



Alberta

# Encouraging Business Investment & Reducing Regulatory Burden

Cisco Canada Digital Readiness Index 2023



## Provincial Insights Brief

DRI Score: 0.83 | Ranking: 4th

*NOTE: This document was finalized before the results of the May 29, 2023, Alberta provincial election.*

**In today's world, digitally mature countries have the infrastructure, governance, labour force, digital services and technologies to support social development, economic growth and global competitiveness.**

Major technology trends including mobility, 5G networks, cybersecurity, Internet of Things (IoT) and cloud solutions have compelled countries to reimagine government, enhance access to public services, promote innovation and drive technology adoption.

At Cisco, we are fuelled by our purpose to 'Power an Inclusive Future for All' by leveraging our technology, our expertise and our extended ecosystem to bridge gaps of inequity and drive change. Cisco's desire to solve global problems and create a more inclusive world through technology led to our first Global Digital Readiness Index (DRI) in 2017. In 2023, we completed the Cisco Canada Digital Readiness Index, a comprehensive analysis of Canada to help provinces and territories better understand the building blocks of digital readiness and explore opportunities to improve their relative performance.

This holistic model measures digital readiness across many components beyond technology including basic needs, human capital and the business and start-up environment. While access to technology and the infrastructure to support digital technologies is critical, if, for instance, individuals' basic needs are not met, a country cannot maximize the benefits of digital opportunity. The Cisco Canada Digital Readiness Index provides an understanding of a province or territory's level of digital readiness and what interventions and investments could help them advance.

The Cisco Canada DRI is based on data published from 2019 to fall of 2022. For more information on Canada's national digital readiness score, the full report is available [here](#).\*

This guide was developed to enable provinces and territories to understand their level of digital readiness and explore areas of opportunity to reach their full potential.

\*[https://www.cisco.com/c/m/en\\_ca/digitalreadiness-2022.html](https://www.cisco.com/c/m/en_ca/digitalreadiness-2022.html)

# Measuring Digital Readiness: DRI Components

The Cisco Canada Digital Readiness Index (DRI) employs a comprehensive framework and model based on seven different components of digital readiness including **Basic Needs**; **Business and Government Investment**; **Ease of Doing Business**; **Human Capital**; **Start-Up Environment**; **Technology Adoption**; and **Technology Infrastructure**. Unique, market-specific metrics serve as proxies for performance in each of the components.



## Basic Needs

Basic needs for a population to survive and thrive

### Metrics

- Life expectancy
- Low Income
- Food insecurity
- Housing affordability



## Business & Government Investment

Private and public investment in innovation and technology

### Metrics

- Business expenditure on R&D
- Government expenditure on R&D
- Infrastructure investment



## Ease of Doing Business

Basic infrastructure/policies needed to support business continuity

### Metrics

- Business density
- Business growth
- Business confidence
- Internal trade barriers



## Human Capital

Skilled labour force to support digital innovation (build and maintain)

### Metrics

- Labor force participation
- Youth population
- Post-secondary education
- Immigration



## Start-Up Environment

Environment which fosters innovation within a community

### Metrics

- Venture capital investment
- Business entries
- Access to financing



## Technology Adoption

Demand for digital products/services continuity

### Metrics

- Zero emission vehicle (ZEV) registrations
- Broadband subscriptions
- Online sales



## Technology Infrastructure

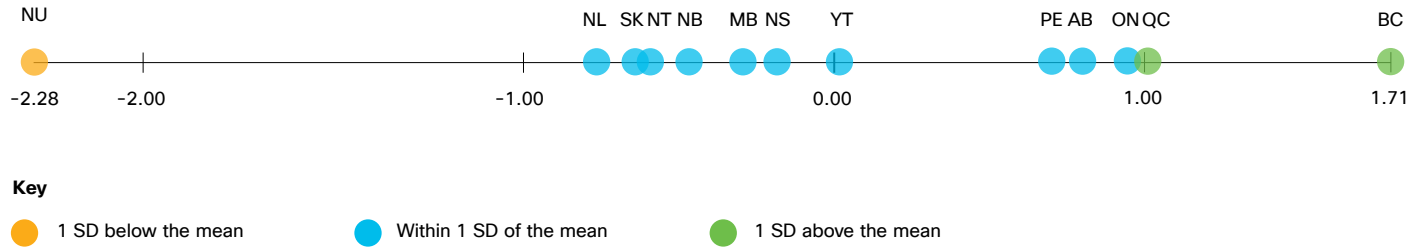
Infrastructure available to enable digital activities and connected to consumers (IoT, Cloud)

### Metrics

- Broadband availability
- LTE coverage
- EV charging stations
- Internet affordability



### Overall DRI Score Across Provinces and Territories



The Cisco Canada DRI examines the performance of Canada’s provinces and territories and provides a benchmark on their progress towards digital readiness<sup>1</sup>. British Columbia tops Canada’s DRI ranking with a sizable lead, followed by Québec and Ontario, while the remainder of the provinces and territories fall closer to Canada’s national average DRI score. The exception is Nunavut, which faces unique digital readiness challenges.

