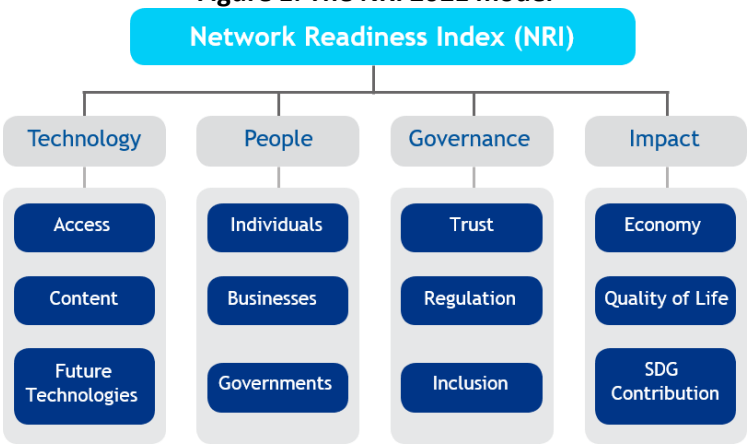
Network Readiness Index 2021 Mongolia

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 2021 the NRI Report maps the network-based readiness landscape of 130 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 60 variables.

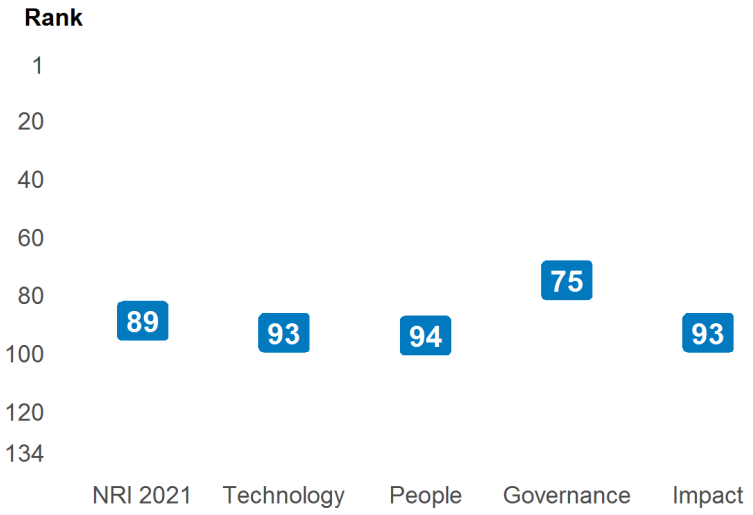
Figure 1: The NRI 2021 model



Global NRI position of Mongolia

Mongolia ranks 89th out of the 130 economies included in the NRI 2021 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Mongolia global ranking, overall and by pillar



Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Mongolia relate to Inclusion, SDG Contribution and Individuals, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Governments and Economy sub-pillars.

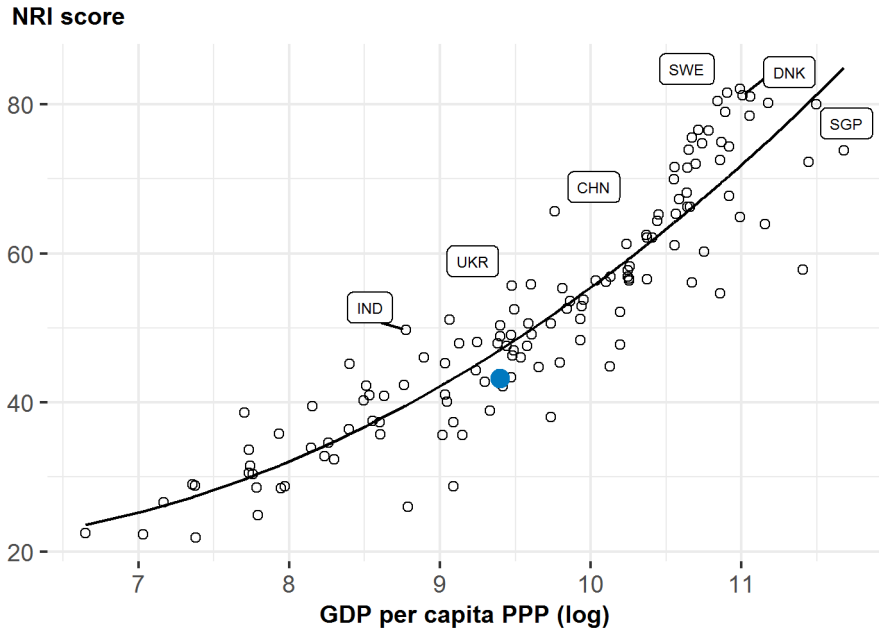
Table 1: Mongolia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Inclusion	47	Access	93
SDG Contribution	48	Regulation	99
Individuals	70	Future Technologies	100
Trust	78	Businesses	104
Quality of Life	80	Governments	104
Content	87	Economy	128

NRI score and income

Figure 3 shows the position of Mongolia 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, Mongolia 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: NLD = Netherlands (rank: 1), SWE = Sweden (2), DNK = Denmark (3), CHN = China (29), IND = India (67). USA is ranked 4th. Mongolia 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

Mongolia is ranked 11th 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 each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in eight of the twelve sub-pillars: Access, Content, Individuals, Trust, Regulation, Inclusion, Quality of Life and SDG Contribution.

