

Northern Connectivity Perceptions and Northern Realities

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Prepared by

Nordicity



Outline

1. Introduction
2. Perceptions about Northern Connectivity
3. Nordicity's Research & Analysis
4. Perceptions versus Northern Realities
5. Some Insights

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Introduction

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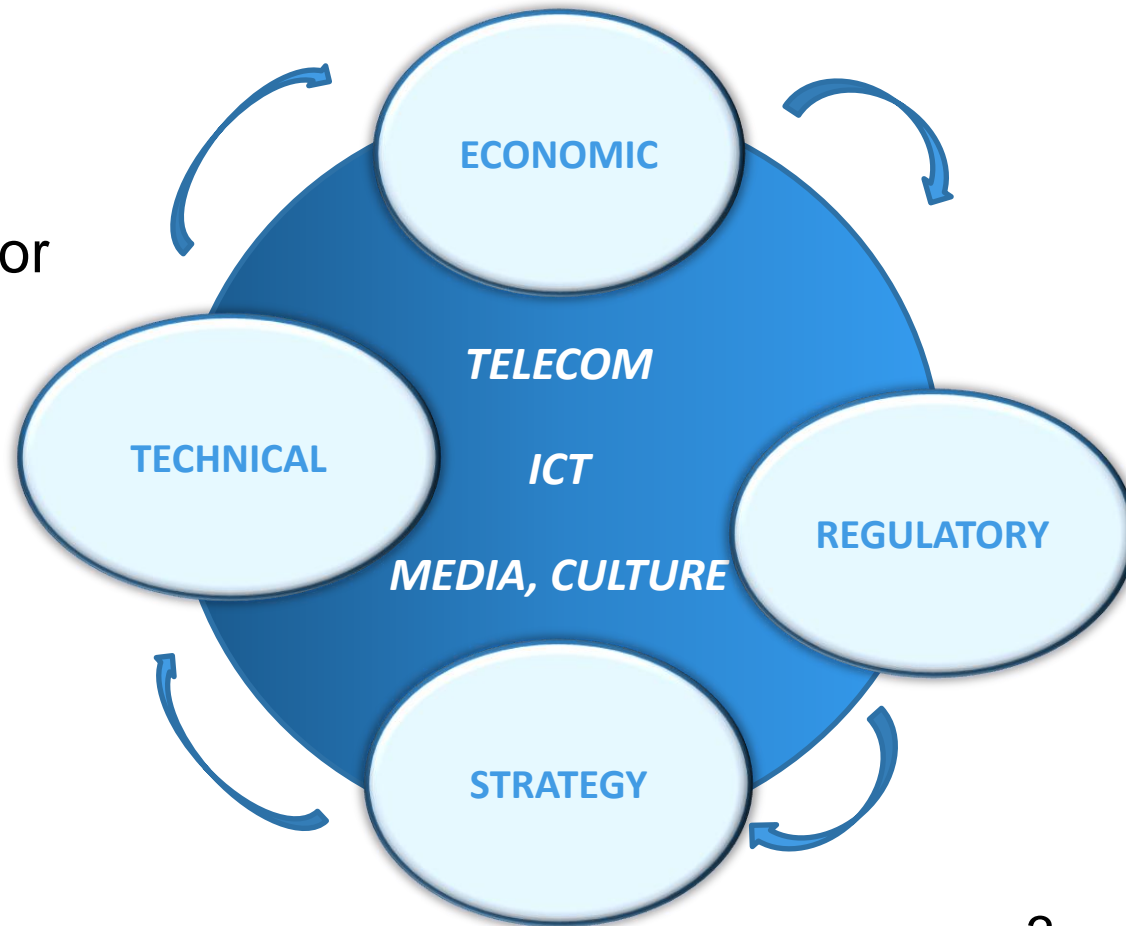
4. Perceptions v. Realities

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About Nordicity

Strategy, Policy and Economic Advice

- +30 years experience
- Private and public sector
- Globally, from Toronto, Ottawa, & UK



Perceptions about Northern Connectivity

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1. The “broadband gap” is small & closing
2. ‘Ubiquity’ is going to be available ‘everywhere’
3. Northern users cannot expect same connectivity
4. Northern user Mbps needs < urban-user needs

Our Work

Nordicity's Northern Connectivity Research*

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Who?

- for 3 Territorial Governments & NCIS-WG
- Nordicity, with partner Centre for the North,

What?

