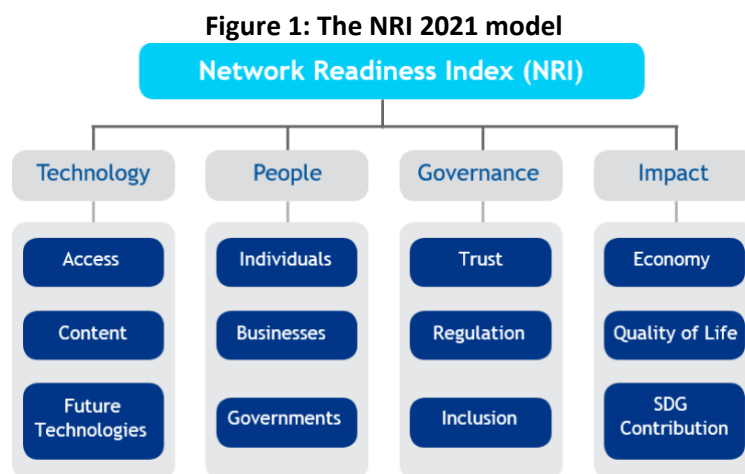


Network Readiness Index 2021

Gambia

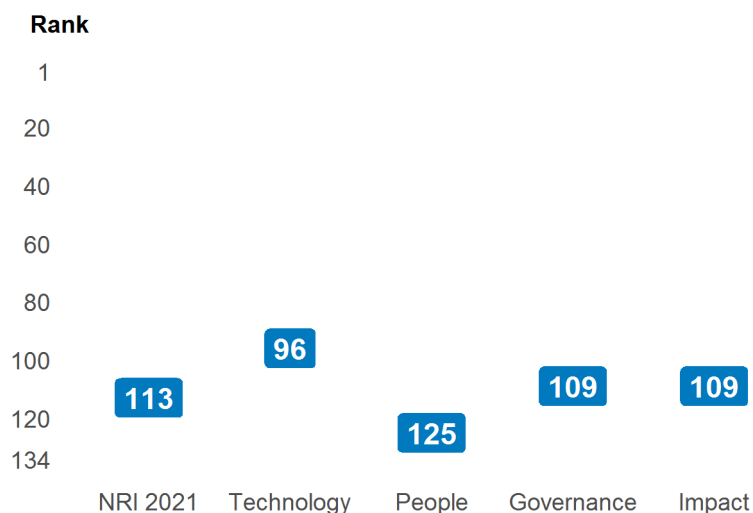
The Network Readiness Index (NRI) is one of the leading global indices on the application and impact of information and communication technology (ICT) in economies around the world. In its latest version of 2021 the NRI Report maps the network-based readiness landscape of 130 economies based on their 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 60 variables.



Global NRI position of Gambia

Gambia ranks 113th out of the 130 economies included in the NRI 2021 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns People.

