ICT4D
Bridging the Digital Divide:
The Canadian Experience

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Len St-Aubin
Minister Counsellor, Canadian Embassy Berlin
International Trade Canada
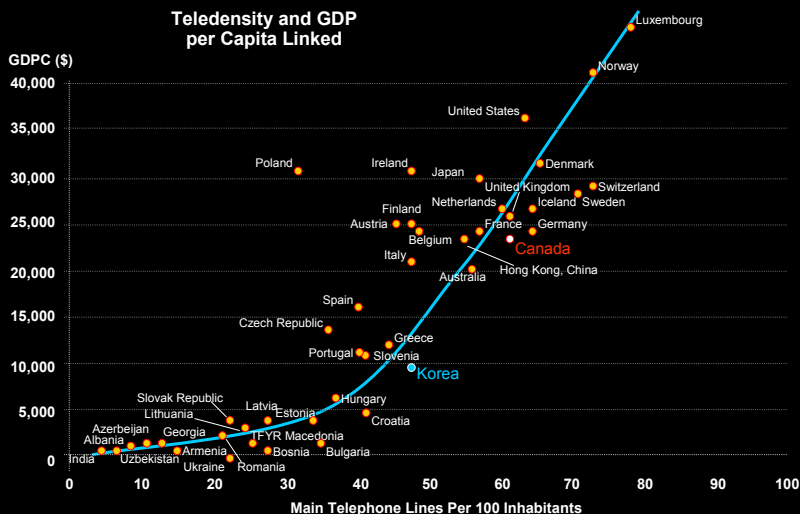len.staubin@international.gc.ca

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We are in the Network Age

"Today's technological transformations are intertwined with another transformation - globalization - and together they are creating a new paradigm: the network age."
United Nations Human Development Report, July 2001

"Without innovative public policy, these technologies could become a source of exclusion, not a tool of progress."

United Nations Development Report, July 2001

Technology is Key to Success …

Teledensity and GDP per Capita Linked

GDPC ($)

Main Telephone Lines Per 100 Inhabitants

Luxembourg, Norway, United States, Poland, Ireland, Japan, Denmark, United Kingdom, Switzerland, Netherlands, Iceland, Sweden, Austria, Finland, France, Germany, Belgium, Canada, Italy, Hong Kong, China, Australia, Spain, Czech Republic, Greece, Portugal, Slovenia, Korea, Slovak Republic, Hungary, Lithuania, Latvia, Estonia, Croatia, Azerbeijan, Georgia, TFYR Macedonia, Albania, Armenia, Bosnia, Bulgaria, India, Uzbekistan, Ukraine, Romania

Source: ITU and Gartner Dataquest, *The Payoff of Ubiquitous Broadband Deployment*, 2004
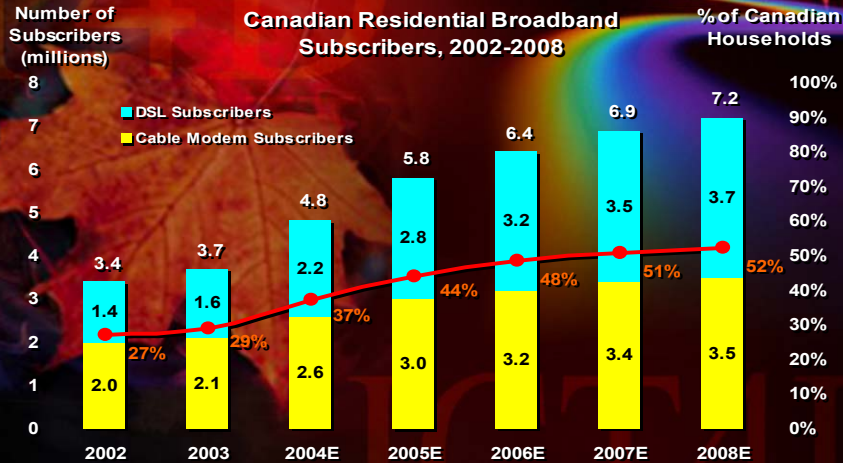
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Canada is increasing connectivity

