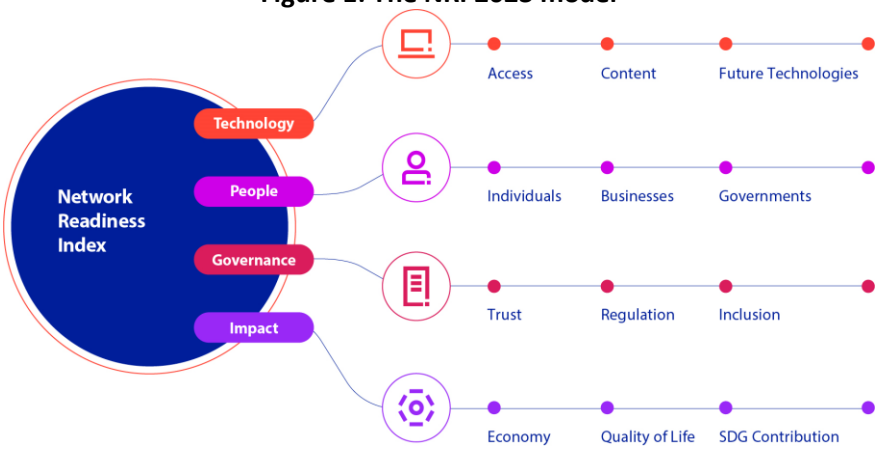
Tunisia

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.

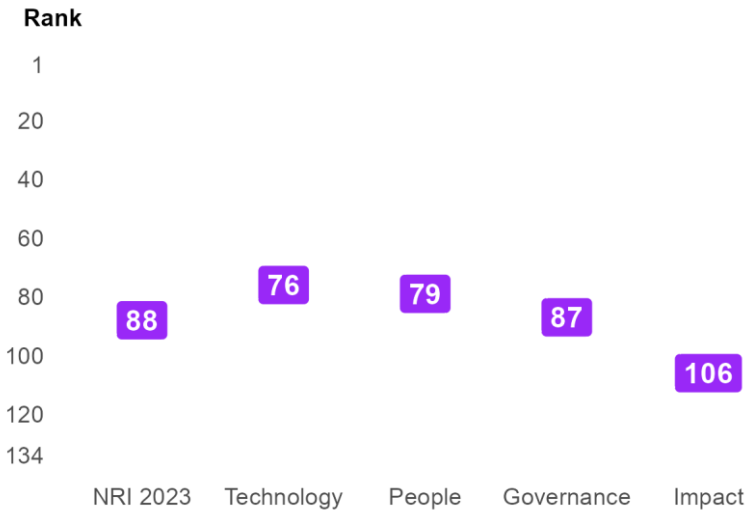
Figure 1: The NRI 2023 model



Global NRI position of Tunisia

Tunisia ranks 88th out of the 134 economies included in the NRI 2023 (Figure 2). Its main strength relates to Technology. The greatest scope for improvement, meanwhile, concerns Impact.

Figure 2: Tunisia global ranking, overall and by pillar



Performance at sub-pillar level

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

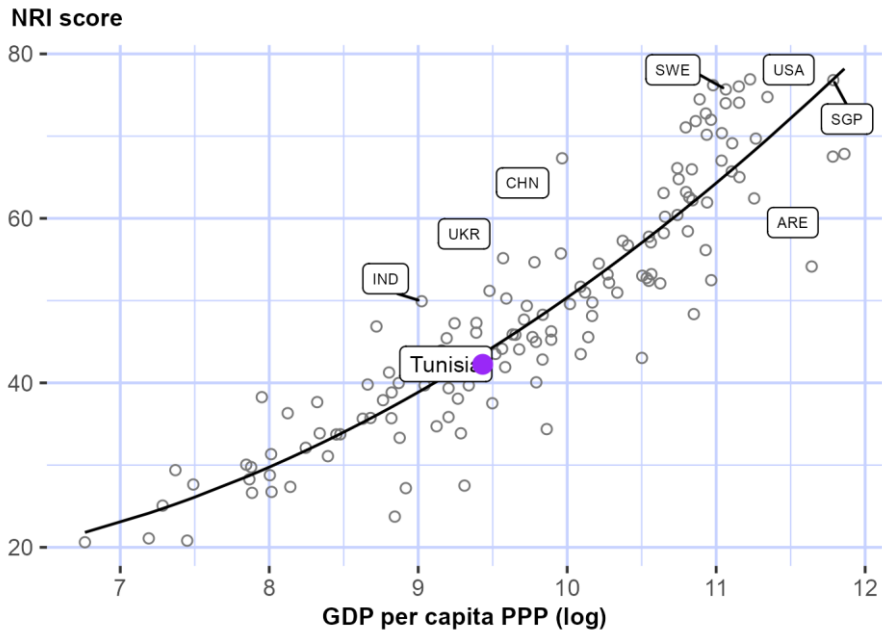
Table 1: Tunisia rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Individuals	67	Economy	92
Future Technologies	68	Businesses	93
Governments	71	Inclusion	94
Access	73	SDG Contribution	96
Trust	73	Regulation	97
Content	77	Quality of Life	107

NRI score and income

Figure 3 shows the position of Tunisia 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, Tunisia 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). Tunisia belongs to the group of lower-middle-income countries, where the best performer is Ukraine (UKR). The top performer of its region-Arab States-is United Arab Emirates (ARE).

