

Canada, Libraries and the Digital Economy

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TED
ROGERS
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MANAGEMENT UNIVERSITY

What I will talk about

- Digital economy strategies
- Canada's digital economy
 - wired broadband networks
 - mobile phones and broadband
 - extending network availability, increasing quality
- Libraries as enablers of the digital economy

Digital economy strategies

See the end of this PDF for links to all documents and data cited in the presentation.



LIVING THE iN2015 VISION

iDA INFOCOMM
DEVELOPMENT
AUTHORITY OF
SINGAPORE

Singapore has made good progress in implementing the Intelligent Nation (iN2015) Masterplan. We have established a highly connected nation with a globally competitive infocomm industry, infocomm-savvy workforce and spearheaded the transformation of key economic sectors, government and society.



CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN

What do digital strategies do?

- Set targets and plan for roll out of high quality broadband infrastructure
 - e.g. all Europeans to have access to broadband networks $\geq 30\text{Mbps}$ by 2020 and 50% of EU households *adopting* services with speeds of 100Mbps or greater by 2020
 - 100 million U.S. homes should have *affordable* access to *actual* download speeds of at least 100 Mbps and actual upload speeds of at least 50 Mbps by 2020

National broadband infrastructure



Encourage digital literacy

- Foster effective use of the internet, encourage socio-economic benefit from access to online data and services
- Individuals and businesses, especially SMEs



Define service delivery in a digital economy



Objectives include:
“Enabling the
American people and
an increasingly
mobile workforce to
*access high-quality
digital government
information and
services anywhere,
anytime, on any
device.*”



Cabinet Office

Government Digital Strategy

November 2012

“Digital by default means digital services which are so straightforward and convenient that all those who can use digital services will choose to do so, while those who can’t are not excluded”

- Services that are convenient to the users rather than the providers; high-quality, responsive, convenient and up-to-date.
- Average cost of a central government digital transaction can be almost 20 times lower than the cost of telephone and 50 times lower than face to face, also saves time/money for users

Canada's digital economy*

*with a focus on citizen access to,
and participation in, the knowledge economy



Canada?

Digital economy strategy finalized and ready for release, sources say

NEWS | THE WIRE REPORT | 01/30/2014 5:01 PM EST

The federal government has finalized its long-awaited digital economy strategy and could release the policy as early as next month, sources familiar with the government's plans said.

Three people contacted by The Wire Report this month confirmed a formal digital economy plan has been finalized after more than four years of preparation. They said the plan is ready for release, most likely by this spring, if not sooner.

[READ MORE](#)

eGovernment in Canada?

“Canadians rely more on the Internet to conduct business, and they expect the government to keep pace and provide them with online information and services that meet their needs,” but:

➡ “there is no government-wide service delivery strategy and that there has been no overall assessment of client needs and satisfaction since 2005” *Auditor General 2013*

➡ no mention of mobile in audit of access to online services

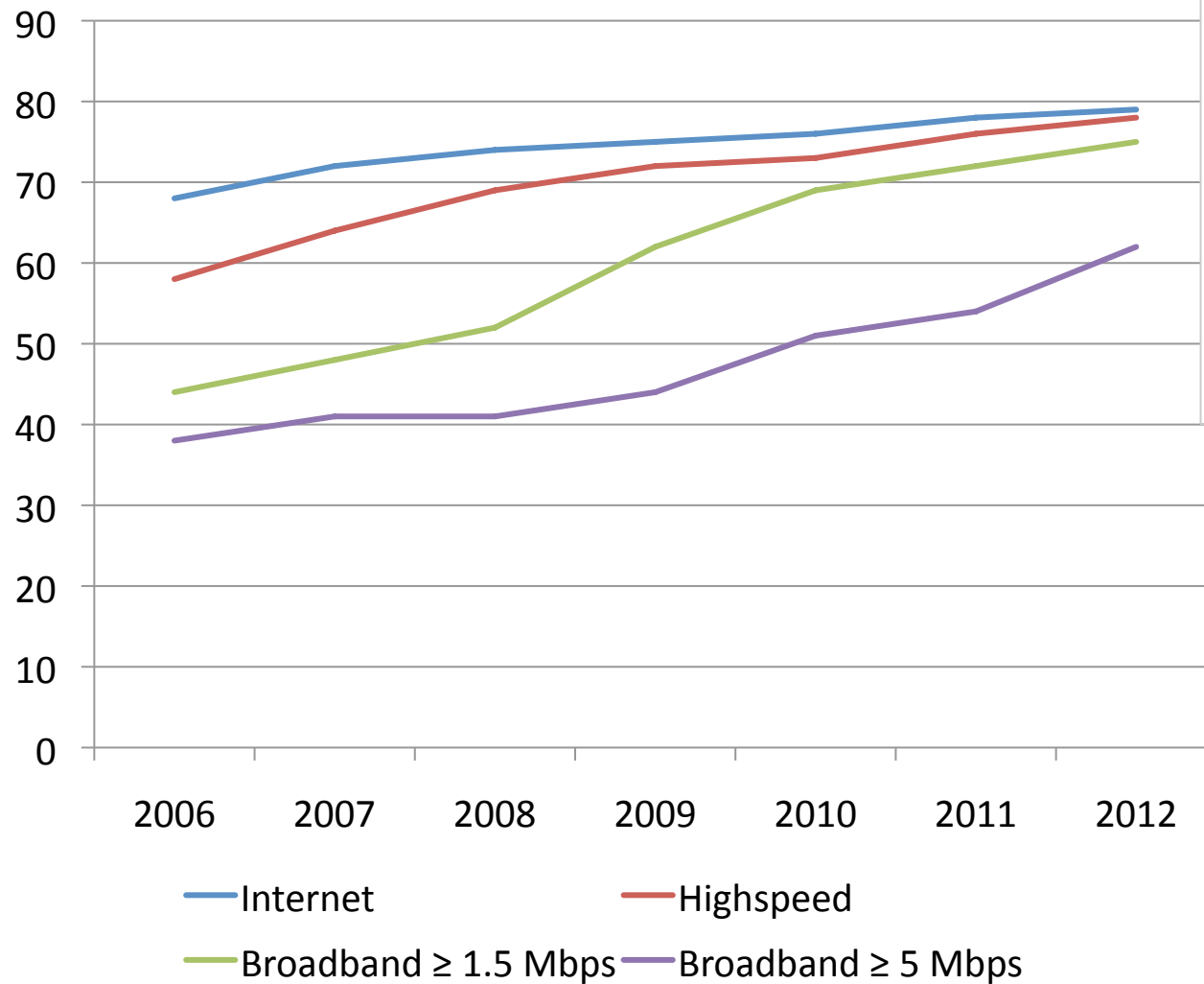
Broadband access

- Federal funding for Community Access Program ended March 2012
- Broadband Canada 2009-2012
- “the Commission [CRTC] establishes target speeds of 5 megabits per second (Mbps) downstream and 1 Mbps upstream. These speeds should be available to all Canadians, through a variety of technologies, by the end of 2015”

