

# **INDIGENOUS COMMUNITY-BASED DIGITAL INFRASTRUCTURE IN CANADA: THE FIRST MILE CONNECTIVITY CONSORTIUM**



**World Forum on Free Media (WFFM)**

**Montreal, Aug. 8, 2016**

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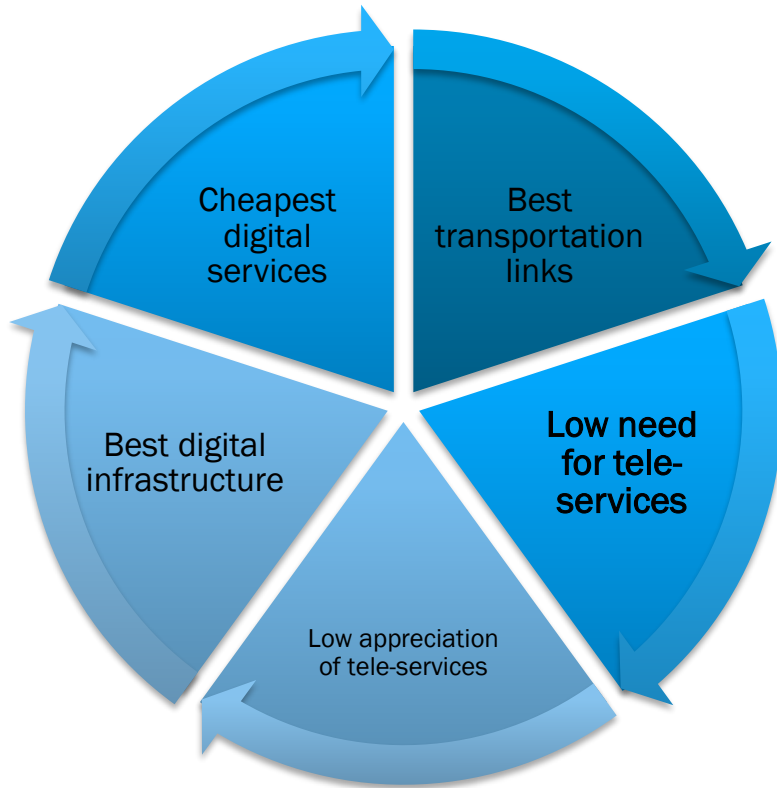
Rob McMahon

# PRESENTATION OVERVIEW

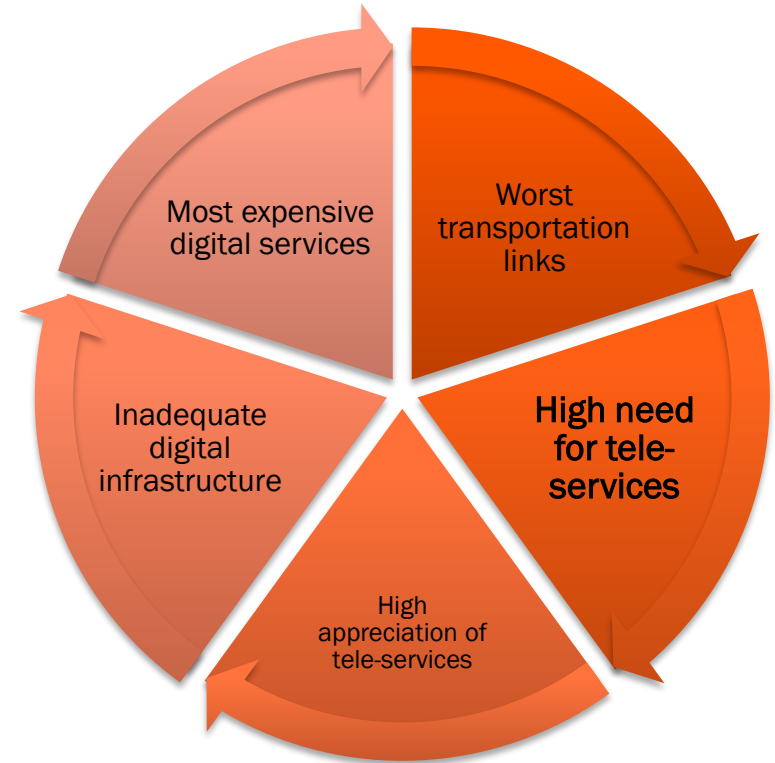
1. First Mile approach to telecommunications development
2. First Mile Connectivity Consortium – research, policy, public outreach
3. Infrastructure Development - Building the Manitoba First Nations Network of the Future Initiative
4. Training and Capacity-Building – the First Nations Technology Council

