



## Bulgaria

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.

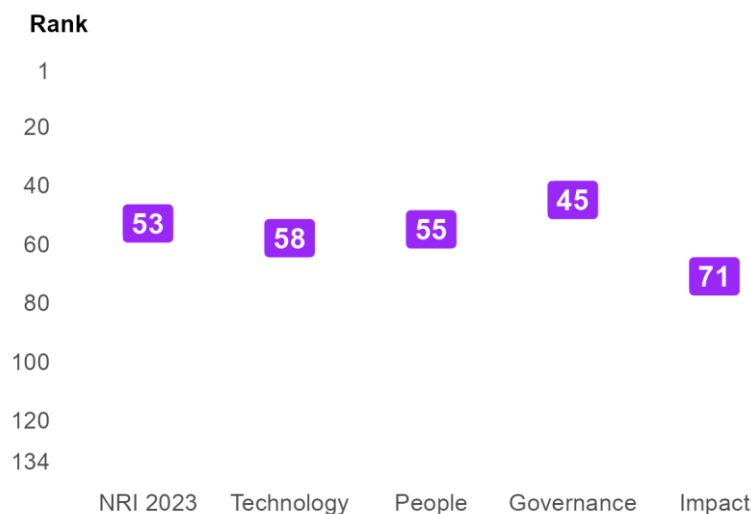
Figure 1: The NRI 2023 model



### Global NRI position of Bulgaria

Bulgaria ranks 53rd out of the 134 economies included in the NRI 2023 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Impact.

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

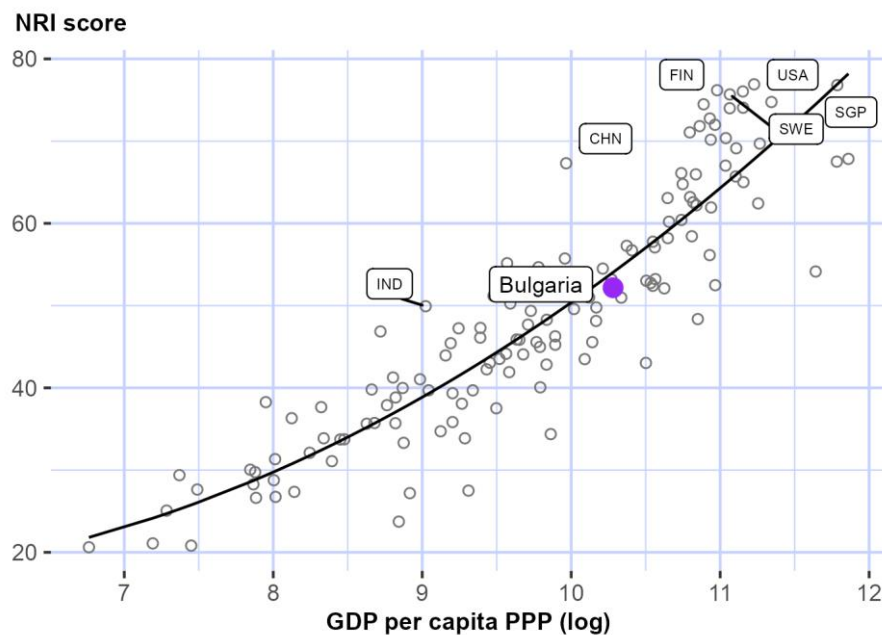
**Table 1: Bulgaria rankings by sub-pillar**

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	31	Trust	55
Economy	40	Governments	56
Content	46	Businesses	61
Individuals	50	SDG Contribution	78
Access	51	Future Technologies	81
Inclusion	52	Quality of Life	88

## NRI score and income

Figure 3 shows the position of Bulgaria 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, Bulgaria is slightly below 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). Bulgaria 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

