

United States

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 Future Technologies Access Content Network Individuals Businesses Governments Readiness Index 囯 Trust Regulation Inclusion Impact (<u>o</u>) **SDG** Contribution

Global NRI position of United States

United States ranks 1st out of the 134 economies included in the NRI 2023 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Impact.

Rank 1 1 7 20 23 40 60 80 100 120 134 NRI 2023 Technology People Impact Governance

Figure 2: United States global ranking, overall and by pillar





Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of United States relate to Future Technologies, Content and Businesses, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, SDG Contribution and Quality of Life sub-pillars.

Table 1: United States rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	1	Inclusion	10
Content	2	Economy	10
Businesses	3	Regulation	16
Governments	3	Individuals	21
Trust	4	SDG Contribution	29
Access	7	Quality of Life	66

NRI score and income

Figure 3 shows the position of United States 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, United States is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

NRI score 80 -United States SGP CHN 60 -IND 0 40 -0 0 0 0 11 12 GDP per capita PPP (log)

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). United States belongs to the group of high-income countries, where the best performer is United States of America (USA). The top performer of its region-The Americas-is also United States of America (USA).







Performance against its income group and region

High-income countries

United States is ranked 1st in the group of high-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 high-income countries in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Economy and SDG Contribution.

The Americas

United States is ranked 1st within The Americas (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it outperforms the average in The Americas in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Businesses, Governments, Trust, Regulation, Inclusion, Economy and SDG Contribution.

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

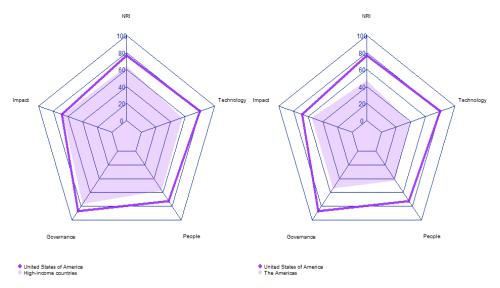


Table 2: United States scores vs. averages of its income group and region, overall and by pillar

Dimension	United States	High-income countries	The Americas
NRI	76.91	64.07	47.41
Technology	79.64	55.76	38.24
People	72.53	56.99	42.35
Governance	87.02	76.81	54.12
Impact	68.44	66.73	54.93



Strongest and weakest indicators

The indicators where United States performs particularly well include 1.3.2 Investment in emerging technologies, 1.3.4 Computer software spending, and 2.2.4 Annual investment in telecommunication services (Table 3). By contrast, the economy's weakest indicators include 4.2.2 Freedom to make life choices, 4.3.4 SDG 7: Affordable and Clean Energy, and 4.2.3 Income inequality.

Table 3: Highlight of Strengths and Opportunities for United States

Strongest indicators	Rank	Weakest indicators	Rank
1.3.2 Investment in emerging technologies	1	4.2.4 Healthy life expectancy at birth	64
1.3.4 Computer software spending	1	4.2.3 Income inequality	77
2.2.4 Annual investment in telecommunication services	1	4.3.4 SDG 7: Affordable and Clean Energy	89
3.1.2 Cybersecurity	1	4.2.2 Freedom to make life choices	96
3.2.4 E-commerce legislation	1		
1.3.1 Adoption of emerging technologies	2		
3.1.1 Secure Internet servers	2		
4.1.4 Domestic market size	2		
4.1.5 Prevalence of gig economy	2		
1.2.4 Al scientific publications	3		
2.2.5 GERD performed by business enterprise	3		
2.3.4 R&D expenditure by governments and higher education	3		

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



NRI 2023 At-A-Glance: United States

Network Readiness Index Rank: 1 (out of 134) Score: 76.91

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	1	79.64	C. Governance pillar	7	87.02
1st sub-pillar: Access	7	80.95	1st sub-pillar: Trust	4	91.30
2nd sub-pillar: Content	2	73.30	2nd sub-pillar: Regulation	16	85.54
3rd sub-pillar: Future Technologies	1	84.67	3rd sub-pillar: Inclusion	10	84.21
B. People pillar	4	72.53	D. Impact pillar	23	68.44
1st sub-pillar: Individuals	21	57.68	1st sub-pillar: Economy	10	58.69
2nd sub-pillar: Businesses	3	81.06	2nd sub-pillar: Quality of Life	66	68.16
3rd sub-pillar: Governments	3	78.85	3rd sub-pillar: SDG Contribution	29	78.47

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator F	Rank	Score
A. Technology pillar	1	79.64	C. Governance pillar	7	87.02
1st sub-pillar: Access	7	80.95	1st sub-pillar: Trust	4	91.30
1.1.1 Mobile tariffs	35	76.87	3.1.1 Secure Internet servers	2	94.60 •
1.1.2 Handset prices	18	78.50	3.1.2 Cybersecurity	1	100.00 •
1.1.3 FTTH/building Internet subscriptions	14	58.47	3.1.3 Online access to financial account	7	84.40
1.1.4 Population covered by at least a 3G mobile network	28	99.97	3.1.4 Internet shopping	9	86.19
1.1.5 International Internet bandwidth	6	90.92	2nd sub-pillar: Regulation	16	85.54
1.1.6 Internet access in schools	NA	NA	3.2.1 Regulatory quality	18	82.40
2nd sub-pillar: Content	2	73.30	3.2.2 ICT regulatory environment	31	90.00
1.2.1 GitHub commits	7	78.60	3.2.3 Regulation of emerging technologies	6	88.31
1.2.2 Internet domain registrations	8	73.48	3.2.4 E-commerce legislation	1	100.00 •
1.2.3 Mobile apps development	23	75.52	3.2.5 Privacy protection by law content	61	66.98
1.2.4 Al scientific publications	3	65.61	3rd sub-pillar: Inclusion	10	84.21
3rd sub-pillar: Future Technologies	1	84.67	3.3.1 E-Participation	10	90.70
1.3.1 Adoption of emerging technologies	2	99.75	3.3.2 Socioeconomic gap in use of digital payments	36	89.92
1.3.2 Investment in emerging technologies	1	100.00	3.3.3 Availability of local online content	7	93.51