Figure 2: Gambia global ranking, overall and by pillar



Performance at sub-pillar level

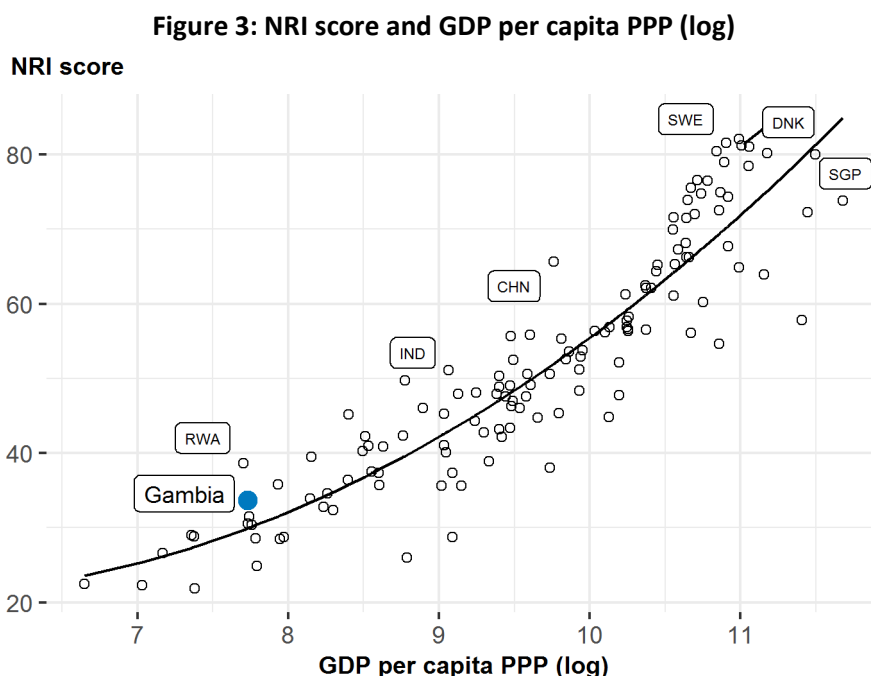
When it comes to sub-pillars, the strongest showings of Gambia relate to Future Technologies, Regulation and Businesses, among others (Table 1). More could be done, though, to improve the economy's performances in the Individuals, Governments and Inclusion sub-pillars.

Table 1: Gambia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	53	Access	107
Regulation	69	Content	107
Businesses	92	SDG Contribution	111
Trust	99	Individuals	124
Quality of Life	101	Governments	128
Economy	104	Inclusion	130

NRI score and income

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



Note: NLD = Netherlands (rank: 1), SWE = Sweden (2), DNK = Denmark (3), CHN = China (29), IND = India (67). USA is ranked 4th. Gambia belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is South Africa (ZAF).

Performance against its income group and region

Low-income countries

Gambia is ranked 3rd in the group of low-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.score, technology, governance and impact. At the sub-pillar level, it outperforms low-income countries in eight of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Trust, Regulation, Quality of Life and SDG Contribution.

Africa

Gambia is ranked 14th within Africa (Figure 4, right panel). It has a score above the regional average in two of the four pillars: nri.score, technology and impact. With regard to sub-pillars, it outperforms the average in Africa in nine of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Trust, Regulation, Economy, Quality of Life and SDG Contribution.

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

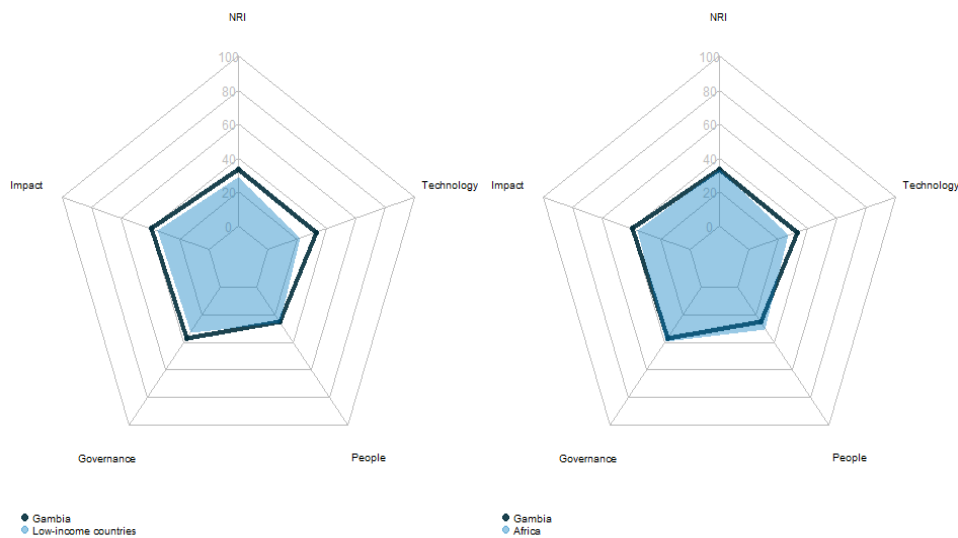


Table 2: Gambia scores vs. averages of its income group and region, overall and by pillar

