

Communications

Background

A National Communications Strategy is an Economic Building Block

Canada continues to fall behind peer nations in the strategic policy area of information and communications technology (ICT) and infrastructure. A recent report from the International Telecommunications Union (ITU), *Measuring the Information Society 2012*, ranked Canada 32nd out of 155 countries according to their level of ICT access, use, and skills. The top five were Korea, Sweden, Denmark, Iceland and Finland. According to the ITU, all top-30 countries are “high-income countries, underlying the strong link between income and ICT progress.”¹ It is becoming increasingly clear that a national communications strategy is an essential part of long-term economic planning.

Communities with affordable high-speed Internet access can attract businesses, encourage local entrepreneurship, and maintain high standards in education and health services, all of which support local sustainability. The recommendations in this chapter are designed to return Canada’s communications infrastructure to world-class standards.²

Current Issues

Recognize “Effective” Connectivity as an Essential Service

On May 11, 2011, the Canadian Radio-television Telecommunications Commission (CRTC) set a target for broadband Internet access services across the country. By the end of 2015, said the Commission, all Canadians should have access to broadband speeds of at least 5 megabits per second (Mbps) for downloads and 1 Mbps for uploads.³

But the target set by the CRTC is not enough to fuel economic growth and job creation. Rural respondents to a 2011 national survey of economic development professionals in the U.S. reported that 100–120 Mbps was the minimum needed over the next three years.⁴ A study done for the U.S. Federal Communications Commission (FCC) recognized broadband “as a key enabler of economic growth that can benefit services such as telemedicine in rural areas, allow better management of transportation and energy systems and reduce infrastructure costs for businesses.”⁵

Modernizing such infrastructure is costly. At the 2012 CRTC hearings that considered basic service obligations, one telephone company estimated it would cost \$700 million annually⁶ for 10 years to bring high-speed Internet to all Canadians, including those who live in the country’s most remote areas. “It’s a task that can never be achieved by market forces alone, [MTS Allstream Inc.] told the CRTC, in one of the first such estimates to be made

for Canada.” Experts agree that the market alone will not resolve Canada’s communications infrastructure deficit.⁷ Governments will have to facilitate the transition with various programs to bridge the gap.

- In order to return Canada to a leadership role in the availability and use of new communications technologies, “effective” broadband that supports a wide range of communications applications must become a vital part of policy and programs at the federal level. The AFB believes that “effective” broadband means high-speed Internet of 100 Mbps or more.⁸

Develop a National Communications Strategy

The CRTC, among others, has pointed out the need for a comprehensive national digital strategy to secure the nation’s economic future.⁹ Digital infrastructure planning elsewhere has been on fast forward for years: Australia (National Broadband Strategy), 2004; Great Britain (Digital Britain Report), 2009; Germany (Information Society Germany 2010), 2006; France and New Zealand, 2008; and the U.S., 2010.

The benefits of a well-designed and implemented plan are significant. According to a new report by IBISWorld, Australia’s information and communications technology industry, combined with the planned national high-speed network, is expected to generate around \$1 trillion in revenue for 2050 — almost eight times the \$131 billion it generates today.¹⁰

Canada still lacks a national plan for universal access to effective broadband. This stalls our economy and negatively affects productivity. In May 2010, after a six-week

online consultation about a digital economy strategy, then Industry Minister Tony Clement offered an interim report with few specifics.¹¹ The holding pattern continues. Current Industry Minister Christian Paradis suggested that a strategy might be released at the end of 2012.

On the other hand, in its February 2011 report on emerging and digital media, the Standing Committee on Canadian Heritage “encouraged the Government of Canada to proceed as quickly as possible with the development of a national digital economy strategy,” and recommended that the strategy be reviewed every five years.¹²

The AFB agrees with the Heritage Committee and will immediately begin a national consultation on these issues. The process will invite multi-stakeholder input on a wide range of communications issues from copyright to infrastructure and access policies through meetings across the country, online and written submissions.

These discussions will also seek ways to improve the environmental sustainability of the ever-growing use of digital technologies. ICT devices currently contribute 2–3% of global greenhouse gas emissions.¹³ As the availability and use of “always on” broadband rises, this amount will likely increase. Technical solutions such as “power saving” devices, and upgraded standards for them, will be explored. Incentives for telecommuting and video-collaboration to support decreased use of fossil fuels for land and air transportation will also be considered.

- The AFB allocates \$250,000 to fund a broad national consultation to modernize communications policy in Canada. We will present a transparent process that can be implemented before September 2013.

