobile network, 1.1.6 Internet access in schools, and 3.2.4 E-commerce legislation (Table 3). By contrast, the economy's weakest indicators include 4.3.4 SDG 7: Affordable and Clean Energy, 1.2.4 AI scientific publications, and 4.3.3 SDG 5: Women's economic opportunity.

Table 3: Highlight of Strengths and Opportunities for Bahrain

Strongest indicators	Rank	Weakest indicators	Rank
1.1.4 Population covered by at least a 3G mobile network	1	2.3.2 Data Capabilities	77
1.1.6 Internet access in schools	1	1.2.3 Mobile apps development	85
3.2.4 E-commerce legislation	1	2.2.3 Annual investment in telecommunication services	86
2.1.3 Use of virtual social networks	2	2.2.4 Public cloud computing market scale	88
4.3.5 SDG 11: Sustainable Cities and Communities	8	2.3.4 R&D expenditure by governments and higher education	105
3.3.3 Availability of local online content	14	1.1.3 FTTH/building Internet subscriptions	106
3.2.3 Regulation of emerging technologies	19	3.2.5 Privacy protection by law content	110
2.3.3 Government promotion of emerging technologies	24	1.2.4 AI scientific publications	114
4.1.3 Prevalence of gig economy	25	4.3.3 SDG 5: Women's economic opportunity	114
2.1.2 ICT skills in the education system	26	4.3.4 SDG 7: Affordable and Clean Energy	123
3.3.5 Rural gap in use of digital payments	26		
4.1.4 ICT services exports	28		

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

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NRI 2024 At-A-Glance: Bahrain

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Rank: 51 (out of 133)

Score: 53.50

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	57	44.78	C. Governance pillar	52	65.98
1st sub-pillar: Access	51	70.08	1st sub-pillar: Trust	63	51.66
2nd sub-pillar: Content	94	17.63	2nd sub-pillar: Regulation	42	75.65
3rd sub-pillar: Future Technologies	37	46.62	3rd sub-pillar: Inclusion	47	70.62
B. People pillar	58	43.38	D. Impact pillar	44	59.85
1st sub-pillar: Individuals	14	67.07	1st sub-pillar: Economy	21	46.58
2nd sub-pillar: Businesses	115	24.40	2nd sub-pillar: Quality of Life	49	71.94
3rd sub-pillar: Governments	68	38.68	3rd sub-pillar: SDG Contribution	85	61.02

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score	
A. Technology pillar	57	44.78	C. Governance pillar	52	65.98	
<i>1st sub-pillar: Access</i>	51	70.08	<i>1st sub-pillar: Trust</i>	63	51.66	
1.1.1 Mobile tariffs	83	56.75	3.1.1 Secure Internet servers	74	48.77	
1.1.2 Handset prices	51	75.96	3.1.2 Cybersecurity	68	77.83	
1.1.3 FTTH/building Internet subscriptions	106	13.19	○ 3.1.3 Online access to financial account	NA	NA	
1.1.4 Population covered by at least a 3G mobile network	1	100.00	● 3.1.4 Internet shopping	62	28.38	
1.1.5 International Internet bandwidth	47	74.58	<i>2nd sub-pillar: Regulation</i>	42	75.65	
1.1.6 Internet access in schools	1	100.00	● 3.2.1 Regulatory quality	32	70.81	
<i>2nd sub-pillar: Content</i>	94	17.63	3.2.2 ICT regulatory environment	65	83.93	
1.2.1 GitHub commits	64	7.53	3.2.3 Regulation of emerging technologies	19	78.12	●
1.2.2 Internet domain registrations	71	2.87	3.2.4 E-commerce legislation	1	100.00	●
1.2.3 Mobile apps development	85	59.46	○ 3.2.5 Privacy protection by law content	110	45.41	○
1.2.4 AI scientific publications	114	0.65	<i>3rd sub-pillar: Inclusion</i>	47	70.62	
<i>3rd sub-pillar: Future Technologies</i>	37	46.62	3.3.1 E-Participation	85	43.03	
1.3.1 Adoption of emerging technologies	57	63.64	3.3.2 Socioeconomic gap in use of digital payments	65	75.64	
1.3.2 Investment in emerging technologies	NA	NA	3.3.3 Availability of local online content	14	88.94	●
1.3.3 Robot density	NA	NA	3.3.4 Gender gap in Internet use	31	70.21	

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Indicator	Rank	Score	Indicator	Rank	Score
1.3.4 Computer software spending	37	29.60	3.3.5 Rural gap in use of digital payments	26	75.26 ●
B. People pillar	58	43.38	D. Impact pillar	44	59.85
<i>1st sub-pillar: Individuals</i>	14	67.07	<i>1st sub-pillar: Economy</i>	21	46.58
2.1.1 Mobile broadband internet traffic within the country	72	10.38	4.1.1 ICT patent applications	NA	NA
2.1.2 ICT skills in the education system	26	74.68 ●	4.1.2 Domestic market scale	91	43.56
2.1.3 Use of virtual social networks	2	86.14 ●	4.1.3 Prevalence of gig economy	25	63.66 ●
2.1.4 Adult literacy rate	31	97.08	4.1.4 ICT services exports	28	32.53 ●
2.1.5 AI talent concentration	NA	NA	<i>2nd sub-pillar: Quality of Life</i>	49	71.94
<i>2nd sub-pillar: Businesses</i>	115	24.40	4.2.1 Happiness	60	61.45
2.2.1 Firms with website	NA	NA	4.2.2 Freedom to make life choices	47	83.69
2.2.2 Number of venture capital deals invested in AI	29	19.27	4.2.3 Income inequality	NA	NA
2.2.3 Annual investment in telecommunication services	86	45.47 ○	4.2.4 Healthy life expectancy at birth	56	69.44
2.2.4 Public cloud computing market scale	88	8.46 ○	<i>3rd sub-pillar: SDG Contribution</i>	85	61.02
<i>3rd sub-pillar: Governments</i>	68	38.68	4.3.1 SDG 3: Good Health and Well-Being	52	75.81
2.3.1 Government online services	54	72.62	4.3.2 SDG 4: Quality Education	NA	NA
2.3.2 Data Capabilities	77	18.77 ○	4.3.3 SDG 5: Women's economic opportunity	114	56.41 ○
2.3.3 Government promotion of investment in emerging technologies	24	61.67 ●	4.3.4 SDG 7: Affordable and Clean Energy	123	40.50 ○
2.3.4 R&D expenditure by governments and higher education	105	1.64 ○	4.3.5 SDG 11: Sustainable Cities and Communities	8	96.47 ●

NOTE: ● a strength and ○ a weakness.

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