The access divide in Canada

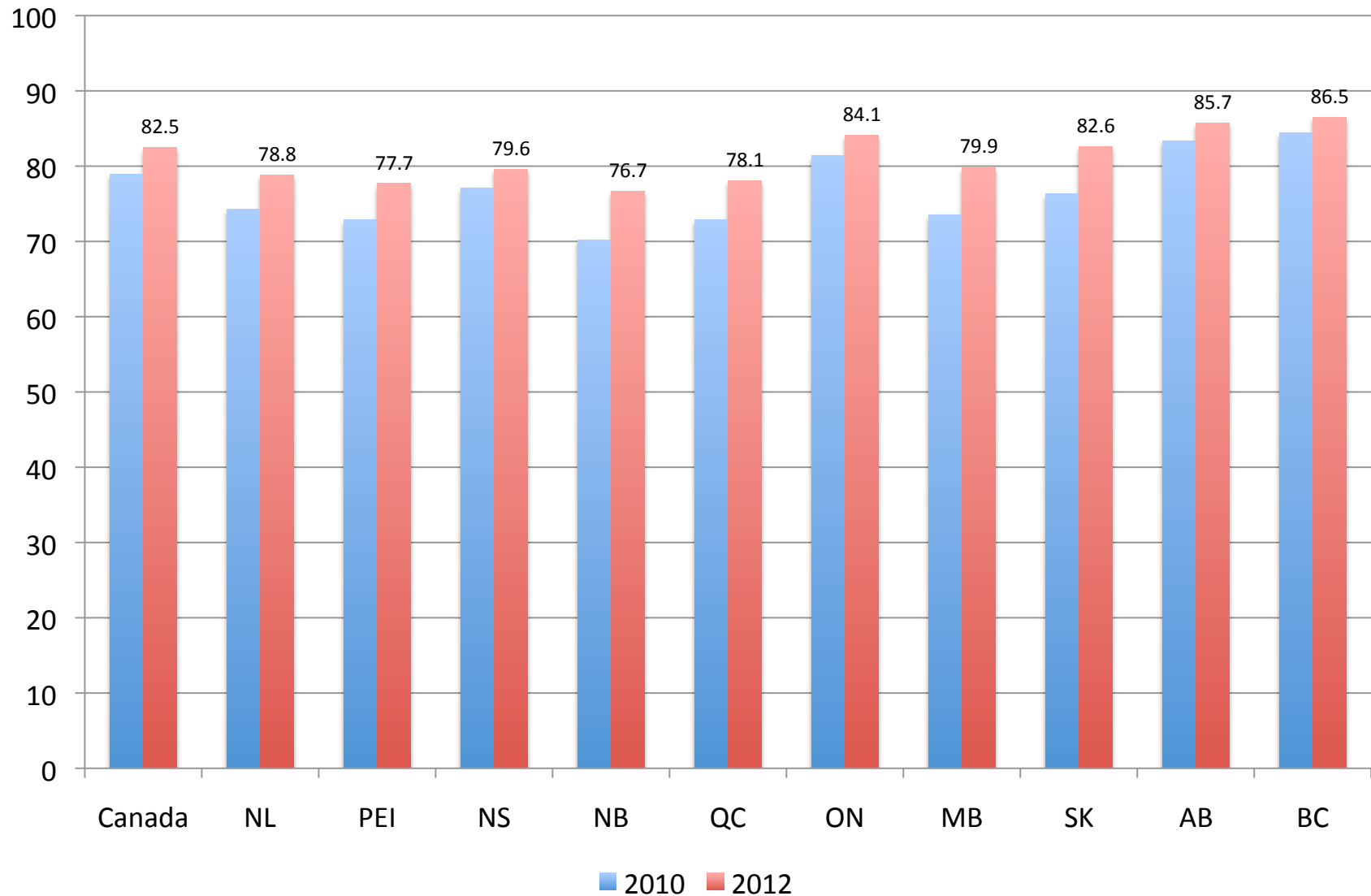
- As of 2012, 100% of urban Canadian households can access broadband
 - 94% access to speeds ≥ 5 Mbps
 - 32% access to ≥ 100 Mbps (limited choice of provider)
- 85% of rural households have access to broadband
 - ≥ 5 Mbps service only available to $\sim 20\%$ of households with fixed wireless or satellite service

