

Canadian Internet Forum

Digital Economy Consultation Backgrounder



CANADIAN INTERNET GOVERNANCE FORUM DIGITAL ECONOMY CONSULTATION GROUP BACKGROUND - NOVEMBER 2010

Introduction

In October 2009, the Canadian Internet Registration Authority (CIRA) commissioned an opinion survey on Canadian public interest in Internet policy and decision-making. The purpose of this initiative was to assess the value in establishing a new multi-stakeholder forum in Canada to explore Internet policy, management and issues of relevance to Canadians. In the survey responses, the link between economic development and the development and deployment of the Internet emerged as a major issue. Nearly all respondents indicated a significant need for public policy that encourages innovation and growth of the Internet-based digital economy.

This consultation is the next step in the process. Its purpose is to gather diverse perspectives on the Internet and economic development that will inform the topics and streams for a national forum in February 2011. This is timely, given that the Government of Canada (GoC) May 2010 digital economy consultation process recognized that, "Intelligent adoption of digital technologies will play a key role in addressing some current economic, social and environmental challenges."¹

As an invitee to the consultation in <<insert city>> we would like you to consider – professionally and personally – what are the burning issues that Canadian policy-makers and Internet stakeholders need to consider related to the role of the Internet in the digital economy, in the context of the major economic, social and environmental challenges facing the country?

This is a very broad subject for a short, three hour discussion. The following questions and background notes are intended to stimulate your thinking and help ensure a productive use of time by providing some focus on key issues. During the consultation, participants will be free to raise other questions and to advance other considerations.

¹ Government of Canada (2010). *Improving Canada's Digital Advantage: Strategies for sustainable prosperity*, p. 12. Available at http://de-en.gc.ca/wp-content/uploads/2010/05/Consultation_Paper.pdf

Issue 1 – The role of the Internet in the digital economy

Sample question for reflection

1. What are the economic opportunities (current and new) that might be available to Canadians that are, or could be, based on the Internet (technology development, content, services, etc.)?

Background notes

The 'digital economy' is a concept currently being used by governments in Canada and some other countries to capture a phenomenon previously referred to by terms such as the 'information/knowledge economy' (1980s) and the 'new economy' (1990s). In the digital economy, the sectors that produce information and communications technology (ICT) goods, services, applications, and content typically generate five to 10 per cent of GDP. The ICT sector accounts for a roughly equivalent share of employment, provides a significant proportion of high quality jobs and is a leader in research and development (R&D).

As the Organization for Economic Cooperation and Development (OECD) has recognized, the Internet is the strategic, underlying resource that increasingly connects all of the different networks and devices used by consumers, businesses, governments, public institutions and other organizations to access, create, share, process, communicate, and store information and knowledge in the digital economy. Because of this, the OECD refers to the digital economy as 'the Internet economy'.²

In the Internet-based digital economy, all stakeholders stand to benefit from an Internet that is open, accessible, affordable, reliable, and secure. For example:

- The Internet enables businesses of every size to connect with customers and suppliers in new ways that can improve the efficiency and quality of the services they provide, manage relationships more effectively, and identify opportunities for innovation.
- The Internet enables governments and public institutions to engage with citizens in new ways and improve the quality and efficiency of the services they provide.
- The Internet provides individuals and families with new opportunities to develop knowledge, skills, and abilities; participate in the job market in ways that achieve work/life balance and overcome barriers to inclusion; express themselves creatively; engage in society; and contribute to public life.

The basic idea behind all these concepts is that the intelligence embedded in ICTs through hardware and software; the instantaneous, 'any time any place' information and knowledge sharing they enable among people and machines; and, the creativity and innovation they unleash can become new sources of national wealth and comparative advantage for countries that successfully exploit these resources.

² See OECD (2008). *The Seoul Declaration for the Future of the Internet Economy*. Available at <http://www.oecd.org/dataoecd/49/28/40839436.pdf>.

Issue 2 – Key public policy issues related to the role of the Internet in the digital economy

Sample questions for reflection

2. What are the key issues and concerns related to the growth of the Internet economy that might benefit from public policy development?
3. How do Internet public policy decisions affect Canada's capacity to respond to the major economic, social and environmental challenges facing the country?

Background notes

There is recognition in Canada, and internationally that a number of key Internet public policy issues should be addressed to optimize the role of the Internet in the development of the digital economy and in bringing attendant benefits to consumers and businesses.

Many of these issues have been debated in Canada over the past decade, and a number of important policy decisions have been taken by the federal, provincial and territorial governments (such as the investment of public funding in community access programs). However, in the fast-moving world of the Internet, new issues and new variants of old issues are constantly emerging, at a speed that often defies traditional approaches to policy-making. Some of the key items that could be on the Internet public policy agenda in Canada include:

- Access to high-speed broadband networks and services for consumers and businesses in all Canadian communities: A number of international comparative studies have suggested that the speed, price and quality of broadband services offered to Canadian consumers, even in well-served areas of the country, lags the offerings available to their counterparts in other countries, thereby harming the productivity, efficiency and competitiveness of Canada's digital economy.
- Issues related to consumer and business confidence in the online marketplace: Key issues include protecting the security and privacy of personal information, authentication of participants in the online transactions, spam, online fraud, distributed denial-of-service attacks, and various other forms of cyber-crime. Federal and provincial legislation is in place or pending to address many of these issues, although enforcement remains a problem in the borderless world of cyberspace.
- More recently, concerns have emerged about new issues related to privacy and the management of digital identity in the social networking and user-created content platforms that characterize Web 2.0.

