TED ROGERS SCHOOL OF MANAGEMENT RYERSON UNIVERSITY

An International Perspective on Australia's NBN

Catherine Middleton

Ryerson University

Toronto, Canada

What is different about the NBN?

As compared to broadband initiatives in other countries, the NBN differs in terms of:

- scale
- cost
- business model:
  - extent of government intervention
  - open access wholesale network, differentiated traffic classes
  - shifts competition to service provision rather than infrastructure provision

Changing Nature of Competition

- Criticism: NBN Co is the new monopolist
- But, is infrastructure competition working in North America?
  - Increasing shift to cable for fixed line access in USA
  - Cable/telco duopoly in Canada
  - Mobile as alternative to fixed line?

“Go to just about any telecom conference these days, and some industry maven will make the case that restoring competition to the telecom world is so 1990s. Why don’t we all just recognize the inevitable, they ask: telecom is a natural monopoly, competition is a chimera, and the sooner we flash a steady green light for more industry consolidation and less government oversight, the better off we’ll all be.” *Former FCC commissioner Michael Copps, October 2012 (known for defense of the public interest)*

Infrastructure Competition: US

Wireline Broadband Technology Platform Coverage (% of homes passed)

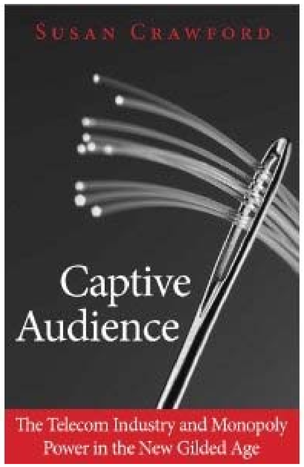
	Downstream bandwidth supported		
	1 Mbps	10 Mbps	25 Mbps
Cable and Fiber-to-the-Home (FTTH)	14-16%	14-16%	14-16%
Cable and Fiber-to-the-Node (FTTN)	23-27%	23-27%	78-82%
Cable and DSL	51-57%	51-57%	
	2-4%	3-9%	3-9%