# GEOGRAPHICAL PARADOX OF TELECOMMUNICATIONS DEVELOPMENT

## URBAN COMMUNITIES



## REMOTE COMMUNITIES



# WHY THE DISPARITIES BETWEEN URBAN AND REMOTE COMMUNITIES?

## Easier to build on existing subsidized urban development

- Roads and other public utility infrastructure have been highly subsidized in urban areas
- Public health, education, social services infrastructure already exists in urban centres

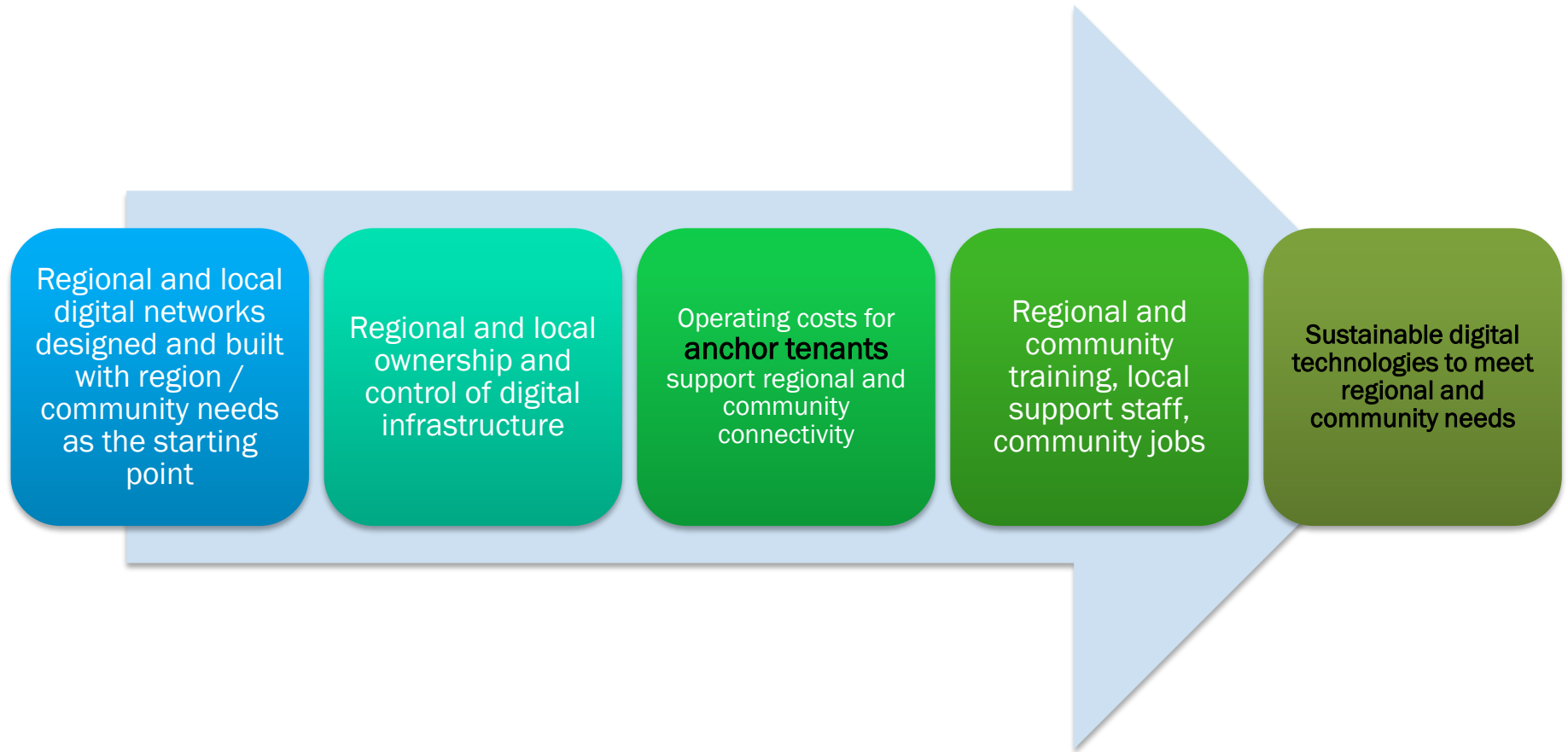
## Policy-makers lack knowledge about remote environments

- Choosing build options that are high-cost and unsustainable in the long-term
- Systemically privileging urban perspectives

