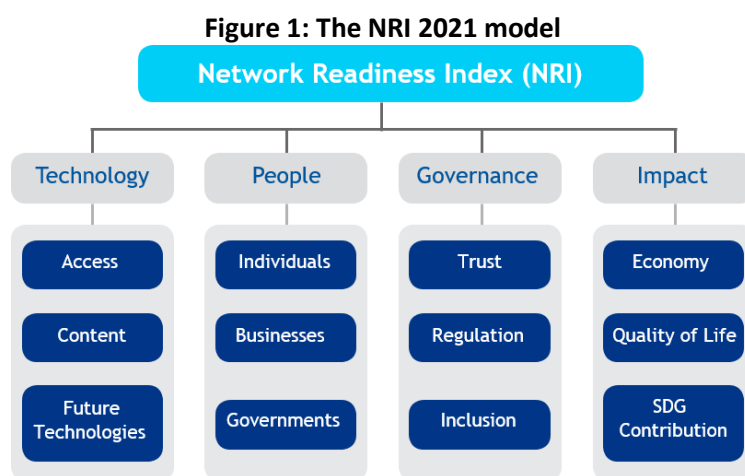


Network Readiness Index 2021

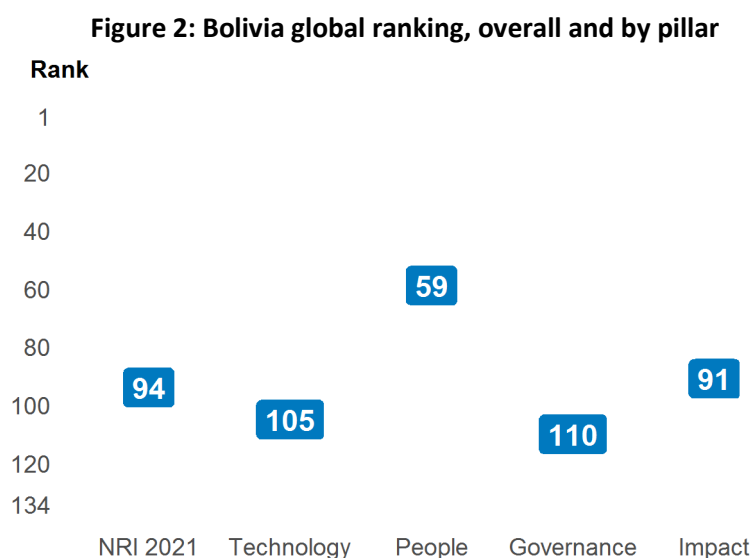
Bolivia

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 Bolivia

Bolivia ranks 94th out of the 130 economies included in the NRI 2021 (Figure 2). Its main strength relates to People. The greatest scope for improvement, meanwhile, concerns Governance.



