Are Users Up to Speed?
The Demand Side of Sustainable Broadband

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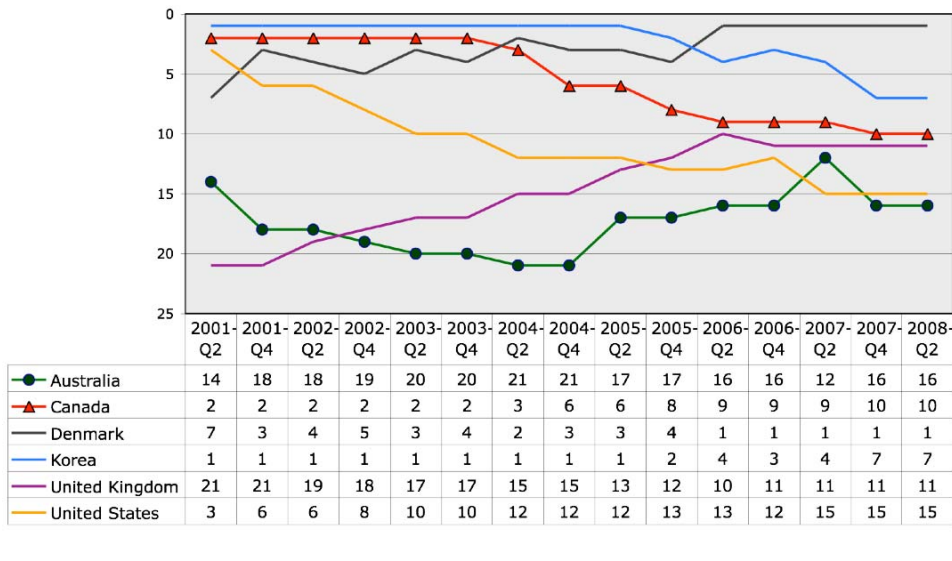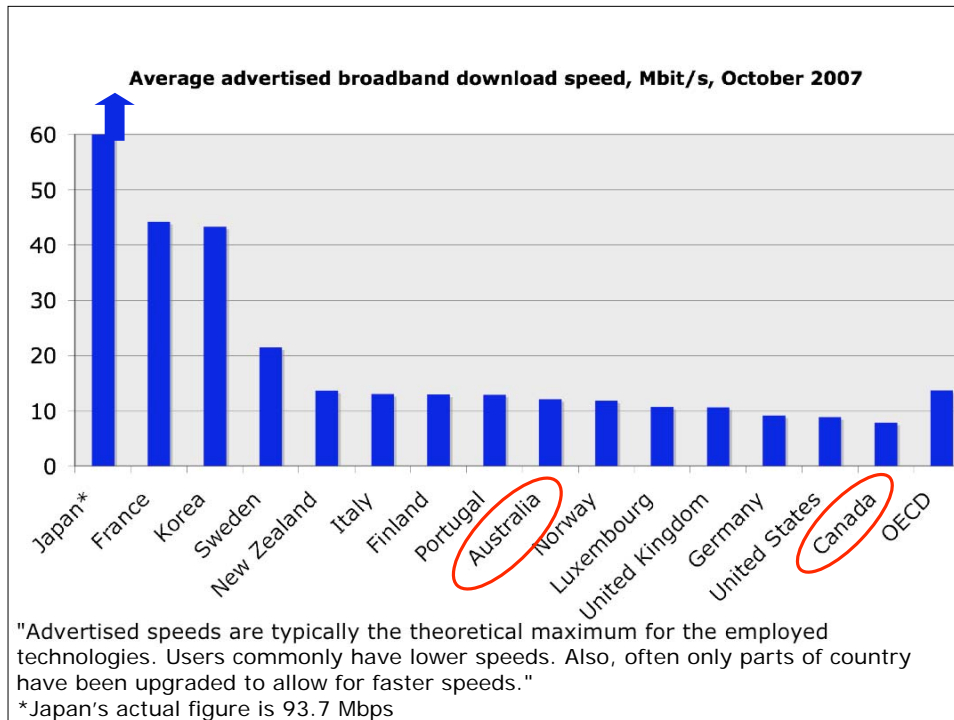---

Broadband in Canada

- Early adopters
- As of 2007:
  - 93% of households can access wired broadband service
  - 48% of households subscribe to broadband services (plus 16% using 'lite')
  - >50% of broadband subscribers buy 5-9 Mbps service, but 25% choose service offering<1.5 Mbps

Broadband in Canada

- Perceived to be a leader in broadband, but:
  - Limited competition in the marketplace (despite LLU, open access), long contracts
  - Concerns about traffic shaping, restrictions on usage
  - Limited, expensive mobile broadband
  - No policy discussions about next-generation broadband networks

