

Digital Broadband

Coauthored by the Hamilton Chamber of Commerce and Lethbridge Chamber of Commerce

Issue

As the digital economy continues to grow it is becoming imperative that all Canadians have access to broadband internet in order to effectively participate and compete in the world economy. With unique geographical challenges to overcome that competing jurisdictions do not face, it is critical that a national strategy be enacted to provide equitable broadband access to all Canadians.

Background

Canada's Unique Challenges

According to the Canadian Radio-television and Telecommunications Commission (CRTC) a digitally well-connected nation is "vital to Canada's economic, social, democratic, and cultural fabric." Canada's bandwidth capacity growth has been on a downward decline for over 15 years while other countries are making significant progress towards faster and more extensive broadband internet access¹. Many countries have declared internet access an essential service and have made it a priority to connect all citizens. Those without access are at a disadvantage.

The gap between the connected and the unconnected is commonly referred to as the 'digital divide,' a problem which plagues rural Canada where the return on investment is seldom high enough to convince private providers to invest in the necessary infrastructure. Canada's low population density is certainly a factor, but the lack of a national broadband strategy which incentivizes companies to expand their networks into low-profit regions is also part of the problem. In contrast, comparable low density countries such as the USA and Australia have comprehensive national broadband strategies and are working towards 100% digital inclusion²³.

Another challenge for Canada is that governing bodies have traditionally legislated low target internet speeds rather than aiming high to increase system potential. For example, the CRTC minimum standards of 5/mbps download and 1/mbps upload were set in 2011. In December of 2016 the CRTC finally proposed a new goal of 50/mbps download and 10/mbps upload as the new national standard for broadband access in Canada with the goal of reaching 90% inclusion

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¹ "Broadband: the essential utility." *ICF Canada*, Intelligent Community Forum Canada, <https://icf-canada.com/>. Accessed 16 May 2017.

² "National Broadband Plan." *Federal Communications Commission*, FCC, <https://www.fcc.gov/general/national-broadband-plan>. Accessed 16 May 2017.

³ "National Broadband Network." *Australia Government: Department of Communications and the Arts*, AG, <https://www.communications.gov.au/what-we-do/internet/national-broadband-network>. Accessed 24 May 2017.

within the next 5 years⁴. However an implementation plan for reaching these targets is still lacking.

Achieving these speeds and inclusion level is problematic under the current system because developing scalable FTTP infrastructure is costly and current facilities-based service providers have naturally invested in geographic market areas that have high profitability rates and population densities. Consequently, many older urban areas and rural areas are excluded.

Another negative aspect of the current system is the incumbent status of service providers that leads to inflated prices with higher margins for ISPs. In 2015 Canada was ranked 30th in the world in affordable broadband connections, behind Venezuela⁵. Ultimately, the current system provides minimal incentives for large corporations to provide access to underserved areas, and where they are provided, they are expensive.

Digital Broadband: The Essential Utility

If Canada aims to have 100% inclusion in the digital economy the Government must have a clear strategy for the future. This could be accomplished by declaring broadband internet services an *essential utility* and putting in place the regulatory framework in order to make this a reality.

The long-term benefits of declaring broadband access an essential utility are numerous.

1. It would provide equal opportunity for educational districts, removing the digital divide between young people in rural and urban areas and allowing all Canadians to learn and innovate in the digital space.
2. Digital resources offer significant productivity gains as they allow better communication, new tools, and open up avenues for the sharing and transfer of data and ideas. This is particularly relevant to Canada's agri-food sector which is poised to grow in importance as a major export sector and for which new digital productivity tools are continually being developed.
3. Making Broadband a utility and regulating the price in exchange for guaranteed service contracts will help drive down prices and provide further opportunities for inclusion.
4. As we move into an era that will be centered on the transfer of high quantities of data it is imperative that Canadians are connected to the global economy. A study by the Montreal Economic Institute shows that the development of the Internet of Things (IoT) is growing rapidly. This expansion will change the needs of citizens as more data is required to operate appliances, lights, medical devices, etc. Artificial intelligence (AI) studies show that it has the potential to add \$7.5 billion to the Canadian economy and create 170,000 jobs by 2025 in Canada⁶. These shifts will require a digitally skilled

⁴ Jackson, Emily. "CRTC declares high-speed Internet a basic service, creates \$750-million fund." *Financial Post*, Financial Post, business.financialpost.com/fp-tech-desk/crtc-declares-high-speed-internet-a-basic-service-creates-750-million-fund. Accessed 16 May 2016.

⁵ "Measuring the Information Society Report 2015." *International Telecommunication Union*, ITU, 2015, www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2015/MISR2015-w5.pdf. Accessed 17 May 2017.

⁶ Dennis, Madonna. "Report: Canada has Unique Potential to Lead in AI [.]". *Betakit.com*, 12 Apr. 2017, betakit.com/report-canada-has-unique-potential-to-lead-in-ai-but-must-address-gaps-in-private-sector-funding-and-internet-access/. Accessed 20 May 2017.

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workforce and world class digital infrastructure for Canada to take full advantage of their potentialities. Declaring broadband an essential utility is the quickest way to get us there.

5. The deployment of nation-wide digital infrastructure will act as a highway system for future products, industries, and growth that we cannot yet anticipate, but from which our economy and society will certainly benefit. Incentivizing the creation of this infrastructure now will act as an incubator for future innovation.
6. Digital Broadband service has emerged as a critical tool in the attraction, retention and scalability of new entrepreneurial start-ups and SME's in both rural and urban municipalities across Canada. Businesses are producing and consuming digital content at an unprecedented rate, with industry trends pointing to even higher demand on service providers⁷. Urban communities across Canada are also struggling to upgrade legacy internet utility infrastructure and service brownfield and infill developments.
7. The Federal government has also announced investment into the Smart Cities Challenge in Budget 2017. Smart Cities have the potential of creating Billions in savings for municipal budgets across Canada in addition to improving socioeconomic outcomes for Canadians. In addition it has an export market estimated at is \$1 trillion a year in 2017 and \$3.4 Trillion by 2026⁸. Smart City deployment and development is predicated on high speed broadband access.

The Canadian Chamber of Commerce recommends that the Government of Canada:

1. Undertake a national broadband feasibility study that lays out minimum service levels, delivery models, cost structures, funding, regulatory models that support facilities and service-based competition and implementation timelines for 100% digital inclusion and work with all jurisdictions and the private sector to determine action required and implementation staging plans. Furthermore, the study should also address ongoing operations and maintenance in deploying infrastructure.

2. Support and expand government funding programs that create incentives for network building by the private sector and public-private partnerships, including, evaluating funding mechanisms to help realize the recent CRTC ruling declaring broadband (<http://crtc.gc.ca/eng/archive/2016/2016-496.htm>) download speeds of at least 50 megabits per second and upload speeds of at least 10 Mbps will now be considered a "basic telecom service."

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⁷ Cisco Global Cloud Index: Forecast and Methodology, 2015–2020.

<http://www.cisco.com/c/dam/en/us/solutions/collateral/service-provider/global-cloud-index-gci/white-paper-c11-738085.pdf>

⁸ "Smart Cities Market 2016-2026". Persistence Marketing 2017.

(<http://www.persistencemarketresearch.com/market-research/smart-cities-market.asp>)