Internet use in Canada



Data: CRTC Communications Monitoring Reports

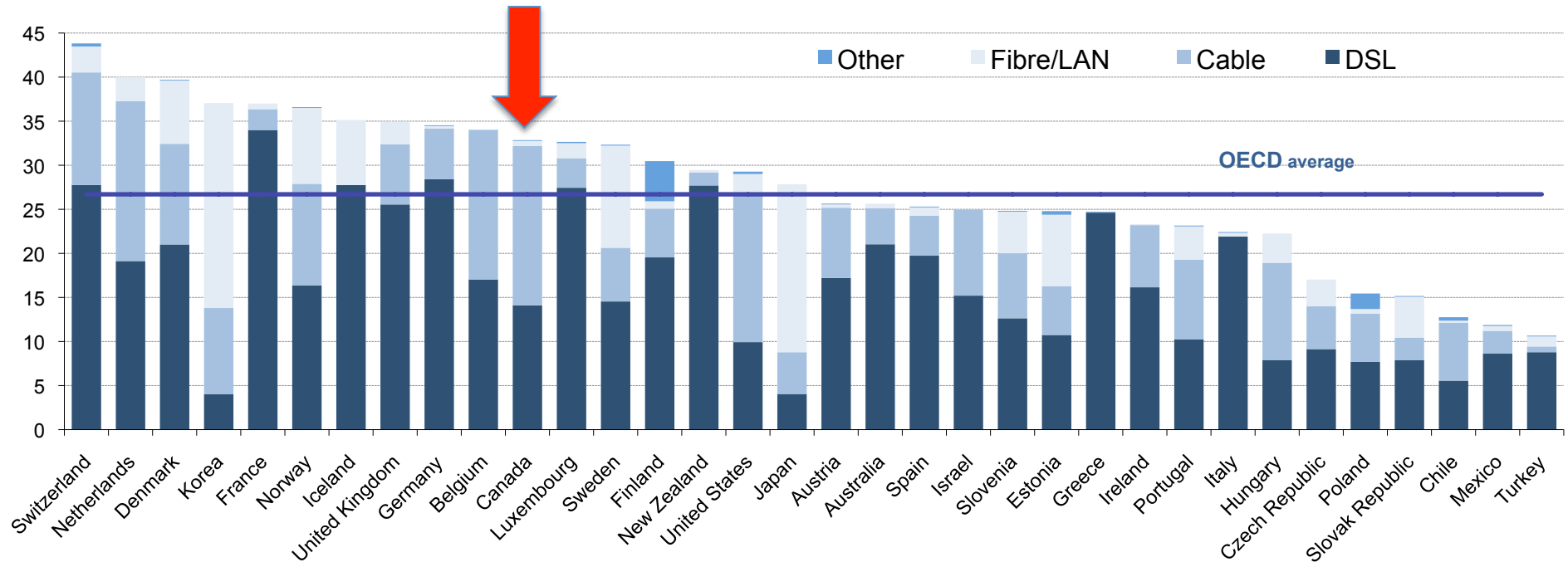
Internet use by province



Data: Canadian Internet Use Survey, Statistics Canada

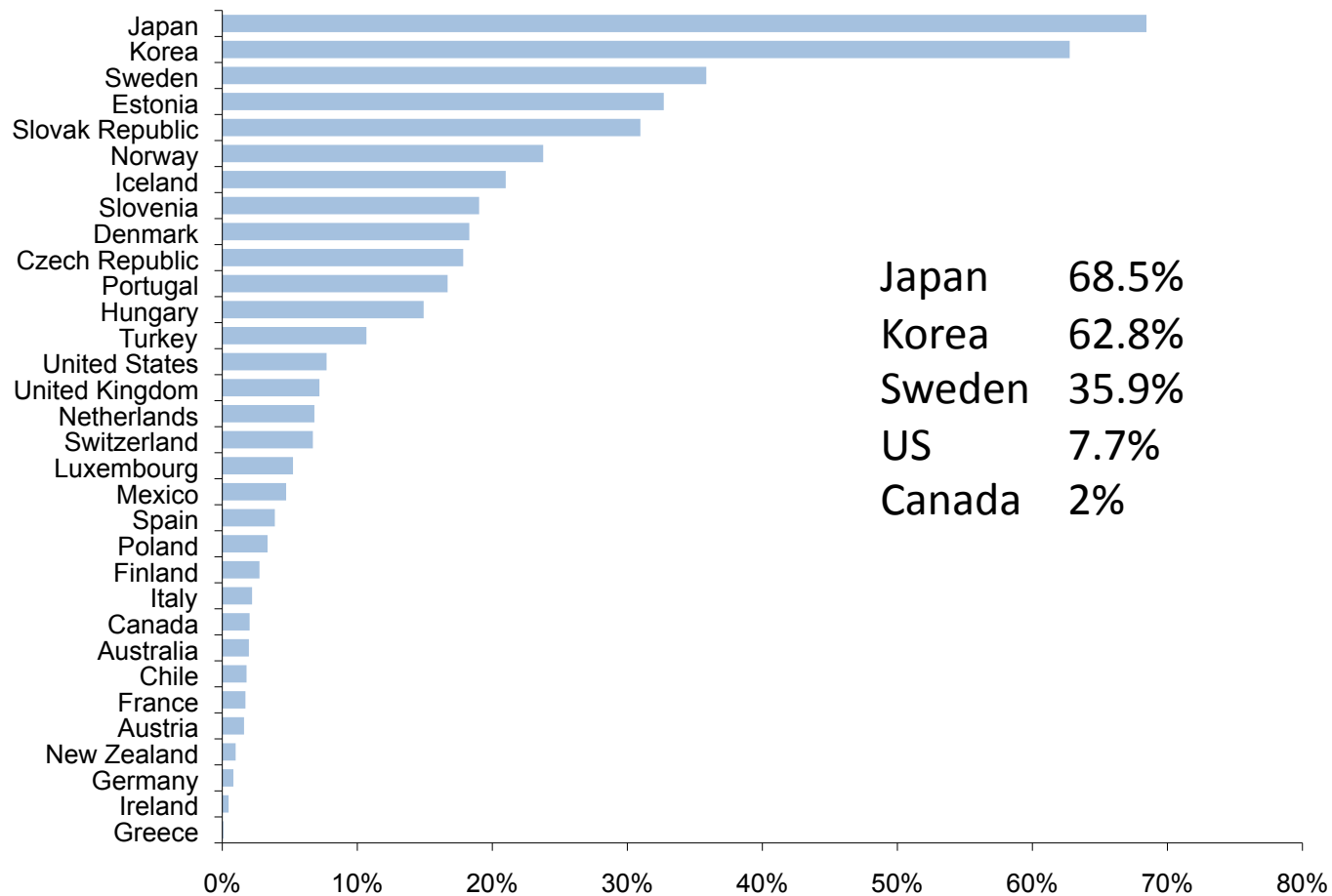
Wired broadband subscriptions

per 100 inhabitants, by technology, June 2013, OECD data

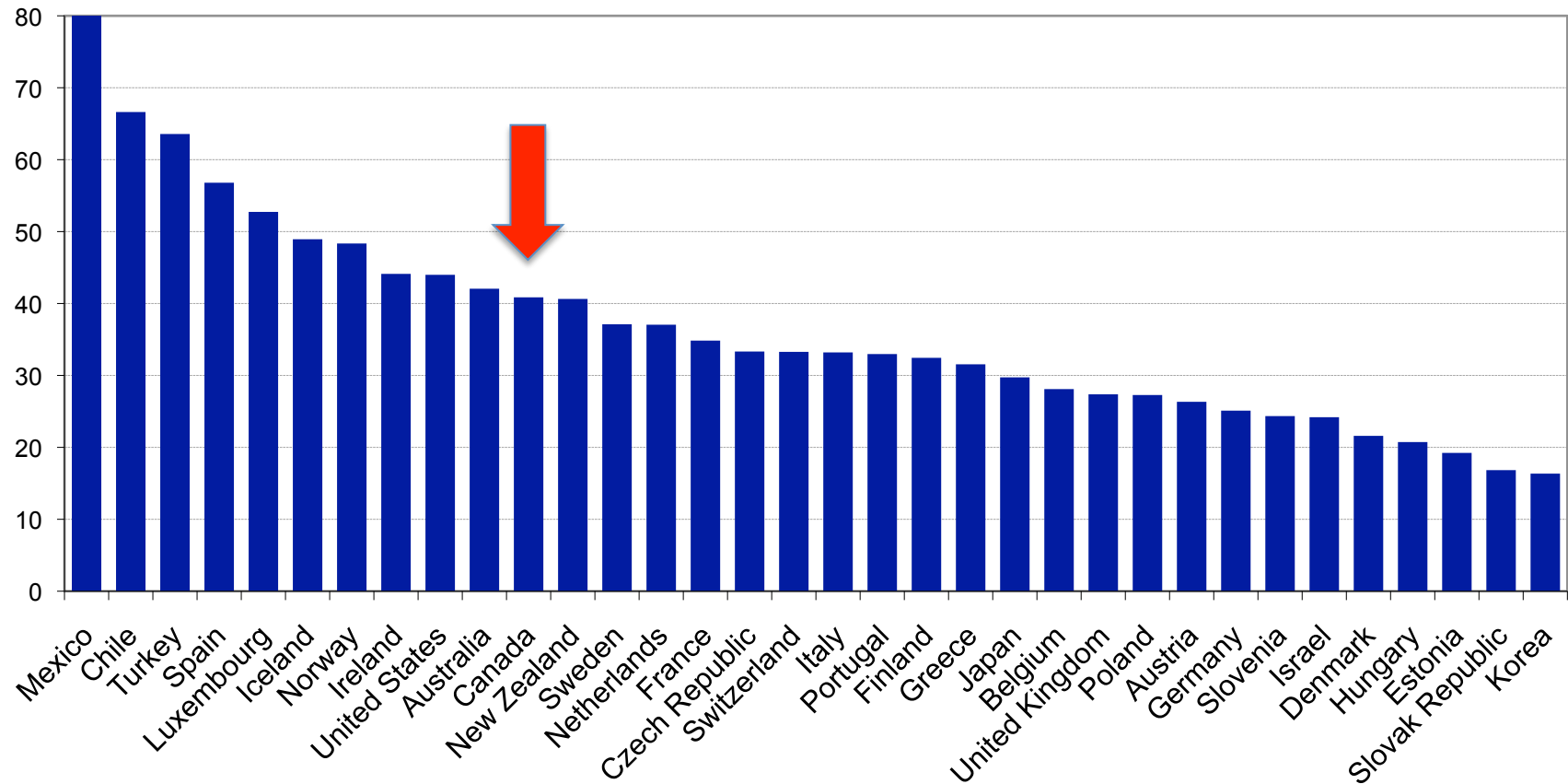


% fibre connections

Percentage of fibre connections in total broadband subscriptions, June 2013, OECD



Pricing comparison



33 GB / 60 hours per month. ≥ 15 Mbps, September 2012, OECD data

Professor Michael Geist, commenting on a 2009 report: 'Lagging or leading? The state of Canada's broadband infrastructure'

[Blog](#) > [ISP Funded Report Finds Canadian Broadband Isn't Awful](#)

ISP Funded Report Finds Canadian Broadband Isn't Awful

Friday October 09, 2009

Improving broadband availability

DIY broadband

- B4RN
- EC Fiber Vermont
- Can these models be scaled?