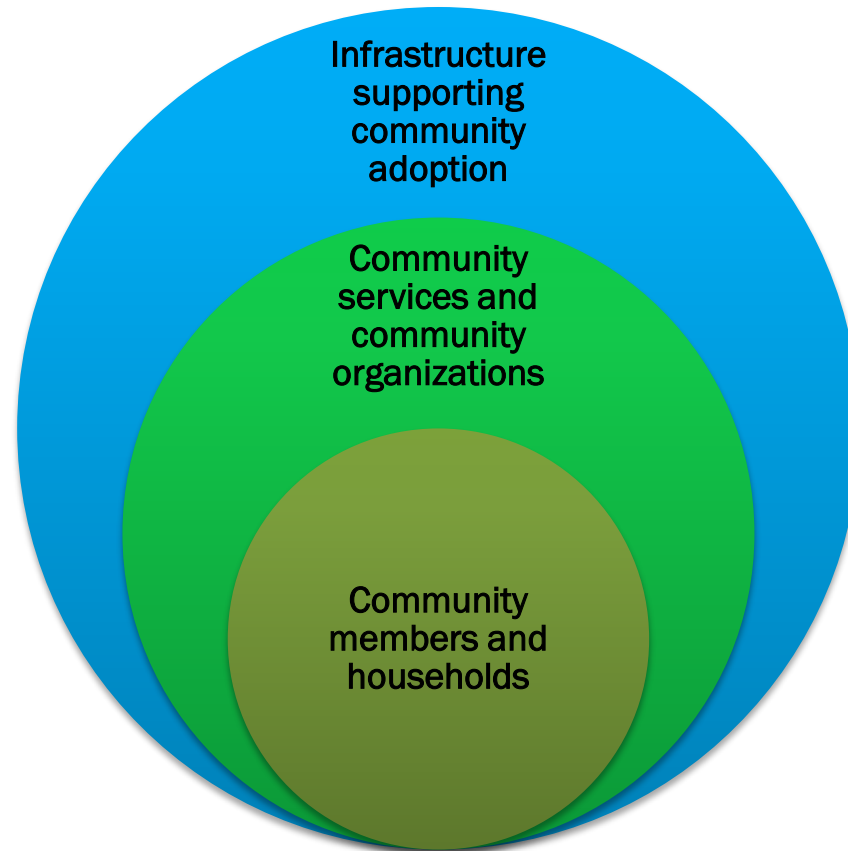
## Corporations (incumbent telcos) wield enormous power

- Corporate political lobbying (evidence at CRTC BSO hearings)
- Most subsidies only available to incumbent telcos
- Lack of “business case” to build and maintain in remote regions

