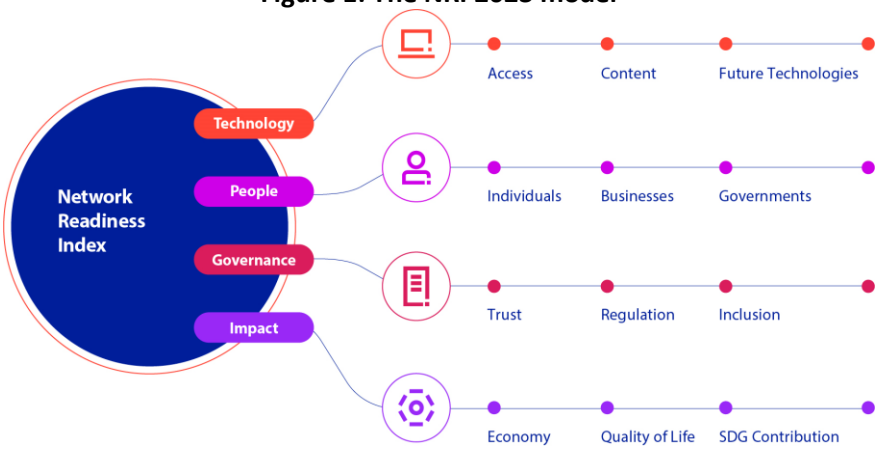
Canada

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.

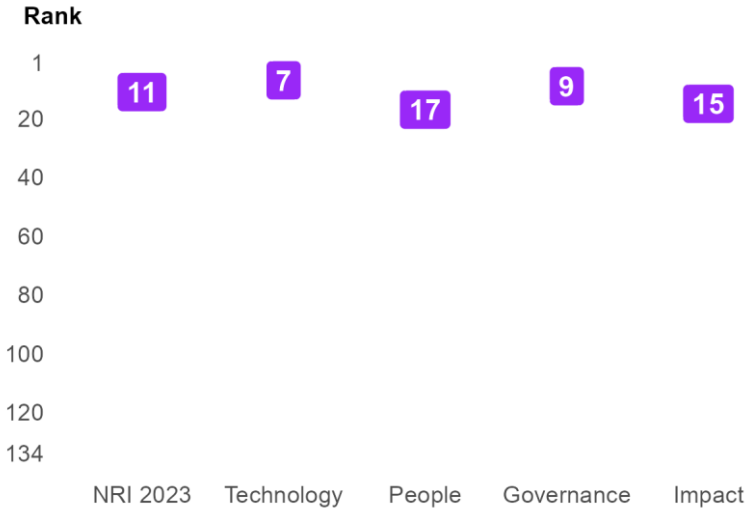
Figure 1: The NRI 2023 model



Global NRI position of Canada

Canada ranks 11th 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 People.

Figure 2: Canada global ranking, overall and by pillar



Performance at sub-pillar level

When it comes to sub-pillars, the strongest showings of Canada relate to Content, Inclusion and Trust, among others (Table 1). More could be done, though, to improve the economy's performances in the Businesses, Access and Individuals sub-pillars.

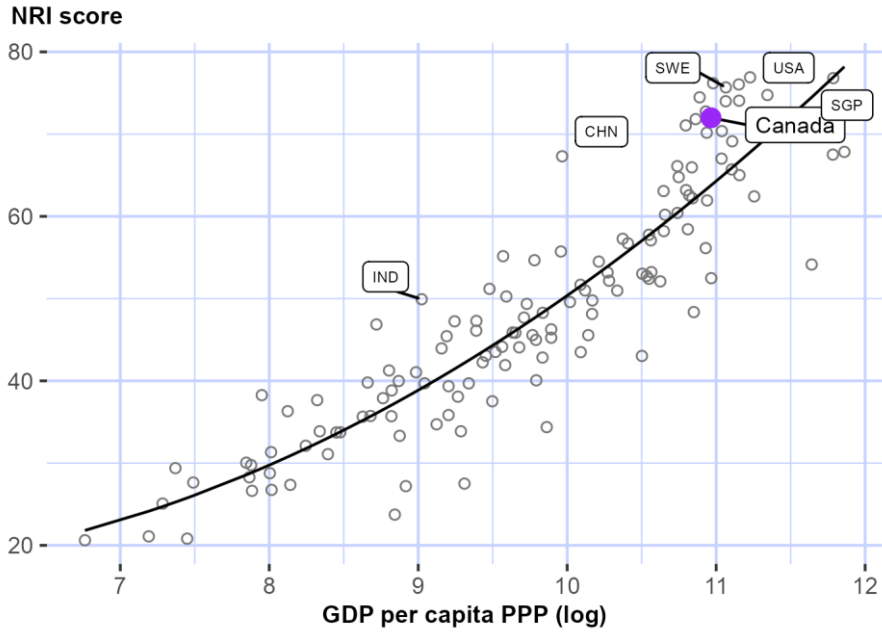
Table 1: Canada rankings by sub-pillar

Sub-pillar	Rank	Sub-pillar	Rank
Content	5	SDG Contribution	16
Inclusion	5	Quality of Life	18
Trust	9	Economy	20
Governments	10	Businesses	23
Future Technologies	13	Access	26
Regulation	13	Individuals	39

NRI score and income

Figure 3 shows the position of Canada 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, Canada 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: USA = United States (rank: 1), SGP = Singapore (rank: 2), FIN = Finland (3), NLD = Netherlands (4), SWE = Sweden (5), CHN = China (20), IND = India (61). Canada belongs to the group of high-income countries, where the best performer is United States of America (USA). The top performer of its region-The Americas-is also United States of America (USA).