Asia & Pacific

Mongolia 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 three of the twelve sub-pillars: Individuals, Inclusion and SDG Contribution.

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

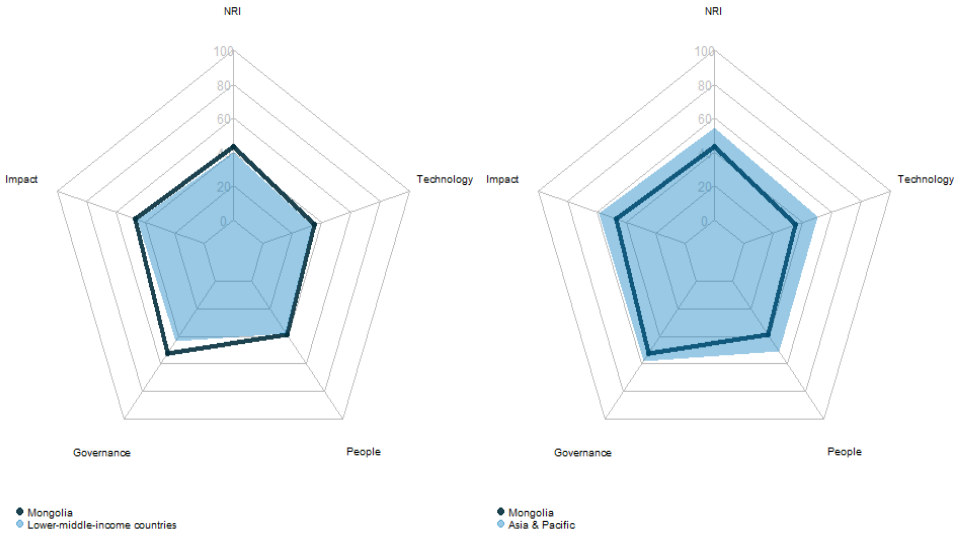


Table 2: Mongolia scores vs. averages of its income group and region, overall and by pillar

Dimension	Mongolia	Lower-middle-income countries	Asia & Pacific
NRI	43.21	40.00	54.38
Technology	35.20	33.64	50.01
People	38.49	37.84	51.22
Governance	52.28	43.38	58.01
Impact	46.87	45.13	58.28

Strongest and weakest indicators

The indicators where Mongolia performs particularly well include 1.1.5 Population covered by at least a 3G mobile network, 3.3.4 Gender gap in Internet use, and 3.3.5 Rural gap in use of digital payments (Table 3). By contrast, the economy's weakest indicators include 1.1.2 Handset prices, 1.3.1 Adoption of emerging technologies, and 4.1.3 PCT patent applications.

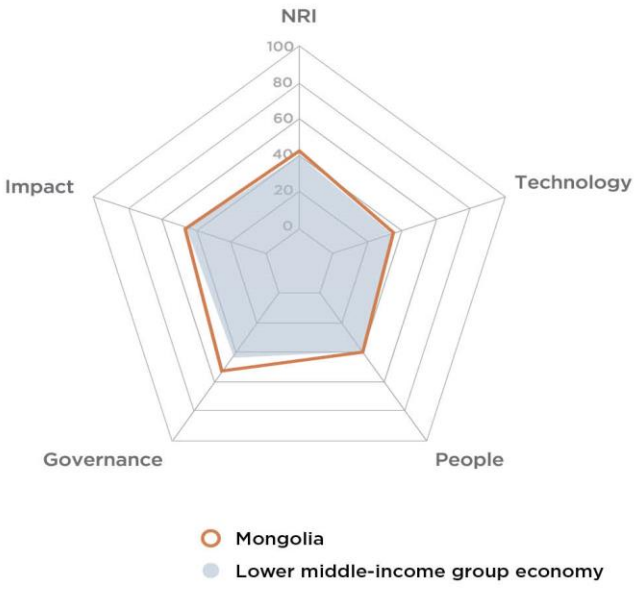
Table 3: Strongest and weakest indicators of Mongolia

Strongest indicators	Rank	Weakest indicators	Rank
1.1.5 Population covered by at least a 3G mobile network	1	2.2.6 GERD performed by business enterprise	86
3.3.4 Gender gap in Internet use	3	4.1.1 High-tech and medium-high-tech manufacturing	95
3.3.5 Rural gap in use of digital payments	12	4.1.3 PCT patent applications	96
4.3.3 Females employed with advanced degrees	17	1.3.1 Adoption of emerging technologies	110
2.1.5 Adult literacy rate	25	1.1.2 Handset prices	116
3.3.2 Socioeconomic gap in use of digital payments	26		
2.1.3 Use of virtual social networks	31		
4.2.3 Income inequality	32		
3.1.3 Online access to financial account	36		
2.1.4 Tertiary enrollment	39		

