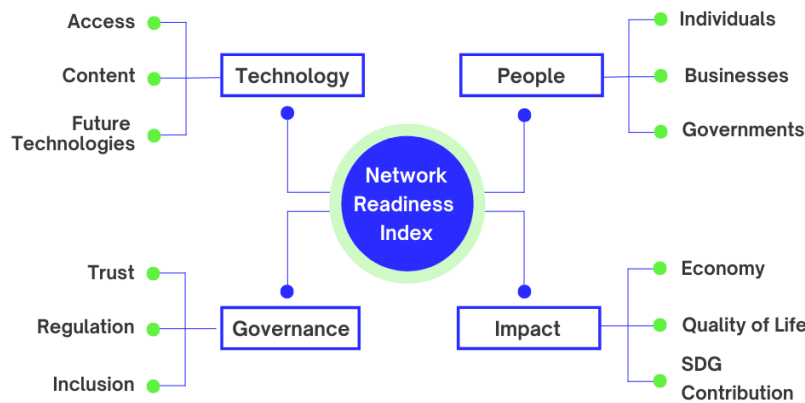


Network Readiness Index 2022

Chad

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.

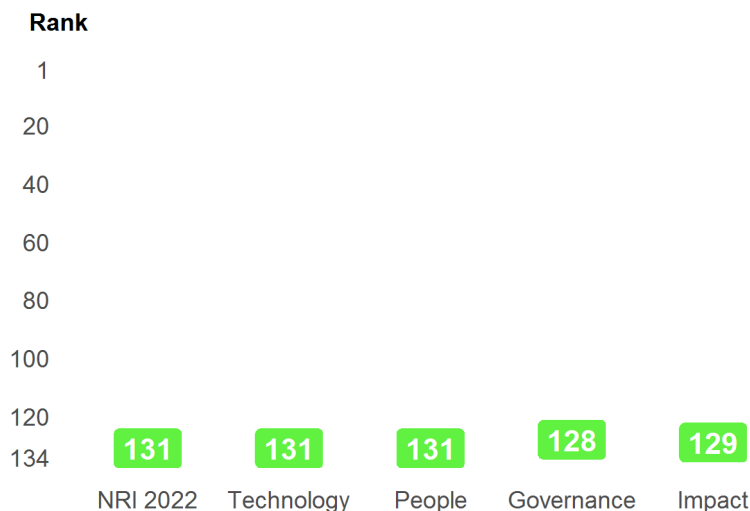
Figure 1: The NRI 2022 model



Global NRI position of Chad

Chad ranks 131st out of the 131 economies included in the NRI 2022 (Figure 2). Its main strength relates to Governance. The greatest scope for improvement, meanwhile, concerns Technology and People.

Figure 2: Chad global ranking, overall and by pillar



Performance at sub-pillar level

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

Table 1: Chad rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Businesses	119	Regulation	128
Economy	119	Access	130
Inclusion	124	Content	130
Governments	125	SDG Contribution	130
Quality of Life	125	Future Technologies	131
Trust	126	Individuals	131

NRI score and income

Figure 3 shows the position of Chad 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, Chad is well below the trend line, which suggests that it is underachieving and that one would expect it could raise its network readiness in view of 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. Chad 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

Chad is ranked 14th 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 trails low-income countries in all of them.

Africa

Chad 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 trails the regional average in each of them.

