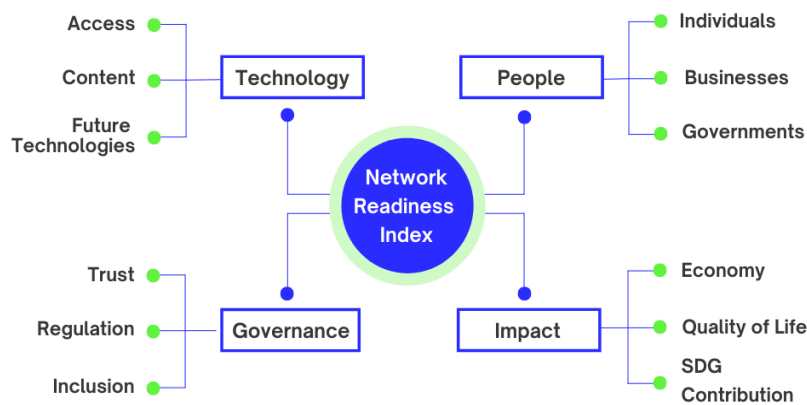


Network Readiness Index 2022

Egypt

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.

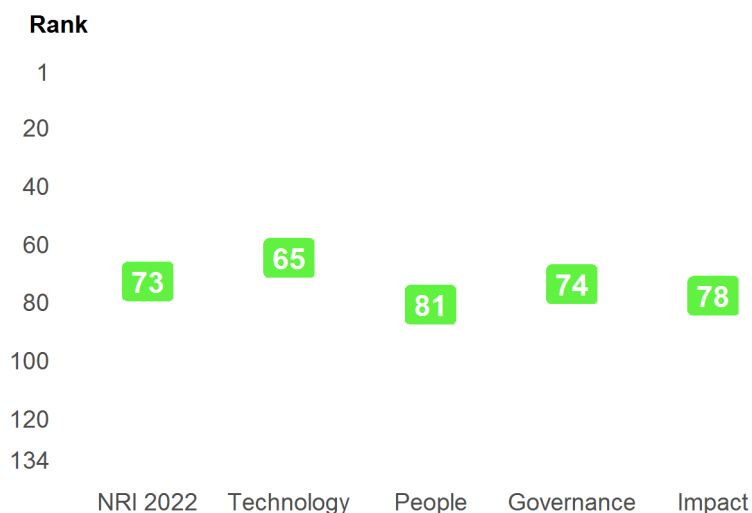
Figure 1: The NRI 2022 model



Global NRI position of Egypt

Egypt ranks 73rd 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 People.

Figure 2: Egypt global ranking, overall and by pillar



Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Egypt relate to Access, Economy and Governments, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Regulation and Quality of Life sub-pillars.

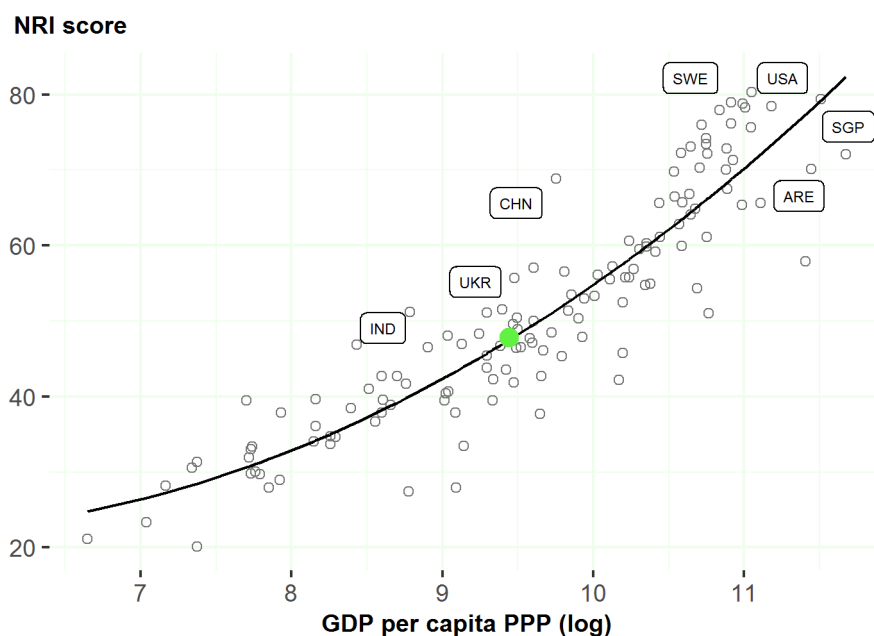
Table 1: Egypt rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Access	46	SDG Contribution	81
Economy	51	Individuals	85
Governments	65	Future Technologies	86
Trust	70	Businesses	92
Content	72	Regulation	93
Inclusion	75	Quality of Life	96

NRI score and income

Figure 3 shows the position of Egypt 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, Egypt is slightly above 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. Egypt 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

Egypt is ranked 6th 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 each of the four pillars. At the sub-pillar level, it outperforms lower-middle-income countries in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Individuals, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

Arab States

Egypt is ranked 8th 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 four of the twelve sub-pillars: Access, Governments, Economy and SDG Contribution.

