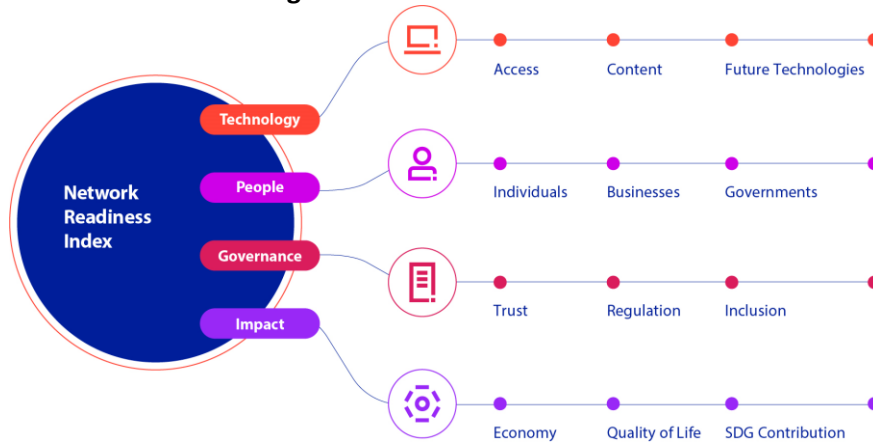




Ukraine

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.

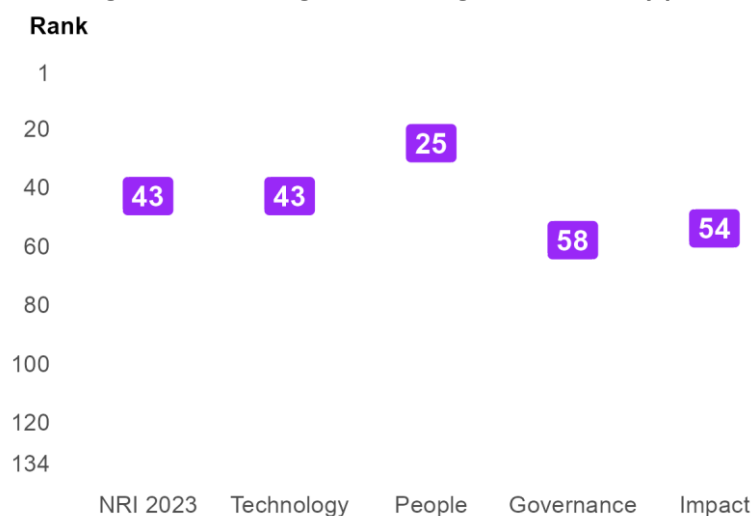
Figure 1: The NRI 2023 model



Global NRI position of Ukraine

Ukraine ranks 43rd 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: Ukraine 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 Ukraine relate to Individuals, Economy and Content, among others (Table 1). More could be done, though, to improve the economy's performances in the Inclusion, Regulation and SDG Contribution sub-pillars.

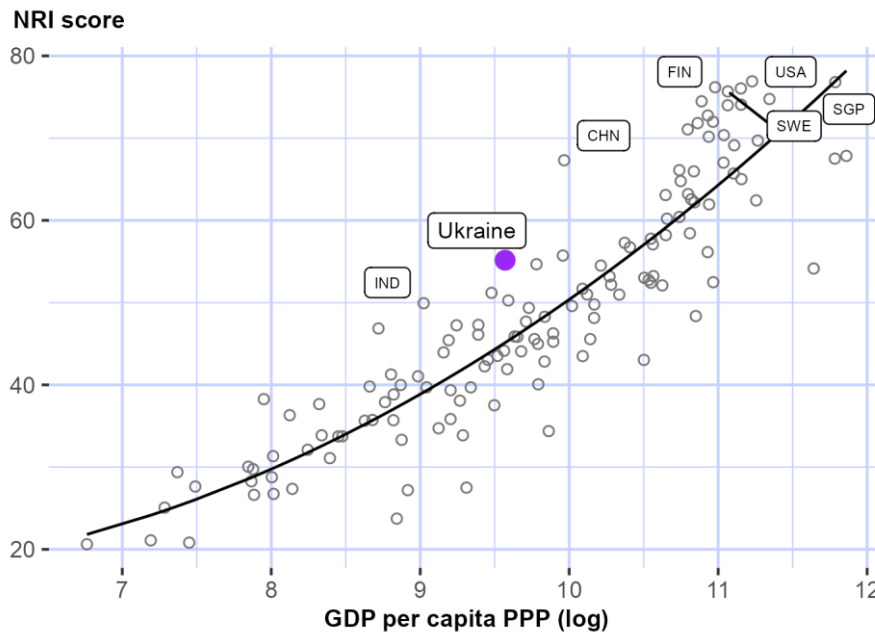
Table 1: Ukraine rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	2	Businesses	53
Economy	35	Trust	54
Content	42	Quality of Life	59
Access	43	Inclusion	60
Governments	43	Regulation	78
Future Technologies	44	SDG Contribution	86

NRI score and income

Figure 3 shows the position of Ukraine 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, Ukraine is well above the trend line, which suggests that it has a greater network readiness than 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). Ukraine belongs to the group of lower-middle-income countries, where the best performer is Ukraine (UKR). The top performer of its region-Europe-is Finland (FIN).