A comprehensive plan based on these discussions will be presented to Canadians by April 2014.

Create Jobs With Next Generation Broadband Networks

Growing evidence supports the connection between jobs and modern information and communications infrastructure. Although there are no firm estimates of the number of Canadian jobs that might be at stake, estimates from other jurisdictions can offer some guidance:

- A 2009 study by the World Bank suggested that an increase of 10% in broadband penetration in high-income countries correlates with GDP growth increases of 1.2%.¹⁴
- According to a 2011 report from global management consultants McKinsey and Associates, over the past five years, the Internet has been responsible for 21% of the growth in mature economies and has created 2.6 jobs for every job it has displaced.¹⁵
- “Rural counties in the United States that embraced broadband adoption at the start of this decade enjoy access to more jobs than those that did not,” states a 2009 study by the U.S. Department of Agriculture. Their residents also make more money than their less-connected counterparts.¹⁶
- In 2008, the Communications Workers of America predicted that a \$5 billion stimulus on broadband infrastructure would create almost 100,000 new jobs directly in the short term and 2.5 million jobs as “network effects.”¹⁷

- A 2009 report by the Information Technology and Innovation Foundation (U.S.) suggested that a broadband subsidy of \$10 billion would directly create or retain 500,000 jobs.¹⁸

In Canada, the most recent federal program that addressed connectivity (2009) allocated a scant \$225 million over three years to fund the expansion of rural broadband infrastructure.¹⁹ In this program, broadband connectivity was defined as “access to Internet service that supports data transmission at a minimum speed of 1.5 Mbps to a household.”²⁰ Although it is considerably better than no connectivity, 1.5 Mbps is a short-term solution, not enough to support applications such as e-health or e-education or intensive e-commerce. This speed will not provide the kind of Internet access that Canadian communities need to ensure their economic future.

By contrast, in April 2009 the Government of Australia announced it would build a national high-speed broadband network to deliver up to 100 Mbps to 90% of its citizens. The eight-year, AU\$43-billion project will be one of the largest state-sponsored Internet infrastructure upgrades in the world. The Australian Prime Minister has suggested that the project will support up to 37,000 jobs at the peak of construction.²¹

To bring Canadian communications infrastructure up to such standards, the AFB ramps up to \$1 billion per year to make effective broadband a reality for all Canadians. The decade-long infrastructure project will start in 2014–15 and will be guided by the recommendations of a National Communications Strategy. Because it is such a major commitment of public funds, Canadians will follow the Australian example and retain majority ownership of the resulting infrastructure.

- The AFB ramps up to \$1 billion annually over 10 years to modernize Canada's digital communications infrastructure.

The Standing Committee on Canadian Heritage recommended that the Government of Canada reinvest some of the money it receives from spectrum auctions into the process of designing and implementing a digital strategy and into extending rural and remote connectivity programs.²² The AFB agrees with these recommendations.

- The AFB will reinvest some of the proceeds from the upcoming spectrum auction (Spring 2013) to support the modernization of our digital infrastructure according to the recommendations of a comprehensive communications strategy.
- The AFB will immediately revive rural and remote connectivity programs.

Rebuild the National Public Access Program

National programs that provide access, education and support for the effective use of new communications technologies in communities are considered essential in countries that rank high in their use of on-line tools. In Korea, for example, such programs are considered investments that generate demand and build human capacity to meet that demand.²³

At the CRTC hearings on basic service (2010), concerns were raised about the 25% of Canadians who have no Internet service even where service is available and questions were asked about programs that might address that gap.^{24,25} Sadly, in March 2012, the federal government cancelled the one program that addressed such issues. The Canadian Access Program was a national network of 3,500

community technology centres that helped thousands of people per day²⁶ incorporate new technologies into their lives. These sites and their young facilitators, along with a legion of volunteers, provided job search and software training, technology literacy programs, access to community services, and cultural integration opportunities. They partnered with the local private and public sector to provide services and experienced personnel in diverse areas, from film editing to website building. Along the way, thousands of youth gained valuable job experience. Both internal and external evaluators agreed that this program had been successful and cost-effective for years.²⁷

Certain populations are particularly in need of such programs. New research from the U.S.-based Pew Internet and American Life project shows that, while many seniors are currently using e-mail and the web, only 39% have broadband at home. They use public access sites in libraries and community centres.²⁸ In Australia, only 62% of those with a reported disability are online and just over one-half of those age 60 or over have Internet access at home.²⁹ In Canada, not only do we lack data on such issues, the only program in place to address them, was disbanded. The AFB would immediately reintroduce and expand support for a national public access program.

