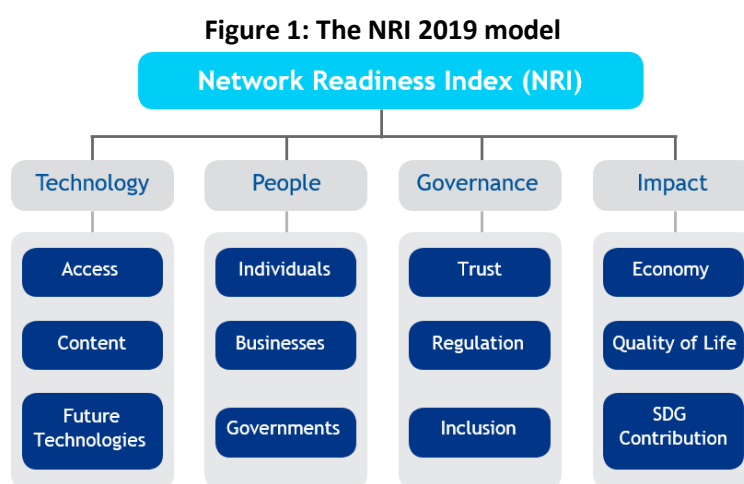


# Network Readiness Index 2019

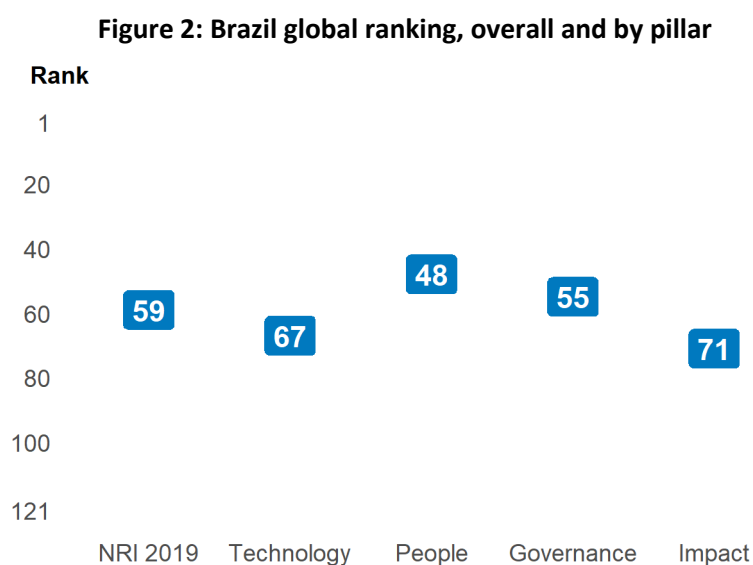
## Brazil

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 2019 the NRI Report maps the network-based readiness landscape of 121 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 62 variables.



### Global NRI position of Brazil

Brazil ranks 59th out of the 121 economies included in the NRI 2019 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Impact.



### Performance at sub-pillar level

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

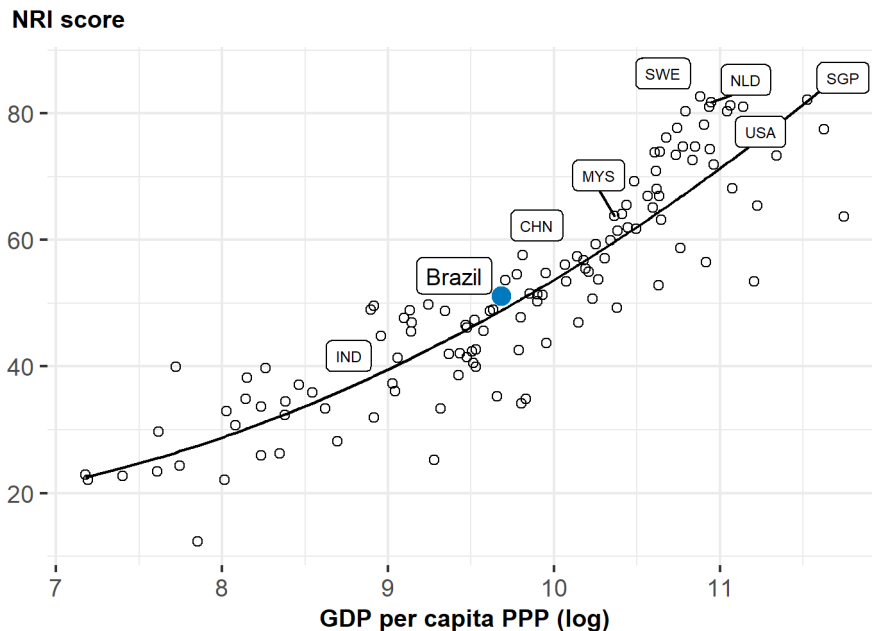
**Table 1: Brazil rankings by sub-pillar**

Sub-pillar	Rank	Sub-pillar	Rank
Governments	27	SDG Contribution	60
Inclusion	40	Access	72
Trust	50	Individuals	72
Businesses	53	Regulation	89
Content	59	Future Technologies	95
Economy	59	Quality of Life	97

### NRI score and income

Figure 3 shows the position of Brazil 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, Brazil is well above the trend line, which suggests that it has a greater network readiness than would be expected given its income level.

