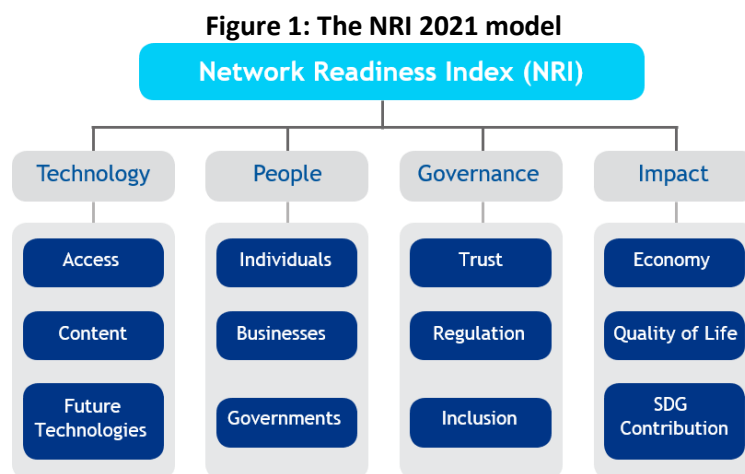


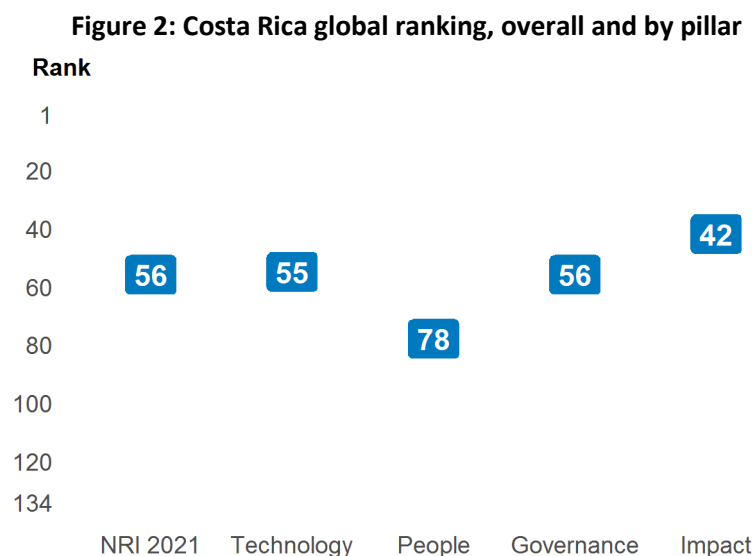
# Network Readiness Index 2021 Costa Rica

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 Costa Rica

Costa Rica ranks 56th out of the 130 economies included in the NRI 2021 (Figure 2). Its main strength relates to Impact. The greatest scope for improvement, meanwhile, concerns People.



### Performance at sub-pillar level

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

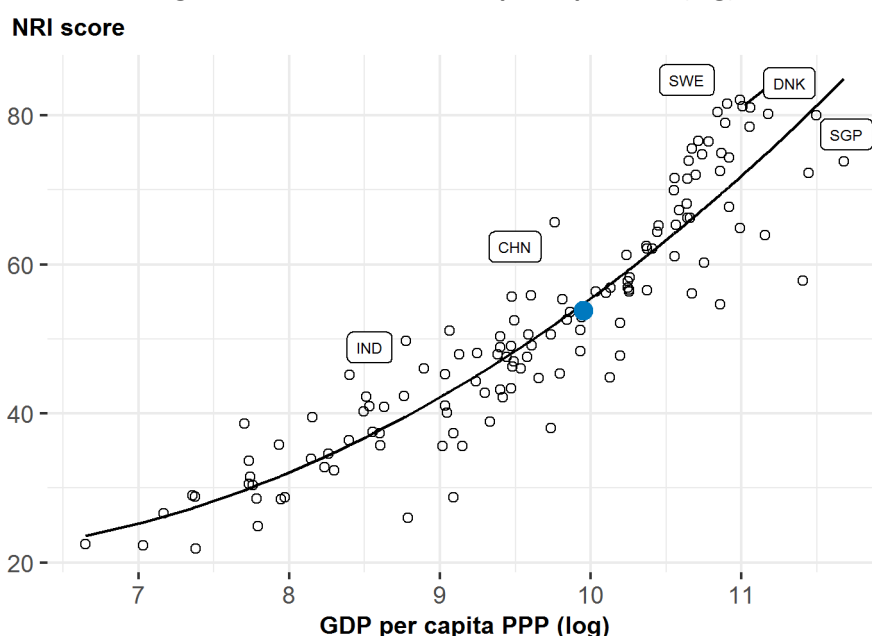
**Table 1: Costa Rica rankings by sub-pillar**