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

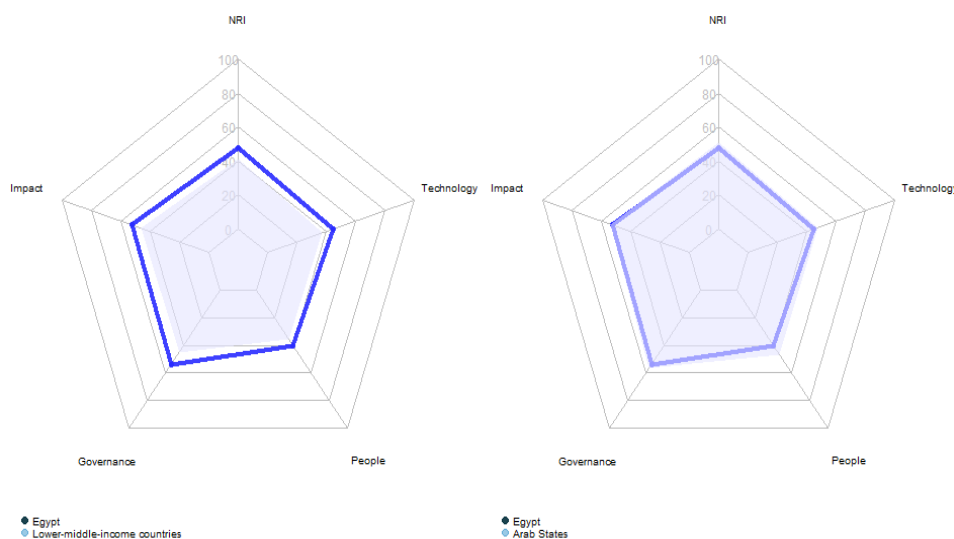


Table 2: Egypt scores vs. averages of its income group and region, overall and by pillar

Dimension	Egypt	Lower-middle-income countries	Arab States
NRI	47.76	40.94	51.21
Technology	44.53	37.28	47.66
People	40.41	35.42	47.11
Governance	54.00	45.00	56.68
Impact	52.08	46.09	53.39

Strongest and weakest indicators

The indicators where Egypt performs particularly well include 3.2.4 E-commerce legislation, 4.1.5 Prevalence of gig economy, and 1.1.1 Mobile tariffs (Table 3). By contrast, the economy's weakest indicators include 4.3.3 SDG 5: Women's economic opportunity, 3.1.3 Online access to financial account, and 4.2.1 Happiness.

Table 3: Strongest and weakest indicators of Egypt

Strongest indicators	Rank	Weakest indicators	Rank
3.2.4 E-commerce legislation	1	1.3.3 Robot density	55
4.1.5 Prevalence of gig economy	7	3.1.1 Secure Internet servers	113
1.1.1 Mobile tariffs	14	4.2.1 Happiness	115
1.1.5 International Internet bandwidth	18	3.1.3 Online access to financial account	122
2.3.4 R&D expenditure by governments and higher education	18	4.3.3 SDG 5: Women's economic opportunity	127
4.1.4 Domestic market size	20		
1.2.4 AI scientific publications	22		
3.1.2 Cybersecurity	30		
4.2.3 Income inequality	30		
2.2.4 Annual investment in telecommunication services	32		
3.3.3 Availability of local online content	35		

NRI 2022 At-A-Glance: Egypt

Network Readiness Index

Rank: 73 (out of 131)

Score: 47.76

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
A. Technology pillar	65	44.53	C. Governance pillar	74	54.00
1st sub-pillar: Access	46	70.77	1st sub-pillar: Trust	70	42.99
2nd sub-pillar: Content	72	35.04	2nd sub-pillar: Regulation	93	57.28
3rd sub-pillar: Future Technologies	86	27.78	3rd sub-pillar: Inclusion	75	61.72
B. People pillar	81	40.41	D. Impact pillar	78	52.08
1st sub-pillar: Individuals	85	42.84	1st sub-pillar: Economy	51	38.09
2nd sub-pillar: Businesses	92	33.25	2nd sub-pillar: Quality of Life	96	57.66
3rd sub-pillar: Governments	65	45.15	3rd sub-pillar: SDG Contribution	81	60.50

