

Jamaica

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>) Quality of Life **SDG** Contribution

Global NRI position of Jamaica

Jamaica ranks 72nd 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 and People.

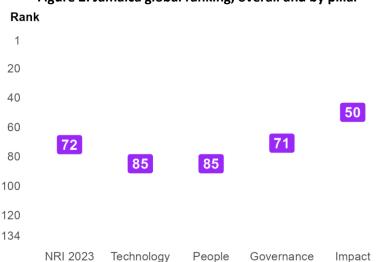


Figure 2: Jamaica global ranking, overall and by pillar





Performance at sub-pillar level

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

Table 1: Jamaica rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Regulation	27	Economy	77
Businesses	46	Inclusion	87
Quality of Life	46	Access	90
Future Technologies	51	Trust	99
SDG Contribution	51	Content	106
Governments	69	Individuals	117

NRI score and income

Figure 3 shows the position of Jamaica 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, Jamaica 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 - SWE SWE SWE SWE SGP

60 - SWE SWE SWE SGP

40 - SWE SWE SGP

20 - 7 8 9 10 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). Jamaica belongs to the group of upper-middle-income countries, where the best performer is China (CHN). The top performer of its region-The Americas-is United States of America (USA).







Performance against its income group and region

Upper-middle-income countries

Jamaica is ranked 19th 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 one of the four pillars: Impact. At the sub-pillar level, it outperforms upper-middle-income countries in five of the twelve sub-pillars: Future Technologies, Businesses, Regulation, Quality of Life and SDG Contribution.

The Americas

Jamaica is ranked 10th within The Americas (Figure 4, right panel). It has a score above the regional average in two of the four pillars: Governance and Impact. With regard to sub-pillars, it outperforms the average in The Americas in five of the twelve sub-pillars: Future Technologies, Businesses, Governments, Regulation and Quality of Life.

Impact

Governance

People

Governance

NRI

100

80

60

60

7

Technology

Technology

Feople

Feople

Feople

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

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

Dimension	Jamaica	Upper-middle- income countries	The Americas
NRI	46.11	47.35	47.41
Technology	35.38	38.48	38.24
People	38.28	42.59	42.35
Governance	54.49	55.90	54.12
Impact	56.28	52.43	54.93



Strongest and weakest indicators

The indicators where Jamaica performs particularly well include 3.2.4 E-commerce legislation, 3.3.4 Gender gap in Internet use, and 3.2.5 Privacy protection by law content (Table 3). By contrast, the economy's weakest indicators include 4.1.4 Domestic market size, 1.1.1 Mobile tariffs, 1.2.4 Al scientific publications, and 2.1.1 Mobile broadband internet traffic within the country.

Table 3: Highlight of Strengths and Opportunities for Jamaica

Strongest indicators	Rank	Weakest indicators	Rank
3.2.4 E-commerce legislation	1	1.2.3 Mobile apps development	103
3.3.4 Gender gap in Internet use	4	1.2.4 AI scientific publications	110
3.2.5 Privacy protection by law content	6	2.1.1 Mobile broadband internet traffic within the country	110
4.1.6 ICT services exports	20	1.1.1 Mobile tariffs	119
1.3.4 Computer software spending	29	4.1.4 Domestic market size	122
4.2.2 Freedom to make life choices	38		
4.3.5 SDG 11: Sustainable Cities and Communities	41		
2.3.2 Publication and use of open data	47		
4.1.5 Prevalence of gig economy	56		
3.2.1 Regulatory quality	58		
4.2.4 Healthy life expectancy at birth	58		

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



NRI 2023 At-A-Glance: Jamaica

Network Readiness Index Rank: 72 (out of 134) Score: 46.11

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	85	35.38	C. Governance pillar	71	54.49
1st sub-pillar: Access	90	54.89	1st sub-pillar: Trust	99	30.05
2nd sub-pillar: Content	106	13.63	2nd sub-pillar: Regulation	27	79.98
3rd sub-pillar: Future Technologies	51	37.61	3rd sub-pillar: Inclusion	87	53.45
B. People pillar	85	38.28	D. Impact pillar	50	56.28
1st sub-pillar: Individuals	117	24.94	1st sub-pillar: Economy	77	24.39
2nd sub-pillar: Businesses	46	52.36	2nd sub-pillar: Quality of Life	46	74.44
3rd sub-pillar: Governments	69	37.53	3rd sub-pillar: SDG Contribution	51	70.02

