

**The e-Community
Development Model
Supporting Economic
and Social
Opportunities in
Remote Communities**

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Research (ANSER)

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Current Research and partners

- The First Nations Innovation research: <http://fn-innovation-pn.com>
- SSHRC Insight Grant 2012-2017
- Four partners, also partners in the First Mile project: <http://firstmile.ca>
 - Keewaytinook Okimakanak (KO) in Ontario
 - First Nations Education Council (FNEC) in Quebec
 - Atlantic Canada's First Nation Help Desk
 - University of New Brunswick
- Research since 2006 on broadband networks and ICT in rural and remote First Nations
- **Brian Beaton** is an associate of the KO Research Institute. In June 2013, Brian joined the UNB research team of the First Nations Innovation initiative

Studying the e-Community Development Model

- Remote First Nations in Northwestern Ontario
- Six small First Nations, Cree, Oji-Cree and Ojibway speakers, including Deer Lake, Fort Severn, Keewaywin, McDowell Lake, North Spirit Lake and Poplar Hill
- Broadband Infrastructure and Applications
- Community services including e-health, e-learning, justice, business use, etc of communication networks
- E-Community Study
- Examining how these First Nations are addressing the challenges involved for developing economic and social e-community opportunities
- Survey – Nov 2011
- An online survey with 131 responses from the six Keewaytinook Okimakanak First Nations
- New Survey – Jan 2014
- Action research and analysis of online social media forum 2014



Theoretical lens

- The importance of infrastructure to Community Resilience
 - Kirmayer (2009), McGill
 - Communities in Crisis, many dimensions, resilience from residential school, Indian Act, Paul Martin statement
 - How infrastructure supports community resilience to address challenges
- OCAP – Ownership, Control, Access, Possession
 - Schnarch (2004), NAHO, AFN
 - Economic and social opportunities that are available with OCAP
 - Address local needs and priorities



Previous research

- Ramirez (2001)
 - Three required components for successful implementation of ICTs in communities – community (needs), infrastructure (ICTs) and government (programs); SMART Communities research
- O'Donnell et al.(2011a; 2011b)
 - How the technology is being used for education, health , administration; community-owned cell service
- Fort Severn First Nation
 - Technology showcase – <http://fortsevern.firstnation.ca/>
- McMahon et al. (2011)
 - First Mile and Self-determination



Focus of Analysis of 2011 Survey in Six KO First Nations

- **ICT Acceptance**
 - Home use of the internet
- **KOTM – Keewaytinook Okimakanak Telemedicine**
 - Use and perceptions of community-owned e-health
- **KIHS – Keewaytinook Internet High School**
 - Use and perceptions of community-owned Internet High School
- **K-Mobile – Keewaytinook Mobile**
 - Use and perceptions of community-owned cellular service
- **Challenges of Service**
 - Areas requiring changes



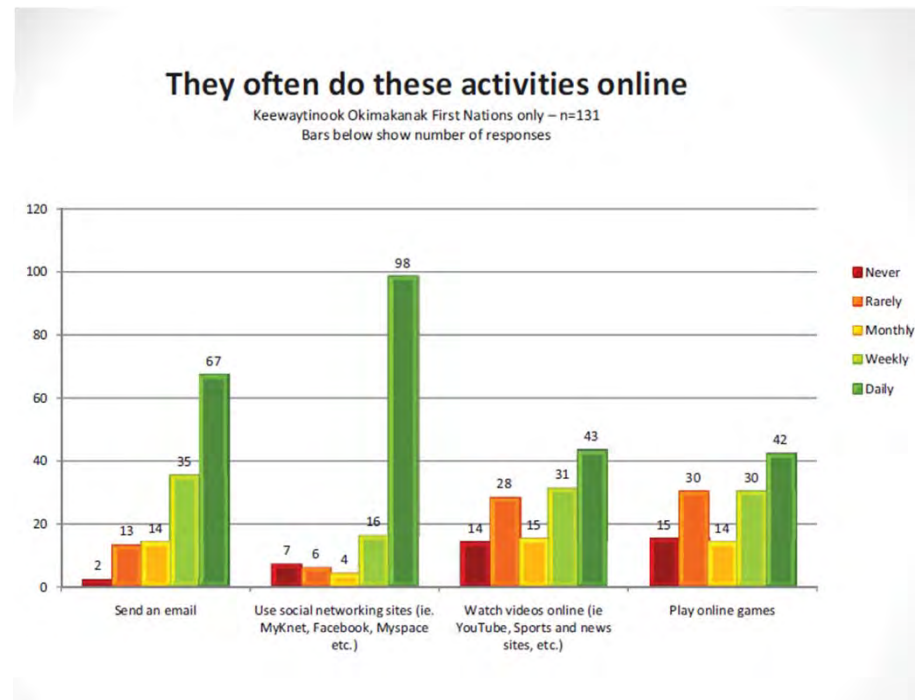
Methodology of Study

- 2011 Online Survey
- Partnership with Videocom research project with UNB, invitation sent to KNET.CA active email accounts; 16% overall response rate; 131 responses from members of KO First Nations
- The diversity of the sample is also an advantage: a wide age range completed the survey(17 to over 70), community members held a variety of roles within their communities, and a variety of educational statuses were held.
- Participatory research
- Working with the First Nations, leadership, staff to review questions; supporting participation in completing the survey, presenting the information