# FIRST MILE TELECOMMUNICATIONS INFRASTRUCTURE DEVELOPMENT



# WHOLE COMMUNITY UNDERSTANDING OF DIGITAL TECHNOLOGY ADOPTION IN REMOTE AND RURAL INDIGENOUS COMMUNITIES



# DIGITAL TECHNOLOGIES ARE USED BY AND FOR THE WHOLE COMMUNITY

Healthcare,  
telehealth, and  
health education

Economic  
development,  
business and  
entrepreneurship

Education and  
distance  
education

Indigenous  
government and  
governance

Justice, public  
safety and  
emergency  
communications

Community  
interconnection  
and  
interdependency

Digital content  
about Indigenous  
culture and  
identity

Commercial  
entertainment

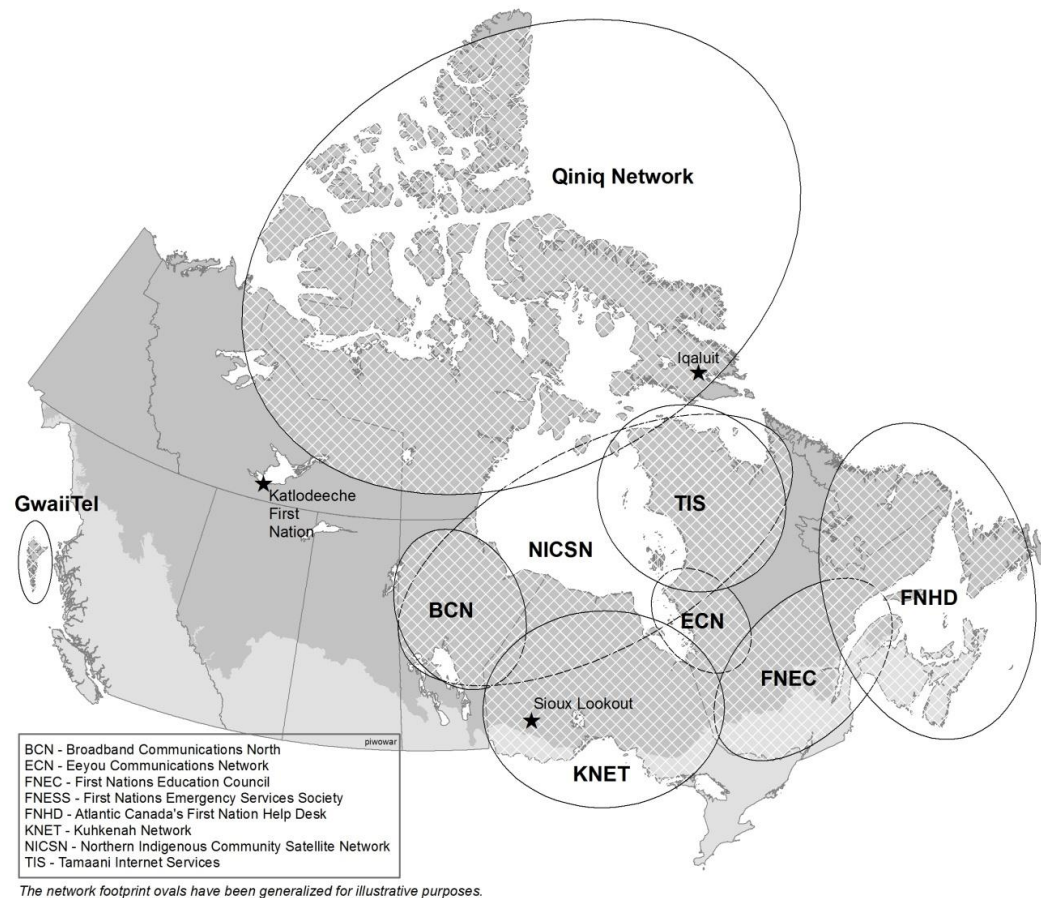
Research, data  
collection, GIS,  
report generation

Infrastructure  
maintenance,  
remote  
monitoring

Indigenous  
resurgence, self-  
determination  
and activism

Land-based  
activities and  
environmental  
sustainability

# REGIONAL INDIGENOUS COMMUNITY INTERMEDIARY ORGANIZATIONS





# ROLES OF REGIONAL COMMUNITY INTERMEDIARY ORGANIZATIONS IN TECHNOLOGY DEVELOPMENT

Advocate for and administer digital infrastructures and services on behalf of their Indigenous member communities

Represent and are governed by groups of local communities, allowing residents to access services and benefit from economies of scale otherwise unavailable

Use digital technologies to deliver public services and economic development opportunities to the residents of member communities

Act as mediators between local, place-based communities and external entities like government funders or corporations

Engage in both social and technical activities associated with the effective use of digital technologies

# FMCC MEMBERS



**Atlantic Canada's First  
Nation Help Desk**



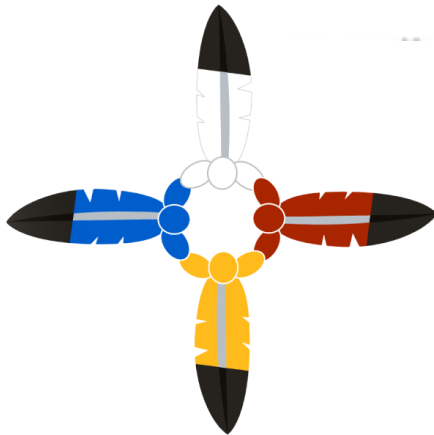
**First Nations  
Education Council**



**Keewaytinook  
Okimakanak KNET  
Services**



**Western James Bay  
Telecom Network**



**Nanaandawewigamig**  
First Nations Health and Social Secretariat of Manitoba



**First Nations  
Technical Services  
Advisory Group, INC.**



**First Nations  
Technology Council**

# EVIDENCE-BASED POLICY AND REGULATORY ACTIVITIES

## EVIDENCE-BASED POLICY ACTIVITIES:

- 2015-2016: Innovation, Science and Economic Development Canada – Digital technology adoption in northern and remote Indigenous communities report
- 2014: Industry Canada – Two submissions on Spectrum Policy (3500 MHz and AWS)
- 2010: Industry Canada - Consultations contributions for a national digital strategy

