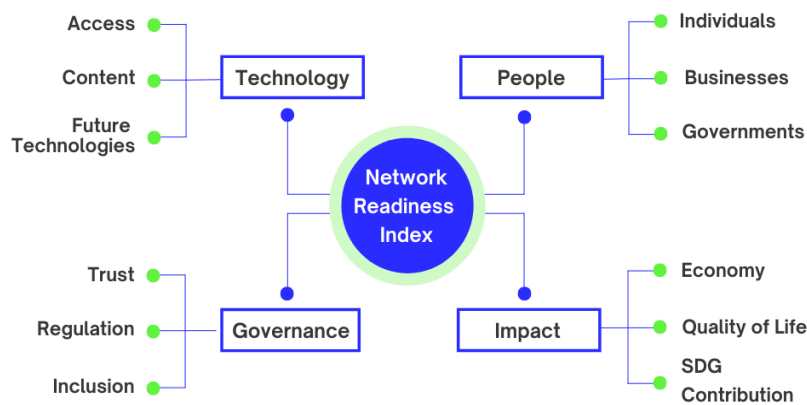


# Network Readiness Index 2022 Nigeria

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 2022 the NRI Report maps the network-based readiness landscape of 131 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.

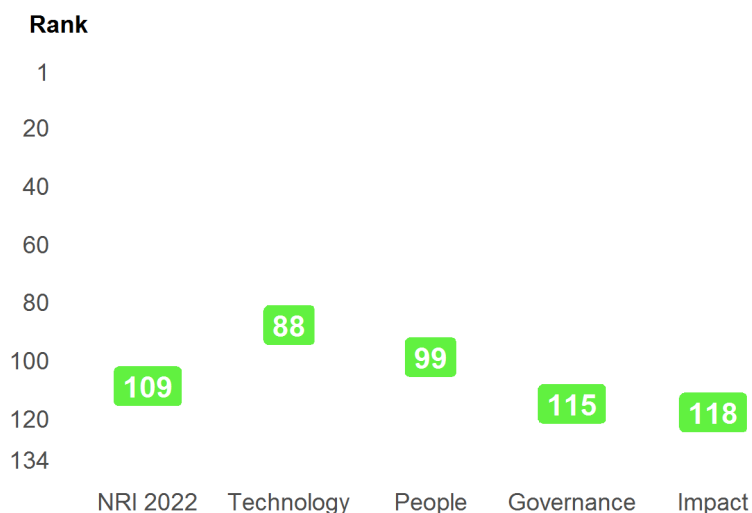
**Figure 1: The NRI 2022 model**



## Global NRI position of Nigeria

Nigeria ranks 109th out of the 131 economies included in the NRI 2022 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Impact.

**Figure 2: Nigeria global ranking, overall and by pillar**



### Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Nigeria relate to Businesses, Trust and Access, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, Inclusion and SDG Contribution sub-pillars.

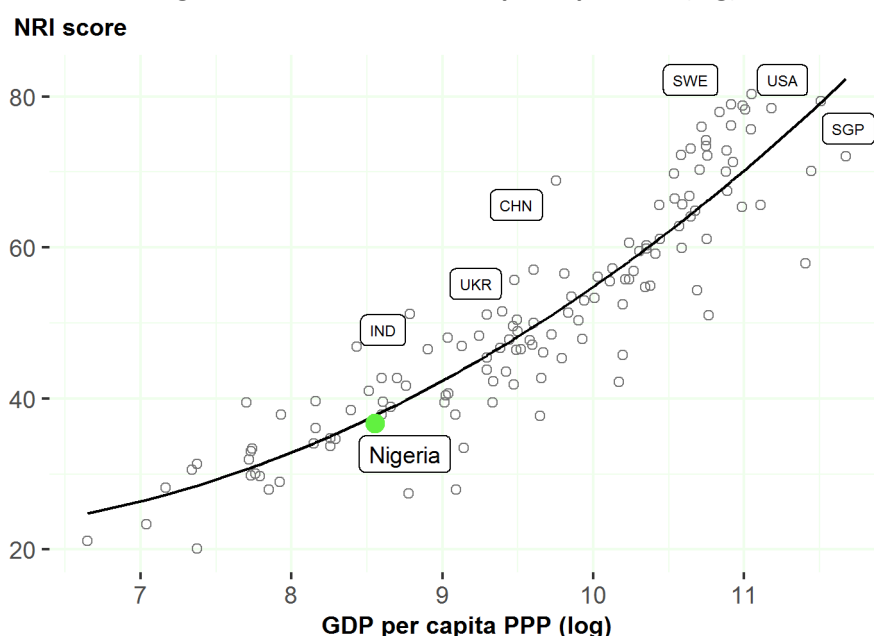
**Table 1: Nigeria rankings by sub-pillar**

Sub-pillar	Rank	Sub-pillar	Rank
Businesses	42	Governments	101
Trust	83	Quality of Life	108
Access	85	Regulation	113
Content	85	Individuals	121
Future Technologies	97	Inclusion	126
Economy	98	SDG Contribution	128

### NRI score and income

Figure 3 shows the position of Nigeria 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, Nigeria 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), SWE = Sweden (3), CHN = China (23), IND = India (61). Netherlands (NLD) is ranked 4th. Nigeria belongs to the group of lower-middle-income countries, where the best performer is Ukraine (UKR). The top performer of its region-Africa-is South Africa (ZAF).

