



Serbia

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.

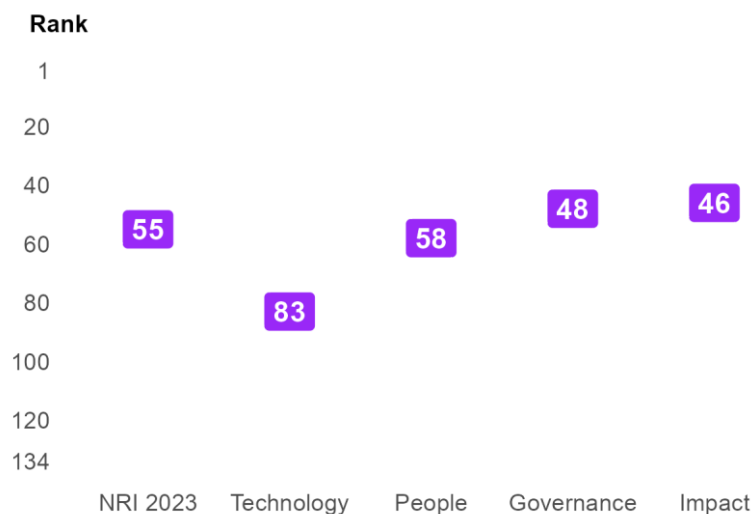
Figure 1: The NRI 2023 model



Global NRI position of Serbia

Serbia ranks 55th out of the 134 economies included in the NRI 2023 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns Technology.

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

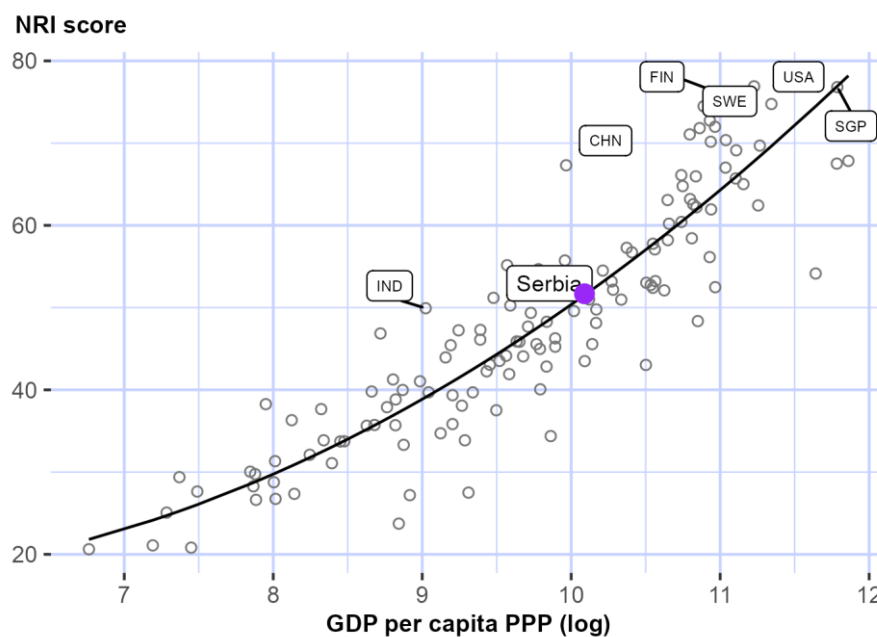
Table 1: Serbia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	36	Content	54
Inclusion	44	Governments	59
Quality of Life	45	Access	66
Regulation	48	SDG Contribution	67
Economy	52	Businesses	72
Trust	53	Future Technologies	115

NRI score and income

Figure 3 shows the position of Serbia 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, Serbia is slightly above the trend line, which suggests that its network readiness is more or less in line with what 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). Serbia belongs to the group of upper-middle-income countries, where the best performer is China (CHN). The top performer of its region-Europe-is Finland (FIN).

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Performance against its income group and region

Upper-middle-income countries

Serbia is ranked 8th 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 ten of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Economy and Quality of Life.

Europe

Serbia is ranked 35th within Europe (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 Europe in one of the twelve sub-pillars: Individuals.