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator Rank Sco	ore
A. Technology pillar	85	35.38	C. Governance pillar 71 54.4	49
1st sub-pillar: Access	90	54.89	1st sub-pillar: Trust 99 30.0	05
1.1.1 Mobile tariffs	119	24.33 0	3.1.1 Secure Internet servers 95 40.8	89
1.1.2 Handset prices	95	35.15	3.1.2 Cybersecurity 106 31.3	34
1.1.3 FTTH/building Internet subscriptions	77	24.91	3.1.3 Online access to financial account NA NA	4
1.1.4 Population covered by at least a 3G mobile network	57	99.67	3.1.4 Internet shopping 74 17.9	93
1.1.5 International Internet bandwidth	95	66.45	2nd sub-pillar: Regulation 27 79.9	98
1.1.6 Internet access in schools	43	78.83	3.2.1 Regulatory quality 58 54.0	02 •
2nd sub-pillar: Content	106	13.63	3.2.2 ICT regulatory environment 87 73.5	53
1.2.1 GitHub commits	86	3.33	3.2.3 Regulation of emerging technologies NA NA	4
1.2.2 Internet domain registrations	90	1.45	3.2.4 E-commerce legislation 1 100.	.00 •
1.2.3 Mobile apps development	103	49.11 0	3.2.5 Privacy protection by law content 6 92.3	35 •
1.2.4 Al scientific publications	110	0.64 o	3rd sub-pillar: Inclusion 87 53.4	45
3rd sub-pillar: Future Technologies	51	37.61	3.3.1 E-Participation 106 26.7	75
1.3.1 Adoption of emerging technologies	76	43.00	3.3.2 Socioeconomic gap in use of digital payments 92 56.0	09
1.3.2 Investment in emerging technologies	72	38.00	3.3.3 Availability of local online content 65 60.3	34







Indicator	Rank	Score		Indicator	Rank	Score	
1.3.3 Robot density	NA	NA		3.3.4 Gender gap in Internet use	4	83.18	•
1.3.4 Computer software spending	29	31.83	•	3.3.5 Rural gap in use of digital payments	101	40.88	
B. People pillar	85	38.28		D. Impact pillar	50	56.28	
1st sub-pillar: Individuals	117	24.94		1st sub-pillar: Economy	77	24.39	
2.1.1 Mobile broadband internet traffic within the country	110	1.22	0	4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
2.1.2 ICT skills in the education system	83	36.31		4.1.2 High-tech exports	91	4.02	
2.1.3 Use of virtual social networks	89	45.75		4.1.3 PCT patent applications	70	2.47	
2.1.4 Tertiary enrollment	89	16.47		4.1.4 Domestic market size	122	32.66	0
2.1.5 Adult literacy rate	NA	NA		4.1.5 Prevalence of gig economy	56	44.77	•
2.1.6 Al talent concentration	NA	NA		4.1.6 ICT services exports	20	38.01	•
2nd sub-pillar: Businesses	46	52.36	- '	2nd sub-pillar: Quality of Life	46	74.44	
2.2.1 Firms with website	NA	NA		4.2.1 Happiness	66	65.43	
2.2.2 GERD financed by business enterprise	NA	NA		4.2.2 Freedom to make life choices	38	83.17	•
2.2.3 Knowledge intensive employment	68	30.78		4.2.3 Income inequality	NA	NA	
2.2.4 Annual investment in telecommunication services	94	73.94		4.2.4 Healthy life expectancy at birth	58	74.73	•
2.2.5 GERD performed by business enterprise	NA	NA	•	3rd sub-pillar: SDG Contribution	51	70.02	
3rd sub-pillar: Governments	69	37.53	-	4.3.1 SDG 3: Good Health and Well-Being	67	68.54	
2.3.1 Government online services	99	43.79		4.3.2 SDG 4: Quality Education	NA	NA	
2.3.2 Publication and use of open data	47	35.29	•	4.3.3 SDG 5: Women's economic opportunity	103	63.72	
2.3.3 Government promotion of investment in emerging tech	78	33.50		4.3.4 SDG 7: Affordable and Clean Energy	72	70.16	
2.3.4 R&D expenditure by governments and higher education	NA	NA		4.3.5 SDG 11: Sustainable Cities and Communities	41	77.67	•

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