



Communication Technologies in the Information Society

Catherine Middleton
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Communication Technologies in the Information Society:
Informing our Understanding of Canada's Digital
Economy.

Presentation for the Canada Research Chairs 10th
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Communications Technologies
People
in the Information Society

Catherine Middleton
Ryerson University

What my Canada Research Chair is really about.

What Is My Research About...?

- Individual level
 - How Canadians use (and don't use) the internet and mobile technologies
- Organizational level
 - Impacts of always-on technologies in organizations ('the BlackBerry stuff')
- Infrastructure level
 - Does our broadband and mobile infrastructure meet our needs?
- Policy level
 - What policies are needed?

Today's focus...

- **Individual level**

- How Canadians use (and don't use) the internet and mobile technologies

- **Organizational level**

- Impacts of always-on technologies in organizations ('the BlackBerry stuff')

- **Infrastructure level**

- Does our broadband and mobile infrastructure meet our needs?

- **Policy level**

- What policies are needed?

Consultation on the Digital Economy



- How can we influence policy making based on what we do know about individual level engagement with the internet?
- Can we supplement discussion on technology (broadband) with consideration of 'digital citizens'?

<http://de-en.gc.ca/en/home>

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Broadband: *The 21st Century Infrastructure* (the rhetoric)

- “Broadband networks are a critical component of the digital economy” Digital Economy consultation paper
- “Broadband is the nervous system of today’s new civilization” Carlos Slim Helú, Co-Chair Broadband Commission for Digital Development
- “Affordable, ubiquitous broadband networks will be as critical to social and economic prosperity as networks like transport, water and power.” Hamadoun Touré, Secretary-General, ITU

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Government of Canada (2010). Improving Canada’s Digital Advantage. Strategies for Sustainable Prosperity – consultation Paper on a Digital Economy Strategy for Canada. http://de-en.gc.ca/wp-content/uploads/2010/05/Consultation_Paper.pdf. (“concerns have been raised that Canada is lagging its peers”, p. 16)

Broadband Commission for Digital Development: <http://www.itu.int/bbcommission/commissioners.html>

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- “concerns have been raised that Canada is lagging its peers”
(Consultation Paper on a Digital Economy Strategy for Canada)
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Broadband Commission for Digital Development: <http://www.itu.int/bbcommission/commissioners.html>

Message from the Minister of Industry ➡➡➡

- “we are seeking the advice of Canadians on how Canada *can improve its position in the digital economy.*”
- “... we must channel our strengths into developing a comprehensive, multi-year strategy that will help Canada take *our rightful place at the top.*”

—*Digital strategy as competition*

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Broadband as Competition

Lagging or Leading?

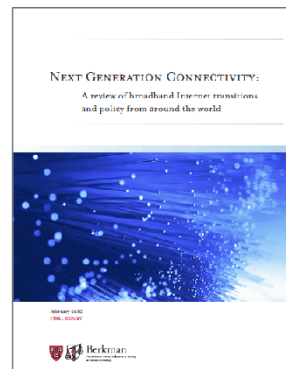
The state of Canada's broadband infrastructure

We have found that Canada is doing very well in terms of availability, affordability and coverage.

Canada's recent broadband development has lagged behind other developed nations. Canada's broadband penetration rates are often lauded, but the country is a poor performer on price and speed and a declining performer in penetration.