The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
A. Technology pillar	65	44.53	C. Governance pillar	74	54.00
1st sub-pillar: Access	46	70.77	1st sub-pillar: Trust	70	42.99
1.1.1 Mobile tariffs	14	86.35	3.1.1 Secure Internet servers	113	30.20
1.1.2 Handset prices	68	50.86	3.1.2 Cybersecurity	30	95.40
1.1.3 FTTH/building Internet subscriptions	41	35.20	3.1.3 Online access to financial account	122	3.38
1.1.4 Population covered by at least a 3G mobile network	47	99.84	3.1.4 Internet shopping	NA	NA
1.1.5 International Internet bandwidth	18	81.08	2nd sub-pillar: Regulation	93	57.28
1.1.6 Internet access in schools	40	71.28	3.2.1 Regulatory quality	109	22.67
2nd sub-pillar: Content	72	35.04	3.2.2 ICT regulatory environment	39	87.65
1.2.1 GitHub commits	96	1.80	3.2.3 Regulation of emerging technologies	84	31.58
1.2.2 Internet domain registrations	98	0.79	3.2.4 E-commerce legislation	1	100.00
1.2.3 Mobile apps development	99	63.66	3.2.5 Privacy protection by law content	111	44.51
1.2.4 AI scientific publications	22	73.91	3rd sub-pillar: Inclusion	75	61.72
3rd sub-pillar: Future Technologies	86	27.78	3.3.1 E-Participation	96	49.38
1.3.1 Adoption of emerging technologies	48	54.92	3.3.2 Socioeconomic gap in use of digital payments	107	42.95
1.3.2 Investment in emerging technologies	74	37.00	3.3.3 Availability of local online content	35	78.61
1.3.3 Robot density	55	0.10	3.3.4 Gender gap in Internet use	64	67.89
1.3.4 Computer software spending	68	19.12	3.3.5 Rural gap in use of digital payments	50	69.77

Indicator	Rank	Score	Indicator	Rank	Score
B. People pillar	81	40.41	D. Impact pillar	78	52.08
<i>1st sub-pillar: Individuals</i>	85	42.84	<i>1st sub-pillar: Economy</i>	51	38.09
2.1.1 Mobile broadband internet traffic within the country	34	21.20	4.1.1 High-tech and medium-high-tech manufacturing	55	28.29
2.1.2 ICT skills in the education system	42	60.36	4.1.2 High-tech exports	83	12.25
2.1.3 Use of virtual social networks	96	44.40	4.1.3 PCT patent applications	79	1.53
2.1.4 Tertiary enrollment	75	25.33	4.1.4 Domestic market size	20	70.83 ●
2.1.5 Adult literacy rate	91	62.91	4.1.5 Prevalence of gig economy	7	85.17 ●
2.1.6 AI talent concentration	NA	NA	4.1.6 ICT services exports	62	30.44
<i>2nd sub-pillar: Businesses</i>	92	33.25	<i>2nd sub-pillar: Quality of Life</i>	96	57.66
2.2.1 Firms with website	82	38.01	4.2.1 Happiness	115	32.89 ○
2.2.2 GERD financed by business enterprise	87	4.81	4.2.2 Freedom to make life choices	104	55.86
2.2.3 Knowledge intensive employment	55	39.95	4.2.3 Income inequality	30	79.15 ●
2.2.4 Annual investment in telecommunication services	32	82.77 ●	4.2.4 Healthy life expectancy at birth	91	62.73
2.2.5 GERD performed by business enterprise	77	0.73	<i>3rd sub-pillar: SDG Contribution</i>	81	60.50
<i>3rd sub-pillar: Governments</i>	65	45.15	4.3.1 SDG 3: Good Health and Well-Being	70	68.03
2.3.1 Government online services	91	55.76	4.3.2 SDG 4: Quality Education	NA	NA
2.3.2 Publication and use of open data	83	13.24	4.3.3 SDG 5: Women's economic opportunity	127	22.81 ○
2.3.3 Government promotion of investment in emerging tech	43	47.75	4.3.4 SDG 7: Affordable and Clean Energy	54	82.54
2.3.4 R&D expenditure by governments and higher education	18	63.86 ●	4.3.5 SDG 11: Sustainable Cities and Communities	57	68.63

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>