<sup>1</sup> Z-scores are a way to measure how far away a particular data point is from the average (or “mean”) of a group of data points, and how unusual or “extreme” that value is compared to the rest of the group. If a score is below the mean, it is expressed as a negative number, and if above the mean, it will be a positive number.

# Alberta's Digital Readiness Index

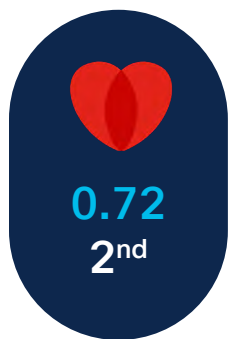
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Alberta's strong scores in each of the DRI components demonstrates that the province is positively positioned to attract talent, business and job-creating investments from across Canada and around the world. The province's robust labour market and affordable cost of living contributed to high scores in **Basic Needs, Ease of Doing Business** and **Human Capital**. Alberta also ranked well in **Business and Government Investment** and **Technology Adoption**, highlighting the province's commitment to its technology and innovation sectors. The provincial government should build on these strengths by prioritizing its **Start-up Environment**. Improvements in this component will create the right conditions for start-ups, help stimulate job creation and diversify the economy.

Alberta's DRI score is well above the national average, driven by its strong performance in Business and Government Investment and Technology

## DRI Scores: A breakdown by component

The following section will explore how Alberta scored in each of the DRI's seven components and what metrics drove performance.



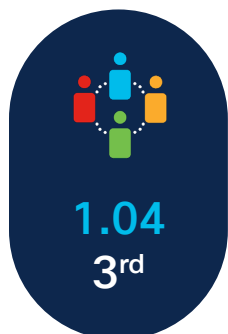
### Basic needs are an indicator of the health of a society.

- Alberta scores second in Basic Needs and ranks above average in every metric in this component.
- However, food insecurity is the province's weakest score with a ninth-place ranking.



### The capacity of government and businesses to invest in their future is a key factor in enabling digital readiness.

- Alberta's fifth place ranking in Business and Government Investment is largely due to the province's strong business and government research and development (R&D) investments. This commitment to R&D investment should result in returns of increased commercialization activity and economic productivity.
- However, Alberta falls slightly below the median in economic impact of infrastructure investments per capita.



### An environment where businesses can invest and grow with ease and confidence is a core foundation to digital readiness.

- With the fewest internal trade barriers in the country, Alberta ranks third in Ease of Doing Business and above average in business growth.
- The province is only hampered by a low business confidence score, which is likely caused by shifting macroeconomic conditions and the future of Alberta's primary energy resource economy.



## Human Capital – a society’s ability to build and maintain a skilled labour force – is intrinsic to digital innovation and readiness.

- A high youth population, strong labour force participation and a 70% post-secondary education attainment rate all contribute to Alberta’s ranking in Human Capital (third).
- The province’s net migration rate is equal to the national average.



## Start-ups are an important source of innovation and economic growth.

- Start-up Environment is the only component where Alberta ranks below the median with a 10th place ranking.
- Although Alberta scores well in the number of business entries, it is heavily weakened by its score in access to financing, a metric that includes private and public financing ranging from venture capital funding to large business loans and grants.



## Technology Adoption serves as a proxy for the population’s willingness and ability to use new and emerging technologies.

- The province has the highest percentage of households with broadband subscriptions and high online sales compared to other provinces and territories.



## Modern technology infrastructure is key to economic growth and the delivery of services.

- The province has a strong foundation for Technology Infrastructure with the highest broadband availability and second highest LTE coverage in the country.
- However, it is well below the median in EV charging stations, with 6.14 per 100,000 people compared to the median of 12 per 100,000 people.

# Alberta's Opportunities

## A Path Forward

The Cisco Canada DRI identifies strengths and opportunities for Alberta to further improve its digital readiness.



### Access to financing for new businesses

The Government of Alberta has committed to creating the conditions to grow industries, businesses and job opportunities through the Alberta Technology and Innovation Strategy. This strategy helps to position the province as a global technology and innovation hub that creates jobs and diversifies the economy. Alberta already has the keys to success with one of the highest labour force participation rates in the country, a large youth population and strong post-secondary education rates. However, new businesses cite access to financing as a major obstacle to their success in the province.

To continue to support a thriving and diversified economy, the provincial government could provide additional financing opportunities to support innovative businesses to scale. One option is to introduce a tax credit that encourages investment into small businesses in key growth sectors.