- Pan-Territorial strategic & implementation plan for northern connectivity
- **Goal:** ensure **affordable** communications to meet **present & future** needs

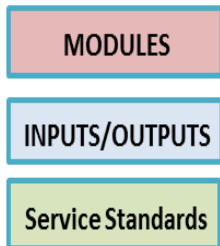
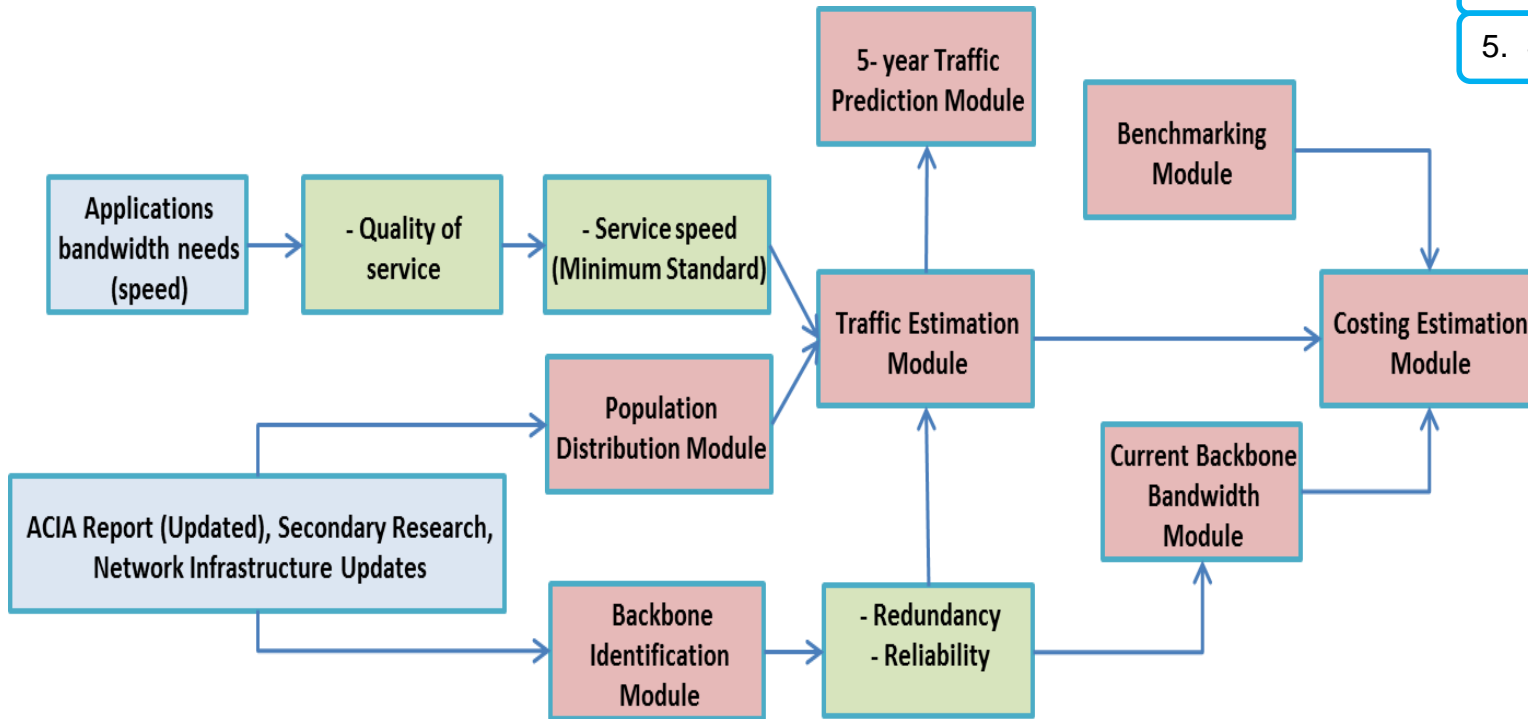
How?