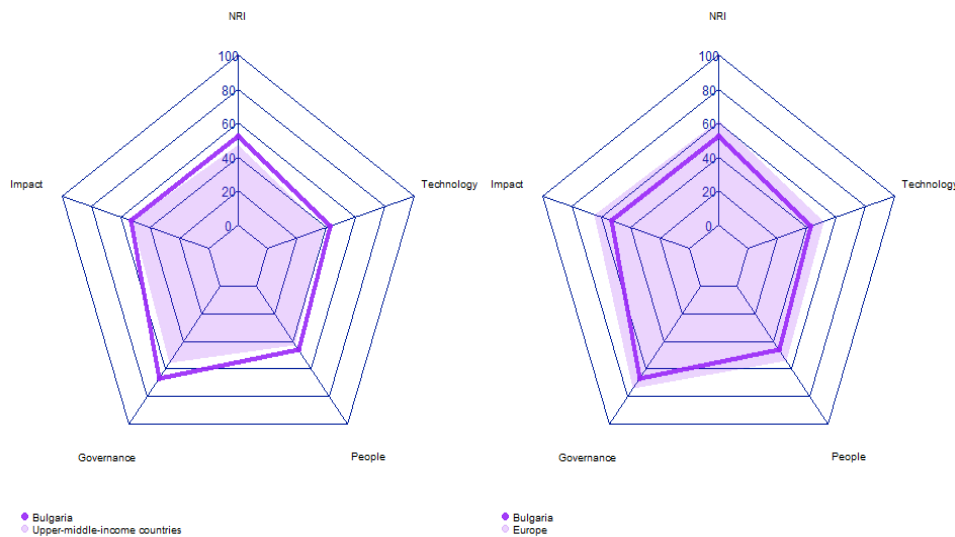
### Upper-middle-income countries

Bulgaria is ranked 7th 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 each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in nine of the twelve sub-pillars: Access, Content, Individuals, Businesses, Governments, Trust, Regulation, Inclusion and Economy.

### Europe

Bulgaria is ranked 34th 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 Bulgaria against its income group and region, overall and by pillar**



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

Dimension	Bulgaria	Upper-middle-income countries	Europe
NRI	52.18	47.35	61.25
Technology	42.69	38.48	51.90
People	46.33	42.59	54.16
Governance	66.87	55.90	74.33
Impact	52.81	52.43	64.61

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## Strongest and weakest indicators

The indicators where Bulgaria performs particularly well include 3.2.4 E-commerce legislation, 2.1.6 AI talent concentration, and 3.1.1 Secure Internet servers (Table 3). By contrast, the economy's weakest indicators include 4.3.5 SDG 11: Sustainable Cities and Communities, 4.2.2 Freedom to make life choices, 3.1.3 Online access to financial account, and 4.3.4 SDG 7: Affordable and Clean Energy.

**Table 3: Highlight of Strengths and Opportunities for Bulgaria**

Strongest indicators	Rank	Weakest indicators	Rank
3.2.4 E-commerce legislation	1	1.3.3 Robot density	43
2.1.6 AI talent concentration	9	3.1.3 Online access to financial account	93
3.1.1 Secure Internet servers	14	4.3.4 SDG 7: Affordable and Clean Energy	93
3.2.2 ICT regulatory environment	14	4.2.2 Freedom to make life choices	94
4.1.6 ICT services exports	18	4.3.5 SDG 11: Sustainable Cities and Communities	105
1.1.4 Population covered by at least a 3G mobile network	22		
4.1.5 Prevalence of gig economy	24		
2.1.4 Tertiary enrollment	26		
1.1.5 International Internet bandwidth	27		
3.2.5 Privacy protection by law content	29		
3.3.1 E-Participation	29		

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

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## NRI 2023 At-A-Glance: Bulgaria

Network Readiness Index

Rank: 53 (out of 134)

Score: 52.18

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	58	42.69	C. Governance pillar	45	66.87
1st sub-pillar: Access	51	69.38	1st sub-pillar: Trust	55	53.39
2nd sub-pillar: Content	46	29.60	2nd sub-pillar: Regulation	31	78.91
3rd sub-pillar: Future Technologies	81	29.10	3rd sub-pillar: Inclusion	52	68.30
B. People pillar	55	46.33	D. Impact pillar	71	52.81
1st sub-pillar: Individuals	50	51.09	1st sub-pillar: Economy	40	36.22
2nd sub-pillar: Businesses	61	46.54	2nd sub-pillar: Quality of Life	88	61.92
3rd sub-pillar: Governments	56	41.36	3rd sub-pillar: SDG Contribution	78	60.30

