

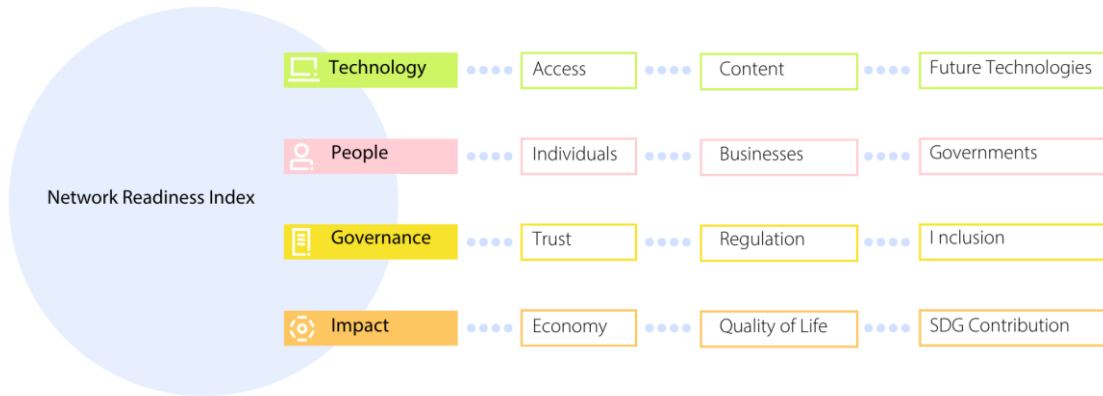
Network Readiness Index 2024



Kazakhstan

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.

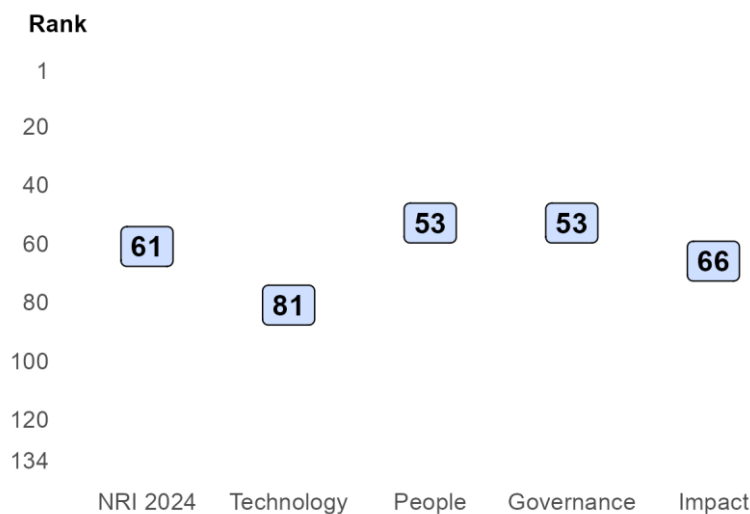
Figure 1: The NRI 2024 model



Global NRI position of Kazakhstan

Kazakhstan ranks 61st out of the 133 economies included in the NRI 2024 (Figure 2). Its main strength relates to People and Governance. The greatest scope for improvement, meanwhile, concerns Technology.

Figure 2: Kazakhstan 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 Kazakhstan relate to Individuals, Quality of Life and Governments, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Future Technologies and Regulation sub-pillars.

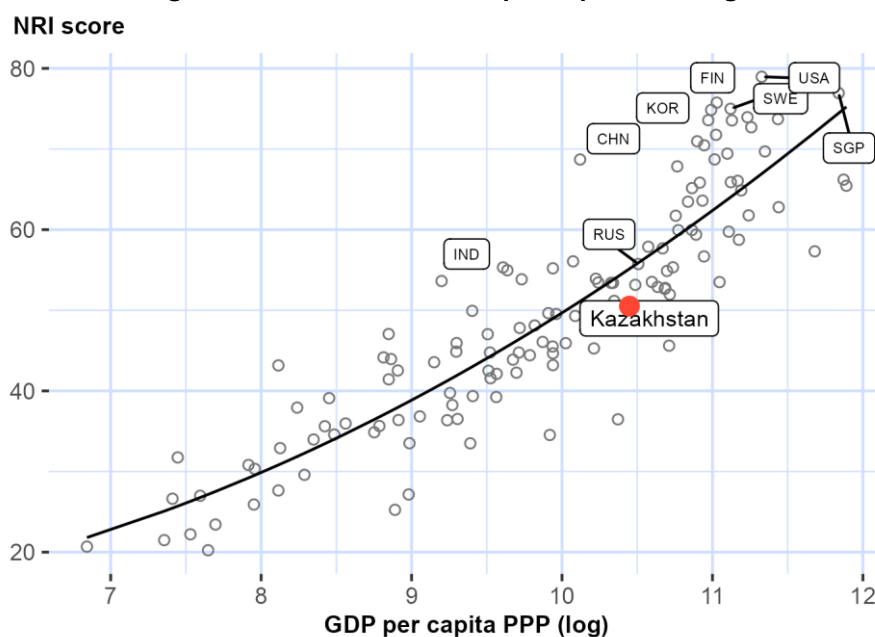
Table 1: Kazakhstan rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	34	Content	85
Quality of Life	34	SDG Contribution	90
Governments	36	Economy	95
Inclusion	39	Businesses	99
Trust	47	Future Technologies	100
Access	56	Regulation	106

NRI score and income

Figure 3 shows the position of Kazakhstan 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, Kazakhstan 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). Kazakhstan belongs to the group of upper-middle-income countries, where the best performer is China (CHN). The top performer of its region-CIS-is Russian Federation (RUS).

