

Broadband: The New Infrastructure Imperative

Thoughts from
Work in Eastern Ontario
(Opportunity Action Plan
and Rural Policy Project)

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Overview of Presentation

- Infrastructure Imperative – What Does This Mean?
- Broadband's Role in:
 - **Business Retention and Expansion**
 - **Building Human Capital**
 - **Business Attraction**
 - **Delivering and Accessing Public Services**
- Assumptions Behind Broadband Strategies in Rural Areas

Broadband – The New Infrastructure Imperative: What Does This Mean?

Significance hidden in “size of pipe” definition:

- Broadband - very **high-speed transfer** of information through **technologies** such as fibre optics, satellites, wireless transmission and co-axial cable. **Data rich applications** such as full motion video require more telecommunication capacity (bits of information per second) or bandwidth than a **low bandwidth application** such as e-mail or still imagery. Using current communication technologies, a transmission rate of 1.5 megabits per second (1.5 million bits of information per second) is often considered to be the **minimum speed** for acceptable broadband applications. Unlike a traditional dial-up connection, broadband services are always on, enabling **productivity and efficiency improvements**.

Source: http://ottawa.ca/city_services/planningzoning/2020/bb/7_0_en.shtml

Broadband – The New Infrastructure Imperative: What Does This Mean?

- More and more data and information is moving faster and faster among more and more people
 - Massive amounts of data/information; less filtering
 - Much smaller amounts of knowledge and wisdom
 - Some access is inappropriately used/security risks
- Many decisions being made faster and faster
 - Are they good ones? Risk of being blind-sided by what's **not** on the web (ex. tacit knowledge)
 - Paralysis due to overabundance of data/information

Broadband – The New Infrastructure Imperative: What Does This Mean?

- Internet users now essentially “blind” to location, and assume you have a big pipe
 - Increasing number of web-based applications --- often interactive --- requiring a big pipe
 - Big pipe opens up opportunity to capitalize on multiple smaller market niches (“Long Tail”)
 - “Size-of-pipe” has become a limiting factor in our ability to work together over distances
 - Big pipe needed for integrated applications (video, audio, text...)
 - Mobile access to pipe is increasingly common

Broadband's Role in Business Retention and Expansion

- Marketing (ex. virtual tours – real estate to tourist resorts, quotation services)
- On-line “catalogues” (parts, products)
- Order placement, bookings (online reservations)
- E-commerce (customer purchases; internal financial transactions)
- Regulatory documents/requirements from government
- Access to employee training and development
- Don't forget! Farms are businesses too!

Broadband's Role in Building Human Capital

- For young people, lack of broadband = “dark ages”
 - Equivalent to earlier generations not having a phone
 - Access to full suite of technologies taken as “given”
- Influences SME and home-based businesses' ability to attract employees, and often to provide ongoing training and professional development
- “Creative class” uses broadband to allow them to work at home for short periods, often on special projects
 - Need to tap into company systems from remote location
 - Need to access web for research, communications

Broadband's Role in Business Attraction

- Broadband is only one of many factors influencing location decisions
- Major firms need easy electronic access to other companies in corporate group and to head office
- More and more often, supply chain management (ex. supplier-to-customer systems) is being done online and globally
- Broadband is a proxy for:
 - How “tech savvy” a community/region is --- especially its labour force
 - How easy/difficult it would be for a company to work from a particular community/region

Broadband's Role in Delivering and Accessing Public Services

- **Delivering...**

- Health care – ex. imaging, video consultation
- Distance education – ex. interactive, multimodal
- Energy and Utility Services – ex. remote interrogation and system monitoring
- Administrative applications – ex. databases and reports required for outcomes/results-based management and accountability requirements

Broadband's Role in Delivering and Accessing Public Services

- **Access...**

- By residential clients
 - ex. applications to PSE, licenses, payment systems, account maintenance, job interviews
- By business clients, especially SMEs
 - ex. downloadable forms, on-line applications, participation in webcasts such as OPA
- Typically, major institutions already have access to “dedicated” broadband (ex. ORION network) but may not be able to make available to multiple sites

Assumptions Behind Broadband Strategies in Rural Areas

- A case of market failure; no business case for ISPs
- Governments don't want to become ISPs
- Someone may still think this is "my territory"
- Ground truthing required to really understand need and potential solutions
- Capital and operating needs are different
- Best role for public sector may be on capital side
- Need to prove ability to aggregate demand
- Need to propose "implementable" solutions.

Thank you!

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