Study findings – ICT Acceptance in Homes

- Internet is available in every home and building in each First Nation via a community-owned and managed cable network
- Highest use is social media (98 of 131 use it daily), e-mail, watching videos and playing games online are also popular
- Challenge – additional bandwidth requirements to accommodate demand

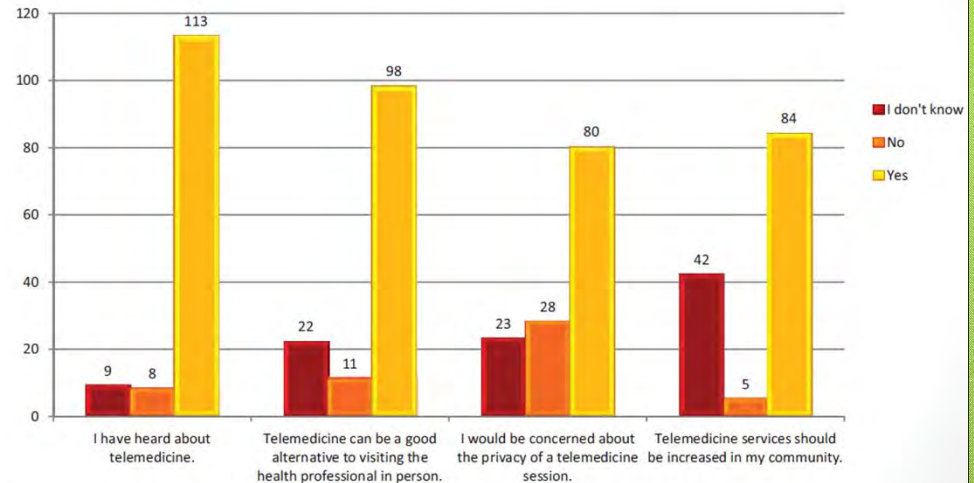


Study findings – KO TeleMedicine (KOTM)

- KOTM provides telehealth services to First Nations communities in Northwestern Ontario
- Most people had heard of KOTM (86%) and thought of it as a good service (75%) that needed to be expanded (64%)
- Challenge – there is a perception that privacy is an issue (61%) when it comes to using telemedicine

Feedback on Keewaytinook Okimakanak Telemedicine (KOTM)

Keewaytinook Okimakanak First Nations only – n=131
Bars below show number of responses

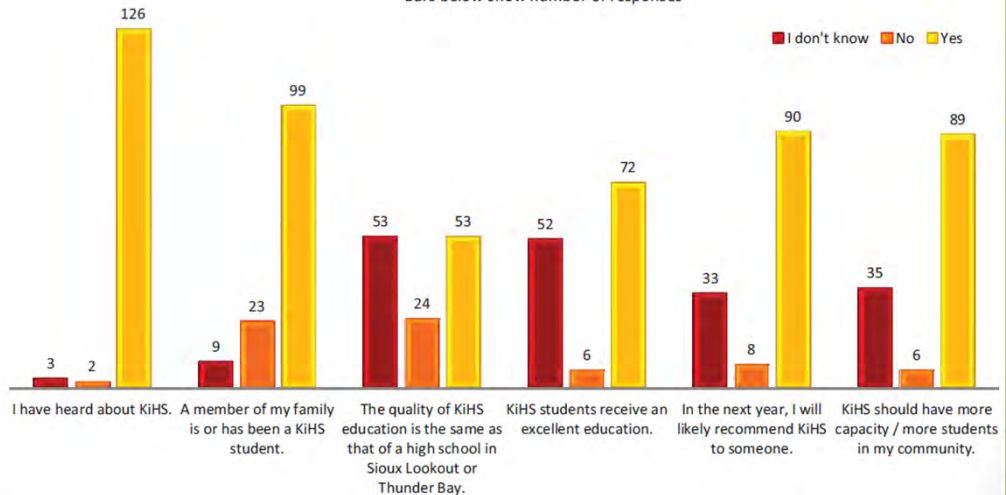


Findings – Keewaytinook Internet High School (KIHS)

- KIHS is a network of more than a dozen classrooms located in remote First Nations in Ontario’s far north connected by KO-KNET
- Offers students and their families the choice to complete high school in their community rather than move to a city
- Most people know about KIHS (96%), know family member who was student (75%), would recommend it (69%) and want more students taking KIHS courses (68%)
- Challenges – some uncertainty about the quality of education when compare to urban high school experience (40%)