- The AFB allocates \$40 million to support new and existing national public access sites.

The AFB also agrees with the Standing Committee on Canadian Heritage, which recommended that the Government of Canada work with provincial authorities to support programs that encourage the development of

a digitally literate population and that the Department of Human Resources and Skills Development review its policies and programs in order to ensure that priority is given to training in digital skills. The Committee also recommended that the Government of Canada examine the proposal of the Canadian Association of Community Television Users and Stations (CACTUS) for the establishment of community-operated multimedia centres and access to its material online as a way of encouraging people to develop digital skills.³⁰

- The AFB will ensure that the Department of Human Resources and Skills Development continues to support digital literacy with its CAP-YI youth initiatives program.
- The AFB will support community-oriented multimedia centres as part of a digital literacy program.

AFB Actions

- The AFB allocates \$250,000 to fund a broad national consultation to modernize communications policy in Canada.
- The AFB ramps up to \$1 billion annually over 10 years to modernize Canada's digital communications infrastructure.
- The AFB allocates \$40 million to support new and existing national public access sites in the 2013–14 budget year.

Notes

1 International Telecommunications Union (ITU). (2012) "ITU releases latest global technology development figures." Press Release. ITU. Geneva: October. http://www.itu.int/net/pressoffice/press_releases/2012/70.aspx#ULPApodZXvI

2 For rankings see: Berkman Center for Internet and Society. (2009). *Next Generation Connectivity: A review of broadband Internet transitions and policy from around the world*. Harvard University, October (draft). p. 112.

3 Canadian Radio-television and Telecommunications Commission. (2011). "The CRTC sets speed target for broadband Internet and maintains obligation to provide basic home telephone service." News release. Ottawa-Gatineau, May 3. <http://www.crtc.gc.ca/eng/com100/2011/r110503.htm>

4 Settles, Craig. (2011). "After the stimulus: broadband and economic development." Fighting the Next Good Fight. Oct. 4. <http://roisforyou.wordpress.com/2011/10/04/after-the-stimulus-broadband-and-economic-development/>

5 Nowak, Peter. (2009). "Canadian broadband blasted by Harvard study." CBC News, Oct. 15. <http://www.cbc.ca/technology/story/2009/10/15/harvard-fcc-broadband-study.html>

6 Marlow, Iain. (2010). "High speed internet for rural areas." *The Globe and Mail* Oct. 27. <http://www.theglobeandmail.com/news/technology/high-speed-internet-for-rural-areas-pegged-at-7-billion/article1774621/>

7 Van Praet, Nicolas. (2011). "Universal Internet access key to the economy: Google CFO," *Financial Post*, FP Tech Desk. Oct. 24. <http://business.financialpost.com/2011/10/24/universal-internet-access-key-to-economy-google-cfo/>

8 As part of its broadband plan, the U.S. government is currently committed to connecting "at least 100 million American homes to 100 Mbps service over the next 10 years." Middleton, Catherine. Canadian Federation for the Humanities and Social Sciences "Big Thinking" Lecture, Oct. 7, 2010. http://www.fedcan.ca/images/File/Middleton_BigThinking.pdf

9 Canadian Radio-television and Telecommunications Commission (CRTC). (2009) "CRTC extends exemption for new media and calls for a national digital strategy." News release, June 4. <http://www.crtc.gc.ca/eng/news/RELEASES/2009/r090604.htm>

10 Ruthven, Phil. (2012). "A snapshot of Australia's digital future to 2050." IBISworld, June. http://www-07.ibm.com/au/pdf/A_Snapshot_of_Australia_s_Digital_Future_to_2050_Executive_Summary.pdf

11 Clement, The Hon. Tony. (2010). "An interim report on the digital economy and telecom strategies." Address to the International Institute of Communications Conference. Industry Canada, Nov. 22. <http://www.ic.gc.ca/eic/site/ic1.nsf/eng/06098.html>

12 Chong, Michael, Hon. (chair). (2011). *Emerging and Digital Media: Opportunities and Challenges*. Report of the Standing Committee on Canadian Heritage. 40th Parliament, 3rd Session. Canada: House of Commons. February 11, 2011. <http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=4838683&Language=E&Mode=1&Parl=40&Ses=3>

13 Kim, Yongsoo and Siddhartha Raja. (2010). *Building Broadband: Strategies and Policies for the Developing World*. World Bank. Chapter 4. p. 48. http://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/282822-1208273252769/Building_broadband.pdf