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Performance against its income group and region

Lower-middle-income countries

Ukraine is ranked 1st 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 has a higher score than the average of lower-middle-income countries in all of them.

Europe

Ukraine is ranked 29th within Europe (Figure 4, right panel). It has a score above the regional average in one of the four pillars: People. With regard to sub-pillars, it outperforms the average in Europe in two of the twelve sub-pillars: Access and Individuals.

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

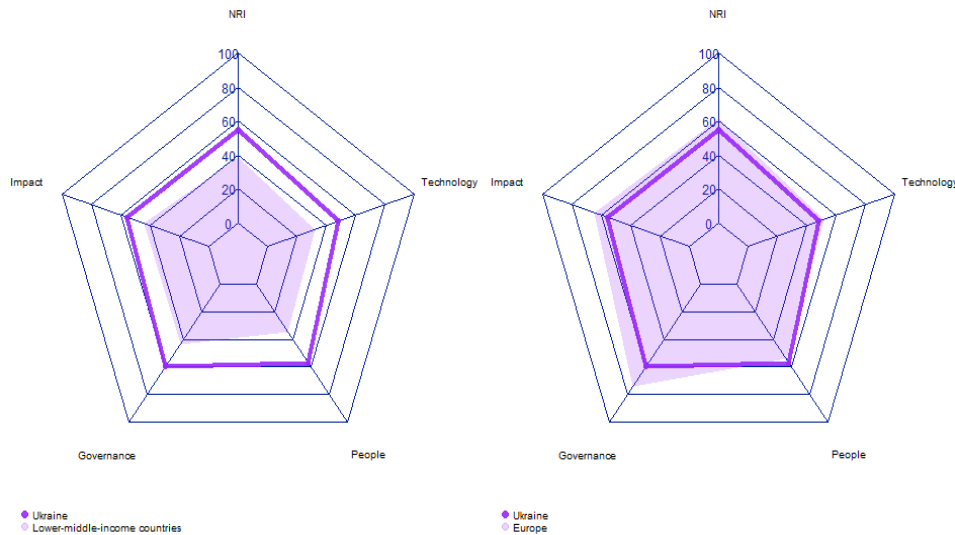


Table 2: Ukraine scores vs. averages of its income group and region, overall and by pillar

Dimension	Ukraine	Lower-middle-income countries	Europe
NRI	55.16	38.41	61.25
Technology	47.84	32.12	51.90
People	57.07	34.38	54.16
Governance	60.00	43.27	74.33
Impact	55.72	43.89	64.61

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Strongest and weakest indicators

The indicators where Ukraine performs particularly well include 1.1.6 Internet access in schools, 2.1.5 Adult literacy rate, 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, 1.1.4 Population covered by at least a 3G mobile network, and 4.3.5 SDG 11: Sustainable Cities and Communities.

Table 3: Highlight of Strengths and Opportunities for Ukraine

Strongest indicators	Rank	Weakest indicators	Rank
1.1.6 Internet access in schools	1	1.3.3 Robot density	55
2.1.5 Adult literacy rate	1	4.2.1 Happiness	98
3.2.4 E-commerce legislation	1	1.1.4 Population covered by at least a 3G mobile network	104
4.2.3 Income inequality	3	4.3.5 SDG 11: Sustainable Cities and Communities	104
1.3.4 Computer software spending	4	4.3.4 SDG 7: Affordable and Clean Energy	118
4.1.6 ICT services exports	6		
1.1.3 FTTH/building Internet subscriptions	11		
1.2.3 Mobile apps development	14		
2.1.2 ICT skills in the education system	16		
2.1.4 Tertiary enrollment	21		
2.3.2 Publication and use of open data	23		
1.2.4 AI scientific publications	26		

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

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NRI 2023 At-A-Glance: Ukraine

Network Readiness Index

Rank: 43 (out of 134)