Municipal networks

- Lafayette, LA
- Chattanooga, TN
- St Louis Gigabit Main Street



The fiber network that permits Gig service was installed by Chattanooga's publicly owned electric power system, EPB, to support the most advanced smart grid system in the nation. The smart grid is the first killer app for Chattanooga's Gig network, but it's just one of many that the community plans to deploy as we continue to take advantage of the Gig.



Intelligent Communities



- Fredericton, NB
- Stratford, ON
 - Broadband Connectivity, Innovation, Knowledge Workforce, Digital Inclusion, Marketing and Advocacy



Olds, Alberta

Network wholly owned by the citizens of Olds

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Going mobile

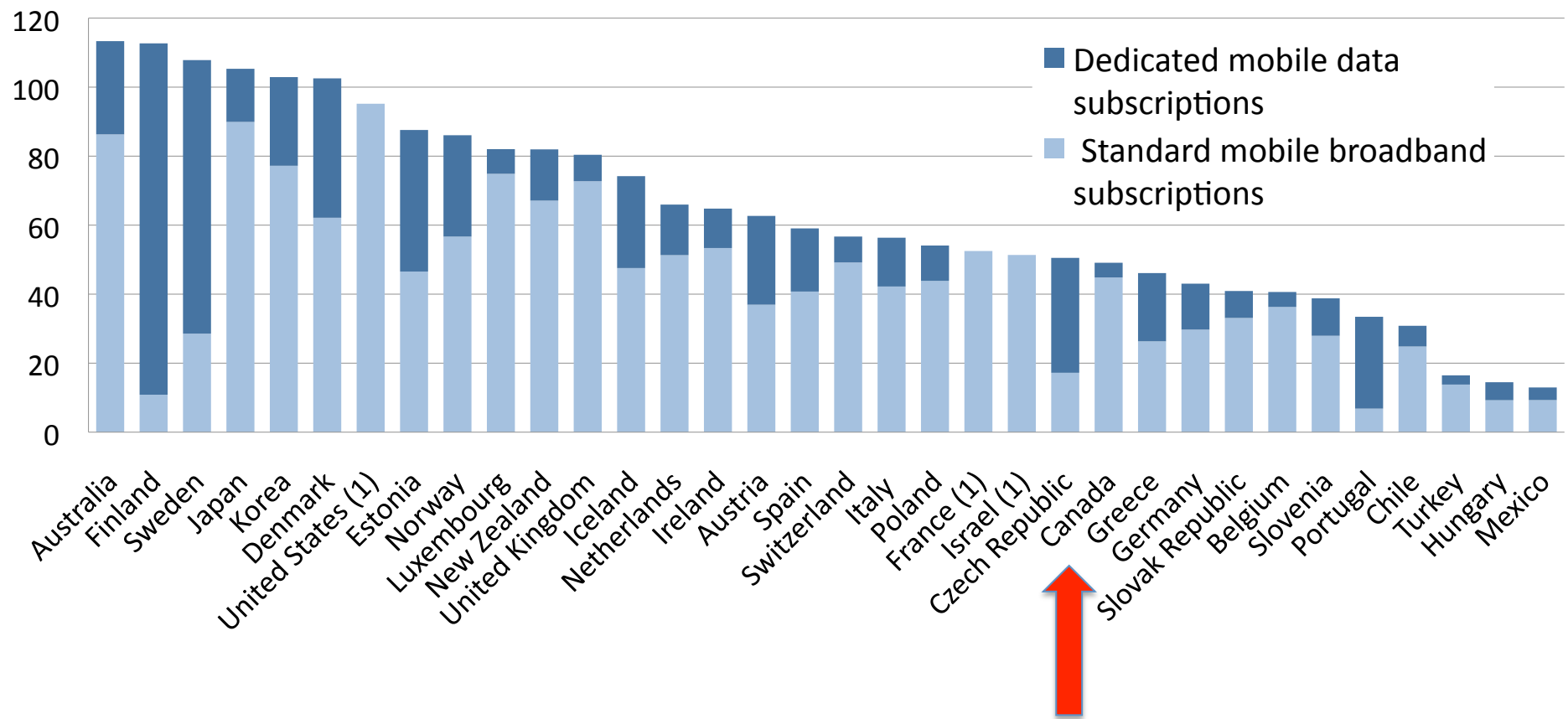
What about mobile services?

- Mobile networks cover 20% of Canada's geographic area
- 99% of Canadians have access to mobile phone and data service
- 72% have access to 4G/LTE (fastest available mobile data service)

Cellular stats – Canada 2012

- 81% of Canadians subscribed to a wireless service
- 52% *of wireless subscribers* used smartphones, tablets and/or other advanced handheld devices
 - ▣➡ $\approx 42\%$ using mobile data
 - ▣➡ $\approx 58\%$ not (yet?) using mobile data

OECD *mobile* broadband subscriptions per 100 inhabitants, by technology, June 2013



Canada 49.1, OECD average 67.8

Is the mobile market competitive?

- Contentious debate about competition (or lack thereof) in Canada's wireless sector
- Canada 24th in OECD in wireless broadband penetration, 109/144 in mobile phone penetration (ITU data)

DID YOU KNOW?

FACT:

Wireless rates in Canada are typically lower than in the U.S., in some cases up to 40% lower¹ and smartphone monthly plans are actually cheaper in Canada than in the United States.²

Source:

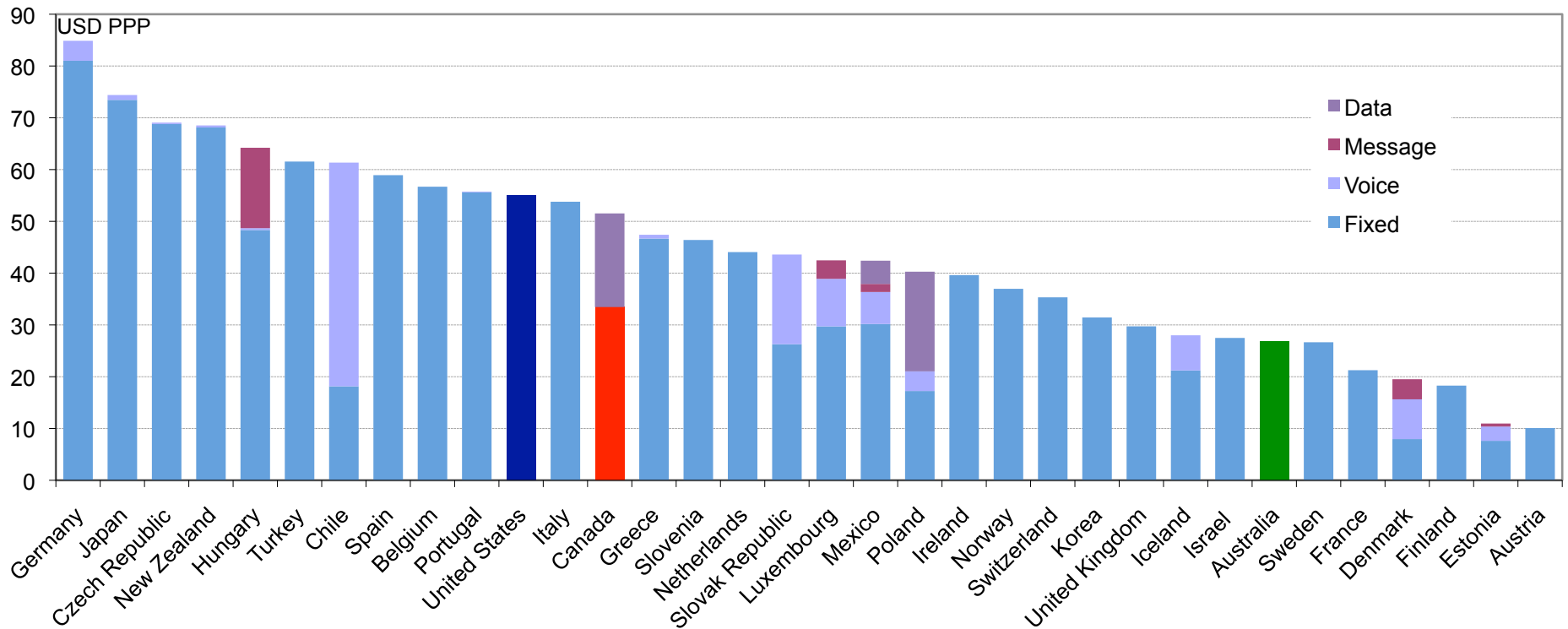
[1] Wall Communications Report, prepared for CRTC, July 2013.

[2] Scotiabank, March 7, 2013

CANADA  A WORLD LEADER IN WIRELESS

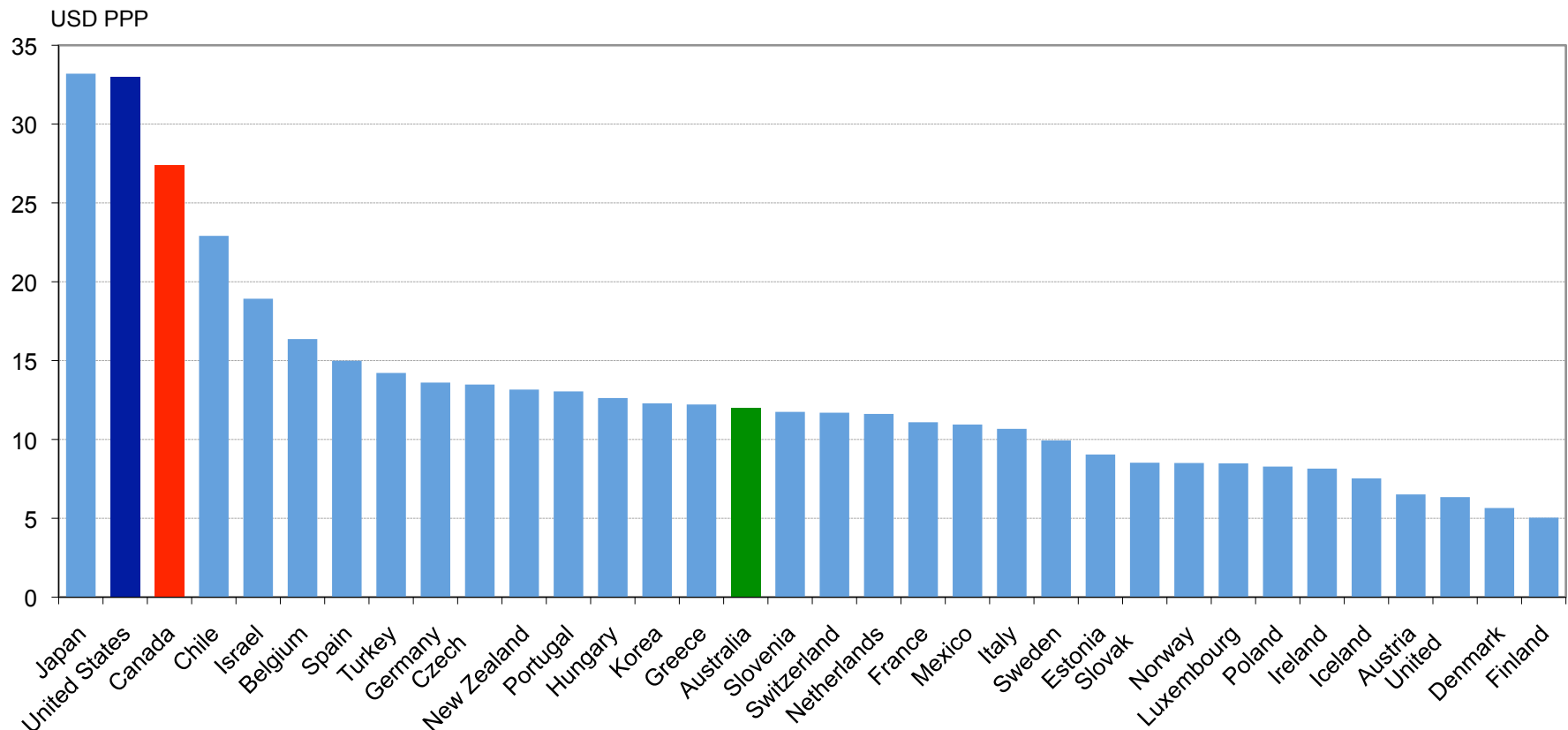
cwta | Association canadienne
des télécommunications sans fil
Canadian Wireless
Telecommunications Association | acts