- **100% of schools and libraries connected by 1999**
- **90% of computers in schools are connected to the Internet**
- **Median student-to-computer ratio is 1 to 5 (Statistics Canada, 2003/04)**
- **Almost 500,000 refurbished computers to schools**
- **Connected 12,000 volunteer organizations to the Internet**
- **Established 8,800 public Internet access sites**
- **CA*net4: the world's first national optical research and education network**
- **64% households (HIUS 2004) and 75% SMEs use the Internet (CFIB 2003)**
- **# 1 in Government Online (Accenture 2001, 2002, 2003, 2004)**

Citizens, businesses and governments are going online

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Not only are Canadians moving online, they are demanding high-speed

Canadian Residential Broadband Subscribers, 2002-2008

Number of Subscribers (millions)

% of Canadian Households

- DSL Subscribers
- Cable Modem Subscribers

Year	Total	DSL	Cable Modem	% Households
2002	3.4	1.4	2.0	27%
2003	3.7	1.6	2.1	29%
2004E	4.8	2.2	2.6	37%
2005E	5.8	2.8	3.0	44%
2006E	6.4	3.2	3.2	48%
2007E	6.9	3.5	3.4	51%
2008E	7.2	3.7	3.5	52%

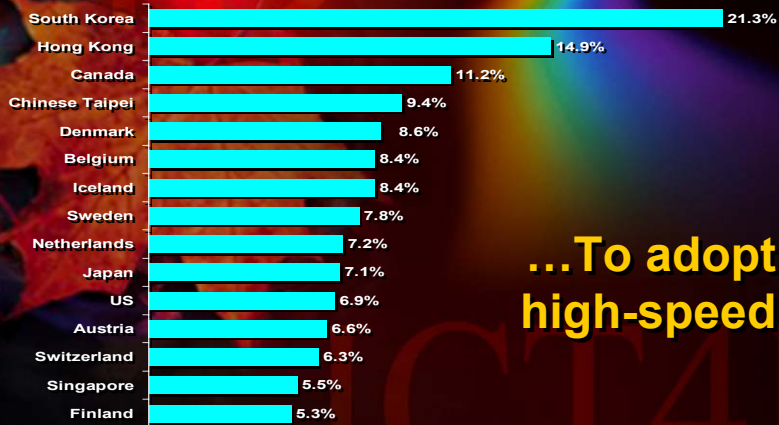Source: Yankee Group, North America Consumer Fixed-Line & Media Forecast (March 2004).

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As a result, today Canada is…

- **One of the most connected nations in the world**
  - Canada ranks second in the Conference Board's Connectedness Index, 2004

- **A world leader in advanced network development**
  - CA*net 4, the world's first national optical research and education network to support user-controlled connections known as *lightpaths*

- **An internationally recognized "first mover" in connectedness**
  - Canada ranked first for the 4th year in a row on e-government maturity (*Accenture, 2004*) and 2nd in e-learning readiness *(Economist Intelligence Unit, 2003)*

- **A global leader in setting policy frameworks, particularly with respect to trust infrastructure for e-commerce**
  - Canada ranked 1st on business environment, 2nd on supporting e-services, and was identified as the world's best place to conduct business over the next five years *(Economist Intelligence Unit, e-readiness rankings, 2004)*

- **Home to innovative, growing companies**
  - Innovation and research have helped establish Canada as the second-largest biotechnology centre in the world, after the United States, with the largest number per capita of biotechnology companies in the world (*CanBiotech,* 2004)