## EVIDENCE-BASED REGULATORY ACTIVITIES:

- 2015-2016: CRTC – Review of the Basic Service Objective (BSO)
- 2015: CRTC – Review of Telesat’s Pricing for Satellite Services
- 2014: CRTC – Let’s Talk TV Consultations
- 2014: CRTC – Review of Satellite Services
- 2013: CRTC – Review of Northwestel’s Modernization Plan

# FMCC TEAM AT CRTC – BSO HEARINGS – APR 2016



# FIRST MILE WEBSITE





# FOR FURTHER INFORMATION ...

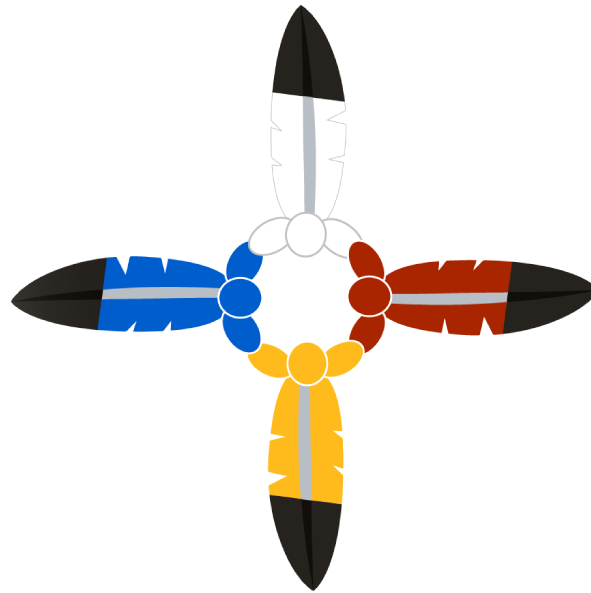
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Visit the First Mile web site at: <http://firstmile.ca>