Sub-pillar	Rank	Sub-pillar	Rank
Future Technologies	35	Content	66
Quality of Life	40	Individuals	66
Regulation	42	Trust	66
Economy	43	Access	69
SDG Contribution	58	Businesses	72
Inclusion	64	Governments	85

### NRI score and income

Figure 3 shows the position of Costa Rica 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, Costa Rica 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: NLD = Netherlands (rank: 1), SWE = Sweden (2), DNK = Denmark (3), CHN = China (29), IND = India (67). USA is ranked 4th. Costa Rica belongs to the group of upper-middle-income countries, where the best performer is China (CHN). The top performer of its region-The Americas-is United States (USA).

## Performance against its income group and region

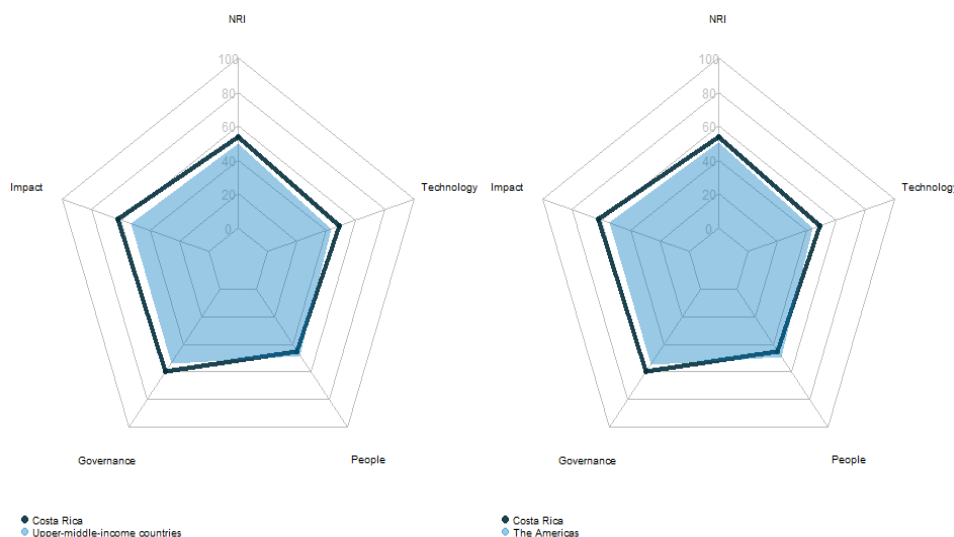
### Upper-middle-income countries

Costa Rica is ranked 8th in the group of upper-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.score, technology, governance and impact. At the sub-pillar level, it outperforms upper-middle-income countries in nine of the twelve sub-pillars: Access, Future Technologies, Individuals, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

### The Americas

Costa Rica is ranked 6th within The Americas (Figure 4, right panel). It has a score above the regional average in three of the four pillars: nri.score, technology, governance and impact. With regard to sub-pillars, it outperforms the average in The Americas in eight of the twelve sub-pillars: Access, Future Technologies, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

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



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

Dimension	Costa Rica	Upper-middle-income countries	The Americas
NRI	53.81	49.71	50.62
Technology	48.56	43.52	44.08
People	45.05	48.48	49.00
Governance	59.72	53.94	54.95
Impact	61.89	52.89	54.45

### Strongest and weakest indicators

The indicators where Costa Rica performs particularly well include 3.2.4 E-commerce legislation, 4.1.6 ICT services exports, and 4.3.4 SDG 7: Affordable and Clean Energy (Table 3). By contrast, the economy's weakest indicators include 4.2.3 Income inequality, 3.3.5 Rural gap in use of digital payments, and 2.2.2 GERD financed by business enterprise.