Performance against its income group and region

Lower-middle-income countries

Tunisia is ranked 13th 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 three of the four pillars: NRI, Technology, People and Governance. At the sub-pillar level, it outperforms lower-middle-income countries in eight of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Governments, Trust, Regulation and Inclusion.

Arab States

Tunisia is ranked 10th within Arab States (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 Arab States in two of the twelve sub-pillars: Content and Governments.

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

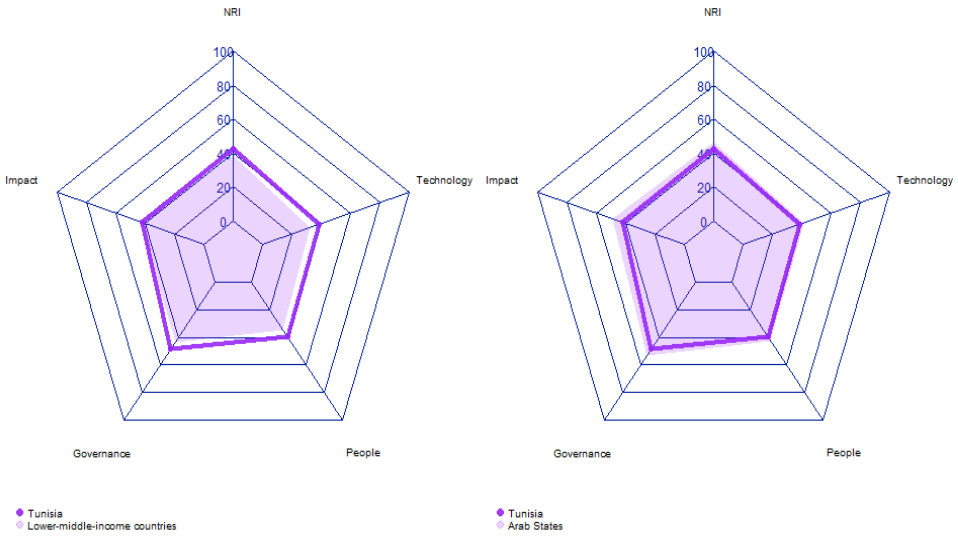


Table 2: Tunisia scores vs. averages of its income group and region, overall and by pillar

Dimension	Tunisia	Lower-middle-income countries	Arab States
NRI	42.25	38.41	46.59
Technology	38.29	32.12	41.17
People	39.89	34.38	42.66
Governance	48.72	43.27	53.45
Impact	42.11	43.89	49.08

Strongest and weakest indicators

The indicators where Tunisia performs particularly well include 2.1.2 ICT skills in the education system, 1.2.4 AI scientific publications, and 1.3.4 Computer software spending (Table 3). By contrast, the economy's weakest indicators include 4.2.2 Freedom to make life choices, 4.3.3 SDG 5: Women's economic opportunity, and 3.3.5 Rural gap in use of digital payments.

Table 3: Highlight of Strengths and Opportunities for Tunisia

Strongest indicators	Rank	Weakest indicators	Rank
2.1.2 ICT skills in the education system	27	4.3.2 SDG 4: Quality Education	71
1.2.4 AI scientific publications	30	3.2.4 E-commerce legislation	87
1.3.4 Computer software spending	36	3.3.5 Rural gap in use of digital payments	112
4.2.3 Income inequality	37	4.3.3 SDG 5: Women's economic opportunity	118
2.3.4 R&D expenditure by governments and higher education	49	4.2.2 Freedom to make life choices	127
2.3.3 Government promotion of investment in emerging technologies	51		
1.1.5 International Internet bandwidth	52		
3.1.2 Cybersecurity	53		
4.2.4 Healthy life expectancy at birth	54		
2.1.1 Mobile broadband internet traffic within the country	58		

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

NRI 2023 At-A-Glance: Tunisia

Network Readiness Index Rank: 88 (out of 134) Score: 42.25

Pillar/sub-pillar	Rank	Score
A. Technology pillar	76	38.29
1st sub-pillar: Access	73	62.40
2nd sub-pillar: Content	77	20.61
3rd sub-pillar: Future Technologies	68	31.86
B. People pillar	79	39.89
1st sub-pillar: Individuals	67	47.08
2nd sub-pillar: Businesses	93	35.58
3rd sub-pillar: Governments	71	37.01

