



## Burundi

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.

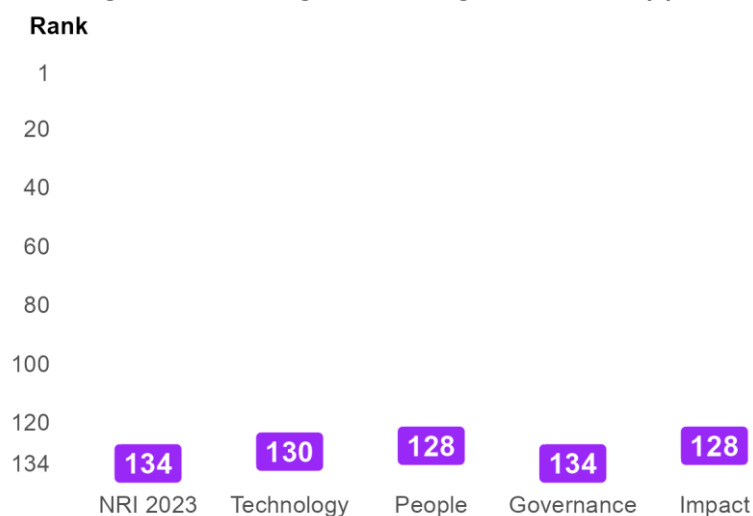
Figure 1: The NRI 2023 model



### Global NRI position of Burundi

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

Figure 2: Burundi 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 Burundi relate to Content, Governments and Quality of Life, among others (Table 1). More could be done, though, to improve the economy's performances in the Trust, Regulation and Inclusion sub-pillars.

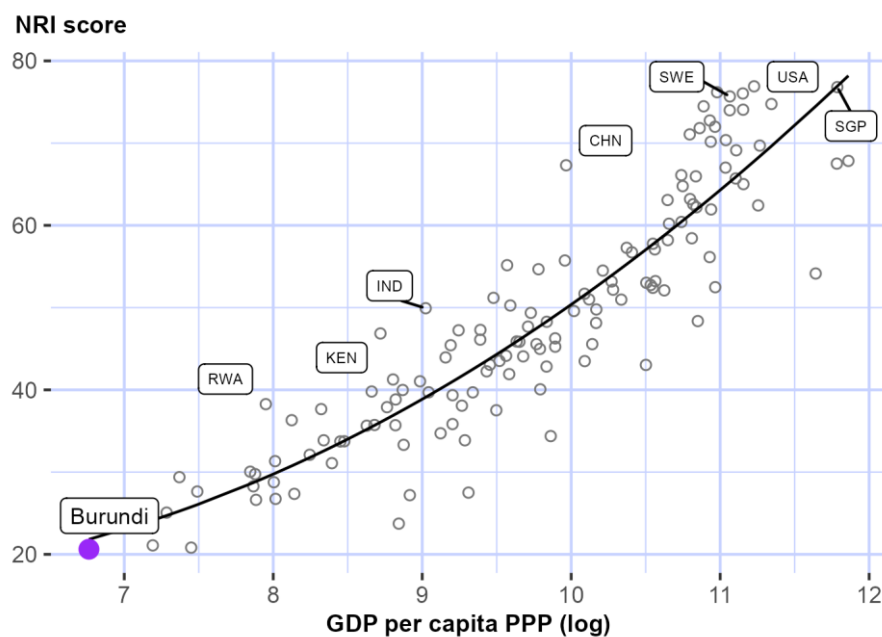
**Table 1: Burundi rankings by sub-pillar**

Sub-pillar	Rank	Sub-pillar	Rank
Content	105	Businesses	129
Governments	117	SDG Contribution	129
Quality of Life	121	Access	134
Future Technologies	126	Trust	134
Individuals	126	Regulation	134
Economy	127	Inclusion	134

## NRI score and income

Figure 3 shows the position of Burundi 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, Burundi 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). Burundi belongs to the group of low-income countries, where the best performer is Rwanda (RWA). The top performer of its region-Africa-is Kenya (KEN).