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

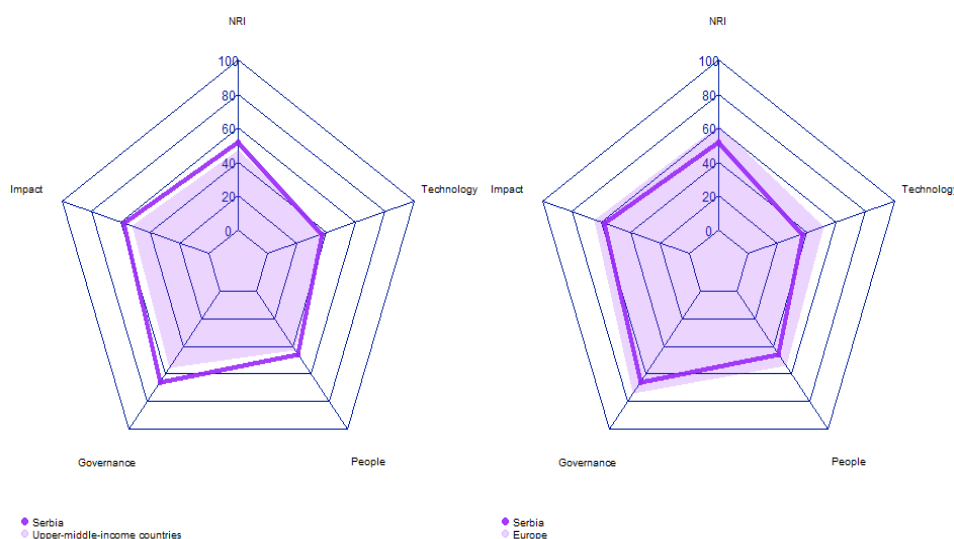


Table 2: Serbia scores vs. averages of its income group and region, overall and by pillar

Dimension	Serbia	Upper-middle-income countries	Europe
NRI	51.68	47.35	61.25
Technology	36.94	38.48	51.90
People	45.92	42.59	54.16
Governance	66.33	55.90	74.33
Impact	57.55	52.43	64.61

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Strongest and weakest indicators

The indicators where Serbia performs particularly well include 3.2.4 E-commerce legislation, 3.2.2 ICT regulatory environment, and 2.1.5 Adult literacy rate (Table 3). By contrast, the economy's weakest indicators include 1.3.4 Computer software spending, 4.3.4 SDG 7: Affordable and Clean Energy, and 1.3.2 Investment in emerging technologies.

Table 3: Highlight of Strengths and Opportunities for Serbia

Strongest indicators	Rank	Weakest indicators	Rank
3.2.4 E-commerce legislation	1	1.3.3 Robot density	45
3.2.2 ICT regulatory environment	11	2.2.2 GERD financed by business enterprise	86
2.1.5 Adult literacy rate	14	1.3.2 Investment in emerging technologies	93
3.3.1 E-Participation	15	4.3.4 SDG 7: Affordable and Clean Energy	98
4.1.6 ICT services exports	16	1.3.4 Computer software spending	110
2.2.1 Firms with website	21		
2.3.1 Government online services	26		
1.2.3 Mobile apps development	28		
4.3.3 SDG 5: Women's economic opportunity	29		
3.2.5 Privacy protection by law content	31		
3.3.2 Socioeconomic gap in use of digital payments	40		

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

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NRI 2023 At-A-Glance: Serbia

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Rank: 55 (out of 134)

Score: 51.68

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	83	36.94	C. Governance pillar	48	66.33
1st sub-pillar: Access	66	64.98	1st sub-pillar: Trust	53	54.87
2nd sub-pillar: Content	54	26.72	2nd sub-pillar: Regulation	48	72.18
3rd sub-pillar: Future Technologies	115	19.11	3rd sub-pillar: Inclusion	44	71.93
B. People pillar	58	45.92	D. Impact pillar	46	57.55
1st sub-pillar: Individuals	36	53.56	1st sub-pillar: Economy	52	34.08
2nd sub-pillar: Businesses	72	43.35	2nd sub-pillar: Quality of Life	45	74.44
3rd sub-pillar: Governments	59	40.85	3rd sub-pillar: SDG Contribution	67	64.13