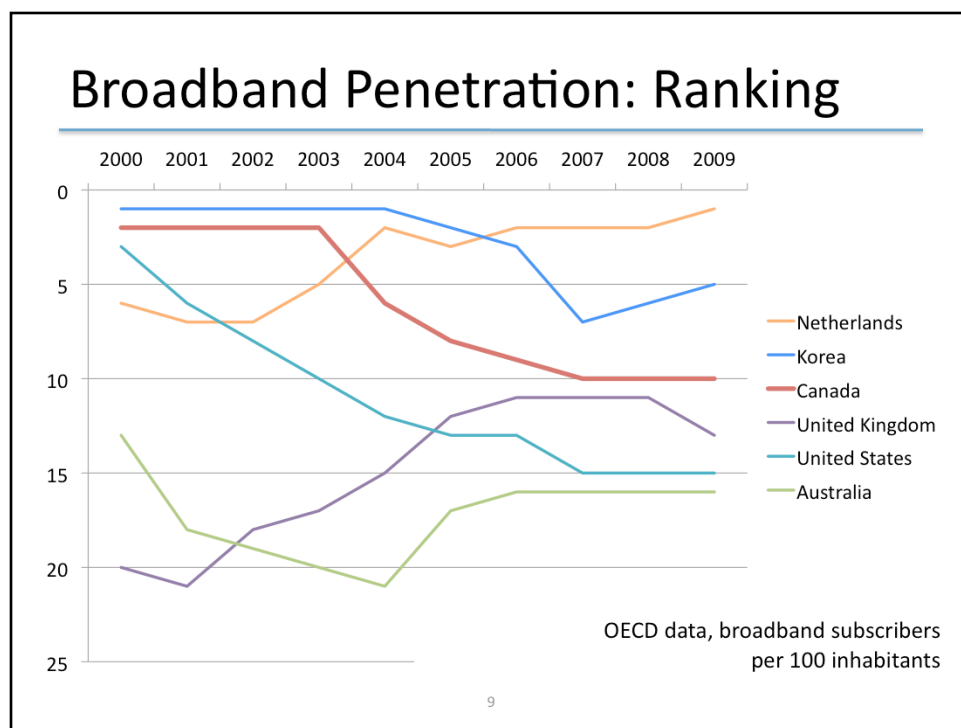
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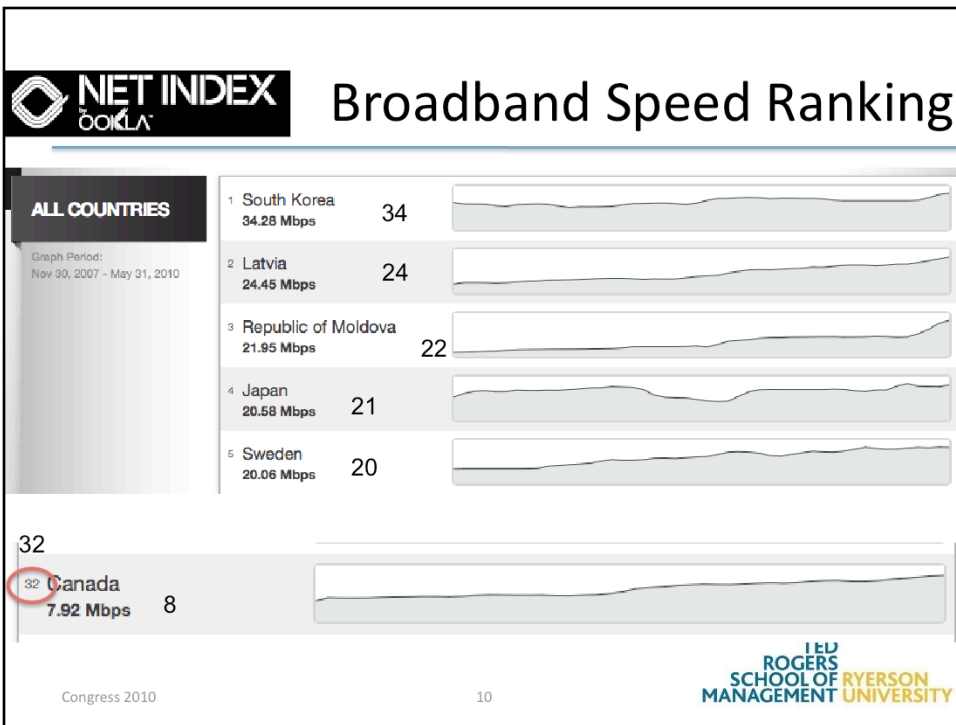
Mark H. Goldberg & Associates Inc., & Giganomics Consulting Inc. (2009). *Lagging or Leading? The State of Canada's Broadband Infrastructure*. Toronto. <http://www.gstconferences.com/LagOrLead.pdf>.