Performance against its income group and region

High-income countries

Canada is ranked 11th in the group of high-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 high-income countries in eleven of the twelve sub-pillars: Access, Content, Future Technologies, Businesses, Governments, Trust, Regulation, Inclusion, Economy, Quality of Life and SDG Contribution.

The Americas

Canada is ranked 2nd within The Americas (Figure 4, right panel). It outperforms its region in each of the four pillars. With regard to sub-pillars, it has a higher score than the regional average in each of the twelve sub-pillars.

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

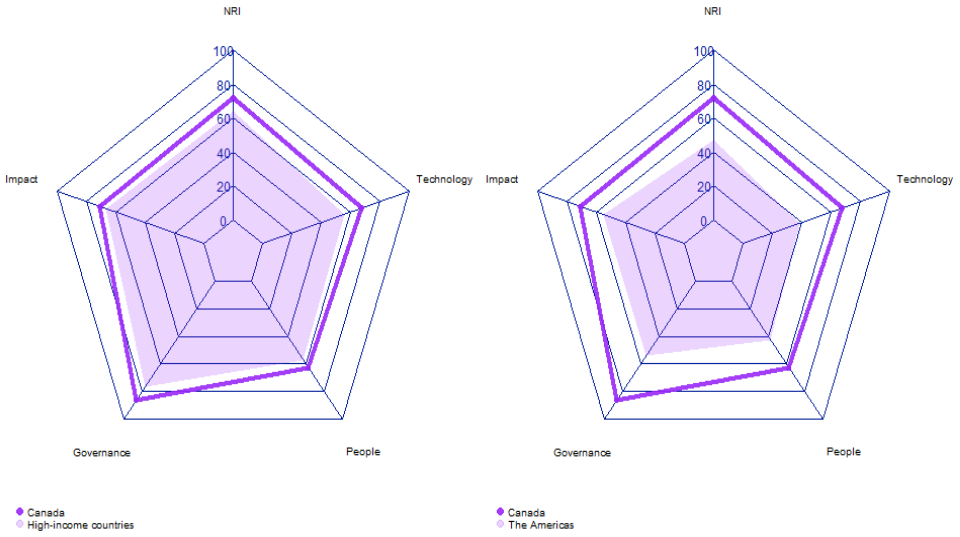


Table 2: Canada scores vs. averages of its income group and region, overall and by pillar

Dimension	Canada	High-income countries	The Americas
NRI	71.99	64.07	47.41
Technology	67.69	55.76	38.24
People	62.84	56.99	42.35
Governance	86.48	76.81	54.12
Impact	70.95	66.73	54.93

Strongest and weakest indicators

The indicators where Canada performs particularly well include 2.3.2 Publication and use of open data, 3.2.4 E-commerce legislation, and 4.3.1 SDG 3: Good Health and Well-Being (Table 3). By contrast, the economy's weakest indicators include 4.3.4 SDG 7: Affordable and Clean Energy, 4.2.2 Freedom to make life choices, and 4.1.6 ICT services exports.

Table 3: Highlight of Strengths and Opportunities for Canada

Strongest indicators	Rank	Weakest indicators	Rank
2.3.2 Publication and use of open data	1	3.2.2 ICT regulatory environment	53
3.2.4 E-commerce legislation	1	4.1.6 ICT services exports	55
4.3.1 SDG 3: Good Health and Well-Being	1	4.2.2 Freedom to make life choices	56
4.3.3 SDG 5: Women's economic opportunity	1	4.3.4 SDG 7: Affordable and Clean Energy	116
1.2.1 GitHub commits	5		
1.3.4 Computer software spending	5		
2.2.4 Annual investment in telecommunication services	7		
4.3.5 SDG 11: Sustainable Cities and Communities	7		
2.2.1 Firms with website	8		
4.1.5 Prevalence of gig economy	9		
3.1.3 Online access to financial account	10		
1.2.2 Internet domain registrations	11		

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

NRI 2023 At-A-Glance: Canada

Network Readiness Index — Rank: 11 (out of 134) — Score: 71.99

Pillar/sub-pillar	Rank	Score
A. Technology pillar	7	67.69
1st sub-pillar: Access	26	75.51
2nd sub-pillar: Content	5	66.39
3rd sub-pillar: Future Technologies	13	61.16
B. People pillar	17	62.84
1st sub-pillar: Individuals	39	52.88
2nd sub-pillar: Businesses	23	64.28
3rd sub-pillar: Governments	10	71.36