Performance at sub-pillar level

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

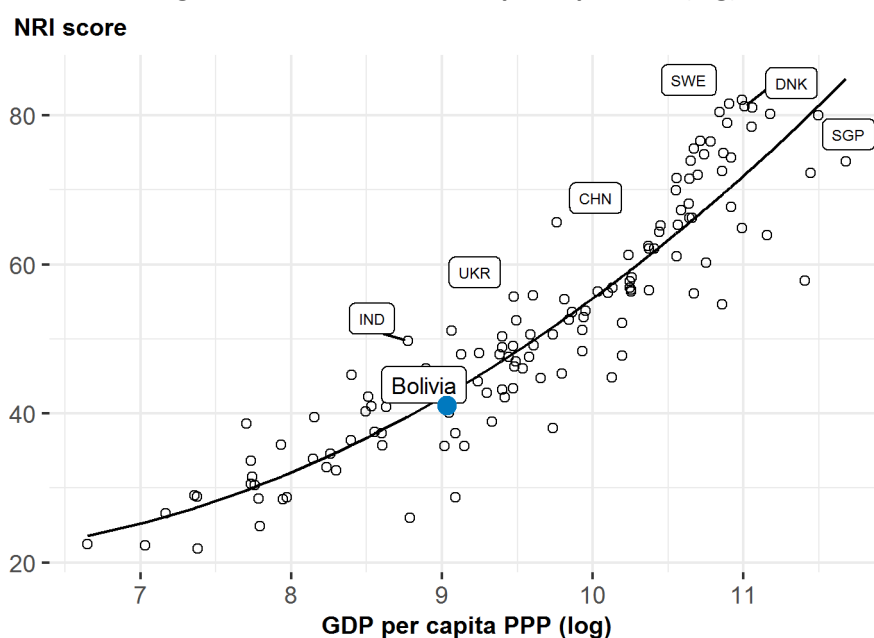
Table 1: Bolivia rankings by sub-pillar

| Sub-pillar | Rank | Sub-pillar | Rank |
|------------------|------|---------------------|------|
| Individuals | 8 | Content | 101 |
| Businesses | 61 | Access | 103 |
| Quality of Life | 73 | Future Technologies | 106 |
| SDG Contribution | 81 | Economy | 111 |
| Inclusion | 84 | Trust | 115 |
| Governments | 96 | Regulation | 117 |

NRI score and income

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

Performance against its income group and region

Lower-middle-income countries

Bolivia is ranked 14th 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 two of the four pillars: nri.score, people and impact. At the sub-pillar level, it outperforms lower-middle-income countries in five of the twelve sub-pillars: Individuals, Businesses, Inclusion, Quality of Life and SDG Contribution.

The Americas

Bolivia is ranked 17th within The Americas (Figure 4, right panel). It has a score above the regional average in one of the four pillars: people. With regard to sub-pillars, it outperforms the average in The Americas in two of the twelve sub-pillars: Individuals and Businesses.

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



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

| Dimension | Bolivia | Lower-middle-income countries | The Americas |
|------------|---------|-------------------------------|--------------|
| NRI | 41.08 | 40.00 | 50.62 |
| Technology | 29.49 | 33.64 | 44.08 |
| People | 50.42 | 37.84 | 49.00 |
| Governance | 37.08 | 43.38 | 54.95 |
| Impact | 47.31 | 45.13 | 54.45 |

Strongest and weakest indicators

The indicators where Bolivia performs particularly well include 4.2.2 Freedom to make life choices, 3.3.5 Rural gap in use of digital payments, and 1.3.4 Computer software spending (Table 3). By contrast, the economy's weakest indicators include 1.3.2 Investment in emerging technologies, 3.2.1 Regulatory quality, and 3.2.3 Legal framework's adaptability to emerging technologies.

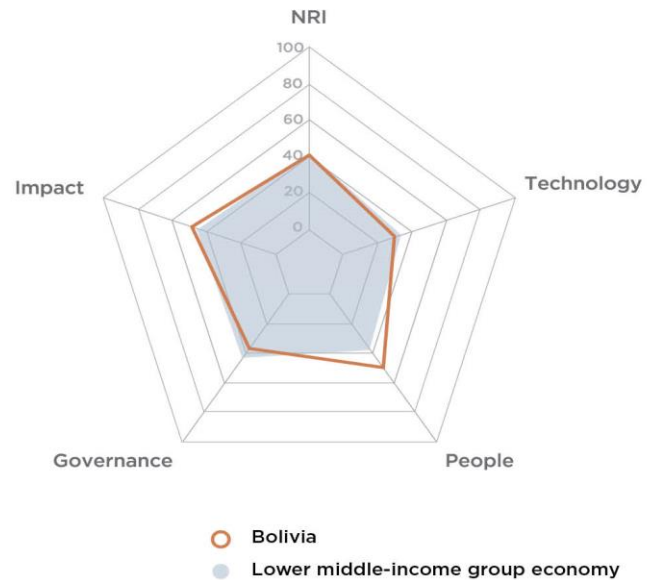
Table 3: Strongest and weakest indicators of Bolivia