Feedback on Keewaytinook Internet High School

Keewaytinook Okimakanak First Nations only n=131
 Bars below show number of responses

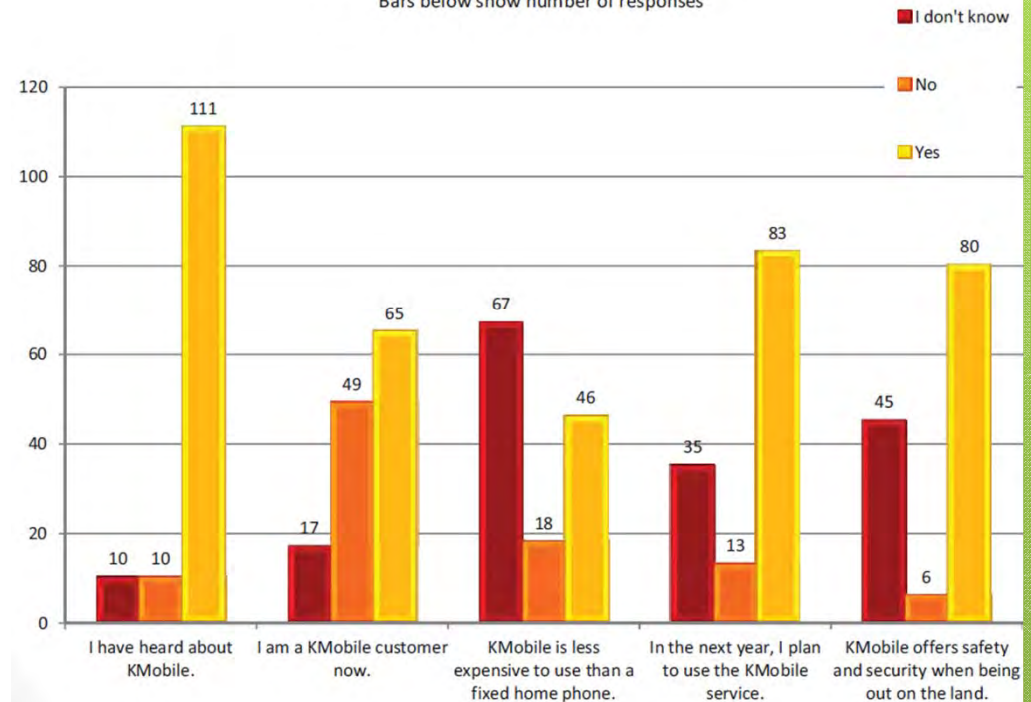


Study findings – Keewaytinook Mobile(K-MOBILE)

- K-Mobile is a community-owned pay-as-you-go cell service began in 2009-2010 using the community IP network for calls and text
- Most people found the service to be fair to excellent as it was being developed (79%) indicating that mobile and cellular services will continue to grow in First Nations in the communities (10% said they would not use the service)
- Challenges – need to establish confidence in the service and support its use as an alternative to landlines

Feedback on Keewaytinook Mobile (KMobile)

Keewaytinook Okimakanak First Nations only – n=131
Bars below show number of responses



Conclusions

- **K**O First Nation members are actively engaging with a wide range of technologies and community services delivered via broadband resulting an increased demand for local improvements and developments.
- **E**ach of these services discussed create local jobs and economic opportunities in the remote First Nations providing professional careers, choices for accessing services, improved access, opportunities for new developments and innovations, while keeping the dollars local
- **T**he findings help us better understand how the communities and their members are building resiliency in addressing economic and social opportunities through the ownership and control of these infrastructures.

Recommendations - what is needed

- Developing comprehensive e-Community strategies in each KO First Nation addressing local needs and priorities requires extensive consultation , time and resources that will assist both the local network development as well as the regional KO-KNET Network.
- Increasing local awareness about each of the services, the local economic and social benefits, properly addressing local concerns, ongoing training and development of services are steps to ensuring and creating local confidence and pride

Acknowledgements

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- Thanks to other members of the research team and community researchers and liaisons
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- Ramírez, R. (2001) A model for rural and remote information and communication technologies: A Canadian exploration. *Telecommunications Policy* 25 (5), 315-330

Contacts for follow up

- More info and publications:
 - ✓ <http://fn-innovation-pn.com>
 - ✓ <http://firstmile.ca>
- For feedback and ideas about next steps, contact Brian Beaton, Researcher, University of New Brunswick, brian.beaton@unb.ca
- You are welcome to refer to the report that this presentation is based upon. The reference is:

Beaton, B., Kakekaspan, C., & O'Donnell, S. (2012) KO-KNET Report: Survey of Connectivity in Keewaytinook Okimakanak Communities. Online presentation from Sioux Lookout, Ontario and Fredericton, New Brunswick, April 2012
<http://tinyurl.com/2012-Summary-KO-pdf>

Thank you!
Comments, questions?