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Performance against its income group and region

Upper-middle-income countries

Kazakhstan is ranked 11th in the group of upper-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, People, Governance and Impact. At the sub-pillar level, it outperforms upper-middle-income countries in six of the twelve sub-pillars: Access, Individuals, Governments, Trust, Inclusion and Quality of Life.

CIS

Kazakhstan is ranked 2nd within CIS (Figure 4, right panel). It has a score above the regional average in two of the four pillars: NRI, People and Governance. With regard to sub-pillars, it outperforms the average in CIS in seven of the twelve sub-pillars: Access, Individuals, Governments, Trust, Regulation, Inclusion and Quality of Life.

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

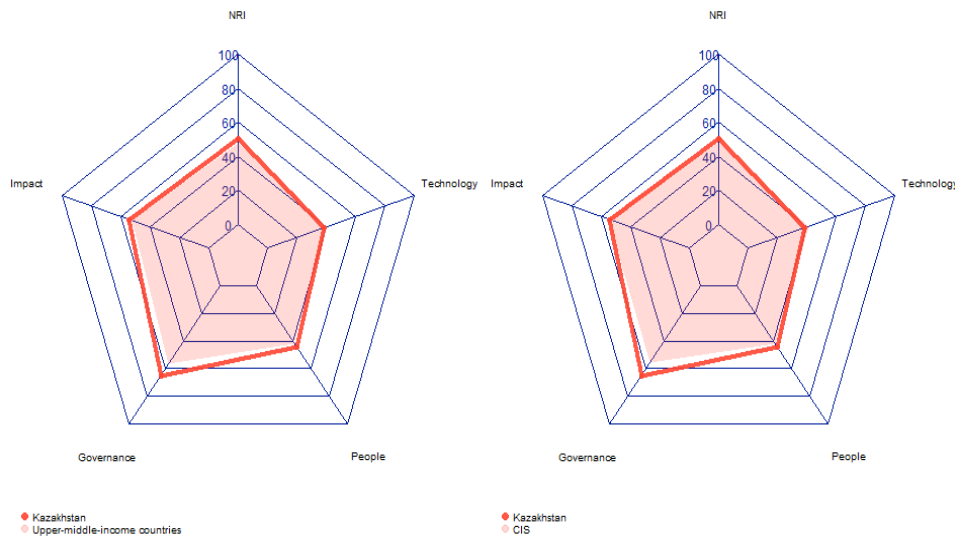


Table 2: Kazakhstan scores vs. averages of its income group and region, overall and by pillar

Dimension	Kazakhstan	Upper-middle-income countries	CIS
NRI	50.52	47.52	48.48
Technology	38.29	39.51	40.94
People	44.56	41.65	42.30
Governance	65.06	56.74	55.72
Impact	54.15	52.19	54.97

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Strongest and weakest indicators

The indicators where Kazakhstan performs particularly well include 3.2.4 E-commerce legislation, 2.1.4 Adult literacy rate, and 2.3.1 Government online services (Table 3). By contrast, the economy's weakest indicators include 3.2.2 ICT regulatory environment, 1.3.4 Computer software spending, and 3.2.5 Privacy protection by law content.

Table 3: Highlight of Strengths and Opportunities for Kazakhstan

Strongest indicators	Rank	Weakest indicators	Rank
3.2.4 E-commerce legislation	1	2.2.2 Number of venture capital deals invested in AI	68
2.1.4 Adult literacy rate	6	4.1.1 ICT patent applications	68
2.3.1 Government online services	8	1.3.1 Adoption of emerging technologies	91
3.3.2 Socioeconomic gap in use of digital payments	9	2.3.4 R&D expenditure by governments and higher education	101
3.3.1 E-Participation	15	4.3.3 SDG 5: Women's economic opportunity	101
1.1.1 Mobile tariffs	17	4.3.4 SDG 7: Affordable and Clean Energy	103
4.2.3 Income inequality	17	2.1.2 ICT skills in the education system	109
2.3.2 Data Capabilities	25	3.2.5 Privacy protection by law content	119
2.1.1 Mobile broadband internet traffic within the country	27	1.3.4 Computer software spending	125
4.2.2 Freedom to make life choices	27	3.2.2 ICT regulatory environment	129
1.1.5 International Internet bandwidth	30		

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

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NRI 2024 At-A-Glance: Kazakhstan

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Rank: 61 (out of 133)

