# Communications

## Background

### Communications infrastructure a key economic driver in the 21st century

Affordable high-speed internet access is an indispensable asset for the economic health of communities of all sizes. It attracts businesses, encourages local entrepreneurship, and maintains high standards in education and health services, all of which support local sustainability.

However, according to statistics released in 2013 by the Organisation for Economic Co-operation and Development (OECD), Canada should increase investment in this sector. Currently in 9th place with 72.2% of households connected to the internet, Canada is behind the leader South Korea (97.5%) and all five of the Scandinavian countries, but still ahead of the U.K. (69.5%) and the U.S. (68.2%).[1] However, Canada is lagging much further behind with respect to speed and price of broadband connections, placing 19th in the same list of countries.[2] Countries with high speeds and low prices are also rapidly increasing their adoption of fibre optic networks. Here again, Canada is falling steadily behind — at 0.6 fibre subscriptions per 100 inhabitants as compared to the U.K. with 1.7 and South Korea leading the way with 22.3. To participate fully in the Information Age, Canada needs to move beyond its current strategy for communications infrastructure.

A user support strategy must also be in place to allow citizens to take advantage of new opportunities. A report from the International Telecommunications Union (ITU) ranked Canada 22nd out of 155 countries on level of ICT access, use, and skills.[3] Although Canada is still in the top 30, in the past we were a very high achiever in this area, with targeted programs on each of these issues. To compete with leading countries of today, Canada needs a national digital strategy as one of the building blocks of its long-term economic planning. The Canadian Radio-Television and Telecommunications Commission's (CRTC) 2013 annual report on the state of communications shows 79% of Canadian households with an internet subscription, which leaves 2.9 million homes still disconnected from the digital economy.[4]

Public policy to address these problems is long overdue. The AFB's recommendations are designed to improve Canada's communications infrastructure and facilitate access, use, and skills in this area.

## Current Issues

### Recognize "effective" connectivity as an essential service

In 2011, the CRTC ruled that by the end of 2015, all Canadians should have access to broadband speeds of at least 5 megabits per second (Mbps) for downloads and 1 Mbps

for uploads.[5] But this target is simply not enough to fuel economic growth and job creation, or to support modern health and education applications. Peer countries such as France and Australia have set much more ambitious targets, and the European Commission has set a target of "30 Mbps for all of its citizens and at least 50% of its citizens subscribing to internet connections above 100 Mbps by 2020."[6]

At the 2010 CRTC hearings that considered basic service obligations, one telephone company estimated that it would cost $700 million annually[7] 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." Governments will have to implement various programs to facilitate bridging the gap.

To return Canada to a leadership role, effective broadband that supports a range of communications applications must become a vital part of policy and programs at the federal level. The AFB believes that, in the long term, "effective" broadband means high-speed internet of 100 Mbps and beyond.[8]

## Develop a national digital economy strategy

The CRTC, among others, has pointed out the need for a comprehensive national digital strategy to secure the nation's economic future.[9] In its 2011 report on emerging and digital media, the Standing Committee on Canadian Heritage urged that a national digital economy strategy be developed and reviewed every five years.[10] Without such a strategy, Canada is lagging behind countries such as Australia, Great Britain, and the U.S.

The AFB will immediately begin a national consultation on these issues. The process will invite input from a variety of stakeholders on a wide range of communications issues — such as copyright, infrastructure, and access policies — through submissions and meetings across the country. It will look for decentralized, community-based solutions to developing broadband infrastructure, since local ownership and control of infrastructure is a preferred model, and community members will be involved in developing plans, especially in rural, northern, and First Nations communities.

These consultations will also address ways to improve the environmental sustainability of digital technologies. ICT devices currently contribute 2%–3% of global greenhouse gas emissions. [11] As the availability and use of "always on" broadband increases, these emissions will likely increase also. Technical solutions such as power-saving devices and upgraded standards for them will be explored, and incentives for telecommuting and video-collaboration will be considered.

The AFB will allocate $250,000 for this broad national consultation to modernize communications policy in Canada. The process will investigate the benefits of various business models, including multi-stakeholder partnerships, to achieve connectivity in hard-to-serve areas. Local ownership and control of high-speed networks as well as environmental benefits that could

be realized through appropriate design will be highlighted.

## High-speed broadband networks and economic benefits

Growing evidence supports the connection between household income, jobs, and modern information and communications infrastructure.

For example, a 2013 study suggests that faster broadband connections can add considerably to household income in developed economies because better internet access improves potential for learning and working from home. Increasing internet speeds from 4 to 8 Mbps increased average earnings by $120 (U.S.) a month in OECD nations.[12] A 2009 study by the World Bank suggested that a 10% increase in broadband penetration in high-income countries correlates with increases of 1.2% in GDP growth.[13] There is also evidence that 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.[14]

To bring Canadian communications infrastructure up to such standards, the AFB will allocate $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 Digital Strategy. Because this is such a major commitment of public funds, Canadians will retain majority ownership of the resulting infrastructure.

The Standing Committee on Canadian Heritage recommended that the Government of Canada reinvest some of the money it re-ceives from spectrum auctions into designing and implementing a digital strategy and into extending rural and remote connectivity programs.[15] The AFB agrees with these recommendations, and will reinvest some of the proceeds from the January 2014 spectrum auction to support the modernization of our digital infrastructure according to the recommendations of a comprehensive communications strategy.