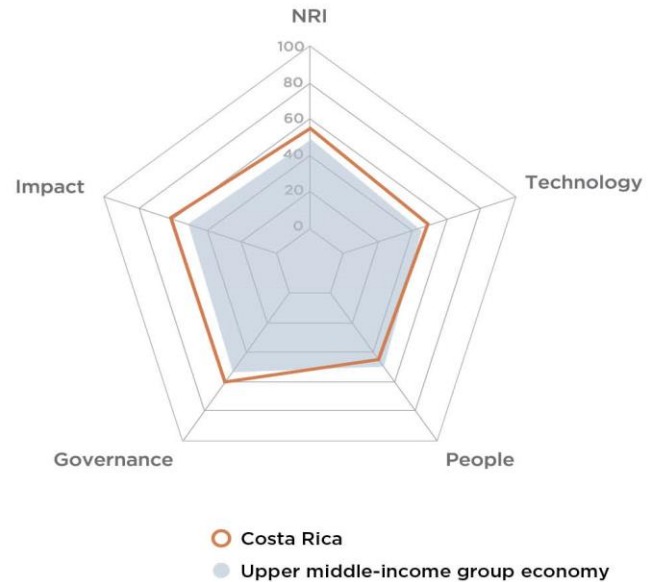
**Table 3: Strongest and weakest indicators of Costa Rica**

<b>Strongest indicators</b>	<b>Rank</b>	<b>Weakest indicators</b>	<b>Rank</b>
3.2.4 E-commerce legislation	1	4.3.2 SDG 4: Quality Education	57
4.1.6 ICT services exports	7	4.1.1 High-tech and medium-high-tech manufacturing	80
4.3.4 SDG 7: Affordable and Clean Energy	13	2.2.2 GERD financed by business enterprise	93
3.3.4 Gender gap in Internet use	15	3.3.5 Rural gap in use of digital payments	94
4.2.1 Happiness	17	4.2.3 Income inequality	104
4.2.2 Freedom to make life choices	18		
4.1.4 Growth rate of GDP per person engaged	30		
1.3.4 Computer software spending	31		
4.1.2 High-tech exports	31		
4.2.4 Healthy life expectancy at birth	31		
2.2.4 Technicians and associate professionals	34		

# Costa Rica

**Network Readiness Index** Rank (out of 130) **56** Score **53.81**

Pillar/sub-pillar	Rank	Score
<b>A. Technology pillar</b>	<b>55</b>	<b>48.56</b>
1st sub-pillar: Access	69	64.85
2nd sub-pillar: Content	66	35.74
3rd sub-pillar: Future Technologies	35	45.10
<b>B. People pillar</b>	<b>78</b>	<b>45.05</b>
1st sub-pillar: Individuals	66	62.71
2nd sub-pillar: Businesses	72	35.76
3rd sub-pillar: Governments	85	36.68
<b>C. Governance pillar</b>	<b>56</b>	<b>59.72</b>
1st sub-pillar: Trust	66	44.20
2nd sub-pillar: Regulation	42	72.70
3rd sub-pillar: Inclusion	64	62.26
<b>D. Impact pillar</b>	<b>42</b>	<b>61.89</b>
1st sub-pillar: Economy	43	46.32
2nd sub-pillar: Quality of Life	40	74.87
3rd sub-pillar: SDG Contribution	58	64.49