- *Primary & secondary research*
- *Dynamic Optimization model* (financial, technical, funding)
- *Financial Costing Model*
- *Economic and Socio-economic impact analysis*

*In progress; results not public

Our Work: *Dynamic Optimization Model*

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Outputs: 5 proposed service standards

1. Applications Bandwidth
2. Service Speed
3. Redundancy
4. Reliability
5. Quality of Service

Our work: Economic & Socio-Economic Impacts Analysis

Select Areas of Analysis

- GDP impacts
- Efficiency gains & Cost-savings
- Impacts on Consumer surplus
- Employment & Productivity Gains
- Quality of life
 - Potential of attracting qualified experts
 - Reducing out-migration
- Inter-generational transmission of core cultural & societal values

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Perceptions v. Northern Realities

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1. *The “broadband gap” is small & closing*

Reality: Coverage ≠ affordable, reliable, suitable access in the North

2. *‘Ubiquity’ is going to be ‘everywhere’*

Reality: Ubiquity is an urban phenomenon

3. *Northern needs < urban user needs*

Reality: Northern users need MORE bandwidth than other users

4. *Northern users cannot expect same connectivity standards*

Reality: Northern users can / do / should expect the same connectivity

Size / significance of 'broadband gap'

Perception: The 'broadband gap' is small & closing

- Gap has two components: (i) access; (ii) affordability
 - emphasis tends to be on coverage and access, not \$, nor technical reliability
 - Coverage data obscures access/ affordability reality
 - Extent / existence of problem depends on who you ask
- **2010**
 - CRTC considered re-defining “basic” service Canadians can expect
 - Decided that market forces + targeted *ad hoc* funding were working to close the gap
 - 2011: Adopted an aspirational (non-binding) 5-yr target: 5 Mbps ↓/ 1 Mbps ↑
 - Decided to monitor the situation from 2012-15
- **2013**
 - CRTC re-visiting the Basic Service Objective - “Enhanced” BSO to include broadband? (2014)
 - Coverage data obscures access / affordability reality
 - Parliamentary Study on [Broadband & Internet Access](#) (March 2013)

Size / significance of 'broadband gap'

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Perception: The 'broadband gap' is small & closing

Northern reality: Coverage ≠ affordable, reliable, suitable access

- Bandwidth *is* currently available but not affordable
- More costly to deploy in the North
 - ~5X more expensive (climate, geography, distance)
 - Population density is ongoing barrier to scale
- Usage patterns *more* intensive in North
 - Affordable capacity is instantly snapped up
 - No TV option – all streaming
- Bandwidth shortages expected in near future
 - Assuming broadband becomes affordable

Broadband Ubiquity

Perception:

‘Ubiquity’ is going to be available ‘everywhere’

- “The next generation of connectivity will be marked by ever more ubiquitous computing and communications. From health monitoring to inventory management, handheld computing to automobile computers and payment systems, pervasive computing is everywhere...”

-Yochai Benkler

Northern reality:

Ubiquity will remain an urban phenomenon

- Deployment in the North will depend on a positive ROI
- Not likely given technology, costs, and population density
- Some form of policy intervention needed unless the economics change

User Needs

Perception:

Northern users don't have the same connectivity needs

- Needs often perceived to be lower

Northern reality: Northern users' needs are significantly *greater*

- Evidence
 - User group surveys / focus groups
 - Traffic projections
 - Adoption rates: Affordable bandwidth snapped up immediately
- Examples - Greater applications needs
 - Healthcare: Min. 17 necessary applications identified
 - Justice & Public Safety: Min. 12 necessary applications
 - Education: Min. 10 necessary applications
- Finding: Price is regulating demand, not the marketplace

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User Expectations

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Perception:

Northern users can't expect the same connectivity

- Slower speeds, less functionality, a 'sacrifice' of living in North?
- All Canadians expect access to '**basic**' communications services.
 - **Mail**
 - See [Canadian Postal Service Charter](#)
 - Universal access, universal rates, affordability, service standards
 - **Phone**
 - See [CRTC obligation to serve / 'basic service objective'](#)
 - Includes low-speed (dial-up) Internet access
 - Includes funding mechanism for high-cost areas

Northern reality: Users do / should expect the same

- Equality issue
- Also economic - broadband implementation has a decided economic & socio-economic impact on rural communities

Some Insights

Northern users

- Adopting broadband quickly; need *more* bandwidth
- If not.... decrease in quality of life

Northern service providers

- Have available capacity
- Available capacity will vanish if made affordable
- Available capacity insufficient to meet projected growth

Northern Economy (also Canadian economy)

- Increased / improved broadband will generate positive impacts across all sectors
- If not... competitive disadvantage, out-migration

Policy implications

- Aspirational target (5Mbps↓ 1Mbps↑) not sufficient
- Funding support necessary to improve affordability / svc provider ROI
- A digital economy strategy is needed

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