### The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
<b>A. Technology pillar</b>	58	42.69	<b>C. Governance pillar</b>	45	66.87
1st sub-pillar: Access	51	69.38	1st sub-pillar: Trust	55	53.39
1.1.1 Mobile tariffs	45	72.16	3.1.1 Secure Internet servers	14	86.02 ●
1.1.2 Handset prices	52	56.21	3.1.2 Cybersecurity	84	66.81
1.1.3 FTTH/building Internet subscriptions	38	38.86	3.1.3 Online access to financial account	93	16.23 ○
1.1.4 Population covered by at least a 3G mobile network	22	100.00 ●	3.1.4 Internet shopping	47	44.48
1.1.5 International Internet bandwidth	27	79.65 ●	2nd sub-pillar: Regulation	31	78.91
1.1.6 Internet access in schools	NA	NA	3.2.1 Regulatory quality	48	59.73
2nd sub-pillar: Content	46	29.60	3.2.2 ICT regulatory environment	14	94.12 ●
1.2.1 GitHub commits	37	26.38	3.2.3 Regulation of emerging technologies	41	59.48
1.2.2 Internet domain registrations	40	15.27	3.2.4 E-commerce legislation	1	100.00 ●
1.2.3 Mobile apps development	48	71.28	3.2.5 Privacy protection by law content	29	81.25 ●
1.2.4 AI scientific publications	68	5.48	3rd sub-pillar: Inclusion	52	68.30
3rd sub-pillar: Future Technologies	81	29.10	3.3.1 E-Participation	29	73.25 ●
1.3.1 Adoption of emerging technologies	60	48.94	3.3.2 Socioeconomic gap in use of digital payments	77	67.26
1.3.2 Investment in emerging technologies	50	46.50	3.3.3 Availability of local online content	36	78.12



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Indicator	Rank	Score	Indicator	Rank	Score
1.3.3 Robot density	43	2.35	3.3.4 Gender gap in Internet use	64	67.43
1.3.4 Computer software spending	74	18.61	3.3.5 Rural gap in use of digital payments	79	55.45
<b>B. People pillar</b>			<b>D. Impact pillar</b>		
<i>1st sub-pillar: Individuals</i>			<i>1st sub-pillar: Economy</i>		
2.1.1 Mobile broadband internet traffic within the country	59	10.65	4.1.1 High-tech and medium-high-tech manufacturing	48	30.52
2.1.2 ICT skills in the education system	60	51.60	4.1.2 High-tech exports	44	20.24
2.1.3 Use of virtual social networks	70	61.58	4.1.3 PCT patent applications	47	7.20
2.1.4 Tertiary enrollment	26	49.06	4.1.4 Domestic market size	69	51.12
2.1.5 Adult literacy rate	27	97.84	4.1.5 Prevalence of gig economy	24	63.95
2.1.6 AI talent concentration	9	35.84	4.1.6 ICT services exports	18	44.28
<i>2nd sub-pillar: Businesses</i>			<i>2nd sub-pillar: Quality of Life</i>		
2.2.1 Firms with website	61	49.01	4.2.1 Happiness	82	56.28
2.2.2 GERD financed by business enterprise	52	43.79	4.2.2 Freedom to make life choices	94	61.05
2.2.3 Knowledge intensive employment	43	48.67	4.2.3 Income inequality	79	56.53
2.2.4 Annual investment in telecommunication services	62	78.19	4.2.4 Healthy life expectancy at birth	60	73.83
2.2.5 GERD performed by business enterprise	39	13.05	<i>3rd sub-pillar: SDG Contribution</i>		
<i>3rd sub-pillar: Governments</i>			4.3.1 SDG 3: Good Health and Well-Being	69	68.14
2.3.1 Government online services	64	67.86	4.3.2 SDG 4: Quality Education	49	37.78
2.3.2 Publication and use of open data	41	38.24	4.3.3 SDG 5: Women's economic opportunity	39	86.73
2.3.3 Government promotion of investment in emerging tech	50	45.63	4.3.4 SDG 7: Affordable and Clean Energy	93	64.09
2.3.4 R&D expenditure by governments and higher education	47	13.70	4.3.5 SDG 11: Sustainable Cities and Communities	105	44.76

NOTE: ● a strength and ○ a weakness.

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