Dimension	Gambia	Low-income countries	Africa
NRI	33.68	28.84	33.19
Technology	32.96	21.78	26.99
People	25.22	25.42	30.56
Governance	37.09	32.91	39.23
Impact	39.47	35.24	35.99

Strongest and weakest indicators

The indicators where Gambia performs particularly well include 3.2.4 E-commerce legislation, 3.2.5 Privacy protection by law content, and 1.2.2 Wikipedia edits (Table 3). By contrast, the economy's weakest indicators include 1.2.5 AI scientific publications, 2.3.1 Government online services, and 3.3.1 E-Participation.

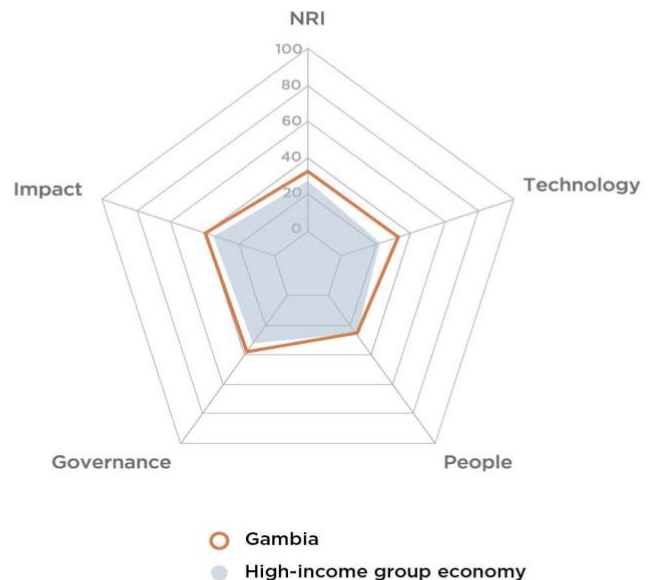
Table 3: Strongest and weakest indicators of Gambia

Strongest indicators	Rank	Weakest indicators	Rank
3.2.4 E-commerce legislation	1	2.1.4 Tertiary enrollment	125
3.2.5 Privacy protection by law content	25	4.1.2 High-tech exports	127
1.2.2 Wikipedia edits	57	1.2.5 AI scientific publications	129
4.1.6 ICT services exports	58	2.3.1 Government online services	129
4.2.3 Income inequality	60	3.3.1 E-Participation	129
2.2.3 Professionals	63		
3.2.3 Legal framework's adaptability to emerging technologies	66		
4.3.4 SDG 7: Affordable and Clean Energy	69		
4.1.5 Prevalence of gig economy	72		
1.3.2 Investment in emerging technologies	76		

Gambia

Network Readiness Index Rank (out of 130) **113** Score **33.68**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	96	32.96
1st sub-pillar: Access	107	42.41
2nd sub-pillar: Content	107	20.59
3rd sub-pillar: Future Technologies	53	35.89
B. People pillar	125	25.22
1st sub-pillar: Individuals	124	29.03
2nd sub-pillar: Businesses	92	31.00
3rd sub-pillar: Governments	128	15.62
C. Governance pillar	109	37.09
1st sub-pillar: Trust	99	28.85
2nd sub-pillar: Regulation	69	63.62
3rd sub-pillar: Inclusion	130	18.80
D. Impact pillar	109	39.47
1st sub-pillar: Economy	104	23.81
2nd sub-pillar: Quality of Life	101	51.75
3rd sub-pillar: SDG Contribution	111	42.84