Mongolia

	Rank (out of 130)	Score
Network Readiness Index	**89**	**43.21**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**93**	**35.20**
1st sub-pillar: Access	93	52.35
2nd sub-pillar: Content	87	29.55
3rd sub-pillar: Future Technologies	100	23.72
B. People pillar	**94**	**38.49**
1st sub-pillar: Individuals	70	61.28
2nd sub-pillar: Businesses	104	28.20
3rd sub-pillar: Governments	104	25.98
C. Governance pillar	**75**	**52.28**
1st sub-pillar: Trust	78	35.11
2nd sub-pillar: Regulation	99	52.78
3rd sub-pillar: Inclusion	47	68.95
D. Impact pillar	**93**	**46.87**
1st sub-pillar: Economy	128	11.10
2nd sub-pillar: Quality of Life	80	62.81
3rd sub-pillar: SDG Contribution	48	66.69



Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	93	35.20	
1st sub-pillar: Access	93	52.35	
1.1.1 Mobile tariffs	86	48.57	
1.1.2 Handset prices	116	22.36	○
1.1.3 Households with internet access	91	46.67	
1.1.4 SMS sent by population 15-69	59	77.45	
1.1.5 Population covered by at least a 3G mobile network	1	100.00	●
1.1.6 International Internet bandwidth	66	0.71	
1.1.7 Internet access in schools	35	70.66	
2nd sub-pillar: Content	87	29.55	
1.2.1 GitHub commits	84	1.69	
1.2.2 Wikipedia edits	71	47.27	
1.2.3 Internet domain registrations	*	*	
1.2.4 Mobile apps development	63	77.79	
1.2.5 AI scientific publications	98	19.50	
3rd sub-pillar: Future Technologies	100	23.72	
1.3.1 Adoption of emerging technologies	110	25.94	○
1.3.2 Investment in emerging technologies	90	32.94	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	80	12.27	
B. People pillar	94	38.49	
1st sub-pillar: Individuals	70	61.28	
2.1.1 Active mobile broadband subscriptions	92	71.10	
2.1.2 ICT skills	63	12.81	
2.1.3 Use of virtual social networks	31	78.90	●
2.1.4 Tertiary enrollment	39	45.60	●
2.1.5 Adult literacy rate	25	98.00	●
2nd sub-pillar: Businesses	104	28.20	
2.2.1 Firms with website	88	32.40	
2.2.2 GERD financed by business enterprise	79	9.96	
2.2.3 Professionals	39	40.81	
2.2.4 Technicians and associate professionals	107	12.47	
2.2.5 Annual investment in telecommunication services	86	73.52	
2.2.6 GERD performed by business enterprise	86	0.06	○
3rd sub-pillar: Governments	104	25.98	
2.3.1 Government online services	95	51.51	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	103	19.86	
2.3.4 R&D expenditure by governments and higher education	96	6.57	

Indicator	Rank	Score	
C. Governance pillar	75	52.28	
1st sub-pillar: Trust	78	35.11	
3.1.1 Secure Internet servers	59	59.51	
3.1.2 Cybersecurity	110	24.90	
3.1.3 Online access to financial account	36	46.58	●
3.1.4 Internet shopping	75	9.46	
2nd sub-pillar: Regulation	99	52.78	
3.2.1 Regulatory quality	72	40.82	
3.2.2 ICT regulatory environment	86	73.53	
3.2.3 Legal framework's adaptability to emerging technologies	109	14.50	
3.2.4 E-commerce legislation	76	75.00	
3.2.5 Privacy protection by law content	86	60.08	
3rd sub-pillar: Inclusion	47	68.95	
3.3.1 E-Participation	83	59.26	
3.3.2 Socioeconomic gap in use of digital payments	26	87.28	●
3.3.3 Availability of local online content	98	42.61	
3.3.4 Gender gap in Internet use	3	77.39	●
3.3.5 Rural gap in use of digital payments	12	78.22	●
D. Impact pillar	93	46.87	
1st sub-pillar: Economy	128	11.10	
4.1.1 High-tech and medium-high-tech manufacturing	95	3.54	○
4.1.2 High-tech exports	87	10.01	
4.1.3 PCT patent applications	96	0.00	○
4.1.4 Growth rate of GDP per person engaged	NA	NA	
4.1.5 Prevalence of gig economy	90	31.17	
4.1.6 ICT services exports	98	10.76	
2nd sub-pillar: Quality of Life	80	62.81	
4.2.1 Happiness	54	60.29	
4.2.2 Freedom to make life choices	100	58.29	
4.2.3 Income inequality	32	78.91	●
4.2.4 Healthy life expectancy at birth	100	53.74	
3rd sub-pillar: SDG Contribution	48	66.69	
4.3.1 SDG 3: Good Health and Well-Being	92	55.74	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 Females employed with advanced degrees	17	77.42	●
4.3.4 SDG 7: Affordable and Clean Energy	98	63.98	
4.3.5 SDG 11: Sustainable Cities and Communities	93	69.63	

NOTE: * Indicates confidential data; ● a strength and ○ a weakness.

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