OECD 100 calls + 2 GB mobile basket



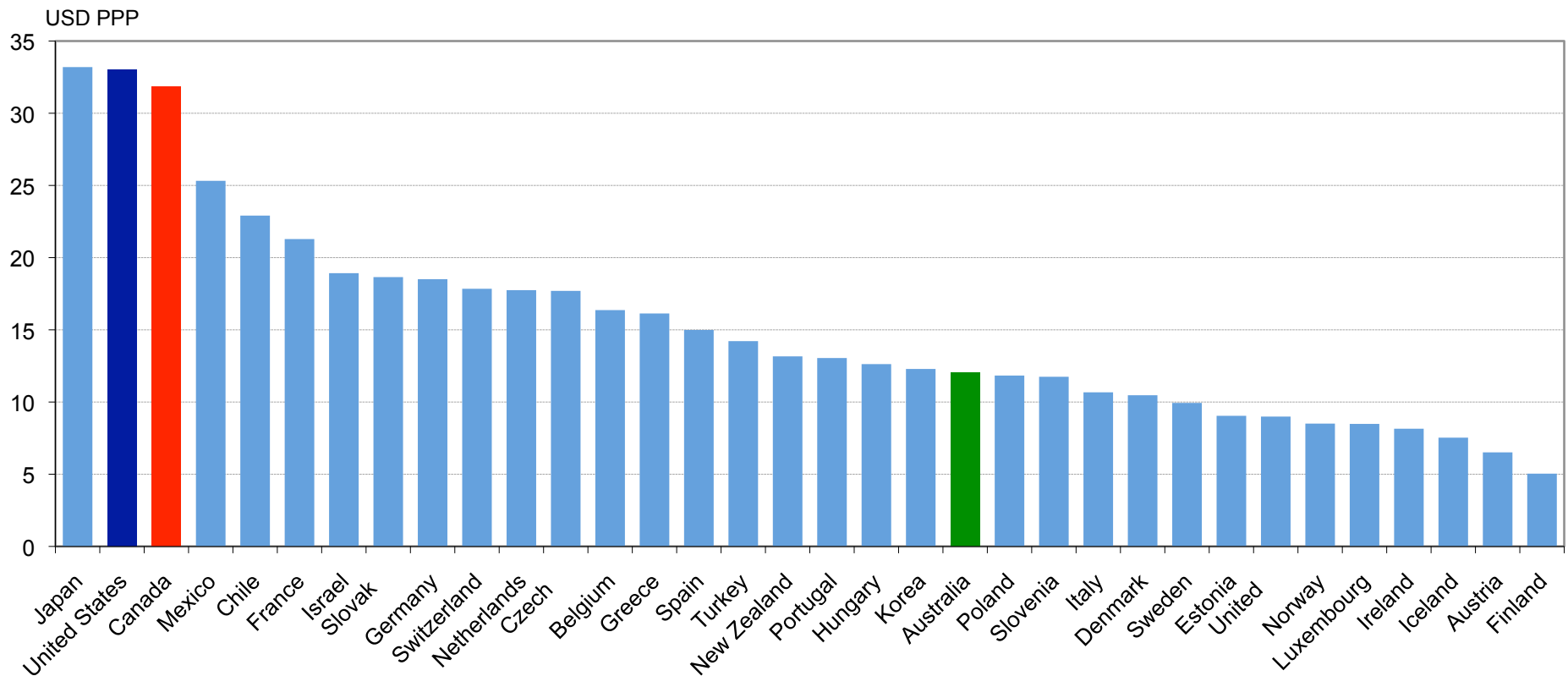
OECD Communications Outlook 2013, August 2012 data

OECD Wireless Broadband basket, Laptop 500 MB



OECD Communications Outlook 2013, Sept 2012 data

OECD Wireless Broadband basket, Laptop 1 GB



OECD Communications Outlook 2013, Sept 2012 data

Make an informed choice

 Canadian Radio-television and Telecommunications Commission
Conseil de la radiodiffusion et des télécommunications canadiennes

KNOW YOUR RIGHTS: WHAT THE CRTC'S WIRELESS CODE MEANS FOR YOU



- **NO CANCELLATION FEES AFTER 2 YEARS**
You can cancel your contract after 2 years with no cancellation fees – even if you have agreed to a longer term
- LIMIT ON DATA & ROAMING CHARGES**
Extra data charges and international data roaming charges are capped to prevent bill shock 
- **UNLOCKED CELLPHONES**
You can have your cellphone unlocked after 90 days, or immediately if you paid for the device in full
- TRIAL PERIOD**
You can return your cellphone within 15 days, without penalty, if you are unhappy with your service 
- **CLEAR LANGUAGE**
Your contract and related documents must be provided to you in plain language

FOR MORE INFORMATION ON THE BENEFITS
OF THE CRTC'S WIRELESS CODE, VISIT
WWW.CRTC.GC.CA/WIRELESSCODE



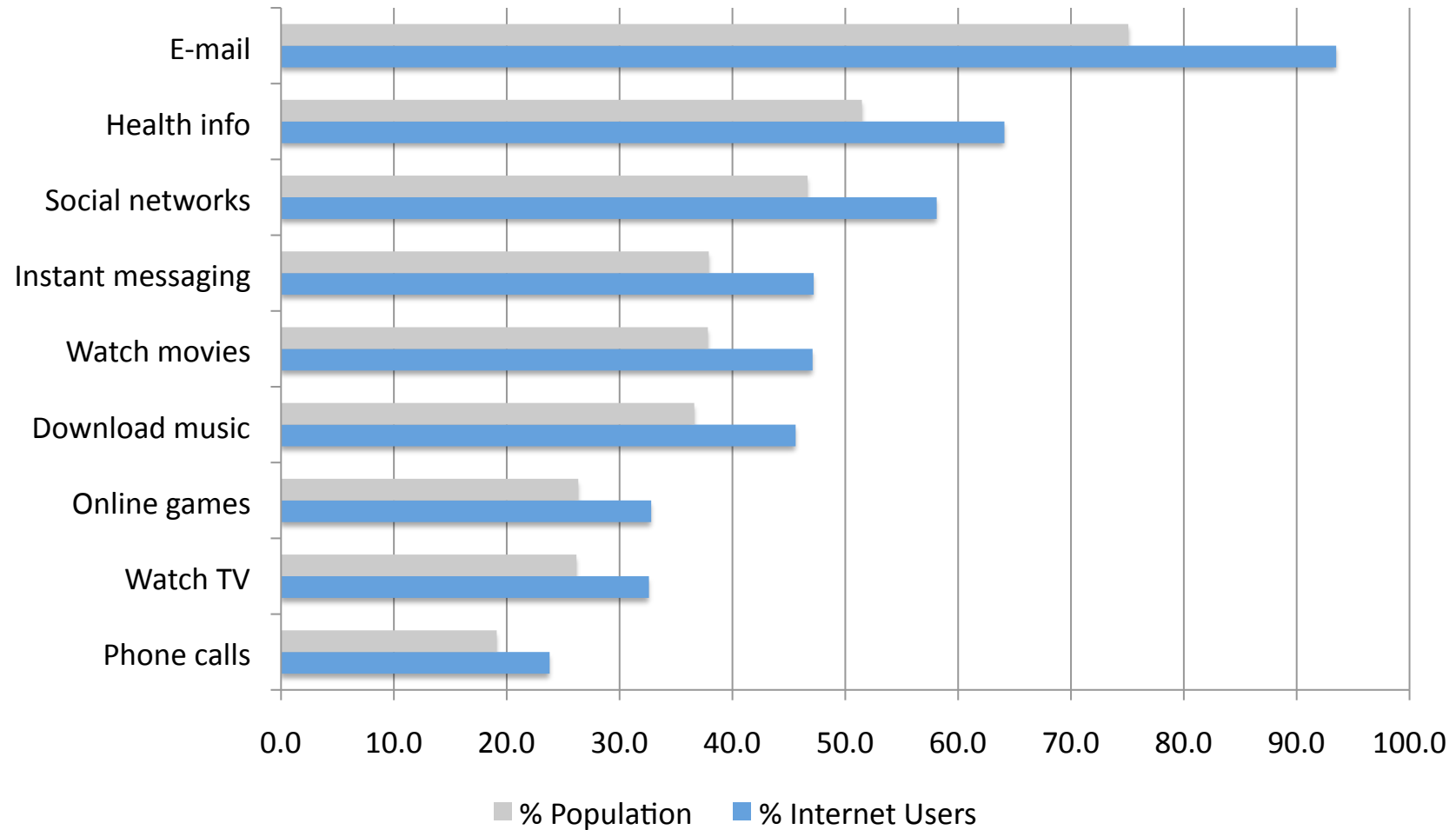
What can libraries do?***

*** thoughts from a non-librarian

What about libraries?