### Supporting digitization in the natural resource sector

Alberta's natural resources sector is vital to the province's economy, contributing over one-quarter of the province's GDP and providing well-paying jobs to Albertans. It is important for the vitality of the sector to continue to modernize and keep up with emerging technologies. Digitization will support increased productivity and clean extraction of resources. Additionally, digitization in the sector can help Alberta achieve its goals to support carbon neutrality, while unlocking energy exploration opportunities.

The Government of Alberta should work closely with the natural resource sector to encourage the adoption of digital technologies to promote innovation in operations, a reduction of carbon emissions and more efficient and clean resource extraction.





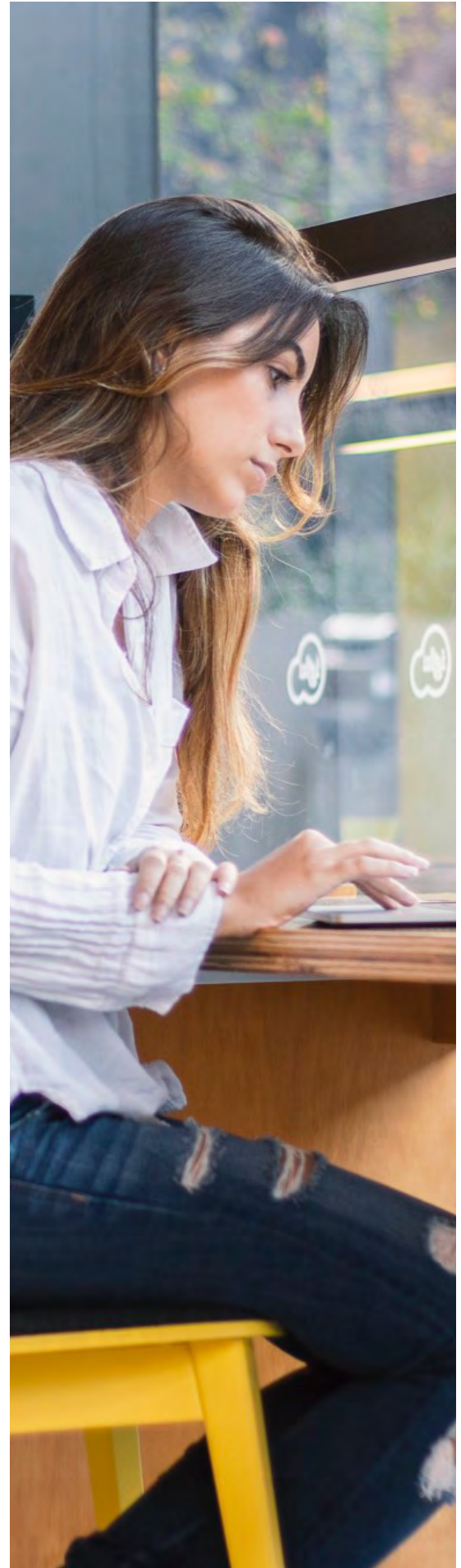
## Moving government services online

Across Alberta, service delivery providers face increased demands due to population growth, an aging population and the impacts of the COVID-19 pandemic. Digital solutions have the potential to create a faster, more efficient system that enhances outcomes for Albertans, especially for those living in rural and remote communities.

The Government of Alberta has been developing an Alberta Digital Strategy to accelerate the adoption of technology and innovation in government operations. The strategy is based on lessons from digital government leaders including the UK and Estonia (which scored 10th and 11th respectively in *Cisco's Global Digital Readiness Index*). While the strategy has yet to be released, the government is already working towards modernizing government service delivery, investing \$40 million in the Digital Accelerator Program as part of the 2023-24 budget to help government services adopt new technologies.

As part of the Alberta Digital Strategy, the provincial government should consider setting ambitious targets and timelines to make 100% of government services available online. As the Government of Alberta transitions to more services online, it is important they work with experts to adopt strong cybersecurity measures to protect Albertans' data and ensure that the adoption of digital delivery promotes access and inclusion for all populations.

With only 20% of Indigenous people living on reserves able to access high-speed unlimited internet, the Governments of Canada and Alberta should work with First Nations, Métis and Inuit governments and service providers to ensure inclusive, equitable and culturally appropriate access to digital government services for Indigenous Albertans.





# Conclusion

Ranking in fourth place in Canada, Alberta is in a strong position to become a digital readiness leader across the country. Alberta can enhance its reputation as a leader in technology and innovation by improving its Start-up Environment, building more Technology Infrastructure and increasing Technology Adoption by governments, businesses and individuals.

Through collaboration between governments, the private sector and communities, Alberta can continue to build a thriving digital economy that is competitive across the country and internationally.