Call toll-free at: 1-877-737-5638 x 4522

Thanks to our funders



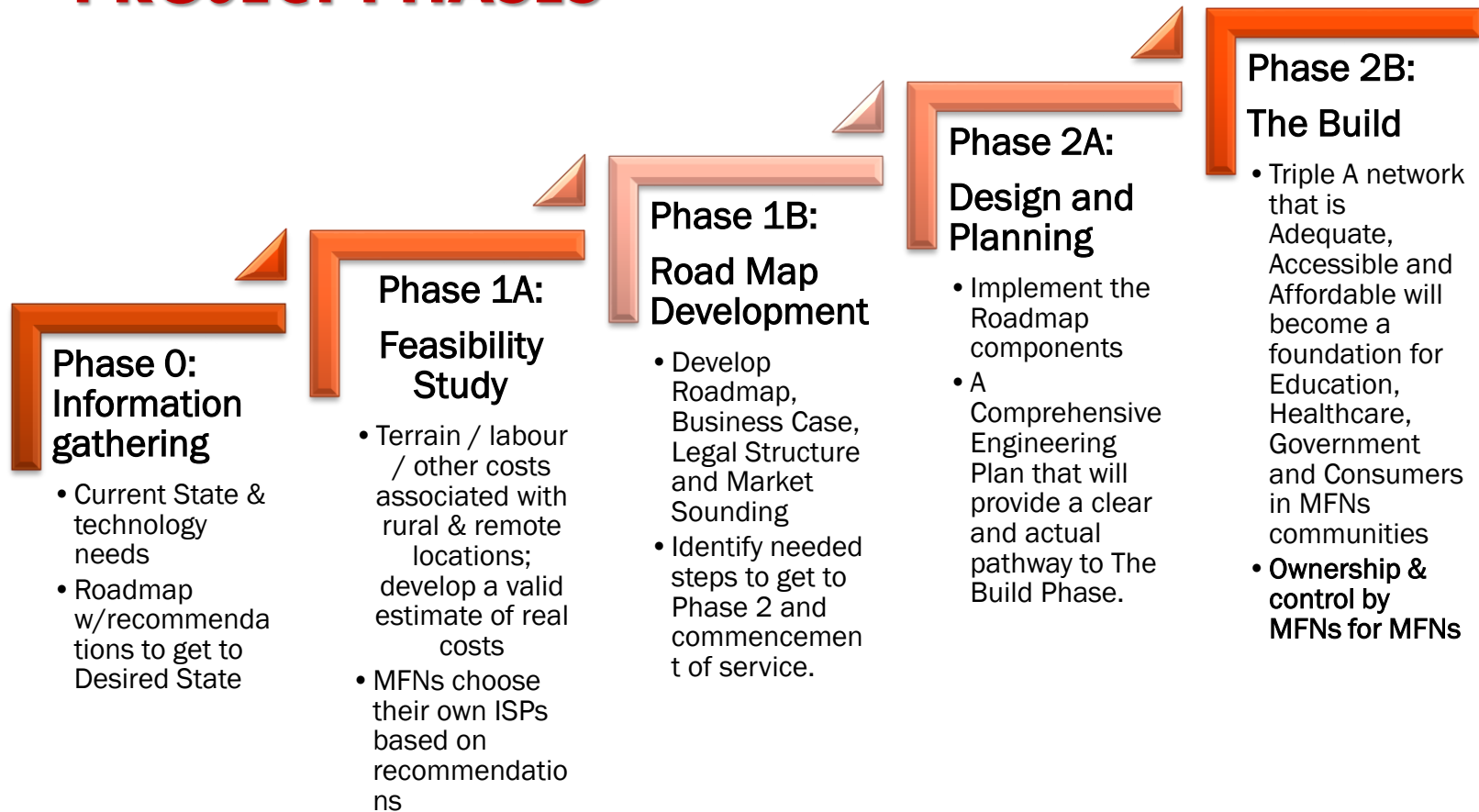


Nanaandawewigamig  
First Nations Health and Social Secretariat of Manitoba

## **BUILDING THE MANITOBA FIRST NATIONS NETWORK OF THE FUTURE INITIATIVE**

FIRST  
MILE.ca

# PROJECT PHASES



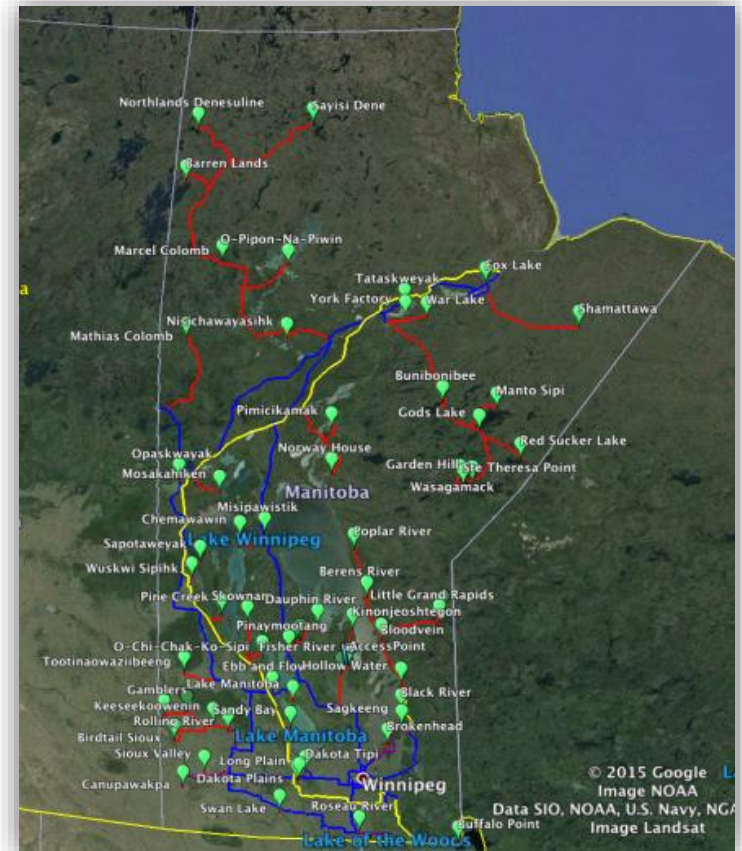


# PROJECT OBJECTIVES

Connect all 63 MFNs with High Speed Fiber Optic Internet

Manitoba First Nations Majority Owned and Operated

Take all satellite connected communities off of satellite connections



# PROJECT GOALS

Develop a legal structure:  
Who owns and  
manages the Network

Business Model to benefit  
First Nation  
Communities and  
citizens

Enhance the service  
delivery for community  
owned ISP



# **Ekosani! Miigweetch! Mahsi! Wopida! Thank You!**

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Chief Nelson Genaille

Co-Chairs

Manitoba First Nations Technology Council

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*Together we will build the network of the  
future.....the Gateway to Economic  
Development Opportunities for Manitoba's  
First Nations*



# First Nations Technology Council

Building capacity to fully utilize digital and connected technologies



[www.technologycouncil.ca](http://www.technologycouncil.ca)



[info@fntc.info](mailto:info@fntc.info)