14 Scott, Sheridan. (2009). "Get ready, CRTC, digital economy is coming." *Globe and Mail*. Nov.2. <http://www.theglobeandmail.com/news/technology/get-ready-crtc-digital-economy-is-coming/article1347786/>

15 Bughin, Jacques and James Manyika. (2012) "The macroeconomic impact of the Internet." White paper written for a keynote speech at the first global e-G8 Summit, France, May 2011. In *Internet Matters, Essays in Digital Transformation*. McKinsey & Company. March. http://www.mckinsey.com/insights/mgi/research/technology_and_innovation/essays_in_digital_transformation

16 Lasar, Matthew. (2009) "Rural broadband = more jobs, better salaries." *Ars Technica* Aug.20. <http://arstechnica.com/tech-policy/news/2009/08/rural-broadband-more-jobs-better-salaries.ars>

17 Communications Workers of America. (2008). "Proposals to stimulate broadband investment." Letter to the House Speaker and Senate Majority Leader. December 9 mentioned in Qiuang, Christine Zhen-Wei. (2009). "Broadband infrastructure investment in stimulus packages: relevance for developing countries." World Bank.

18 Atkinson, R., D. Castro and S. Elzell. (2009). *Digital Road to Recovery: A Stimulus Plan to Create Jobs, Boost Productivity and Revitalize America*. Report by the Information Technology and Innovation Foundation. January 7. <http://www.itif.org> mentioned in Qiuang, Christine Zhen-Wei. (2009). "Broadband infrastructure investment in stimulus packages: relevance for developing countries." World Bank.

- 19** Office of the Prime Minister of Canada. (2009). "PM announces major improvement to broadband internet access in rural Canada." Ottawa: News release, July 30. <http://pm.gc.ca/eng/media.asp?category=1&id=2702>
- 20** Industry Canada. (2009). "Broadband Canada: Connecting Rural Canadians. Frequently Asked Questions." Last modified Sept. 22. http://www.ic.gc.ca/eic/site/719.nsf/eng/h_00004.html#BPQ3
- 21** Foley, Maraiah. (2009). "Australia moves to build high-speed network." *New York Times*. April 07. <http://www.nytimes.com/2009/04/08/technology/internet/08broadband.html>
- 22** Ibid. Chong, Michael, Hon. (chair). 2011.
- 23** Berkman Center. (2009). http://www.fcc.gov/stage/pdf/Berkman_Center_Broadband_Study_13Oct09.pdf
- 24** CRTC. (2010). "Transcript of proceedings on obligation to serve and other matters." Discussion on adoption rates of new technologies between Commissioner Katz and Denis Henry appearing for Bell Aliant. Timmins, Ont. Vol. 1, Oct. 26. para. 640–654. <http://www.crtc.gc.ca/eng/transcripts/2010/tt1026.html>
- 25** CBC News. (2011). "No internet in 1 out of 5 Canadian homes." May 25th. <http://www.cbc.ca/news/technology/story/2011/05/25/technology-internet-use-statistics-canada.html>
- 26** This network was built under the Industry Canada Community Access Program (CAP) and its companion Youth Initiative Program (CAP-YI). Telecommunications Policy Review Panel. (2006) Final Report. Chapter 8. Industry Canada. <http://www.telecomreview.ca/epic/site/tprrp-gecrt.nsf/en/tx00055e.html>
- 27** See, for example: Ekos Research Associates. (2004). Evaluation Study of the Community Access Program (CAP). Industry Canada. Audit and Evaluation Branch, January 16. <http://www.ic.gc.ca/epic/site/ici.nsf/en/01420e.html> and Coleman, Ronald. (2002). "Economic value of CAP sites as investments in social capital" and "Impact of CAP sites on volunteerism." GPI Atlantic. <http://www.gpiatlantic.org/publications/abstracts/econvalue-cap-ab.htm>
- 28** Zickuhr, Karen and Mary Madden. (2012) "Older adults and Internet use." Pew Research Internet and American Life Project. January. <http://pewinternet.org/Reports/2012/Older-adults-and-internet-use/Main-Report/Internet-adoption.aspx>
- 29** O'Leary, Tim. (2012) "Making connections to end digital divide." Op-ed. National Times: October 12. <http://www.smh.com.au/opinion/making-connections-to-end-digital-divide-20121009-27aul.html>
- 30** Ibid. Chong, Michael, Hon. (chair). 2011.