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	83	36.94	C. Governance pillar	48	66.33
1st sub-pillar: Access	66	64.98	1st sub-pillar: Trust	53	54.87
1.1.1 Mobile tariffs	51	69.53	3.1.1 Secure Internet servers	42	72.97
1.1.2 Handset prices	59	52.40	3.1.2 Cybersecurity	47	89.62
1.1.3 FTTH/building Internet subscriptions	68	27.95	3.1.3 Online access to financial account	83	18.74
1.1.4 Population covered by at least a 3G mobile network	53	99.83	3.1.4 Internet shopping	52	38.17
1.1.5 International Internet bandwidth	45	75.18	2nd sub-pillar: Regulation	48	72.18
1.1.6 Internet access in schools	NA	NA	3.2.1 Regulatory quality	70	50.78
2nd sub-pillar: Content	54	26.72	3.2.2 ICT regulatory environment	11	94.71 ●
1.2.1 GitHub commits	46	19.00	3.2.3 Regulation of emerging technologies	80	34.55
1.2.2 Internet domain registrations	59	5.19	3.2.4 E-commerce legislation	1	100.00 ●
1.2.3 Mobile apps development	28	74.61 ●	3.2.5 Privacy protection by law content	31	80.86 ●
1.2.4 AI scientific publications	53	8.09	3rd sub-pillar: Inclusion	44	71.93
3rd sub-pillar: Future Technologies	115	19.11	3.3.1 E-Participation	15	80.23 ●
1.3.1 Adoption of emerging technologies	81	40.36	3.3.2 Socioeconomic gap in use of digital payments	40	88.33 ●
1.3.2 Investment in emerging technologies	93	31.25 ○	3.3.3 Availability of local online content	53	66.59

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Indicator	Rank	Score		Indicator	Rank	Score	
1.3.3 Robot density	45	1.92	○	3.3.4 Gender gap in Internet use	79	62.51	
1.3.4 Computer software spending	110	2.90	○	3.3.5 Rural gap in use of digital payments	70	62.00	
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	56	11.12		4.1.1 High-tech and medium-high-tech manufacturing	53	29.22	
2.1.2 ICT skills in the education system	67	46.93		4.1.2 High-tech exports	NA	NA	
2.1.3 Use of virtual social networks	65	65.59		4.1.3 PCT patent applications	49	6.82	
2.1.4 Tertiary enrollment	41	44.86		4.1.4 Domestic market size	75	49.28	
2.1.5 Adult literacy rate	14	99.29	●	4.1.5 Prevalence of gig economy	81	35.17	
2.1.6 AI talent concentration	NA	NA		4.1.6 ICT services exports	16	49.92	
<i>2nd sub-pillar: Businesses</i>				<i>2nd sub-pillar: Quality of Life</i>			
2.2.1 Firms with website	21	80.41	●	4.2.1 Happiness	43	72.40	
2.2.2 GERD financed by business enterprise	86	2.60	○	4.2.2 Freedom to make life choices	53	79.19	
2.2.3 Knowledge intensive employment	46	41.58		4.2.3 Income inequality	49	70.35	
2.2.4 Annual investment in telecommunication services	50	80.65		4.2.4 Healthy life expectancy at birth	55	75.83	
2.2.5 GERD performed by business enterprise	42	11.51		<i>3rd sub-pillar: SDG Contribution</i>			
<i>3rd sub-pillar: Governments</i>				4.3.1 SDG 3: Good Health and Well-Being	65	69.51	
2.3.1 Government online services	26	83.58	●	4.3.2 SDG 4: Quality Education	43	44.27	
2.3.2 Publication and use of open data	68	23.53		4.3.3 SDG 5: Women's economic opportunity	29	91.15	
2.3.3 Government promotion of investment in emerging tech	61	38.62		4.3.4 SDG 7: Affordable and Clean Energy	98	61.71	
2.3.4 R&D expenditure by governments and higher education	40	17.67		4.3.5 SDG 11: Sustainable Cities and Communities	84	54.01	

NOTE: ● a strength and ○ a weakness.

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