Although they have yet to acquire a high profile among policy-makers and the public, there are a number of issues related to the stability, security, and scalability of the Internet that are central to the role it plays in the digital economy. These issues revolve around the continuing growth and future development of one of the critical resources on which the functioning of the Internet depends – the system for assigning unique numerical addresses to every device connected to the Internet.

- The issue is how to transition from the current addressing system, which is based on version 4 of the Internet Protocol (IPv4) and will run out of numbers next year, to a new system based on the version 6 of the Internet Protocol (IPv6), which can provide an unimaginably large number of addresses. Although IPv6 was developed a decade ago it has not yet been widely adopted. Delays in making the transition from IPv4 to IPv6 could constrain the growth of the Internet. It could also lead to a situation in which networks and devices using the old numbering system could not connect to networks and devices using the new system.

These and other public policy issues directly related to the development, management and use of the Internet have been discussed and debated nationally and internationally for a number of years. Recently, a newer set of issues has begun to appear on policy agendas at both these levels. These issues have a different focus. They relate not just to the future of the Internet and its place in the digital economy, but more broadly to the role the Internet can play in helping address the major challenges Canada and other countries face in reconciling long-term economic growth and social development with environmental sustainability - thereby achieving what the OECD refers to as 'green growth'.³

From this 'big picture' perspective, Canada faces a series of daunting challenges in the years ahead that include the following:

- Improving education access and quality, along with our capacity to innovate.
- Supporting and strengthening the delivery of managed services such as health care.
- Maintaining and strengthening our competitive advantages while transitioning to a higher value-added economy.
- Integrating an increasingly diverse workforce.
- Balancing our openness to the world with defence of sovereignty and national security.

The initial work done on these issues by various stakeholders suggests that decisions made about Internet public policy issues can have an important affect on these and other issues of sustainable development. This is because of the transformational impact the Internet has already demonstrated on key forces for future change including: the innovation process; economic and social structures; energy and materials requirements; patterns of politics and governance; and individual behaviour, attitudes and values.

This work also suggests there might be benefit in systematically considering the role the Internet could play in developing a green economy, identifying options for optimizing this role, and factoring these considerations into discussion and debate about Internet public policy issues, as they more traditionally have been defined.⁴

³ See OECD *Declaration on Green Growth*. Available at <http://www.oecd.org/dataoecd/58/34/44077822.pdf>.

⁴ See Souter David, Don MacLean, Ben Akoh and Heather Creech (2010). *ICTs, the Internet and Sustainable Development: Towards a new paradigm*. Winnipeg, International Institute for Sustainable Development. Available at http://www.iisd.org/pdf/2010/icts_internet_sd_new_paradigm.pdf

Issue 3 – Key Internet management and governance issues

Sample questions for reflection

4. What are the strengths and weaknesses of current arrangements for managing and governing the Internet in Canada?
5. What improvements could be made to current arrangements, in terms of the roles and responsibilities of different stakeholder groups?

Background notes

Unlike telecommunication and broadcasting networks, the Internet traditionally was managed and governed through voluntary, bottom-up arrangements that were open to participation by interested parties. Only one government, the United States Government (USG), was involved in these arrangements where it played a limited, but important part derived from its role as the Internet's original funder. The technical management of the Internet continues to be done by the Internet Engineering Task Force (IETF) and related bodies, under the umbrella of the Internet Society.

Canada has generally shared the view that the Internet is different from telecommunication and broadcasting networks, and should be allowed to develop as freely as possible from government control in order to maximize the creativity and innovation it has so spectacularly enabled. Over the past decade, however, governments in Canada and other countries increasingly have become involved in Internet governance and management through policy, regulatory and judicial decision-making, programs to extend access to broadband networks and services, and as major users of the Internet to deliver government and public services. Many emerging economies and developing countries want to see a stronger role for governments on the international management and governance of the Internet.

There is an emerging principle that all stakeholders – users, industry, the technical community and government -- should be involved in the governance and management of the Internet. The challenge facing Canada, other countries, and the international community is to translate this general principle into innovative governance arrangements, involving all stakeholders in appropriate roles, that will successfully address Internet public policy issues at Internet speed, with the aim of maintaining the Internet as an open, accessible, stable and secure platform for building the digital economy and addressing the major economic, social and environmental challenges facing our country in the longer term.

The Internet is the most powerful driver of social and economic change of the past 20 years. The digital economy exists in a dynamic and fast-paced environment, providing unique challenges and opportunities with regard to governance and management. Any attempt to identify chart the course for the management and governance of the Internet requires an open and transparent consultation involving a broad-base of stakeholders. The proposed questions identified in this paper will hopefully stimulate discussion that identifies issues

related to effective public policy that encourages innovation and growth of the Internet-based digital economy.