Two technologies meeting demand

One technology meeting demand

Zero technologies meeting demand

Source: Bernstein Research
Data: FCC National Broadband Plan



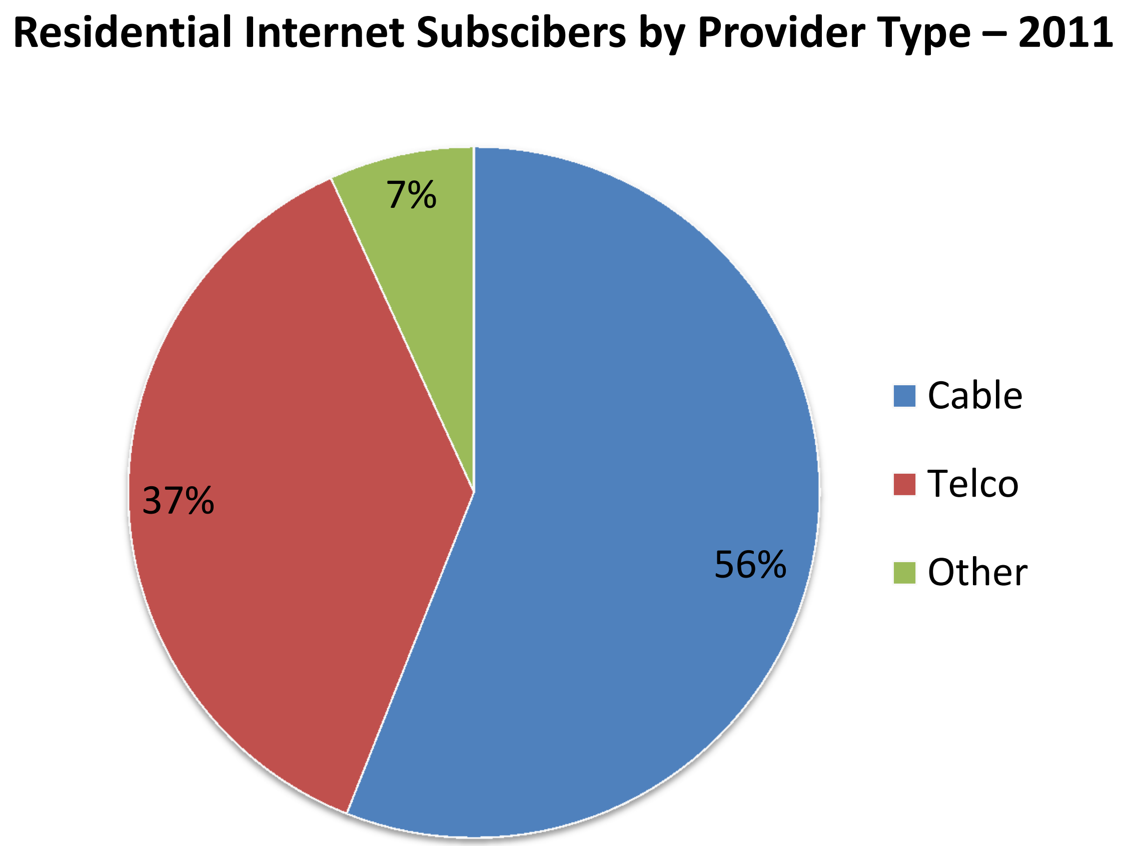
Infrastructure Competition: Canada

# of platforms	1.5 - 4.9 Mbps	5.0 - 9.9	10.0 - 15.9	16.0 - 24.9	25.0 - 29.9	30.0 - 49.9	50.0 - 99.9	≥100
1	3%	13%	27%	30%	33%	60%	75%	28%
2	9%	74%	56%	51%	45%	16%	0%	0%
3	16%	0%	0%	0%	0%	0%	0%	0%
4	72%	0%	0%	0%	0%	0%	0%	0%

Platforms include DSL, cable modem, fixed wireless, and mobile (HSPA+)

Source: 2012 CRTC Communications Monitoring Report, Table 5.3.5
Broadband availability platforms, by speed and number of platforms (2011)