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

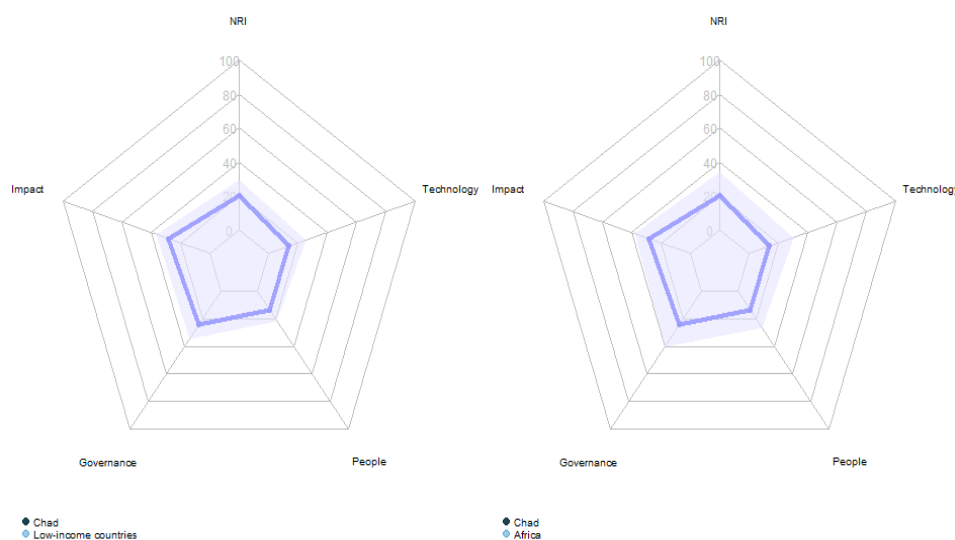


Table 2: Chad scores vs. averages of its income group and region, overall and by pillar

Dimension	Chad	Low-income countries	Africa
NRI	20.12	29.49	33.77
Technology	13.91	25.43	29.96
People	13.81	21.74	26.81
Governance	24.33	34.28	40.37
Impact	28.44	36.50	37.94

Strongest and weakest indicators

The indicators where Chad performs particularly well include 2.3.4 R&D expenditure by governments and higher education, 3.3.5 Rural gap in use of digital payments, and 4.3.4 SDG 7: Affordable and Clean Energy (Table 3). By contrast, the economy's weakest indicators include 1.1.1 Mobile tariffs, 2.1.3 Use of virtual social networks, 3.1.1 Secure Internet servers, and 3.3.3 Availability of local online content.

Table 3: Strongest and weakest indicators of Chad

Strongest indicators	Rank	Weakest indicators	Rank
2.3.4 R&D expenditure by governments and higher education	62	4.1.3 PCT patent applications	99
3.3.5 Rural gap in use of digital payments	62	3.2.4 E-commerce legislation	126
4.3.4 SDG 7: Affordable and Clean Energy	64	1.1.4 Population covered by at least a 3G mobile network	129
4.2.3 Income inequality	67	2.1.2 ICT skills in the education system	129
3.2.5 Privacy protection by law content	72	2.2.3 Knowledge intensive employment	129
3.1.3 Online access to financial account	88	1.1.2 Handset prices	130
4.1.6 ICT services exports	96	1.2.1 GitHub commits	130
3.1.2 Cybersecurity	98	1.2.3 Mobile apps development	130
4.2.1 Happiness	111	4.3.1 SDG 3: Good Health and Well-Being	130
4.3.3 SDG 5: Women's economic opportunity	111	4.3.5 SDG 11: Sustainable Cities and Communities	130
		1.1.1 Mobile tariffs	131
		2.1.3 Use of virtual social networks	131
		3.1.1 Secure Internet servers	131
		3.3.3 Availability of local online content	131

NRI 2022 At-A-Glance: Chad

Network Readiness Index

Rank: 131 (out of 131)

Score: 20.12

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	131	13.91	C. Governance pillar	128	24.33
1st sub-pillar: Access	130	29.12	1st sub-pillar: Trust	126	14.50
2nd sub-pillar: Content	130	4.54	2nd sub-pillar: Regulation	128	27.17
3rd sub-pillar: Future Technologies	131	8.06	3rd sub-pillar: Inclusion	124	31.33
B. People pillar	131	13.81	D. Impact pillar	129	28.44
1st sub-pillar: Individuals	131	0.72	1st sub-pillar: Economy	119	13.64
2nd sub-pillar: Businesses	119	23.10	2nd sub-pillar: Quality of Life	125	38.64
3rd sub-pillar: Governments	125	17.62	3rd sub-pillar: SDG Contribution	130	33.04