**Figure 3: NRI score and GDP per capita PPP (log)**



Note: SWE = Sweden (rank: 1), SGP = Singapore (2), NLD = Netherlands (3), CHN = China (41), IND = India (79). USA is ranked 8th. Brazil belongs to the group of upper-middle-income countries, where the best performer is Malaysia (MYS). The top performer of its region—The Americas—is United States (USA).

## Performance against its income group and region

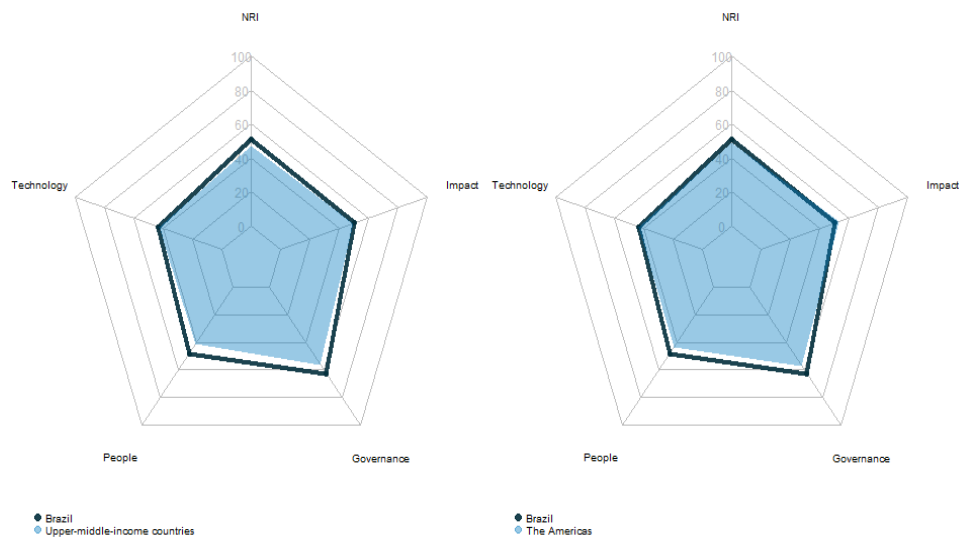
### Upper-middle-income countries

Brazil is ranked 13th 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 each of the four pillars. At the sub-pillar level, it outperforms upper-middle-income countries in eight of the twelve sub-pillars: Access, Content, Businesses, Governments, Trust, Inclusion, Economy and SDG Contribution.

### The Americas

Brazil is ranked 8th within The Americas (Figure 4, right panel). It has a score above the regional average in three of the four pillars: Score, Technology, People and Governance. With regard to sub-pillars, it outperforms the average in The Americas in eight of the twelve sub-pillars: Access, Content, Businesses, Governments, Trust, Inclusion, Economy and SDG Contribution.

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



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

Dimension	Brazil	Upper-middle-income countries	The Americas
NRI	51.07	47.40	49.08
Technology	43.39	42.66	43.12
People	48.02	41.07	43.32
Governance	62.79	56.24	57.13
Impact	50.08	49.62	52.73

### Strongest and weakest indicators

The indicators where Brazil performs particularly well include Use of clean fuels and technology, E-Participation, and Publication and use of open data (Table 3). By contrast, the economy's weakest indicators include Government procurement of advanced technology products, Income inequality, and Ease of doing business.

**Table 3: Top-ranked and bottom-ranked indicators of Brazil**

<b>Strongest indicators</b>	<b>Rank</b>	<b>Weakest indicators</b>	<b>Rank</b>
Use of clean fuels and technology	1	International Internet bandwidth	80
E-Participation	12	Road safety	86
Publication and use of open data	18	Regulatory quality	90
Online trust and safety	19	Freedom to make life choices	90
Government online services	22	Handset prices	94
Pollution	23	ICT use and government efficiency	95
Gender gap in internet use	27	Legal framework's adaptability to digital business models	95
Rural gap in use of digital payments	29	Ease of doing business	100
Intellectual property receipts	31	Income inequality	102
Maths proficiency in schools	31	Government procurement of advanced technology products	104

# NRI 2019 At-A-Glance: Brazil

Network Readiness Index

Rank: 59 (out of 121)