Broadband Subscribers per 100 inhabitants, OECD rankings

	2001-Q2	2001-Q4	2002-Q2	2002-Q4	2003-Q2	2003-Q4	2004-Q2	2004-Q4	2005-Q2	2005-Q4	2006-Q2	2006-Q4	2007-Q2	2007-Q4	2008-Q2
Australia	14	18	18	19	20	20	21	21	17	17	16	16	12	16	16
Canada	2	2	2	2	2	2	3	6	6	8	9	9	9	10	10
Denmark	7	3	4	5	3	4	2	3	3	4	1	1	1	1	1
Korea	1	1	1	1	1	1	1	1	1	2	4	3	4	7	7
United Kingdom	21	21	19	18	17	17	15	15	13	12	10	11	11	11	11
United States	3	6	6	8	10	10	12	12	12	13	13	12	15	15	15

Average advertised broadband download speed, Mbit/s, October 2007

Chart with categories (left to right): Japan*, France, Korea, Sweden, New Zealand, Italy, Finland, Portugal, Australia, Norway, Luxembourg, United Kingdom, Germany, United States, Canada, OECD

"Advertised speeds are typically the theoretical maximum for the employed technologies. Users commonly have lower speeds. Also, often only parts of country have been upgraded to allow for faster speeds."
*Japan's actual figure is 93.7 Mbps

Can Canada learn from Australia?

- What is important in building a next-generation broadband network?
  - Capacity building (demand)
  - Infrastructure decisions (what to supply)
  - Private sector and public sector involvement (how to pay for it)

## Can Broadband enable Sustainability?

- Issues involved in building infrastructure impact the extent to which it can contribute to sustainability
- Two examples and a question:
  - Substitution of digital products for physical products
  - Substitution of online interaction for travel
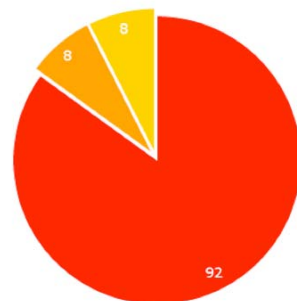 - Are we focusing on the right thing?

Canada: Online Activities

% of Canadian population (aged 16+) doing each online activity
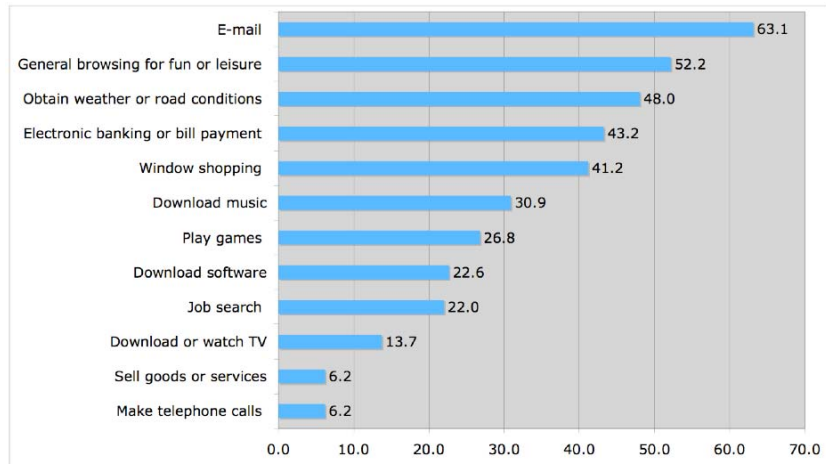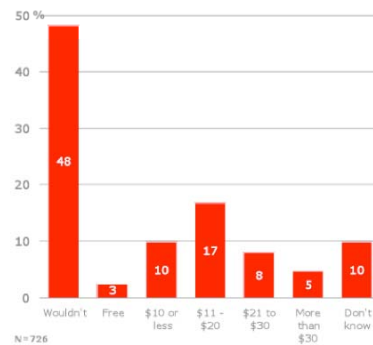

CCi Digital Futures Report
The Internet in Australia

5.18 Where do you usually buy your music?

The vast majority of internet users still usually buy their music from a 'bricks and mortar' store. Less than one in ten (8.1%) usually buy online.

CCi Digital Futures Report

The Internet in Australia

5.27 If a boxed DVD or CD set was on sale for $40, for what price would you consider downloading a digital copy instead?

Chart (percentages):
- Wouldn't: 48
- Free: 3
- $10 or less: 10
- $11 – $20: 17
- $21 to $30: 8
- More than $30: 5
- Don't know: 10

N=726

Capacity

- There will always be a Flashing 12:00 problem
- Broadband usage is not yet sufficiently integrated into average people's daily lives to result in benefits from substituting digital products for physical ones

What about Organizational Capacity?

Fixed vs. Mobile Broadband

- Not an either-or decision, but…
  – Fixed broadband is not yet delivering broader societal benefits to wide user base (e.g. e-health, e-learning)
  – Fixed broadband may end up being used primarily for entertainment purposes
  – Mobile devices as the primary tool for communication, networking, information retrieval, and some entertainment

Sustainability: PC vs. Mobile

Points to Ponder

- Fibre to the home is probably inevitable, but is the demand really there now?
  - Market forces vs. interventionist approaches?
  - Mobile vs. fixed
- What is needed to encourage a 'culture of use' that would encourage more sustainable outcomes?

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