Find us: First Nations  
Technology Council

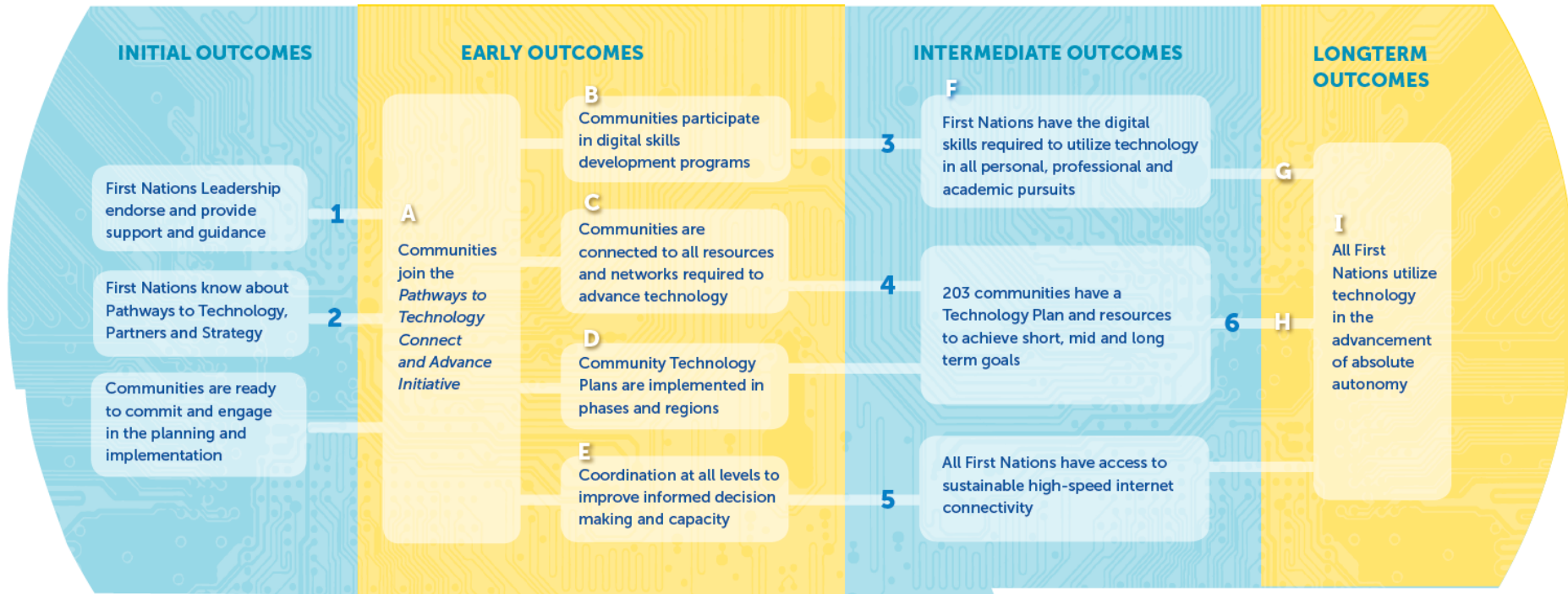


[@FN\\_TechCouncil](https://twitter.com/FN_TechCouncil)

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# INDIGENOUS COMMUNITIES AND DIGITAL TECHNOLOGIES – A THEORY OF CHANGE