Score: 50.52

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	81	38.29	C. Governance pillar	53	65.06
1st sub-pillar: Access	56	68.65	1st sub-pillar: Trust	47	66.25
2nd sub-pillar: Content	85	19.64	2nd sub-pillar: Regulation	106	54.73
3rd sub-pillar: Future Technologies	100	26.59	3rd sub-pillar: Inclusion	39	74.19
B. People pillar	53	44.56	D. Impact pillar	66	54.15
1st sub-pillar: Individuals	34	56.21	1st sub-pillar: Economy	95	25.84
2nd sub-pillar: Businesses	99	28.74	2nd sub-pillar: Quality of Life	34	76.69
3rd sub-pillar: Governments	36	48.74	3rd sub-pillar: SDG Contribution	90	59.93

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score	
A. Technology pillar	81	38.29	C. Governance pillar	53	65.06	
<i>1st sub-pillar: Access</i>	56	68.65	<i>1st sub-pillar: Trust</i>	47	66.25	
1.1.1 Mobile tariffs	17	84.81	• 3.1.1 Secure Internet servers	52	64.66	
1.1.2 Handset prices	62	66.16	3.1.2 Cybersecurity	38	93.17	
1.1.3 FTTH/building Internet subscriptions	41	38.64	3.1.3 Online access to financial account	34	63.62	
1.1.4 Population covered by at least a 3G mobile network	87	76.14	3.1.4 Internet shopping	49	43.53	
1.1.5 International Internet bandwidth	30	77.51	• <i>2nd sub-pillar: Regulation</i>	106	54.73	
1.1.6 Internet access in schools	NA	NA	3.2.1 Regulatory quality	71	47.76	
<i>2nd sub-pillar: Content</i>	85	19.64	3.2.2 ICT regulatory environment	129	45.24	○
1.2.1 GitHub commits	70	5.79	3.2.3 Regulation of emerging technologies	72	45.92	
1.2.2 Internet domain registrations	77	2.25	3.2.4 E-commerce legislation	1	100.00	•
1.2.3 Mobile apps development	66	65.00	3.2.5 Privacy protection by law content	119	34.75	○
1.2.4 AI scientific publications	72	5.50	<i>3rd sub-pillar: Inclusion</i>	39	74.19	
<i>3rd sub-pillar: Future Technologies</i>	100	26.59	3.3.1 E-Participation	15	80.23	•
1.3.1 Adoption of emerging technologies	91	41.78	○ 3.3.2 Socioeconomic gap in use of digital payments	9	98.66	•
1.3.2 Investment in emerging technologies	73	37.00	3.3.3 Availability of local online content	71	59.86	
1.3.3 Robot density	NA	NA	3.3.4 Gender gap in Internet use	70	65.95	

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Indicator	Rank	Score		Indicator	Rank	Score	
1.3.4 Computer software spending	125	0.99	○	3.3.5 Rural gap in use of digital payments	58	66.23	
B. People pillar	53	44.56		D. Impact pillar	66	54.15	
<i>1st sub-pillar: Individuals</i>	34	56.21		<i>1st sub-pillar: Economy</i>	95	25.84	
2.1.1 Mobile broadband internet traffic within the country	27	34.00	●	4.1.1 ICT patent applications	68	0.12	○
2.1.2 ICT skills in the education system	109	28.97	○	4.1.2 Domestic market scale	40	62.29	
2.1.3 Use of virtual social networks	49	62.08		4.1.3 Prevalence of gig economy	76	35.76	
2.1.4 Adult literacy rate	6	99.78	●	4.1.4 ICT services exports	94	5.20	
2.1.5 AI talent concentration	NA	NA		<i>2nd sub-pillar: Quality of Life</i>	34	76.69	
<i>2nd sub-pillar: Businesses</i>	99	28.74		4.2.1 Happiness	45	68.99	
2.2.1 Firms with website	75	42.09		4.2.2 Freedom to make life choices	27	89.14	●
2.2.2 Number of venture capital deals invested in AI	68	2.32	○	4.2.3 Income inequality	17	86.89	●
2.2.3 Annual investment in telecommunication services	83	45.96		4.2.4 Healthy life expectancy at birth	86	57.00	
2.2.4 Public cloud computing market scale	50	24.59		<i>3rd sub-pillar: SDG Contribution</i>	90	59.93	
<i>3rd sub-pillar: Governments</i>	36	48.74		4.3.1 SDG 3: Good Health and Well-Being	37	82.26	
2.3.1 Government online services	8	92.75	●	4.3.2 SDG 4: Quality Education	52	30.71	
2.3.2 Data Capabilities	25	54.05	●	4.3.3 SDG 5: Women's economic opportunity	101	66.67	○
2.3.3 Government promotion of investment in emerging technologies	41	45.98		4.3.4 SDG 7: Affordable and Clean Energy	103	65.50	○
2.3.4 R&D expenditure by governments and higher education	101	2.16	○	4.3.5 SDG 11: Sustainable Cities and Communities	56	71.43	

NOTE: ● a strength and ○ a weakness.

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