Indicator	Rank	Score		Indicator	Rank	Score	
1.3.3 Robot density	9	38.92		3.3.4 Gender gap in Internet use	21	73.04	
1.3.4 Computer software spending	1	100.00	•	3.3.5 Rural gap in use of digital payments	34	73.90	
B. People pillar	4	72.53	_	D. Impact pillar	23	68.44	
1st sub-pillar: Individuals	21	57.68		1st sub-pillar: Economy	10	58.69	
2.1.1 Mobile broadband internet traffic within the country	NA	NA		4.1.1 High-tech and medium-high-tech manufacturing	24	52.82	
2.1.2 ICT skills in the education system	13	81.85		4.1.2 High-tech exports	24	35.84	
2.1.3 Use of virtual social networks	57	68.23		4.1.3 PCT patent applications	13	53.23	
2.1.4 Tertiary enrollment	14	57.27		4.1.4 Domestic market size	2	98.22	•
2.1.5 Adult literacy rate	NA	NA		4.1.5 Prevalence of gig economy	2	95.35	•
2.1.6 Al talent concentration	17	23.39		4.1.6 ICT services exports	57	16.68	
2nd sub-pillar: Businesses	3	81.06	_	2nd sub-pillar: Quality of Life	66	68.16	
2.2.1 Firms with website	28	73.19		4.2.1 Happiness	23	80.73	
2.2.2 GERD financed by business enterprise	6	84.00		4.2.2 Freedom to make life choices	96	60.10	0
2.2.3 Knowledge intensive employment	9	79.35		4.2.3 Income inequality	77	58.54	0
2.2.4 Annual investment in telecommunication services	1	100.00	•	4.2.4 Healthy life expectancy at birth	64	73.28	0
2.2.5 GERD performed by business enterprise	3	68.77	•	3rd sub-pillar: SDG Contribution	29	78.47	
3rd sub-pillar: Governments	3	78.85	_	4.3.1 SDG 3: Good Health and Well-Being	25	88.96	
2.3.1 Government online services	9	92.31		4.3.2 SDG 4: Quality Education	24	65.82	
2.3.2 Publication and use of open data	9	82.35		4.3.3 SDG 5: Women's economic opportunity	36	87.61	
2.3.3 Government promotion of investment in emerging tech	8	78.58		4.3.4 SDG 7: Affordable and Clean Energy	89	66.33	0
2.3.4 R&D expenditure by governments and higher education	3	62.14	•	4.3.5 SDG 11: Sustainable Cities and Communities	31	83.60	

NOTE: • a strength and o a weakness.



Sources

Dutta, S., & Lanvin, B. (eds.) (2022). The Network Readiness Index 2022: Benchmarking the Future of the Network Economy. Washington DC: Portulans Institute.

Berry, B. (2019). berryFunctions: Function Collection Related to Plotting and Hydrology. R package version 1.18.2. URL: https://CRAN.R-project.org/package=berryFunctions

Dutta, S., & Lanvin, B. (eds.) (2019). The Network Readiness Index 2019: Towards a Future-Ready Society. Washington DC: Portulans Institute.

Dutta, S., & Lanvin, B. (eds.) (2020). The Network Readiness Index 2020: Fostering Digital Transformation in a post-COVID Global Economy. Washington DC: Portulans Institute.

Dutta, S., & Lanvin, B. (eds.) (2021). The Network Readiness Index 2021: Shaping the Global Recovery. How digital technologies can make the post-COVID world more equal. Washington DC: Portulans Institute.

Gohel, D. (2019). officer: Manipulation of Microsoft Word and PowerPoint Documents. R package version 0.3.6. URL: https://CRAN.R-project.org/package=officer

Gohel, D. (2019). flextable: Functions for Tabular Reporting. R package version 0.5.6. URL: https://CRAN.R-project.org/package=flextable

Milton Bache, S. & Wickham, H. (2014). magrittr: A Forward-Pipe Operator for R. R package version 1.5. URL: https://CRAN.R-project.org/package=magrittr

Nakazawa, M. (2019). fmsb: Functions for Medical Statistics Book with some Demographic Data. R package version 0.7.0. URL: https://CRAN.R-project.org/package=fmsb

R Core Team (2018). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL: https://www.R-project.org/.

Slowikowski, K. (2019). ggrepel: Automatically Position Non-Overlapping Text Labels with 'ggplot2'. R package version 0.8.1. URL: https://CRAN.R-project.org/package=ggrepel

Wickham, H. (2007). Reshaping Data with the reshape Package. Journal of Statistical Software, 21(12), 1-20. URL: http://www.jstatsoft.org/v21/i12/.

Wickham, H. (2016). ggplot2: Elegant Graphics for Data Analysis. Springer-Verlag. New York.

Wickham et al., (2019). Welcome to the tidyverse. Journal of Open Source Software, 4(43), 1686, URL: https://doi.org/10.21105/joss.01686