## Performance against its income group and region

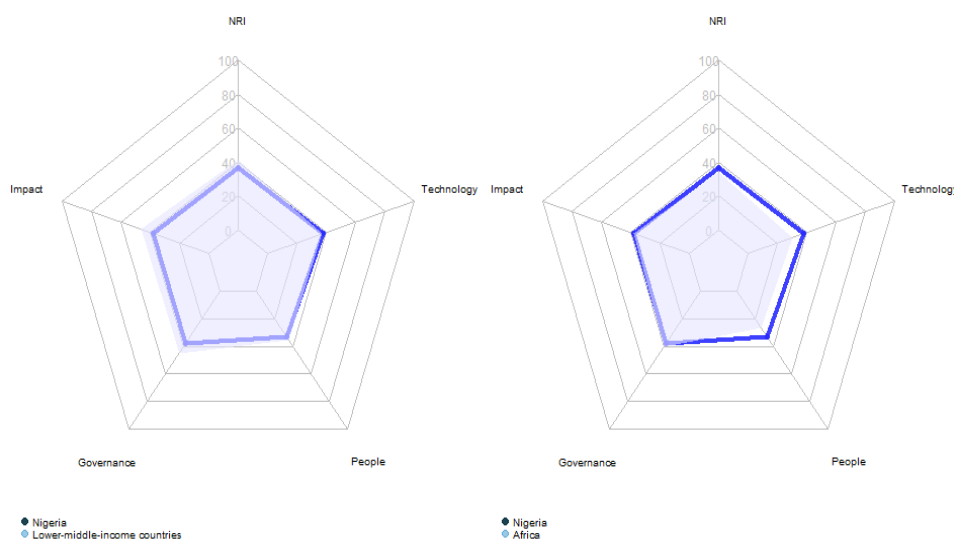
### Lower-middle-income countries

Nigeria is ranked 28th 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 one of the four pillars: technology. At the sub-pillar level, it outperforms lower-middle-income countries in four of the twelve sub-pillars: Access, Content, Businesses and Trust.

### Africa

Nigeria is ranked 11th within Africa (Figure 4, right panel). It has a score above the regional average in two of the four pillars: nri.score, technology and people. With regard to sub-pillars, it outperforms the average in Africa in eight of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Economy and Quality of Life.

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



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

Dimension	Nigeria	Lower-middle-income countries	Africa
NRI	36.67	40.94	33.77
Technology	38.08	37.28	29.96
People	33.12	35.42	26.81
Governance	37.88	45.00	40.37
Impact	37.59	46.09	37.94

### Strongest and weakest indicators

The indicators where Nigeria performs particularly well include 4.1.4 Domestic market size, 2.2.4 Annual investment in telecommunication services, and 1.2.4 AI scientific publications (Table 3). By contrast, the economy's weakest indicators include 4.3.5 SDG 11: Sustainable Cities and Communities, 3.2.1 Regulatory quality, and 4.2.4 Healthy life expectancy at birth.

**Table 3: Strongest and weakest indicators of Nigeria**

Strongest indicators	Rank	Weakest indicators	Rank
4.1.4 Domestic market size	25	3.3.2 Socioeconomic gap in use of digital payments	120
2.2.4 Annual investment in telecommunication services	31	3.3.5 Rural gap in use of digital payments	120
1.2.4 AI scientific publications	34	3.2.1 Regulatory quality	122
2.2.3 Knowledge intensive employment	35	4.2.4 Healthy life expectancy at birth	122
4.2.3 Income inequality	54	4.3.5 SDG 11: Sustainable Cities and Communities	128
3.1.2 Cybersecurity	55		
3.2.2 ICT regulatory environment	57		
1.1.5 International Internet bandwidth	60		
1.1.2 Handset prices	67		
1.1.1 Mobile tariffs	76		

# NRI 2022 At-A-Glance: Nigeria

Network Readiness Index

Rank: 109 (out of 131)

Score: 36.67

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	88	38.08	C. Governance pillar	115	37.88
1st sub-pillar: Access	85	57.53	1st sub-pillar: Trust	83	35.61
2nd sub-pillar: Content	85	31.17	2nd sub-pillar: Regulation	113	47.40
3rd sub-pillar: Future Technologies	97	25.53	3rd sub-pillar: Inclusion	126	30.63
B. People pillar	99	33.12	D. Impact pillar	118	37.59
1st sub-pillar: Individuals	121	18.41	1st sub-pillar: Economy	98	22.67
2nd sub-pillar: Businesses	42	52.04	2nd sub-pillar: Quality of Life	108	51.13
3rd sub-pillar: Governments	101	28.92	3rd sub-pillar: SDG Contribution	128	38.96