- Enablers of the digital economy, connecting people to knowledge
- Very important role as access provider:
 - Wi-Fi, connected computers, e-readers, tablets
- Enormous impact in increasing digital literacy, ongoing activity that provides real value to communities

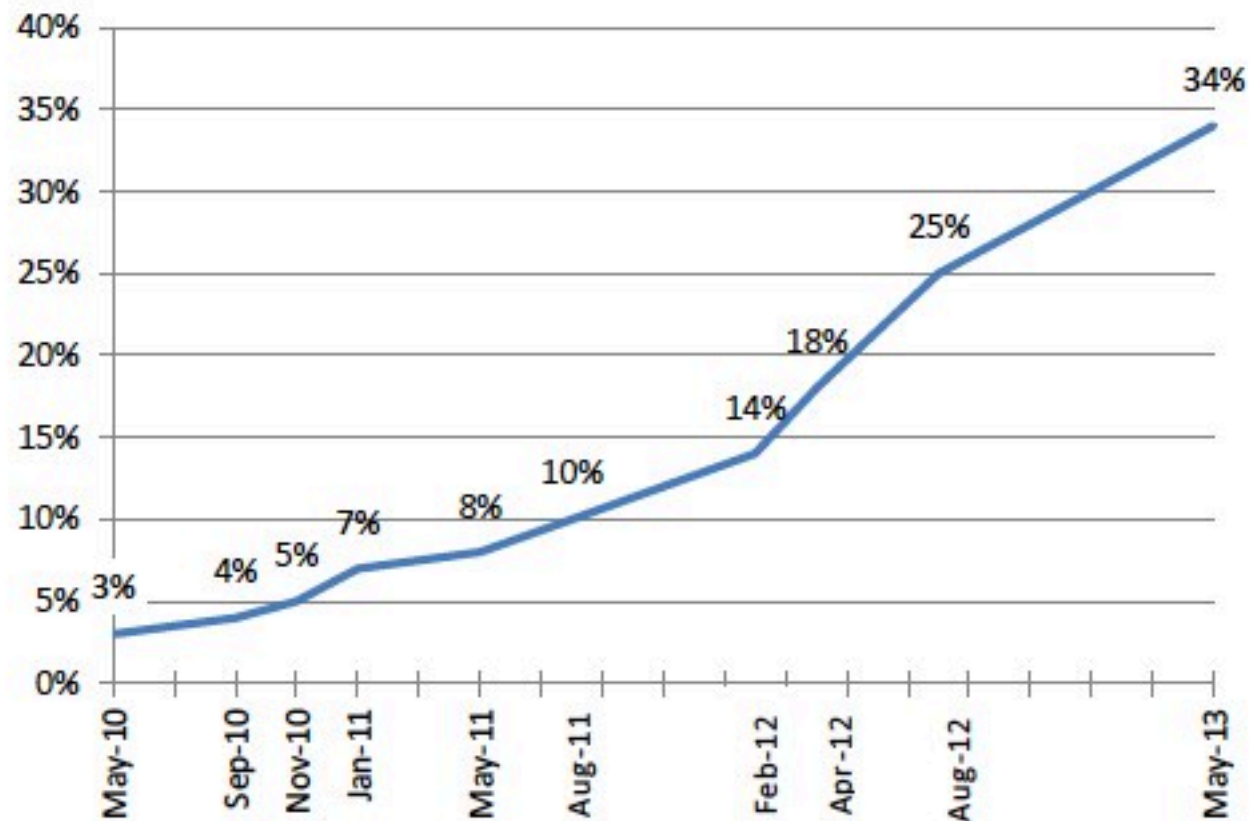
What do Canadians do online?



Data: 2010 Canadian Internet Use Survey, Statistics Canada

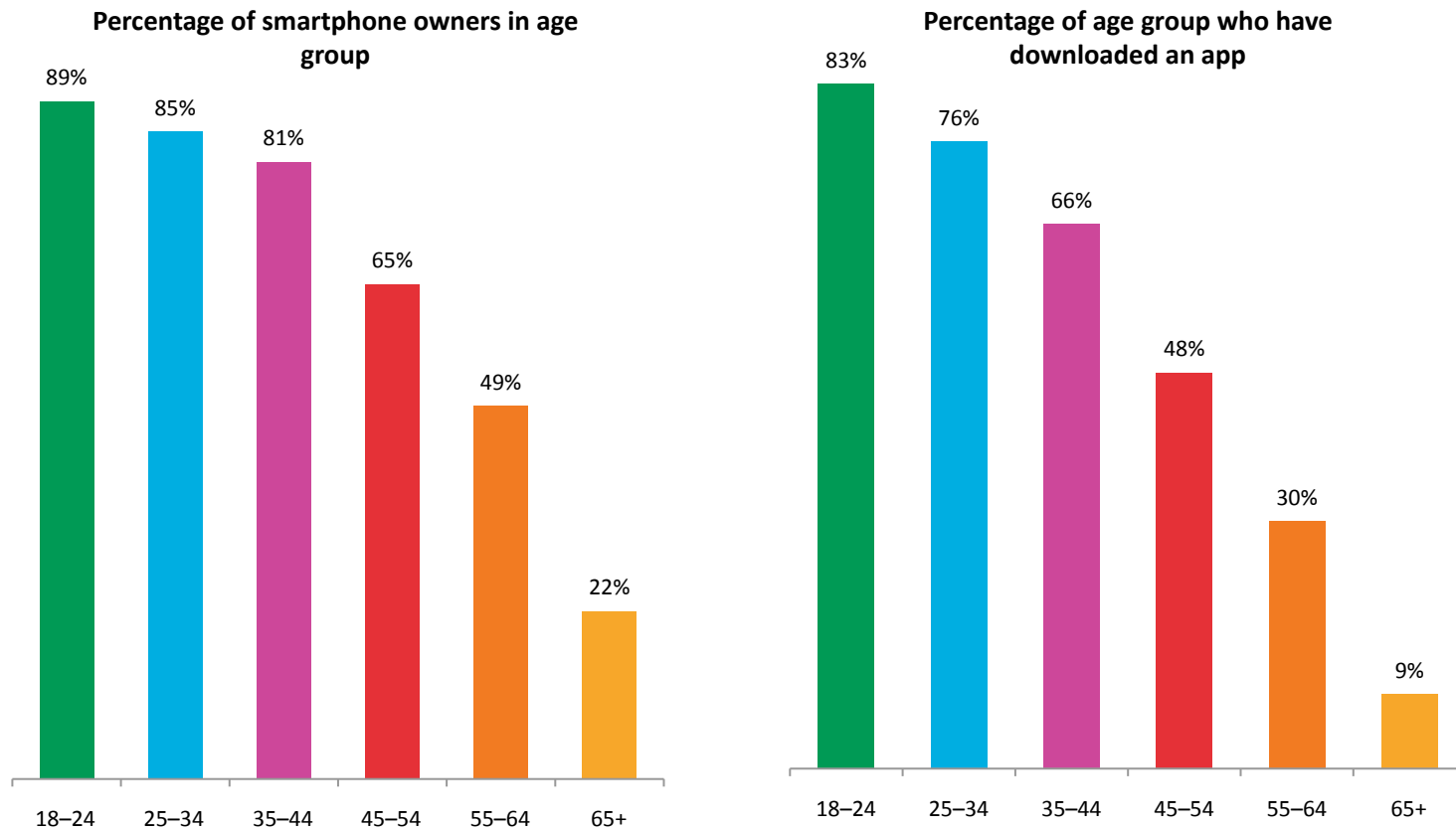
Tablet ownership over time (2010-2013)

% of American adults ages 18+ who own a tablet computer, over time.



