2021 Federal Budget – CARL Brief

to House of Commons' Standing Committee on Finance

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Summary

Recommendation 1:
That the Government recognize there is a gap in available high-speed internet in urban settings and expand funding opportunities to include urban areas, in addition to rural and remote.

Recommendation 2:
That the Government increase support to small enterprise and last-mile ISPs to increase market competition and to maintain the capacity for ongoing service and delivery.

Recommendation 3:
That the Government introduce a program similar to the Connecting Families Program to provide affordable high-speed internet and equipment for eligible low-income post-secondary students.

Recommendation 4:
That the Government review the minimum upload and download standards established by the CRTC to ensure that Canadians remain competitive with average global internet speeds.

Introduction

The Canadian Association of Research Libraries (CARL) is the leadership organization for Canada's research library community. The Association includes the 29 largest university libraries across the country. CARL's mission is to enhance the capacity of Canada's research libraries to partner in research and higher education, seeking effective and sustainable scholarly communication and public policy encouraging of research and broad access to scholarly information.

This submission focusses on measures to advance higher education and create a stronger, highly-educated workforce to contribute to Canada's economy.

Recommendations

1. Broadband Connectivity

In 2016, the Canadian Radio-television and Telecommunications Commission (CRTC) declared broadband internet an essential service[1], indicating that 90% of Canadian businesses and individuals will have access to a minimum of 50 megabit per second download and 10 megabit per second upload speeds by 2021.

That same report discusses the digital divide between rural and urban settings and the need to provide affordable broadband service to rural and remote areas. While the need for high-speed internet in rural and remote areas remains, there are urban settings that face the same reality.

[1] Telecom Regulatory Policy CRTC 2016-496, "Modern telecommunications services – The path forward for Canada's digital economy", https://crtc.gc.ca/eng/archive/2016/2016-496.htm Accessed 30 July 2020

Availability

The COVID-19 pandemic has seen cities, companies, and learning institutions close all around the world, and the need for fast and reliable internet has increased. As post-secondary educational institutions closed their doors, students' educations were at risk. The demand for online access to coursework and study materials grew exponentially and many students found themselves without sufficient internet access to continue their studies. Faculty were likewise affected, needing to develop and deliver courses through home connectivity.

A spring 2020 Statistics Canada report "COVID-19 Pandemic: Academic impacts on postsecondary students in Canada"[2] studies crowdsourcing data completed by over 100,000 postsecondary students from April 19 to May 1, 2020 on the impact of COVID-19 on their studies. Results showed that 26% of participants had some of their courses postponed or cancelled. Of students whose entire course load moved online, 7% reported that they were unable to complete some or all of their courses and 63% indicated they were "very" or "extremely" concerned about the effect on their grades[3].

Those effects of COVID-19 support the 2016 EKOS *Let's Talk Broadband: Findings Report*[4] to the CRTC, which reported that "a lack of minimum service can affect access to education, not only for basic access to the Internet, but also for resources that require additional bandwidth to access".

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[2] Statistics Canada, "COVID-19 Pandemic: Academic impacts on postsecondary students in Canada", May 2020, https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00015-eng.htm. Accessed 30 July 2020.

[3] Statistics Canada, "How are postsecondary students in Canada impacted by the COVID-19 pandemic?", May 2020, https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2020032-eng.htm Accessed 30 July 2020.

[4] EKOS, "Let's Talk Broadband: Findings Report", April 2016, p. 65 https://epe.lac-bac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/crtc/2016/030-15-e/report.pdf Accessed 30 July 2020

Recommendation 1:
That the Government recognize there is a gap in available high-speed internet in urban settings and expand funding opportunities to include urban areas, in addition to rural and remote.

Affordability

The Statistics Canada 2018 Canadian Internet Use Survey[5] gathered information on Canadians' use of the internet. The study surveyed individuals that were age 15 years and older and living in the 10 provinces (excluding full-time residents of institutions). The survey found that the share of Canadians aged 15 and older who used the internet had reached 91%.

Ninety-four percent of survey respondents reported that they had home internet access, but, of those who did not, the number one reason was cost (28%), followed by equipment (19%), and lastly the unavailability of internet service (8%). Ten percent of households in the 10 provinces that fall within the lowest quartile of household income reported that they do not have home internet access[6].