## The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
<b>A. Technology pillar</b>	88	38.08	<b>C. Governance pillar</b>	115	37.88
<i>1st sub-pillar: Access</i>	85	57.53	<i>1st sub-pillar: Trust</i>	83	35.61
1.1.1 Mobile tariffs	76	51.33	• 3.1.1 Secure Internet servers	105	34.34
1.1.2 Handset prices	67	51.25	• 3.1.2 Cybersecurity	55	84.49
1.1.3 FTTH/building Internet subscriptions	72	19.18	3.1.3 Online access to financial account	78	19.70
1.1.4 Population covered by at least a 3G mobile network	115	94.38	3.1.4 Internet shopping	102	3.92
1.1.5 International Internet bandwidth	60	71.53	• <i>2nd sub-pillar: Regulation</i>	113	47.40
1.1.6 Internet access in schools	NA	NA	3.2.1 Regulatory quality	122	15.47
<i>2nd sub-pillar: Content</i>	85	31.17	3.2.2 ICT regulatory environment	57	85.09
1.2.1 GitHub commits	99	1.72	3.2.3 Regulation of emerging technologies	105	17.63
1.2.2 Internet domain registrations	111	0.36	3.2.4 E-commerce legislation	87	66.67
1.2.3 Mobile apps development	109	57.73	3.2.5 Privacy protection by law content	91	52.16
1.2.4 AI scientific publications	34	64.85	• <i>3rd sub-pillar: Inclusion</i>	126	30.63
<i>3rd sub-pillar: Future Technologies</i>	97	25.53	3.3.1 E-Participation	101	46.91
1.3.1 Adoption of emerging technologies	74	43.17	3.3.2 Socioeconomic gap in use of digital payments	120	33.24
1.3.2 Investment in emerging technologies	114	22.75	3.3.3 Availability of local online content	116	27.40
1.3.3 Robot density	NA	NA	3.3.4 Gender gap in Internet use	NA	NA
1.3.4 Computer software spending	84	10.67	3.3.5 Rural gap in use of digital payments	120	14.97

Indicator	Rank	Score	Indicator	Rank	Score
<b>B. People pillar</b>	99	33.12	<b>D. Impact pillar</b>	118	37.59
<i>1st sub-pillar: Individuals</i>	121	18.41	<i>1st sub-pillar: Economy</i>	98	22.67
2.1.1 Mobile broadband internet traffic within the country	79	5.22	4.1.1 High-tech and medium-high-tech manufacturing	NA	NA
2.1.2 ICT skills in the education system	118	16.86	4.1.2 High-tech exports	92	7.41
2.1.3 Use of virtual social networks	114	11.78	4.1.3 PCT patent applications	97	0.18
2.1.4 Tertiary enrollment	105	7.07	4.1.4 Domestic market size	25	68.91 ●
2.1.5 Adult literacy rate	96	51.12	4.1.5 Prevalence of gig economy	92	29.65
2.1.6 AI talent concentration	NA	NA	4.1.6 ICT services exports	113	7.18
<i>2nd sub-pillar: Businesses</i>	42	52.04	<i>2nd sub-pillar: Quality of Life</i>	108	51.13
2.2.1 Firms with website	111	14.79	4.2.1 Happiness	105	40.97
2.2.2 GERD financed by business enterprise	NA	NA	4.2.2 Freedom to make life choices	95	59.47
2.2.3 Knowledge intensive employment	35	58.45 ●	4.2.3 Income inequality	54	70.10 ●
2.2.4 Annual investment in telecommunication services	31	82.88 ●	4.2.4 Healthy life expectancy at birth	122	34.00 ○
2.2.5 GERD performed by business enterprise	NA	NA	<i>3rd sub-pillar: SDG Contribution</i>	128	38.96
<i>3rd sub-pillar: Governments</i>	101	28.92	4.3.1 SDG 3: Good Health and Well-Being	119	26.65
2.3.1 Government online services	99	50.30	4.3.2 SDG 4: Quality Education	NA	NA
2.3.2 Publication and use of open data	73	19.12	4.3.3 SDG 5: Women's economic opportunity	116	48.25
2.3.3 Government promotion of investment in emerging tech	110	17.34	4.3.4 SDG 7: Affordable and Clean Energy	110	57.64
2.3.4 R&D expenditure by governments and higher education	NA	NA	4.3.5 SDG 11: Sustainable Cities and Communities	128	23.29 ○

NOTE: ● a strength and ○ a weakness.

## Sources

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>