Score: 51.07

Pillar/sub-pillar	Rank	Score	Pillar/sub-pillar	Rank	Score
<b>A. Technology pillar</b>	<b>67</b>	<b>43.39</b>	<b>C. Governance pillar</b>	<b>55</b>	<b>62.79</b>
1st sub-pillar: Access	72	60.11	1st sub-pillar: Trust	50	61.69
2nd sub-pillar: Content	59	47.85	2nd sub-pillar: Regulation	89	54.81
3rd sub-pillar: Future Technologies	95	22.22	3rd sub-pillar: Inclusion	40	71.86
<b>B. People pillar</b>	<b>48</b>	<b>48.02</b>	<b>D. Impact pillar</b>	<b>71</b>	<b>50.08</b>
1st sub-pillar: Individuals	72	51.83	1st sub-pillar: Economy	59	22.17
2nd sub-pillar: Businesses	53	32.02	2nd sub-pillar: Quality of Life	97	51.21
3rd sub-pillar: Governments	27	60.21	3rd sub-pillar: SDG Contribution	60	76.85

## The Network Readiness Index in detail

Indicator	Rank	Score	Indicator	Rank	Score
<b>A. Technology pillar</b>			<b>C. Governance pillar</b>		
<i>1st sub-pillar: Access</i>			<i>1st sub-pillar: Trust</i>		
1.1.1 Mobile tariffs	52	68.61	3.1.1 Rule of law	76	47.00
1.1.2 Handset prices	94	32.70	3.1.2 Software piracy rate	36	58.11
1.1.3 Internet access	72	58.13	3.1.3 Secure Internet servers	53	65.00
1.1.4 4G mobile network coverage	75	83.05	3.1.4 Cybersecurity	71	61.18
1.1.5 Fixed-broadband subscriptions	69	52.04	3.1.5 Online trust and safety	19	77.17
1.1.6 International Internet bandwidth	80	64.33	<i>2nd sub-pillar: Regulation</i>		
1.1.7 Internet access in schools	38	61.89	3.2.1 Regulatory quality	90	44.51
<i>2nd sub-pillar: Content</i>			3.2.2 Ease of doing business	100	51.03
1.2.1 Digital participation and content creation	*	*	3.2.3 Legal framework's adaptability to digital business models	95	31.15
1.2.2 Mobile apps development	49	67.09	3.2.4 E-commerce legislation	66	75.00
1.2.3 Intellectual property receipts	31	1.67	3.2.5 Social safety net protection	74	37.42
<i>3rd sub-pillar: Future Technologies</i>			3.2.6 ICT regulatory environment	34	89.77
1.3.1 Availability of latest technologies	74	46.23	<i>3rd sub-pillar: Inclusion</i>		
1.3.2 Company investment in emerging technology	65	33.79	3.3.1 E-Participation	12	96.81
1.3.3 Government procurement of advanced technology products	104	24.24	3.3.2 Socioeconomic gap in use of digital payments	77	58.01
1.3.4 ICT PCT patent applications	54	6.90	3.3.3 Availability of local online content	42	63.28
1.3.5 Computer software spending	59	18.18	3.3.4 Gender gap in internet use	27	65.94
1.3.6 Robot density	43	4.01	3.3.5 Rural gap in use of digital payments	29	75.26
<b>B. People pillar</b>			<b>D. Impact pillar</b>		
<i>1st sub-pillar: Individuals</i>			<i>1st sub-pillar: Economy</i>		
2.1.1 Internet users	67	64.18	4.1.1 Medium and high-tech industry	39	45.11
2.1.2 Active mobile-broadband subscriptions	44	33.65	4.1.2 High-tech exports	35	24.54
2.1.3 Use of virtual social networks	35	65.70	4.1.3 PCT patent applications	54	0.94
2.1.4 Tertiary enrolment	56	37.21	4.1.4 Labour productivity per employee	74	18.08
2.1.5 Adult literacy rate	57	89.54	<i>2nd sub-pillar: Quality of Life</i>		
2.1.6 ICT skills	51	20.72	4.2.1 Happiness	43	65.27
<i>2nd sub-pillar: Businesses</i>			4.2.2 Freedom to make life choices	90	51.41
2.2.1 Firms with website	63	45.95	4.2.3 Income inequality	102	25.53
2.2.2 Internet shopping	63	18.19	4.2.4 Healthy life expectancy at birth	69	62.64
2.2.3 Professionals	61	27.43	<i>3rd sub-pillar: SDG Contribution</i>		
2.2.4 Technicians and associate professionals	64	32.73	4.3.1 Access to basic services	71	91.09
2.2.5 Extent of staff training	68	35.81	4.3.2 Pollution	23	93.50
2.2.6 R&D expenditure by businesses	NA	NA	4.3.3 Road safety	86	46.88
<i>3rd sub-pillar: Governments</i>			4.3.4 Reading proficiency in schools	41	66.50
2.3.1 Government online services	22	91.54	4.3.5 Maths proficiency in schools	31	63.13
2.3.2 Publication and use of open data	18	58.86	4.3.6 Use of clean fuels and technology	1	100.00
2.3.3 ICT use and government efficiency	95	30.23			
2.3.4 R&D expenditure by governments and higher education	NA	NA			

\* Confidential data

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