| Strongest indicators | Rank | Weakest indicators | Rank |
|---|-------------|---|-------------|
| 4.2.2 Freedom to make life choices | 40 | 2.3.3 Government promotion of investment in emerging technologies | 121 |
| 3.3.5 Rural gap in use of digital payments | 42 | 4.1.5 Prevalence of gig economy | 121 |
| 1.3.4 Computer software spending | 44 | 3.2.3 Legal framework's adaptability to emerging technologies | 122 |
| 2.2.5 Annual investment in telecommunication services | 47 | 3.2.1 Regulatory quality | 124 |
| 4.1.4 Growth rate of GDP per person engaged | 53 | 1.3.2 Investment in emerging technologies | 126 |
| 2.1.1 Active mobile broadband subscriptions | 55 | | |
| 2.3.2 Publication and use of open data | 56 | | |
| 2.1.3 Use of virtual social networks | 57 | | |
| 3.2.5 Privacy protection by law content | 64 | | |
| 4.2.1 Happiness | 69 | | |

Bolivia

Network Readiness Index Rank (out of 130) **94** Score **41.08**

| Pillar/sub-pillar | Rank | Score |
|-------------------------------------|------------|--------------|
| A. Technology pillar | 105 | 29.49 |
| 1st sub-pillar: Access | 103 | 44.79 |
| 2nd sub-pillar: Content | 101 | 22.51 |
| 3rd sub-pillar: Future Technologies | 106 | 21.17 |
| B. People pillar | 59 | 50.42 |
| 1st sub-pillar: Individuals | 8 | 78.75 |
| 2nd sub-pillar: Businesses | 61 | 42.07 |
| 3rd sub-pillar: Governments | 96 | 30.43 |
| C. Governance pillar | 110 | 37.08 |
| 1st sub-pillar: Trust | 115 | 19.08 |
| 2nd sub-pillar: Regulation | 117 | 39.17 |
| 3rd sub-pillar: Inclusion | 84 | 53.00 |
| D. Impact pillar | 91 | 47.31 |
| 1st sub-pillar: Economy | 111 | 19.97 |
| 2nd sub-pillar: Quality of Life | 73 | 63.84 |
| 3rd sub-pillar: SDG Contribution | 81 | 58.12 |



Network Readiness Index in detail

| Indicator | Rank | Score |
|---|------|---------|
| A. Technology pillar | 105 | 29.49 |
| 1st sub-pillar: Access | 103 | 44.79 |
| 1.1.1 Mobile tariffs | 91 | 45.23 |
| 1.1.2 Handset prices | 93 | 38.97 |
| 1.1.3 Households with internet access | 86 | 55.17 |
| 1.1.4 SMS sent by population 15-69 | 110 | 67.71 |
| 1.1.5 Population covered by at least a 3G mobile network | 93 | 97.62 |
| 1.1.6 International Internet bandwidth | 58 | 1.28 |
| 1.1.7 Internet access in schools | 63 | 7.52 |
| 2nd sub-pillar: Content | 101 | 22.51 |
| 1.2.1 GitHub commits | 82 | 1.77 |
| 1.2.2 Wikipedia edits | 93 | 33.05 |
| 1.2.3 Internet domain registrations | * | * |
| 1.2.4 Mobile apps development | 90 | 66.14 |
| 1.2.5 AI scientific publications | 113 | 10.59 |
| 3rd sub-pillar: Future Technologies | 106 | 21.17 |
| 1.3.1 Adoption of emerging technologies | 105 | 27.75 |
| 1.3.2 Investment in emerging technologies | 126 | 12.03 ○ |
| 1.3.3 Robot density | NA | NA |
| 1.3.4 Computer software spending | 44 | 23.74 ● |
| B. People pillar | 59 | 50.42 |
| 1st sub-pillar: Individuals | 8 | 78.75 |
| 2.1.1 Active mobile broadband subscriptions | 55 | 76.28 ● |
| 2.1.2 ICT skills | NA | NA |
| 2.1.3 Use of virtual social networks | 57 | 69.65 ● |
| 2.1.4 Tertiary enrollment | NA | NA |
| 2.1.5 Adult literacy rate | 59 | 90.32 |
| 2nd sub-pillar: Businesses | 61 | 42.07 |
| 2.2.1 Firms with website | 68 | 46.17 |
| 2.2.2 GERD financed by business enterprise | NA | NA |
| 2.2.3 Professionals | 78 | 19.73 |
| 2.2.4 Technicians and associate professionals | 86 | 22.54 |
| 2.2.5 Annual investment in telecommunication services | 47 | 79.85 ● |
| 2.2.6 GERD performed by business enterprise | NA | NA |
| 3rd sub-pillar: Governments | 96 | 30.43 |
| 2.3.1 Government online services | 87 | 56.98 |
| 2.3.2 Publication and use of open data | 56 | 27.67 ● |
| 2.3.3 Government promotion of investment in emerging tech | 121 | 6.63 |
| 2.3.4 R&D expenditure by governments and higher education | NA | NA |