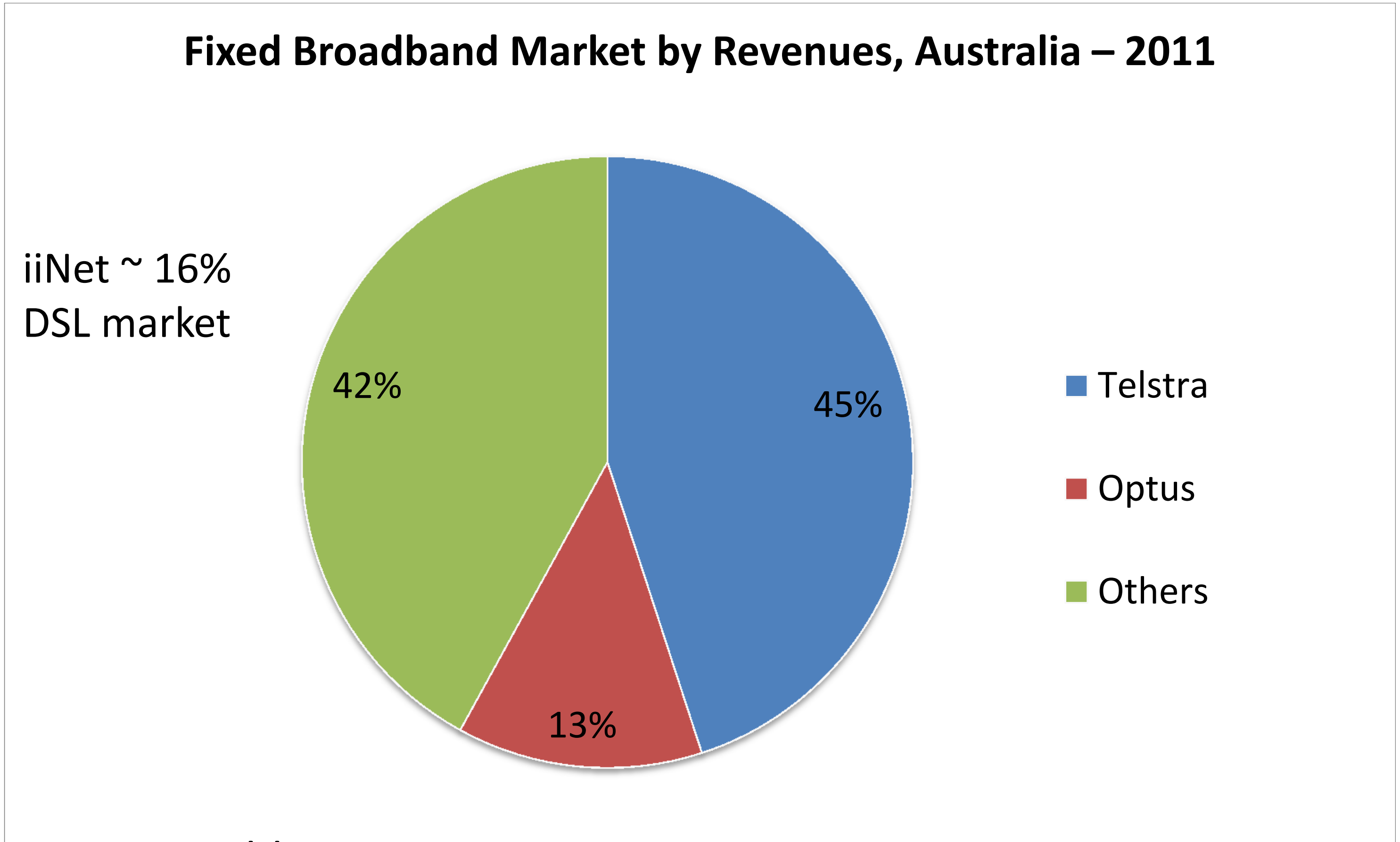
Fixed bb market share: Canada



Infrastructure competition but is it effective in enabling choice, innovation?

Source: 2012 CRTC Communications Monitoring Report
Table 5.3.2 Residential Internet subscribers, by type of TSP

Fixed bb market share: Australia



Source: BuddeComm

Canada/US fixed broadband market

- Limited competition for service providers
- Prices are not declining, although speeds are increasing over time
- Average speeds, no clear path to next gen networks
- Broadband provides internet connectivity, it is not nationwide infrastructure
- So, is there a better kind of competition or a better model?

A Rationale for the NBN

"The NBN will be a significant piece of Australian *critical infrastructure* that will underpin the provision of a range of essential services to the Australian community."

December 2010 Statement of Expectations

The NBN as *Infrastructure*

Is this the counter-argument to encouraging competing facilities to develop faster broadband?

- Uniform and ubiquitous
- High quality service
- Enables seamless access to internet *and* other services (e.g. multicast), QoS enabled
- Allows multiple service providers to serve single premise

Is the infrastructure model important?

- Key differentiator of NBN plan
  - but not well understood nor yet being realised through service development and delivery
- What is essential to infrastructure approach?
  - structural separation/effective wholesale access regime
  - FTTP?
- If Australia needs broadband *infrastructure*, why limit the infrastructure model to fixed line services?

Diverging outcomes

- Canada/US model has not provided effective competition for service provision, does provide *internet* access but path to next generation services unclear, not public *infrastructure*
- Australian NBN model *should* result in extensive service competition, enable use of broadband connectivity for more than internet access, provide public infrastructure

Defining Infrastructure

"Public infrastructure underpins the well being of society by enabling activities that provide public benefit. Whether it is ensuring public access to safe drinking water, or facilitating the transportation of goods and people, public infrastructure serves to create the conditions necessary for a functioning economy."

Infrastructure Canada (2006)

Research Note: Productivity and Infrastructure – A Preliminary Review of the Literature