Score: 55.16

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	43	47.84	C. Governance pillar	58	60.00
1st sub-pillar: Access	43	71.67	1st sub-pillar: Trust	54	54.61
2nd sub-pillar: Content	42	32.02	2nd sub-pillar: Regulation	78	62.25
3rd sub-pillar: Future Technologies	44	39.82	3rd sub-pillar: Inclusion	60	63.15
B. People pillar	25	57.07	D. Impact pillar	54	55.72
1st sub-pillar: Individuals	2	74.99	1st sub-pillar: Economy	35	38.30
2nd sub-pillar: Businesses	53	48.79	2nd sub-pillar: Quality of Life	59	69.83
3rd sub-pillar: Governments	43	47.43	3rd sub-pillar: SDG Contribution	86	59.03

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	43	47.84	C. Governance pillar	58	60.00
1st sub-pillar: Access	43	71.67	1st sub-pillar: Trust	54	54.61
1.1.1 Mobile tariffs	69	60.25	3.1.1 Secure Internet servers	43	72.61
1.1.2 Handset prices	92	36.65	3.1.2 Cybersecurity	85	65.33
1.1.3 FTTH/building Internet subscriptions	11	59.96	3.1.3 Online access to financial account	57	32.53
1.1.4 Population covered by at least a 3G mobile network	104	97.08	3.1.4 Internet shopping	45	47.97
1.1.5 International Internet bandwidth	40	76.08	2nd sub-pillar: Regulation	78	62.25
1.1.6 Internet access in schools	1	100.00	3.2.1 Regulatory quality	85	43.32
2nd sub-pillar: Content	42	32.02	3.2.2 ICT regulatory environment	85	75.29
1.2.1 GitHub commits	41	22.45	3.2.3 Regulation of emerging technologies	80	34.55
1.2.2 Internet domain registrations	54	6.05	3.2.4 E-commerce legislation	1	100.00
1.2.3 Mobile apps development	14	77.64	3.2.5 Privacy protection by law content	83	58.09
1.2.4 AI scientific publications	26	21.94	3rd sub-pillar: Inclusion	60	63.15
3rd sub-pillar: Future Technologies	44	39.82	3.3.1 E-Participation	57	59.31
1.3.1 Adoption of emerging technologies	49	53.00	3.3.2 Socioeconomic gap in use of digital payments	42	87.08
1.3.2 Investment in emerging technologies	64	40.50	3.3.3 Availability of local online content	75	54.33

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Indicator	Rank	Score	Indicator	Rank	Score	
1.3.3 Robot density	55	0.11	○	3.3.4 Gender gap in Internet use	82	61.08
1.3.4 Computer software spending	4	65.69	●	3.3.5 Rural gap in use of digital payments	83	53.97
B. People pillar			D. Impact pillar			
<i>1st sub-pillar: Individuals</i>			<i>1st sub-pillar: Economy</i>			
2.1.1 Mobile broadband internet traffic within the country	NA	NA	4.1.1 High-tech and medium-high-tech manufacturing	64	22.13	
2.1.2 ICT skills in the education system	16	76.30	●	4.1.2 High-tech exports	80	7.93
2.1.3 Use of virtual social networks	46	69.70	4.1.3 PCT patent applications	44	8.53	
2.1.4 Tertiary enrollment	21	53.96	●	4.1.4 Domestic market size	43	61.79
2.1.5 Adult literacy rate	1	100.00	●	4.1.5 Prevalence of gig economy	36	57.85
2.1.6 AI talent concentration	NA	NA	4.1.6 ICT services exports	6	71.57	●
<i>2nd sub-pillar: Businesses</i>			<i>2nd sub-pillar: Quality of Life</i>			
2.2.1 Firms with website	43	62.85	4.2.1 Happiness	98	42.50	○
2.2.2 GERD financed by business enterprise	57	37.74	4.2.2 Freedom to make life choices	63	75.64	
2.2.3 Knowledge intensive employment	35	57.24	4.2.3 Income inequality	3	93.97	●
2.2.4 Annual investment in telecommunication services	56	79.10	4.2.4 Healthy life expectancy at birth	83	67.21	
2.2.5 GERD performed by business enterprise	48	7.04	<i>3rd sub-pillar: SDG Contribution</i>			
<i>3rd sub-pillar: Governments</i>			4.3.1 SDG 3: Good Health and Well-Being	55	73.18	
2.3.1 Government online services	34	79.53	4.3.2 SDG 4: Quality Education	39	52.50	
2.3.2 Publication and use of open data	23	57.35	●	4.3.3 SDG 5: Women's economic opportunity	60	78.76
2.3.3 Government promotion of investment in emerging tech	45	47.72	4.3.4 SDG 7: Affordable and Clean Energy	118	45.74	○
2.3.4 R&D expenditure by governments and higher education	78	5.12	4.3.5 SDG 11: Sustainable Cities and Communities	104	44.97	○

NOTE: ● a strength and ○ a weakness.

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