Pillar/sub-pillar	Rank	Score
C. Governance pillar	9	86.48
1st sub-pillar: Trust	9	86.11
2nd sub-pillar: Regulation	13	87.15
3rd sub-pillar: Inclusion	5	86.17
D. Impact pillar	15	70.95
1st sub-pillar: Economy	20	46.25
2nd sub-pillar: Quality of Life	18	82.30
3rd sub-pillar: SDG Contribution	16	84.30

The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	7	67.69	
1st sub-pillar: Access	26	75.51	
1.1.1 Mobile tariffs	36	75.88	
1.1.2 Handset prices	12	81.43	
1.1.3 FTTH/building Internet subscriptions	30	42.64	
1.1.4 Population covered by at least a 3G mobile network	46	99.90	
1.1.5 International Internet bandwidth	31	77.70	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	5	66.39	
1.2.1 GitHub commits	5	95.55	•
1.2.2 Internet domain registrations	11	64.71	•
1.2.3 Mobile apps development	41	72.43	
1.2.4 AI scientific publications	14	32.87	
3rd sub-pillar: Future Technologies	13	61.16	
1.3.1 Adoption of emerging technologies	11	85.04	
1.3.2 Investment in emerging technologies	20	68.25	

Indicator	Rank	Score	
C. Governance pillar	9	86.48	
1st sub-pillar: Trust	9	86.11	
3.1.1 Secure Internet servers	17	84.53	
3.1.2 Cybersecurity	13	97.63	
3.1.3 Online access to financial account	10	81.53	•
3.1.4 Internet shopping	14	80.76	
2nd sub-pillar: Regulation	13	87.15	
3.2.1 Regulatory quality	12	86.13	
3.2.2 ICT regulatory environment	53	86.47	○
3.2.3 Regulation of emerging technologies	16	79.22	
3.2.4 E-commerce legislation	1	100.00	•
3.2.5 Privacy protection by law content	23	83.95	
3rd sub-pillar: Inclusion	5	86.17	
3.3.1 E-Participation	14	82.55	
3.3.2 Socioeconomic gap in use of digital payments	19	96.33	
3.3.3 Availability of local online content	15	88.70	

Indicator		Rank	Score	
1.3.3	Robot density	16	26.98	
1.3.4	Computer software spending	5	64.36	●
B. People pillar		17	62.84	
1st sub-pillar: Individuals		39	52.88	
2.1.1	Mobile broadband internet traffic within the country	38	19.99	
2.1.2	ICT skills in the education system	15	79.47	
2.1.3	Use of virtual social networks	11	81.13	
2.1.4	Tertiary enrollment	25	51.83	
2.1.5	Adult literacy rate	NA	NA	
2.1.6	AI talent concentration	11	31.97	
2nd sub-pillar: Businesses		23	64.28	
2.2.1	Firms with website	8	86.41	●
2.2.2	GERD financed by business enterprise	36	54.57	
2.2.3	Knowledge intensive employment	25	66.75	
2.2.4	Annual investment in telecommunication services	7	91.75	●
2.2.5	GERD performed by business enterprise	28	21.91	
3rd sub-pillar: Governments		10	71.36	
2.3.1	Government online services	27	83.47	
2.3.2	Publication and use of open data	1	100.00	●
2.3.3	Government promotion of investment in emerging tech	13	74.16	
2.3.4	R&D expenditure by governments and higher education	25	27.79	

Indicator		Rank	Score	
3.3.4	Gender gap in Internet use	NA	NA	
3.3.5	Rural gap in use of digital payments	12	77.09	
D. Impact pillar		15	70.95	
1st sub-pillar: Economy		20	46.25	
4.1.1	High-tech and medium-high-tech manufacturing	34	42.85	
4.1.2	High-tech exports	35	26.91	
4.1.3	PCT patent applications	24	33.28	
4.1.4	Domestic market size	15	74.80	
4.1.5	Prevalence of gig economy	9	81.98	●
4.1.6	ICT services exports	55	17.68	○
2nd sub-pillar: Quality of Life		18	82.30	
4.2.1	Happiness	15	84.91	
4.2.2	Freedom to make life choices	56	77.18	○
4.2.3	Income inequality	33	76.63	
4.2.4	Healthy life expectancy at birth	16	90.48	
3rd sub-pillar: SDG Contribution		16	84.30	
4.3.1	SDG 3: Good Health and Well-Being	1	100.00	●
4.3.2	SDG 4: Quality Education	7	74.55	
4.3.3	SDG 5: Women's economic opportunity	1	100.00	●
4.3.4	SDG 7: Affordable and Clean Energy	116	50.36	○
4.3.5	SDG 11: Sustainable Cities and Communities	7	96.57	●

NOTE: ● a strength and ○ a weakness.

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