## Performance against its income group and region

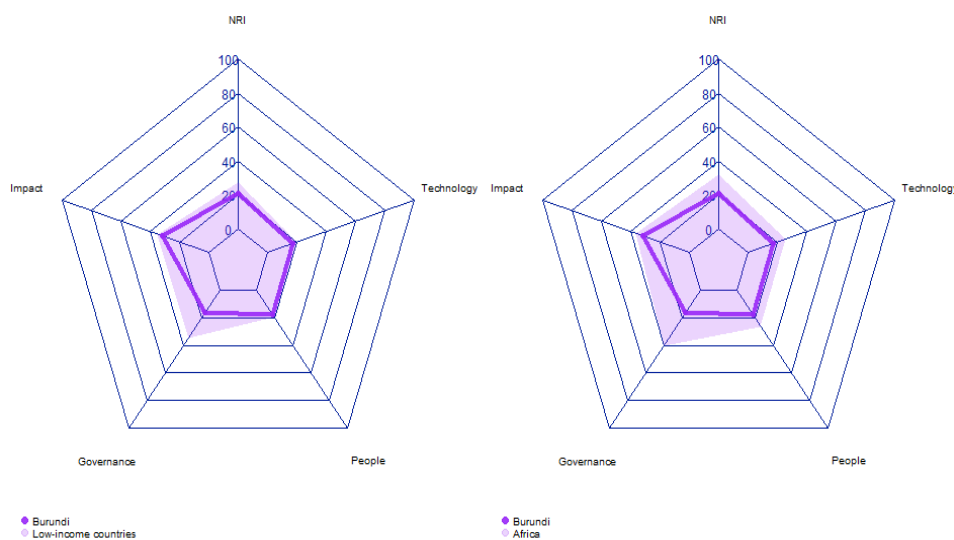
### Low-income countries

Burundi is ranked 12th in the group of low-income countries (Figure 4, left panel). In terms of pillar performance, it has a score below the income group average in each of the four pillars. At the sub-pillar level, it outperforms low-income countries in two of the twelve sub-pillars: Content and Individuals.

### Africa

Burundi is ranked 31st within Africa (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 Africa in one of the twelve sub-pillars: Content.

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



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

Dimension	Burundi	Low-income countries	Africa
NRI	20.62	27.19	32.14
Technology	16.84	19.75	25.14
People	17.72	19.57	26.19
Governance	16.27	34.61	40.44
Impact	31.66	34.82	36.77

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## Strongest and weakest indicators

The indicators where Burundi performs particularly well include 1.2.4 AI scientific publications, 4.2.3 Income inequality, and 2.2.2 GERD financed by business enterprise (Table 3). By contrast, the economy's weakest indicators include 3.1.2 Cybersecurity, 1.1.1 Mobile tariffs, 1.1.2 Handset prices, and 3.2.5 Privacy protection by law content.

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

Strongest indicators	Rank	Weakest indicators	Rank
1.2.4 AI scientific publications	45	3.3.4 Gender gap in Internet use	105
4.2.3 Income inequality	71	1.2.2 Internet domain registrations	128
2.2.2 GERD financed by business enterprise	76	2.2.3 Knowledge intensive employment	128
3.2.3 Regulation of emerging technologies	82	1.2.1 GitHub commits	129
2.3.4 R&D expenditure by governments and higher education	87	2.1.3 Use of virtual social networks	129
4.1.5 Prevalence of gig economy	91	3.1.1 Secure Internet servers	129
3.3.1 E-Participation	98	3.2.4 E-commerce legislation	129
4.3.3 SDG 5: Women's economic opportunity	98	4.1.2 High-tech exports	130
1.3.4 Computer software spending	99	1.1.4 Population covered by at least a 3G mobile network	131
4.1.6 ICT services exports	99	1.1.5 International Internet bandwidth	131
		3.3.2 Socioeconomic gap in use of digital payments	131
		4.1.4 Domestic market size	131
		1.1.1 Mobile tariffs	132
		1.1.2 Handset prices	132
		3.2.5 Privacy protection by law content	132
		3.1.2 Cybersecurity	133

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

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## NRI 2023 At-A-Glance: Burundi

Network Readiness Index

Rank: 134 (out of 134)

Score: 20.62

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	130	16.84	C. Governance pillar	134	16.27
1st sub-pillar: Access	134	20.85	1st sub-pillar: Trust	134	8.38
2nd sub-pillar: Content	105	14.22	2nd sub-pillar: Regulation	134	25.74
3rd sub-pillar: Future Technologies	126	15.43	3rd sub-pillar: Inclusion	134	14.69
B. People pillar	128	17.72	D. Impact pillar	128	31.66
1st sub-pillar: Individuals	126	17.60	1st sub-pillar: Economy	127	11.40
2nd sub-pillar: Businesses	129	18.35	2nd sub-pillar: Quality of Life	121	42.75
3rd sub-pillar: Governments	117	17.21	3rd sub-pillar: SDG Contribution	129	40.82