Benkler, Y., Faris, R., Gasser, U., Miyakawa, L., & Schultze, S. (2010). *Next Generation Connectivity: A Review of Broadband Internet Transitions and Policy from around the World*. Cambridge, MA: Berkman Center for Internet & Society, Harvard University. http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/Berkman_Center_Broadband_Final_Report_15Feb2010.pdf.



http://www.oecd.org/document/54/0,3343,en_2649_34225_38690102_1_1_1_1,00.html, data for 2009 from June, all other years December

Netherlands, 38.1; Korea, 32.8; Canada, 29.7; UK, 28.9; US, 26.7; Australia, 24.9



<http://www.netindex.com/download/allcountries/>

Canada's speed of 7.92 Mbps is above the rolling average of 7.69 noted on June 1, 2010

Graph Period: Nov 30, 2007 - May 31, 2010

www.broadbandchoices.co.uk

Supplier	Package details	Speed (up to)	Usage limit	Contract length	One off costs	1st year cost	Monthly charge	X \$1.53
	Plusnet - Value + Talk Evening & Weekend ★★★★☆ (114)	8Mb	10GB	12 months	£4.99	£56.91	£6.49 Online Exclusive 4 Months Free Ends 18/05/2010	 GO Call PlusNet on 0800 694 0016
	Home Max - Orange mobile customers only ★★★★☆ (246)	20Mb	unlimited	18 months	Free	£58.50	£6.50 Free for 3 months + Exclusive £20 Amazon Voucher	 GO Call Orange on 0800 072 4137
	Broadband + Phone - Essentials ★★★★☆ (709)	24Mb	40GB	18 months	Free	£62.91	£6.99 3 Months Free + Free Connection Ends Soon	 GO Call TalkTalk 0800 049 7843
	Standard - O2 mobile customers only ★★★★☆ (265)	8Mb	unlimited	12 months	Free	£67.50	£7.50 Free for 3 months Ends 31/05/10	 GO Call O2 on 0800 028 2102
	Plusnet - Value ★★★★☆ (114)	8Mb	10GB	12 months	£29.99	£81.91	£6.49 Online Exclusive 4 Months Free Ends 18/05/2010	 GO Call PlusNet on 0800 694 0016
	Home Starter - Orange mobile customers only ★★★★☆ (246)	20Mb	unlimited	18 months	Free	£84.00	£7.00 Call now for Exclusive £20 Amazon Voucher	 GO Call Orange on 0800 072 4137
	Premium - O2 mobile customers only ★★★★☆ (265)	20Mb	unlimited	12 months	Free	£90.00	£10.00 Free for 3 months Ends 31/05/10	 GO Call O2 on 0800 028 2102

<http://www.broadbandchoices.co.uk/bundleCalc.asp>
Rates for postal code NW3 6NR, May 2010

- “All Canadians should have access to high-speed networks as digitally savvy citizens, consumers, workers, entrepreneurs and artists— to connect them to the potential that the digital economy offers.” (DE Consultation paper)
- But how does this work exactly...? If we ‘fix’ the access ‘problem’ can we realize this potential?

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Government of Canada (2010). Improving Canada’s Digital Advantage. Strategies for Sustainable Prosperity – consultation Paper on a Digital Economy Strategy for Canada. http://de-en.gc.ca/wp-content/uploads/2010/05/Consultation_Paper.pdf. p. 19

Linking Citizens and Broadband

- How does 'broadband' produce/enable positive socio-economic outcomes?
- Are we* focusing on the right questions?
 - We need to think about society and people, not just technology and economic impacts
 - How do we enable citizen *engagement* with a digital *society*?
 - What is the link between 'broadband' and positive socio-economic outcomes?

** Multiple stakeholders, multiple (conflicting?) objectives*

Problematic Assumptions

- Access to broadband = engaged user able to participate in the digital economy
- What we see around us is representative of Canadian society, everyone uses the internet

Some Data

- Canadian Internet Use Survey, Fall 2009
 - >23,000 respondents, Statistics Canada data
- Big picture looks quite good
 - 80% of Canadian adults used the Internet for personal reasons in the past 12 months, 96% of these used the Internet at home
 - 92% of home users had a high speed connection
 - Digital divide narrowing (except urban-rural)

Statistics Canada (2010). Canadian Internet Use Survey, 2009. <http://www.statcan.gc.ca/daily-quotidien/100510/dq100510a-eng.htm>.