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Canada is well positioned…

Global Broadband Penetration
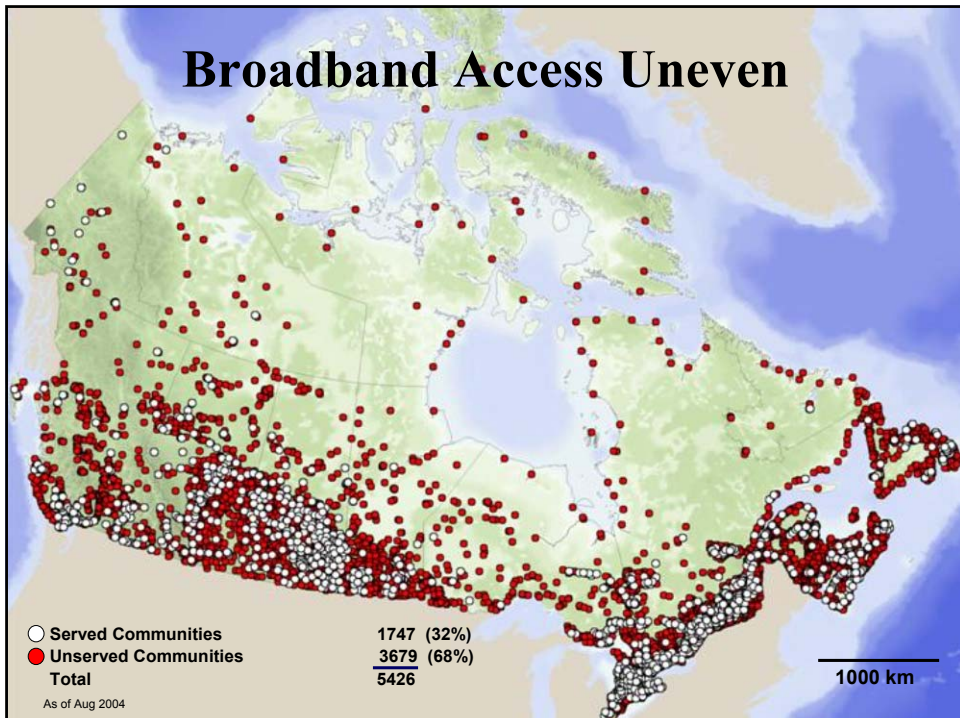**(broadband subscribers per 100 inhabitants), 2002**

Country	Penetration
South Korea	21.3%
Hong Kong	14.9%
Canada	11.2%
Chinese Taipei	9.4%
Denmark	8.6%
Belgium	8.4%
Iceland	8.4%
Sweden	7.8%
Netherlands	7.2%
Japan	7.1%
US	6.9%
Austria	6.6%
Switzerland	6.3%
Singapore	5.5%
Finland	5.3%

…To adopt high-speed

Source: ITU, *Birth of Broadband*, September 2003.

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Broadband Access Uneven

○ Served Communities   1747 (32%)
● Unserved Communities   3679 (68%)
   Total   5426

As of Aug 2004

1000 km

Broadband initiatives to bridge the digital divide

- Policy leadership to facilitate the deployment of broadband to unserved First Nations, Northern, rural and remote communities.

- Leveraging partnerships with communities in delivering broadband through a community aggregation approach.

- Joint federal-provincial programs in the roll-out of broadband high-speed networks to unserved communities.

Canadian support for bridging the international Digital Divide

Sharing expertise ...

- Focus our efforts on multilateral and regional organizations (ITU, APEC, OECD, UN ICT Task Force, G8 DOT Force)

- Promote Canadian principles and expertise

- Start with clear policy and regulatory frameworks

Benchmarking progress

Sharing knowledge …

Multiple activities are underway to measure and monitor:

ICT Readiness • Infrastructure, policy framework, enabling environment.

ICT Access • Diffusion and accessibility across all regions and sectors of society.

ICT Use • E-applications

ICT Impact • ICT as an enabler for socio and economic growth.

Canada: what have we learned?

- Start with a vision
- Build high-level political will
- Involve stakeholders through partnership
- Build consensus

- Develop sustainable projects
- Create a policy environment to promote development
- Foster competition

- Measure, learn from our successes and failures
- Realign priorities
- Recognize and share best practices