### The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
<b>A. Technology pillar</b>	130	16.84	<b>C. Governance pillar</b>	134	16.27
1st sub-pillar: Access	134	20.85	1st sub-pillar: Trust	134	8.38
1.1.1 Mobile tariffs	132	5.29	3.1.1 Secure Internet servers	129	16.76
1.1.2 Handset prices	132	0.00	3.1.2 Cybersecurity	133	0.00
1.1.3 FTTH/building Internet subscriptions	123	2.29	3.1.3 Online access to financial account	NA	NA
1.1.4 Population covered by at least a 3G mobile network	131	70.76	3.1.4 Internet shopping	NA	NA
1.1.5 International Internet bandwidth	131	46.78	2nd sub-pillar: Regulation	134	25.74
1.1.6 Internet access in schools	84	0.00	3.2.1 Regulatory quality	125	27.37
2nd sub-pillar: Content	105	14.22	3.2.2 ICT regulatory environment	126	54.94
1.2.1 GitHub commits	129	0.21	3.2.3 Regulation of emerging technologies	82	33.25
1.2.2 Internet domain registrations	128	0.09	3.2.4 E-commerce legislation	129	0.00
1.2.3 Mobile apps development	108	46.13	3.2.5 Privacy protection by law content	132	13.12
1.2.4 AI scientific publications	45	10.46	3rd sub-pillar: Inclusion	134	14.69
3rd sub-pillar: Future Technologies	126	15.43	3.3.1 E-Participation	98	32.56
1.3.1 Adoption of emerging technologies	118	17.31	3.3.2 Socioeconomic gap in use of digital payments	131	0.00
1.3.2 Investment in emerging technologies	112	23.50	3.3.3 Availability of local online content	119	26.20
1.3.3 Robot density	NA	NA	3.3.4 Gender gap in Internet use	105	0.00

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Indicator	Rank	Score	Indicator	Rank	Score
1.3.4 Computer software spending	99	5.48	3.3.5 Rural gap in use of digital payments	NA	NA
<b>B. People pillar</b>	128	17.72	<b>D. Impact pillar</b>	128	31.66
<i>1st sub-pillar: Individuals</i>	126	17.60	<i>1st sub-pillar: Economy</i>	127	11.40
2.1.1 Mobile broadband internet traffic within the country	121	0.00	4.1.1 High-tech and medium-high-tech manufacturing	103	2.62
2.1.2 ICT skills in the education system	NA	NA	4.1.2 High-tech exports	130	0.06 ○
2.1.3 Use of virtual social networks	129	2.74 ○	4.1.3 PCT patent applications	NA	NA
2.1.4 Tertiary enrollment	123	2.18	4.1.4 Domestic market size	131	18.98 ○
2.1.5 Adult literacy rate	89	65.47	4.1.5 Prevalence of gig economy	91	30.81
2.1.6 AI talent concentration	NA	NA	4.1.6 ICT services exports	99	4.53
<i>2nd sub-pillar: Businesses</i>	129	18.35	<i>2nd sub-pillar: Quality of Life</i>	121	42.75
2.2.1 Firms with website	99	18.60	4.2.1 Happiness	119	26.46
2.2.2 GERD financed by business enterprise	76	10.90	4.2.2 Freedom to make life choices	118	45.24
2.2.3 Knowledge intensive employment	128	0.00 ○	4.2.3 Income inequality	71	61.31
2.2.4 Annual investment in telecommunication services	119	61.81	4.2.4 Healthy life expectancy at birth	117	37.99
2.2.5 GERD performed by business enterprise	80	0.46	<i>3rd sub-pillar: SDG Contribution</i>	129	40.82
<i>3rd sub-pillar: Governments</i>	117	17.21	4.3.1 SDG 3: Good Health and Well-Being	122	26.46
2.3.1 Government online services	124	26.79	4.3.2 SDG 4: Quality Education	NA	NA
2.3.2 Publication and use of open data	NA	NA	4.3.3 SDG 5: Women's economic opportunity	98	66.37
2.3.3 Government promotion of investment in emerging tech	103	21.19	4.3.4 SDG 7: Affordable and Clean Energy	119	44.36
2.3.4 R&D expenditure by governments and higher education	87	3.66	4.3.5 SDG 11: Sustainable Cities and Communities	126	26.06

NOTE: ● a strength and ○ a weakness.

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## 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>