A CRTC analysis of Statistics Canada data[7] reveals that Canadians with household income in the first quintile (less than $32,914 annually) spend an average of 9.1% of their income on communications, while those in the fourth quintile ($132,809 or more annually) spend an average of 1.8% of their income on such goods and services. That is a significant disparity that Government should address.

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[5] Statistics Canada, "2018 Canadian Internet Use Survey", https://www150.statcan.gc.ca/n1/daily-quotidien/191029/dq191029a-eng.htm Accessed 30 July 2020.

[6] Statistics Canada, "Location of Internet access by age group and household income quartile", https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=2210008101&pickMembers%5B0%5D=3.2&pickMembers%5B1%5D=4.1 Accessed 30 July 2020

[7] Canadian Radio-television and Telecommunications Commission, "Communications Monitoring Report 2019", Subscriptions by income quintile, Infographic 1.3 Household characteristics and communications expenditures by income quintile, https://crtc.gc.ca/eng/publications/reports/policymonitoring/2019/cmr1.htm#i1.3 Accessed 30 July 2020.

Increasing competition[8] in the industry is one way to provide Canadians with more cost-effective access to the internet. The April 2018 report of the Standing Committee on Industry, Science and Technology (INDU), *Broadband Connectivity in Rural Canada: Overcoming the Digital Divide*, provided several recommendations related to broadband in Canada, including:

Recommendation 6: That *"The Government of Canada consider the spectrum allocation process for the purpose of broadband deployment… it should focus on the scope of licences, pricing, and effective use of allocated spectrum, including ensuring that small providers, non-profit providers, and non-incumbent providers have reasonable access to spectrum for broadband deployment"*.

In Budget 2019, the Federal Government announced $5-6 billion over 10 years to support rural broadband development, including $1.7 billion for a Universal Broadband Fund to bring high-speed connectivity to rural and remote areas. That is an important first step, but ongoing support is needed for service providers, particularly small enterprises, to support such networks after they have been laid.

In January 2020, the *Canada's communications future: Time to act*[9] report was submitted to Minister Bains and Minister Guilbeault as part of the Broadcasting and Telecommunications Legislative Review. The report revealed that "public investments in broadband deployment have had important impacts on rural Canadians' ability to access broadband." Figure 2-2 in the report, *Impact of investments on rural households served by 5/1Mbps (2014 & 2018)*, shows that 12% of the 22% increase in service to rural communities from 2014 to 2018 was publicly-funded.

Recommendation 2:

[8] Competition Bureau Canada, "Delivering Choice: A Study of Competition in Canada's Broadband Industry" https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/vwapj/CSBP-BR-Main-Eng.pdf/$file/CSBP-BR-Main-Eng.pdf Accessed 30 July 2020

[9] Final report of the Broadcasting and Telecommunications Legislative Review, "Canada's communications future: Time to act", Section 2. Affordable access to advanced telecommunications networks, https://www.ic.gc.ca/eic/site/110.nsf/eng/00012.html#Toc26977829 Accessed 30 July 2020

That the Government increase support to small enterprise and last-mile ISPs to increase market competition and to maintain the capacity for ongoing service and delivery.

Additionally, direct support to students is needed. As previously noted, when post-secondary educational institutions closed their doors, many students were unable to complete their coursework online. For many, this was because of their reliance on high speed networks and equipment provided by their educational institution to support learning and coursework. Although residential high speed internet may be available to them, many students are unable to afford it.

In 2017, the Government introduced the Connecting Families Program[10], a plan to invest $13.2 million over five years to help eligible families access affordable home internet. The program partners with participating Internet Service Providers (ISPs) to provide high speed internet access for $10 per month. As part of the program, Computers for Success Canada[11] provides computer equipment to the lowest income families, because they face barriers around both internet cost and access to devices.

For that program, the Government determined eligible families to be those "who currently receive the maximum Canada Child Benefit […]. The initiative was designed to connect the lowest-income families to the Internet."