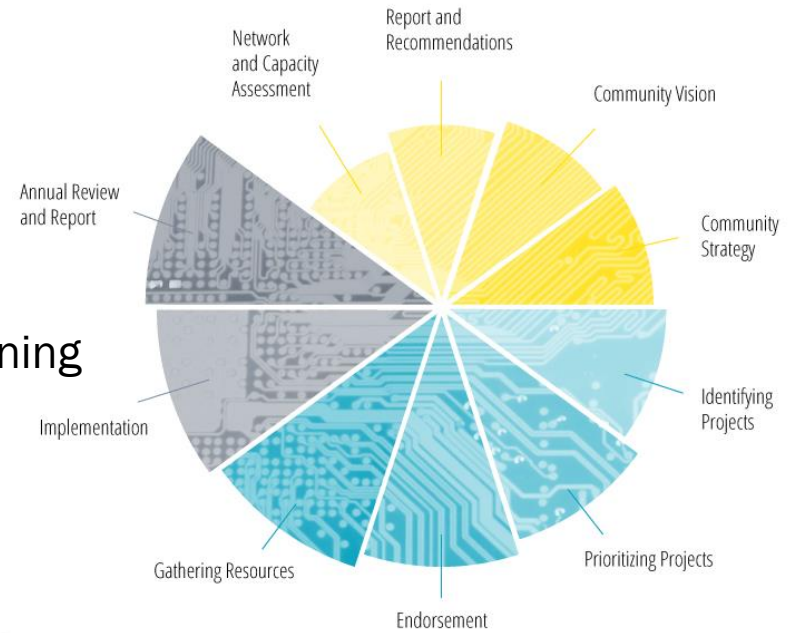


# INITIATIVES OF CHANGE



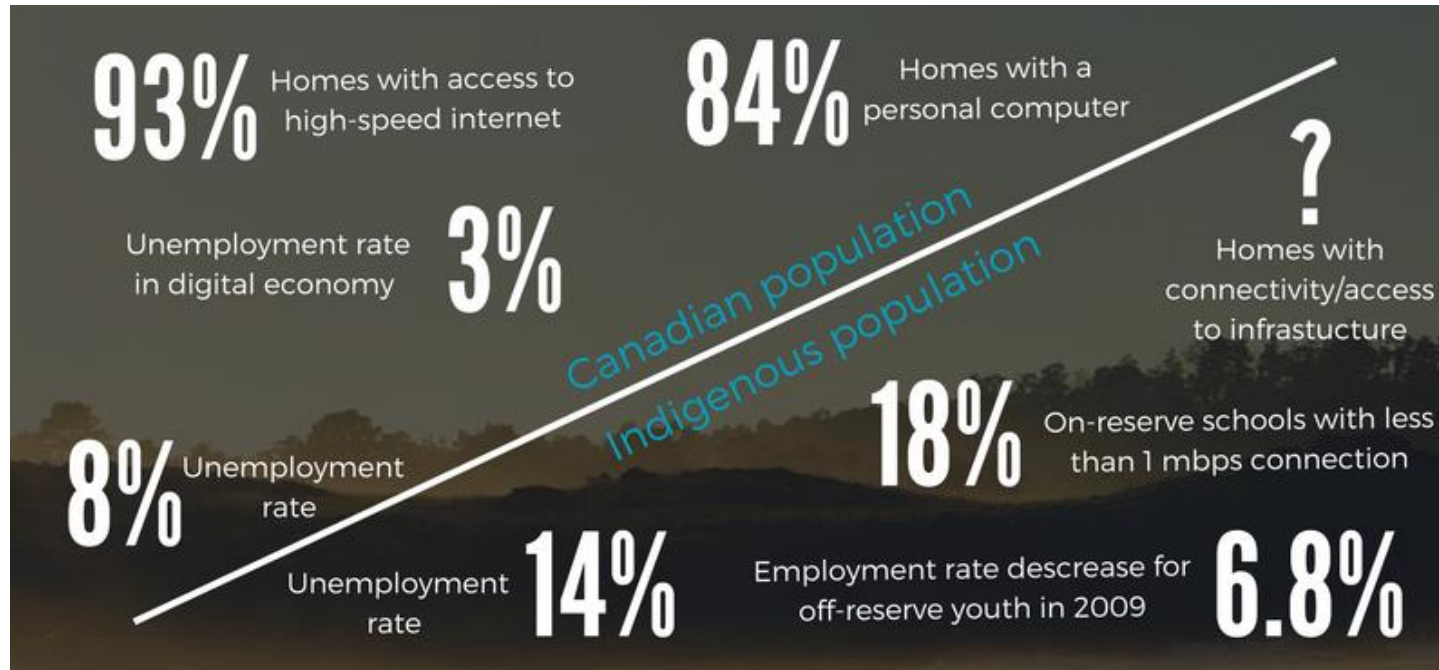
Indigenous Technology Talent Development Strategy

## Community Technology Planning



First Nations in BC Knowledge Network  
[www.fnbc.info](http://www.fnbc.info)

# BC'S TECHNOLOGY SECTOR – OPPORTUNITY



# BC'S TECHNOLOGY SECTOR – THE OPPORTUNITY



Industry leaders agree that talent availability is the most significant issue facing firms in BC. Talent drives growth through innovation and creativity.



Indigenous people are the fastest growing population in Canada. The population is expected to grow to 1.4 million by 2017.



Median age is much lower (29) than the national average (41) creating a young demographic of potential innovators.



Culture connects Indigenous people to the land reducing movement away and keeps talent local.



# FOR MORE INFORMATION

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Executive Director

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Thank you!