Pillar/sub-pillar	Rank	Score
C. Governance pillar	87	48.72
1st sub-pillar: Trust	73	40.31
2nd sub-pillar: Regulation	97	57.06
3rd sub-pillar: Inclusion	94	48.79
D. Impact pillar	106	42.11
1st sub-pillar: Economy	92	21.07
2nd sub-pillar: Quality of Life	107	50.96
3rd sub-pillar: SDG Contribution	96	54.29

The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	76	38.29	
1st sub-pillar: Access	73	62.40	
1.1.1 Mobile tariffs	70	59.94	
1.1.2 Handset prices	83	39.80	
1.1.3 FTTH/building Internet subscriptions	85	22.15	
1.1.4 Population covered by at least a 3G mobile network	57	99.67	
1.1.5 International Internet bandwidth	52	73.83	•
1.1.6 Internet access in schools	42	79.02	
2nd sub-pillar: Content	77	20.61	
1.2.1 GitHub commits	66	6.92	
1.2.2 Internet domain registrations	75	2.49	
1.2.3 Mobile apps development	98	55.05	
1.2.4 AI scientific publications	30	17.98	•
3rd sub-pillar: Future Technologies	68	31.86	
1.3.1 Adoption of emerging technologies	104	29.39	
1.3.2 Investment in emerging technologies	81	35.50	

Indicator	Rank	Score	
C. Governance pillar	87	48.72	
1st sub-pillar: Trust	73	40.31	
3.1.1 Secure Internet servers	83	46.00	
3.1.2 Cybersecurity	53	85.99	•
3.1.3 Online access to financial account	106	10.37	
3.1.4 Internet shopping	71	18.86	
2nd sub-pillar: Regulation	97	57.06	
3.2.1 Regulatory quality	91	40.82	
3.2.2 ICT regulatory environment	91	70.35	
3.2.3 Regulation of emerging technologies	63	44.42	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	69	63.04	
3rd sub-pillar: Inclusion	94	48.79	
3.3.1 E-Participation	67	53.49	
3.3.2 Socioeconomic gap in use of digital payments	81	65.35	
3.3.3 Availability of local online content	83	51.44	

Indicator	Rank	Score	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	36	30.70	●
B. People pillar	79	39.89	
1st sub-pillar: Individuals	67	47.08	
2.1.1 Mobile broadband internet traffic within the country	58	10.75	●
2.1.2 ICT skills in the education system	27	70.39	●
2.1.3 Use of virtual social networks	80	54.45	
2.1.4 Tertiary enrollment	79	23.45	
2.1.5 Adult literacy rate	75	76.38	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	93	35.58	
2.2.1 Firms with website	57	54.30	
2.2.2 GERD financed by business enterprise	68	23.44	
2.2.3 Knowledge intensive employment	85	21.34	
2.2.4 Annual investment in telecommunication services	83	75.76	
2.2.5 GERD performed by business enterprise	59	3.08	
3rd sub-pillar: Governments	71	37.01	
2.3.1 Government online services	85	56.13	
2.3.2 Publication and use of open data	49	33.82	
2.3.3 Government promotion of investment in emerging tech	51	44.80	●
2.3.4 R&D expenditure by governments and higher education	49	13.28	●

Indicator	Rank	Score	
3.3.4 Gender gap in Internet use	95	45.59	
3.3.5 Rural gap in use of digital payments	112	28.07	○
D. Impact pillar	106	42.11	
1st sub-pillar: Economy	92	21.07	
4.1.1 High-tech and medium-high-tech manufacturing	52	29.28	
4.1.2 High-tech exports	63	12.76	
4.1.3 PCT patent applications	74	1.89	
4.1.4 Domestic market size	77	48.44	
4.1.5 Prevalence of gig economy	107	22.09	
4.1.6 ICT services exports	70	11.98	
2nd sub-pillar: Quality of Life	107	50.96	
4.2.1 Happiness	108	35.50	
4.2.2 Freedom to make life choices	127	16.58	○
4.2.3 Income inequality	37	75.88	●
4.2.4 Healthy life expectancy at birth	54	75.87	●
3rd sub-pillar: SDG Contribution	96	54.29	
4.3.1 SDG 3: Good Health and Well-Being	70	68.12	
4.3.2 SDG 4: Quality Education	71	15.23	○
4.3.3 SDG 5: Women's economic opportunity	118	49.56	○
4.3.4 SDG 7: Affordable and Clean Energy	66	72.18	
4.3.5 SDG 11: Sustainable Cities and Communities	67	66.34	

NOTE: ● a strength and ○ 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