Source: Pew Research Center's Internet & American Life Project tracking surveys, May 2010 – May 2013. May 2013 data is from the Pew Research Center's Internet & American Life Project's April 17-May 19, 2013 Tracking Survey of 2,252 adults ages 18 and older. Interviews were conducted in English and Spanish and on landline and cell phones. The margin of error on the sample is +/- 2.3 percentage points.

Smartphone user demographics

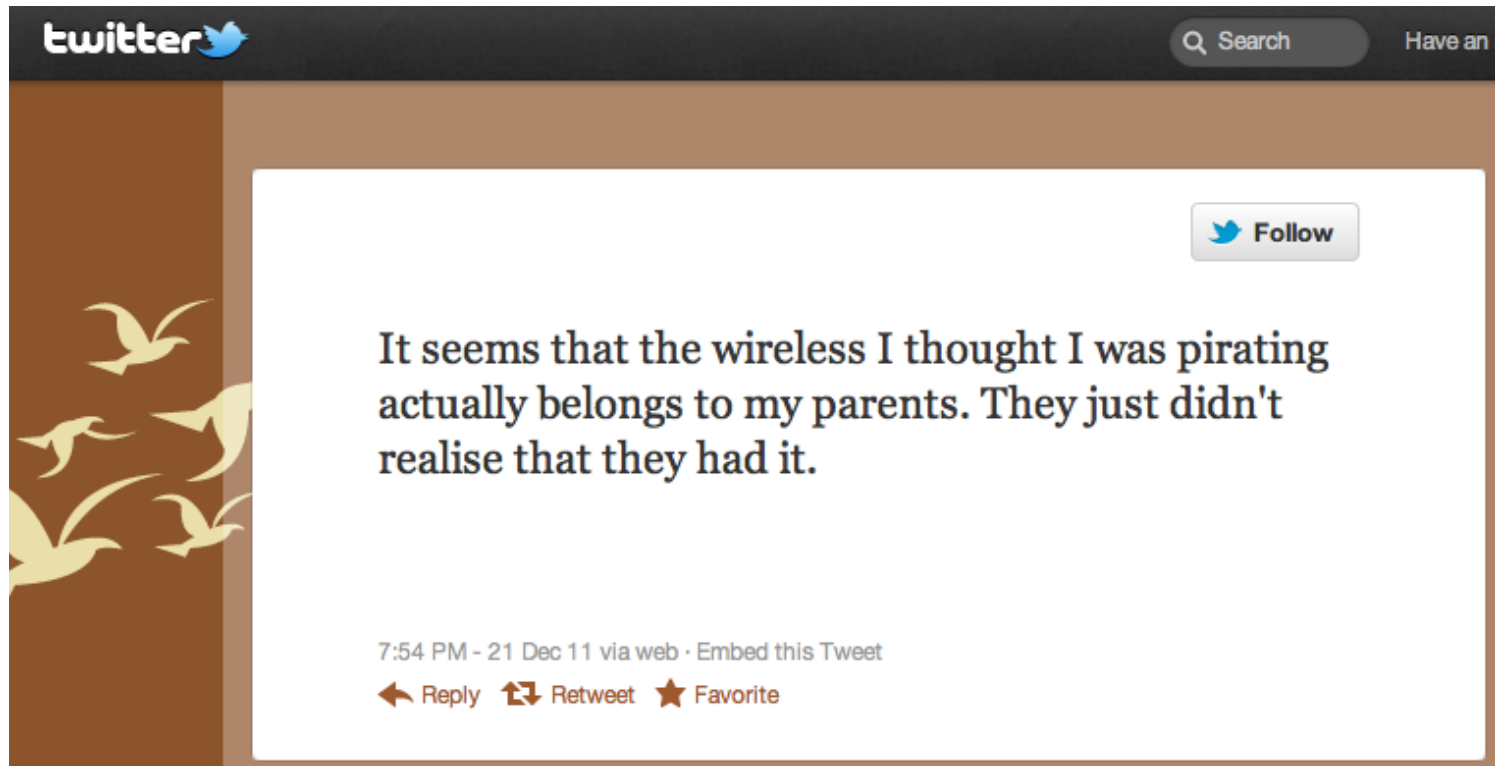


Australia, May 2013. ACMA research “Mobile apps: putting the ‘smart’ in smartphones

Need for mobile literacy



and digital literacy in the home



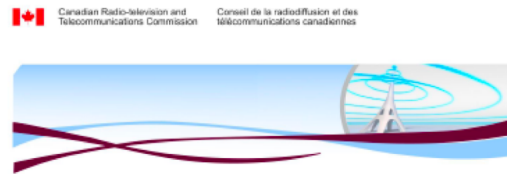
Thank you!

@catm Middleton

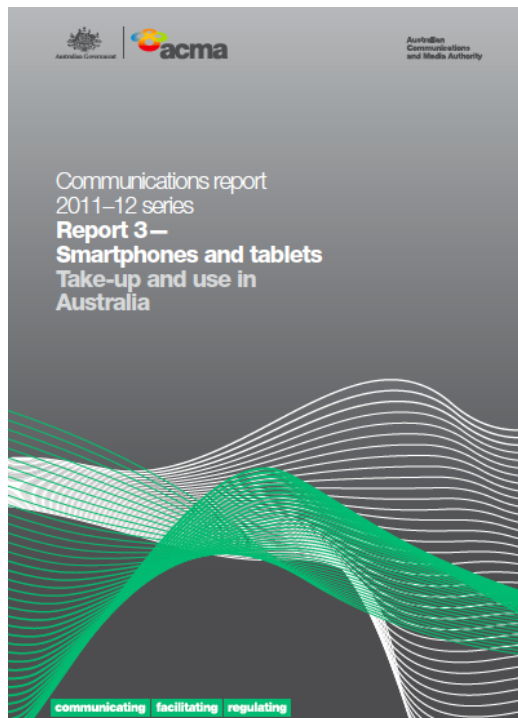
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Additional data sources



Communications Monitoring Report September 2013



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CRTC 2013, p. ii. For breakdown of mobile data use, see Table 5.5.9, p. 165

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OECD Fixed and wireless broadband subscriptions per 100 inhabitants (June 2013) <http://www.oecd.org/sti/broadband/oecdbroadbandportal.htm> Graph redrawn to include only mobile broadband.

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