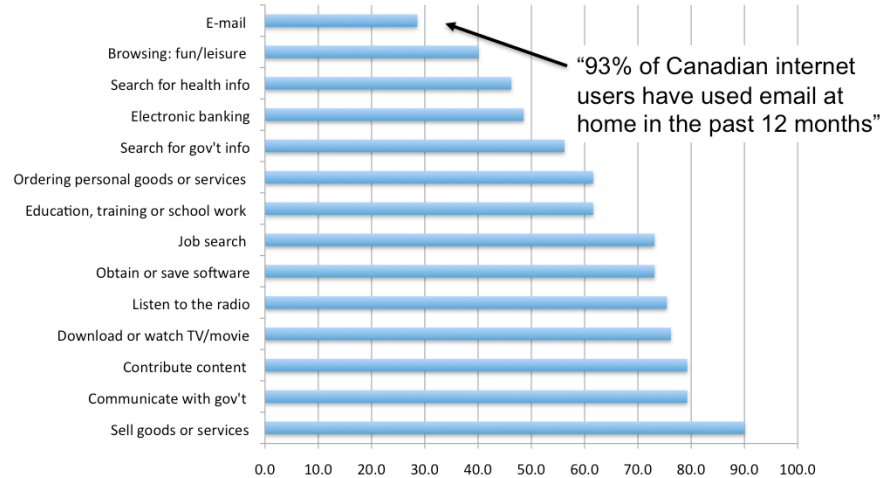
Digging Deeper

- Does internet access = use?
 - ~58% of adult Canadians online every day
 - ~42% of adult Canadians spend 5 or more hours online per week
- Do these numbers represent an 'engaged' citizenry?
 - We don't really have a good way to answer this question. Few international comparisons, lack of detailed data.

Statistics Canada (2010). Canadian Internet Use Survey, 2009. <http://www.statcan.gc.ca/daily-quotidien/100510/dq100510a-eng.htm>. Numbers are extrapolated to the general population, survey reports on the 96% of home internet users among the 80% of Canadians who use the internet from any location.

Digging Deeper (2)

% of adult Canadians who DO NOT do these activities online (from home)



Statistics Canada (2010). Canadian Internet Use Survey, 2009. <http://www.statcan.gc.ca/daily-quotidien/100510/dq100510a-eng.htm>.

Calculations by Catherine Middleton, showing % of total adult Canadian population that did not engage in these specific activities on the internet from home in the past twelve months

Are We 'Digital-Ready'?

- Online activities as a proxy for engagement and skill (can we develop better measures?)
- Do Canadians have the necessary skills to use the internet to engage with e-health, e-learning, e-commerce, e-government services?
- If not, what is needed to encourage/enhance digital literacy, and to narrow the skills gap?



Statistics Canada (2010). Canadian Internet Use Survey, 2009. <http://www.statcan.gc.ca/daily-quotidien/100510/dq100510a-eng.htm>. Numbers are extrapolated to the general population, survey reports on the 96% of home internet users among the 80% of Canadians who use the internet from any location.

What Do We Need to Do This Research?

- Better data
 - CIUS is a good start, but problematic in some ways
 - Need comprehensive approach, e.g. US NBP
 - More fine-grained analysis, e.g. non-users
- More hands on deck
- Multiple perspectives, community partnerships and engagement
- International comparisons, metrics

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US NBP is the National Broadband Plan. Development of this plan involved extensive data collection on a wide range of metrics to understand how Americans are, and are not, using broadband connectivity.

Conclusion

- Focus on infrastructure, while important, overshadows an understanding of capacity and engagement
- Humanities and social sciences scholars can contribute greatly to better understanding what people need/want in a digital society, and articulating/translating these findings for policy makers



Thanks!

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