Network Readiness Index in detail

Indicator	Rank	Score
A. Technology pillar	96	32.96
1st sub-pillar: Access	107	42.41
1.1.1 Mobile tariffs	122	15.04
1.1.2 Handset prices	127	7.62
1.1.3 Households with internet access	82	63.28
1.1.4 SMS sent by population 15-69	94	71.82
1.1.5 Population covered by at least a 3G mobile network	99	96.57
1.1.6 International Internet bandwidth	81	0.12
1.1.7 Internet access in schools	NA	NA
2nd sub-pillar: Content	107	20.59
1.2.1 GitHub commits	111	0.32
1.2.2 Wikipedia edits	57	55.66
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	117	46.80
1.2.5 AI scientific publications	129	0.00
3rd sub-pillar: Future Technologies	53	35.89
1.3.1 Adoption of emerging technologies	94	35.57
1.3.2 Investment in emerging technologies	76	36.20
1.3.3 Robot density	NA	NA
1.3.4 Computer software spending	NA	NA
B. People pillar	125	25.22
1st sub-pillar: Individuals	124	29.03
2.1.1 Active mobile broadband subscriptions	116	62.86
2.1.2 ICT skills	NA	NA
2.1.3 Use of virtual social networks	111	15.28
2.1.4 Tertiary enrollment	125	1.34
2.1.5 Adult literacy rate	100	36.65
2nd sub-pillar: Businesses	92	31.00
2.2.1 Firms with website	109	14.93
2.2.2 GERD financed by business enterprise	NA	NA
2.2.3 Professionals	63	26.19
2.2.4 Technicians and associate professionals	79	24.47
2.2.5 Annual investment in telecommunication services	115	58.40
2.2.6 GERD performed by business enterprise	NA	NA
3rd sub-pillar: Governments	128	15.62
2.3.1 Government online services	129	0.00
2.3.2 Publication and use of open data	NA	NA
2.3.3 Government promotion of investment in emerging tech	85	31.24
2.3.4 R&D expenditure by governments and higher education	NA	NA

Indicator	Rank	Score
C. Governance pillar	109	37.09
1st sub-pillar: Trust	99	28.85
3.1.1 Secure Internet servers	118	26.78
3.1.2 Cybersecurity	105	30.93
3.1.3 Online access to financial account	NA	NA
3.1.4 Internet shopping	NA	NA
2nd sub-pillar: Regulation	69	63.62
3.2.1 Regulatory quality	109	23.01
3.2.2 ICT regulatory environment	93	70.20
3.2.3 Legal framework's adaptability to emerging technologies	66	40.81
3.2.4 E-commerce legislation	1	100.00
3.2.5 Privacy protection by law content	25	84.10
3rd sub-pillar: Inclusion	130	18.80
3.3.1 E-Participation	129	0.00
3.3.2 Socioeconomic gap in use of digital payments	NA	NA
3.3.3 Availability of local online content	104	37.61
3.3.4 Gender gap in Internet use	NA	NA
3.3.5 Rural gap in use of digital payments	NA	NA
D. Impact pillar	109	39.47
1st sub-pillar: Economy	104	23.81
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA
4.1.2 High-tech exports	127	0.00
4.1.3 PCT patent applications	NA	NA
4.1.4 Growth rate of GDP per person engaged	NA	NA
4.1.5 Prevalence of gig economy	72	39.39
4.1.6 ICT services exports	58	32.05
2nd sub-pillar: Quality of Life	101	51.75
4.2.1 Happiness	92	42.37
4.2.2 Freedom to make life choices	113	51.19
4.2.3 Income inequality	60	70.57
4.2.4 Healthy life expectancy at birth	110	42.87
3rd sub-pillar: SDG Contribution	111	42.84
4.3.1 SDG 3: Good Health and Well-Being	118	26.23
4.3.2 SDG 4: Quality Education	NA	NA
4.3.3 Females employed with advanced degrees	97	13.16
4.3.4 SDG 7: Affordable and Clean Energy	69	76.04
4.3.5 SDG 11: Sustainable Cities and Communities	112	55.92

NOTE: * Indicates confidential data; ● 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 help 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>