| Indicator | Rank | Score |
|---|------|---------|
| C. Governance pillar | 110 | 37.08 |
| 1st sub-pillar: Trust | 115 | 19.08 |
| 3.1.1 Secure Internet servers | 90 | 42.66 |
| 3.1.2 Cybersecurity | 120 | 14.66 |
| 3.1.3 Online access to financial account | 98 | 12.41 |
| 3.1.4 Internet shopping | 83 | 6.61 |
| 2nd sub-pillar: Regulation | 117 | 39.17 |
| 3.2.1 Regulatory quality | 124 | 14.06 ○ |
| 3.2.2 ICT regulatory environment | 119 | 57.06 |
| 3.2.3 Legal framework's adaptability to emerging technologies | 122 | 6.48 ○ |
| 3.2.4 E-commerce legislation | 112 | 50.00 |
| 3.2.5 Privacy protection by law content | 64 | 68.23 ● |
| 3rd sub-pillar: Inclusion | 84 | 53.00 |
| 3.3.1 E-Participation | 85 | 58.02 |
| 3.3.2 Socioeconomic gap in use of digital payments | 79 | 47.57 |
| 3.3.3 Availability of local online content | 113 | 28.29 |
| 3.3.4 Gender gap in Internet use | 68 | 57.72 |
| 3.3.5 Rural gap in use of digital payments | 42 | 73.42 ● |
| D. Impact pillar | 91 | 47.31 |
| 1st sub-pillar: Economy | 111 | 19.97 |
| 4.1.1 High-tech and medium-high-tech manufacturing | 90 | 7.21 |
| 4.1.2 High-tech exports | 88 | 9.07 |
| 4.1.3 PCT patent applications | NA | NA |
| 4.1.4 Growth rate of GDP per person engaged | 53 | 61.97 ● |
| 4.1.5 Prevalence of gig economy | 121 | 5.31 ○ |
| 4.1.6 ICT services exports | 85 | 16.29 |
| 2nd sub-pillar: Quality of Life | 73 | 63.84 |
| 4.2.1 Happiness | 69 | 50.73 ● |
| 4.2.2 Freedom to make life choices | 40 | 85.17 ● |
| 4.2.3 Income inequality | 84 | 55.73 |
| 4.2.4 Healthy life expectancy at birth | 89 | 63.74 |
| 3rd sub-pillar: SDG Contribution | 81 | 58.12 |
| 4.3.1 SDG 3: Good Health and Well-Being | 77 | 65.57 |
| 4.3.2 SDG 4: Quality Education | NA | NA |
| 4.3.3 Females employed with advanced degrees | 80 | 25.24 |
| 4.3.4 SDG 7: Affordable and Clean Energy | 80 | 72.12 |
| 4.3.5 SDG 11: Sustainable Cities and Communities | 94 | 69.53 |

NOTE: * Indicates confidential data; ● a strength and ○ a weakness.

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