We propose that the Government extend the concept of that program to similarly benefit low income post-secondary education students. Using criteria such as CRA-declared income and full-time enrollment in post-secondary institutions, the Government could establish a student's eligibility as a low-income earner.

[10] Innovation, Science and Economic Development Canada, Connecting Families, https://www.ic.gc.ca/eic/site/111.nsf/eng/home Accessed 30 July 2020

[11] Computers for Success Canada, https://cfsc-opec.org/en/ Accessed 30 July 2020

Recommendation 3:
That the Government introduce a program similar to the Connecting Families Program to provide affordable high-speed internet and equipment to eligible post-secondary students.

Reliability (speeds)

Given the rapidly-advancing nature of telecommunications technology, the 2016 goals set by the CRTC for a 50/10 Mbps target by 2021 should be reviewed and updated. A 2017 Brief submitted to INDU by SWIFT[12] noted that "actual broadband speeds in Canada lag substantially behind a large number of leading countries where governments have been more committed to building a world-class digital infrastructure". In June 2020, the SpeedTest Global Index[13] ranked Canada as 19th in the world for download speeds and showed that the global average for fixed broadband is 78.26 download and 42.06 upload speeds; already far exceeding the proposed 50/10 future standard for Canada.

Further referring to the April 2018 INDU report, *Broadband Connectivity in Rural Canada: Overcoming the Digital Divide,* there were several recommendations in relation to broadband in Canada, including:

Recommendation 2: That "T*he Canadian Radio-television and Telecommunications Commission consider regularly reviewing its target broadband speeds (currently set at 50 megabits per second download and 10 megabits per second upload) to ensure they remain relevant with technological development and international standards, and publish their findings in their annual report on the telecommunications sector."*[14]; and

[12] SWIFT, "A Brief on Broadband Connectivity In Rural Canada", 2017, p.8 https://www.ourcommons.ca/Content/Committee/421/INDU/Brief/BR9341757/br-external/SouthWesternIntegratedFibreTechnology-e.pdf Accessed 30 July 2020
[13] SpeedTest Global Index, https://www.speedtest.net/global-index Accessed 30 July 2020
[14] Report of the Standing Committee on Industry, Science and Technology, "Broadband Connectivity in Rural Canada: Overcoming the Digital Divide", p. 3, https://www.ourcommons.ca/Content/Committee/421/INDU/Reports/RP9711342/indurp11/indurp11-e.pdf

Recommendation 12: That "T*he Government of Canada consider new ways of collecting service and performance data in addition to the speed of Internet services, including, but not limited to, adding new indicators, using local knowledge, and reconsidering the conclusions drawn from the current hexagonal mapping system."*[15]

With the shift to online course instruction and work, it is crucial that students be able to share documents, collaborate remotely, and submit coursework online. A minimum upload speed of 10 Mbps is not sufficient for that type of learning environment.

Recommendation 4
That the Government review the minimum upload and download standards established by the CRTC to ensure that Canadians remain competitive with average global internet speeds.

Conclusion

Canada was once a global leader in terms of telecommunications — we were the first country to connect all public schools and libraries to the internet — and in broadband connectivity. But in 2019, the OECD ranked Canada 9th in the world for fixed broadband[16], with only 17.39% through fibre connectivity (28th in the world)[17].

Broadband is the electricity of the 21st century – among many essential functions, it is key infrastructure for enhanced education, tele-health services, and the ability to work, learn and teach from home. Investing in broadband to support Canada's students, educators, and researchers would not only address the short-term challenges of COVID-19, it would also bolster and invigorate the post-secondary

[15] Ibid, p.4
[16] OECD Broadband statistics, Table 1.2.1. OECD Fixed broadband subscriptions per 100 inhabitants, by technology, Dec 2019, https://www.oecd.org/sti/broadband/1.2.OECD-FixedMobileBB-2019-12.xls Accessed 30n July 2020
[17] OECD Broadband statistics, Table 1.10. Percentage of fibre connections in total fixed broadband, Dec. 2019 https://www.oecd.org/sti/broadband/1.10-PctFibreToTotalBroadband-2019-12_new.xls Accessed 30 July 2020

education sector for the long-term, thereby enabling future social and economic success for Canada.

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