## Rebuilding the national public access program

In the 2013 pre-budget consultations, the federal government asked for suggestions from Canadians for cost-neutral or low-cost measures they could introduce to enable competition and prosperity over the long term. One citizen responded as follows:

> "Economic growth in the 21st century cannot occur without 21st-century tools.... A program to support community-driven access and education initiatives across the country would help ensure prosperity is both deep and wide throughout the country. Over the years, this kind of initiative has created jobs and brought new businesses to many areas at very little cost."[16]

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 online tools. In Korea, for example, such programs are considered investments that gen-

erate demand and build human capacity to meet that demand.[17]

At the CRTC hearings on basic service held in 2010, concerns were raised about the 25% of Canadians who have no internet service even where service is available. The situation has not improved since then. In 2012, Statistics Canada reported that only 62% of the poorest quartile of Canadians were connected and that the main barriers to connectivity were age and income.[18]

Sadly, in March 2012, the federal government cancelled the one program that was addressing such issues. The Community Access Program was a national network of 3,500 community technology centres which helped thousands of people per day incorporate new technologies into their lives[19]. These sites, their young facilitators, and their 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 sectors 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.[20]

Certain populations are particularly in need of such programs. For example, a U.S. study showed that while many seniors use e-mail and the Web, only 39% have broadband at home; the others use public access sites in libraries and community centres.[21] 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.[22] Statistics Canada data from 2010 showed that of the 20% of Canadians who did not have access to the internet, slightly more than half of these (about 1.5 million people) mentioned cost; lack of equipment; or lack of confidence, knowledge, or skills as reasons for their non-connectivity.[23]

The AFB will reintroduce and expand support for public access programs to address these issues. This investment will boost local economies by encouraging them to use new technologies for community development and by offering collaborative tools. When Canadian communities suffer because of major job losses, these programs help provide support in an economic downturn.

The AFB also agrees with the Standing Committee on Canadian Heritage that the Government of Canada should work with provincial authorities to encourage the development of a digitally literate population, and that the Department of Human Resources and Skills Development should review its policies and programs 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) to establish community-operated multimedia centres to encourage people to develop digital skills.[24]

## AFB Actions

• The AFB will allocate $250,000 to fund a broad national consultation to mod-

ernize communications policy in Canada. We will present a transparent process that can be implemented before September 2014, and a comprehensive plan based on these discussions will ready by April 2015.

- The AFB will increase expenditure to $1 billion annually over 10 years to modernize Canada's digital communications infrastructure.

- The AFB will allocate $40 million to support new and existing Community Access Program public access sites in the 2014–15 budget year.

- The AFB will ensure that digital literacy is still supported through Industry Canada's Youth Internships.

- The AFB will support community-oriented multimedia centres as part of a digital literacy program.

## Notes

**1** Organisation for Economic Co-operation and Development. (2013). Broadband statistics. Updated to September 13. http://www.oecd.org/sti/broadband/oecdbroadbandportal.htm

**2** Canadian Internet Registration Authority. "Internet speeds and costs around the world." Infographic, 2012. *CIRA News*. http://www.slideshare.net/CIRANews/broadbandmap2012

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

**4** Canadian Radio-Television and Telecommunications Commission. (2013). "Communications monitoring report." Ottawa: CRTC http://www.crtc.gc.ca/eng/publications/reports/PolicyMonitoring/2013/cmr.htm

**5** 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

**6** European Commission. (2013). "A digital agenda for Europe." Update 2013. http://ec.europa.eu/digital-agenda/our-goals/pillar-iv-fast-and-ultra-fast-internet-access

**7** Marlow, Iain. (2010). "High-speed Internet for rural areas pegged at $7-billion." *The Globe and Mail*, October 27. Updated 23 August 2012. http://www.theglobeandmail.com/news/technology/high-speed-internet-for-rural-areas-pegged-at-7-billion/article1774621/

**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, October 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** 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. Recommendations 19 and 20. http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=4838683&Language=E&Mode=1&Parl=40&Ses=3

**11** 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

**12** Garside, Juliette. (2013) "Broadband can boost household income." *The Guardian*. September http://www.theguardian.com/technology/2013/sep/17/broadband-speed-household-income ; Ericsson. (2013). "Home broadband speed impacts household income." *News*, September 13. http://www.ericsson.com/news/1729555

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

**14** 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 McKinsey & Company (2011), *Internet Matters, Essays in Digital Transformation*, McKinsey Global Institute. http://www.mckinsey.com/insights/mgi/research/technology_and_innovation/essays_in_digital_transformation

**15** Chong, Michael, Hon. (chair). (2011). *Emerging and Digital Media*. Recommendation 17.

**16** Personal e-mail from Clarice Leader. 2013. *The road we travelled; Our communities' voyage to the future on the ICT highway*. http://www.nu.e-association.ca/cim/305C1_3T580.dhtm

**17** Berkman Center. (2009). *Next generation connectivity; A review of broadband Internet transitions and policy from around the world*. http://www.fcc.gov/stage/pdf/Berkman_Center_Broadband_Study_13Oct09.pdf

**18** Statistics Canada. (2013). "Individual Internet use and e-commerce, 2012." *The Daily*, October 28. http://www.statcan.gc.ca/daily-quotidien/131028/dq131028a-eng.htm

**19** 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/tprp-gecrt.nsf/en/rx00055e.html

**20** 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/ic1.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

**21** Zickuher, 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

**22** 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

**23** Statistics Canada. (2010). *Canadian Internet Use Survey*. Archived. http://www.statcan.gc.ca/daily-quotidien/110525/dq110525b-eng.htm

**24** Chong, Michael, Hon. (chair). (2011). *Emerging and Digital Media*. Recommendations 7, 9, and 8.