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	131	13.91	C. Governance pillar	128	24.33
1st sub-pillar: Access	130	29.12	1st sub-pillar: Trust	126	14.50
1.1.1 Mobile tariffs	131	0.00	3.1.1 Secure Internet servers	131	0.00
1.1.2 Handset prices	130	0.00	3.1.2 Cybersecurity	98	39.39
1.1.3 FTTH/building Internet subscriptions	NA	NA	3.1.3 Online access to financial account	88	16.73
1.1.4 Population covered by at least a 3G mobile network	129	67.89	3.1.4 Internet shopping	109	1.89
1.1.5 International Internet bandwidth	126	48.59	2nd sub-pillar: Regulation	128	27.17
1.1.6 Internet access in schools	NA	NA	3.2.1 Regulatory quality	127	10.67
2nd sub-pillar: Content	130	4.54	3.2.2 ICT regulatory environment	123	55.68
1.2.1 GitHub commits	130	0.00	3.2.3 Regulation of emerging technologies	112	7.11
1.2.2 Internet domain registrations	127	0.06	3.2.4 E-commerce legislation	126	0.00
1.2.3 Mobile apps development	130	10.93	3.2.5 Privacy protection by law content	72	62.39
1.2.4 AI scientific publications	96	7.18	3rd sub-pillar: Inclusion	124	31.33
3rd sub-pillar: Future Technologies	131	8.06	3.3.1 E-Participation	126	23.46
1.3.1 Adoption of emerging technologies	124	3.37	3.3.2 Socioeconomic gap in use of digital payments	116	37.42
1.3.2 Investment in emerging technologies	126	12.75	3.3.3 Availability of local online content	131	0.00
1.3.3 Robot density	NA	NA	3.3.4 Gender gap in Internet use	NA	NA
1.3.4 Computer software spending	NA	NA	3.3.5 Rural gap in use of digital payments	62	64.45

Indicator	Rank	Score	Indicator	Rank	Score
B. People pillar	131	13.81	D. Impact pillar	129	28.44
<i>1st sub-pillar: Individuals</i>	131	0.72	<i>1st sub-pillar: Economy</i>	119	13.64
2.1.1 Mobile broadband internet traffic within the country	114	0.21	4.1.1 High-tech and medium-high-tech manufacturing	NA	NA
2.1.2 ICT skills in the education system	129	2.37	4.1.2 High-tech exports	NA	NA
2.1.3 Use of virtual social networks	131	0.00	4.1.3 PCT patent applications	99	0.00
2.1.4 Tertiary enrollment	125	1.04	4.1.4 Domestic market size	122	31.49
2.1.5 Adult literacy rate	106	0.00	4.1.5 Prevalence of gig economy	119	10.76
2.1.6 AI talent concentration	NA	NA	4.1.6 ICT services exports	96	12.30
<i>2nd sub-pillar: Businesses</i>	119	23.10	<i>2nd sub-pillar: Quality of Life</i>	125	38.64
2.2.1 Firms with website	121	0.00	4.2.1 Happiness	111	36.90
2.2.2 GERD financed by business enterprise	NA	NA	4.2.2 Freedom to make life choices	124	27.55
2.2.3 Knowledge intensive employment	129	0.89	4.2.3 Income inequality	67	64.07
2.2.4 Annual investment in telecommunication services	105	68.40	4.2.4 Healthy life expectancy at birth	127	26.04
2.2.5 GERD performed by business enterprise	NA	NA	<i>3rd sub-pillar: SDG Contribution</i>	130	33.04
<i>3rd sub-pillar: Governments</i>	125	17.62	4.3.1 SDG 3: Good Health and Well-Being	130	0.00
2.3.1 Government online services	127	17.58	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	111	52.63
2.3.3 Government promotion of investment in emerging tech	118	9.08	4.3.4 SDG 7: Affordable and Clean Energy	64	79.53
2.3.4 R&D expenditure by governments and higher education	62	26.19	4.3.5 SDG 11: Sustainable Cities and Communities	130	0.00

NOTE: ● a strength and ○ a weakness.

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