## Network Readiness Index in detail

Indicator	Rank	Score
<b>A. Technology pillar</b>	55	48.56
<b>1st sub-pillar: Access</b>	69	64.85
1.1.1 Mobile tariffs	48	68.33
1.1.2 Handset prices	57	58.78
1.1.3 Households with internet access	45	84.82
1.1.4 SMS sent by population 15-69	75	75.66
1.1.5 Population covered by at least a 3G mobile network	73	99.44
1.1.6 International Internet bandwidth	27	7.69
1.1.7 Internet access in schools	38	59.24
<b>2nd sub-pillar: Content</b>	66	35.74
1.2.1 GitHub commits	47	9.33
1.2.2 Wikipedia edits	64	51.06
1.2.3 Internet domain registrations	*	*
1.2.4 Mobile apps development	53	80.12
1.2.5 AI scientific publications	80	31.74
<b>3rd sub-pillar: Future Technologies</b>	35	45.10
1.3.1 Adoption of emerging technologies	43	57.76
1.3.2 Investment in emerging technologies	48	48.38
1.3.3 Robot density	NA	NA
1.3.4 Computer software spending	31	29.16 ●
<b>B. People pillar</b>	78	45.05
<b>1st sub-pillar: Individuals</b>	66	62.71
2.1.1 Active mobile broadband subscriptions	85	72.48
2.1.2 ICT skills	51	27.44
2.1.3 Use of virtual social networks	41	76.30
2.1.4 Tertiary enrollment	51	40.03
2.1.5 Adult literacy rate	31	97.28
<b>2nd sub-pillar: Businesses</b>	72	35.76
2.2.1 Firms with website	61	51.49
2.2.2 GERD financed by business enterprise	93	1.52 ○
2.2.3 Professionals	65	25.53
2.2.4 Technicians and associate professionals	34	55.11 ●
2.2.5 Annual investment in telecommunication services	63	77.78
2.2.6 GERD performed by business enterprise	57	3.13
<b>3rd sub-pillar: Governments</b>	85	36.68
2.3.1 Government online services	70	67.28
2.3.2 Publication and use of open data	70	19.65
2.3.3 Government promotion of investment in emerging tech	73	34.38
2.3.4 R&D expenditure by governments and higher education	65	25.40

Indicator	Rank	Score
<b>C. Governance pillar</b>	56	59.72
<b>1st sub-pillar: Trust</b>	66	44.20
3.1.1 Secure Internet servers	62	57.33
3.1.2 Cybersecurity	81	66.88
3.1.3 Online access to financial account	62	29.47
3.1.4 Internet shopping	54	23.13
<b>2nd sub-pillar: Regulation</b>	42	72.70
3.2.1 Regulatory quality	49	54.69
3.2.2 ICT regulatory environment	38	88.24
3.2.3 Legal framework's adaptability to emerging technologies	60	43.34
3.2.4 E-commerce legislation	1	100.00 ●
3.2.5 Privacy protection by law content	39	77.25
<b>3rd sub-pillar: Inclusion</b>	64	62.26
3.3.1 E-Participation	75	64.20
3.3.2 Socioeconomic gap in use of digital payments	57	64.62
3.3.3 Availability of local online content	67	60.19
3.3.4 Gender gap in Internet use	15	69.76 ●
3.3.5 Rural gap in use of digital payments	94	52.52 ○
<b>D. Impact pillar</b>	42	61.89
<b>1st sub-pillar: Economy</b>	43	46.32
4.1.1 High-tech and medium-high-tech manufacturing	80	14.70 ○
4.1.2 High-tech exports	31	51.37 ●
4.1.3 PCT patent applications	63	35.01
4.1.4 Growth rate of GDP per person engaged	30	68.57 ●
4.1.5 Prevalence of gig economy	51	48.05
4.1.6 ICT services exports	7	60.19 ●
<b>2nd sub-pillar: Quality of Life</b>	40	74.87
4.2.1 Happiness	17	81.15 ●
4.2.2 Freedom to make life choices	18	93.61 ●
4.2.3 Income inequality	104	38.54 ○
4.2.4 Healthy life expectancy at birth	31	86.20 ●
<b>3rd sub-pillar: SDG Contribution</b>	58	64.49
4.3.1 SDG 3: Good Health and Well-Being	34	80.33
4.3.2 SDG 4: Quality Education	57	32.95 ○
4.3.3 Females employed with advanced degrees	60	40.17
4.3.4 SDG 7: Affordable and Clean Energy	13	89.38 ●
4.3.5 SDG 11: Sustainable Cities and Communities	67	79.65

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>