Digital Technology Adoption in Northern and Remote Indigenous Communities in Canada

Appendix 6: Community Asset Mapping Tool Poplar Hill First Nation, Ontario

Prepared for Innovation, Science and Economic Development Canada (ISED)

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First Mile Connectivity Consortium (FMCC)

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The author of this "work-in-progress" research thanks the leadership of Poplar Hill First Nation for agreeing to be included in this report as presented below. Working with the SSHRC-funded First Nations Innovation research project based at the University of New Brunswick and its project partner, Keewaytinook Okimakanak Research Institute (KORI) makes this field research possible. Franz Seibel's continued support for this community-based participatory action research is appreciated. For any follow up information about this research initiative, please contact Brian Beaton at brian.beaton@unb.ca

Community Asset Mapping Tool: Poplar Hill First Nation, Ontario

1. Background information to this pilot study

Our third pilot study involves the development of a community asset map process that will identify local assets and capacity to effectively use digital technologies by community members, organizations, the community, and their intermediary organizations. Poplar Hill First Nation leadership agreed to work with the research project to create the tool with the understanding that the local research will be conducted in the summer of 2016. Plans are now being put in place for a researcher to work with community members to complete the community asset map. Analysis and presentation of the information and findings will then be made available to community for use in planning for economic and social development initiatives taking into consideration identified local priorities and capacities.

This research methodology pilot is possible because of a partnership with a Social Sciences and Humanities Research Canada (SSHRC) funded research project called First Nations Innovation. The research project is led by Dr. Susan O'Donnell as the primary investigator. The five-year project began in 2012 funded by a SSHRC Insight grant at the University of New Brunswick (UNB). Keewaytinook Okimakanak along with its research institute (KORI) are partners in the

project. Several earlier SSHRC grants, beginning in 2005 involved the same partners. This ten-year research history exploring many aspects of digital infrastructure development and technology adoption in remote First Nations resulted in numerous co-authored publications, shared conference presentations, the collection and sharing of various research studies and information, and an established working relationship with Keewaytinook Okimakanak and UNB. The publications produced by numerous UNB graduate students working with partner and community co-authors are available online at http://firstmile.ca.

The research team produced this report on the development of the community asset map instrument. The UNB graduate student (Brian Beaton) will travel to Poplar Hill First Nation in June to work with the community leaders and members to gather the information outlined in the community asset map survey. The methodology for this work is included in this document. The data will be used to produce a report for the First Nation that can be used for their community planning. Additional reports, papers, and presentation will be produced as required.

As the literature review for this ISED project identifies, progress in the measurement of digital technology use by community members, households, organizations, and businesses in remote and rural communities is almost non-existent. Policy relevant aspects and associated measurement needs have changed, with new aspects gaining importance, as usage becomes pervasive in a growing number of areas in people's life. This research initiative will address the need for local and regional information gathering to support the development of data gathering tools to be used in other communities.

The usage of digital technologies in people's everyday life has increased dramatically. Different uses of these tools are undergoing changes at a constant rate with new technological and service developments. The price of broadband, especially mobile, is changing considerably and connection speeds are increasing. Innovations are improving the different functions and uses for the devices and their applications while becoming more affordable. In some communities, digital technology services are being transmitted over local network and are increasing to include content, such as access to TV channels. Many individuals are always switched on and can shift in a seamless fashion across different networks and devices, performing a greater variety of online tasks than they were doing only a few years ago. These changes are placing a great deal of pressure on the demand for bandwidth and improved network services.

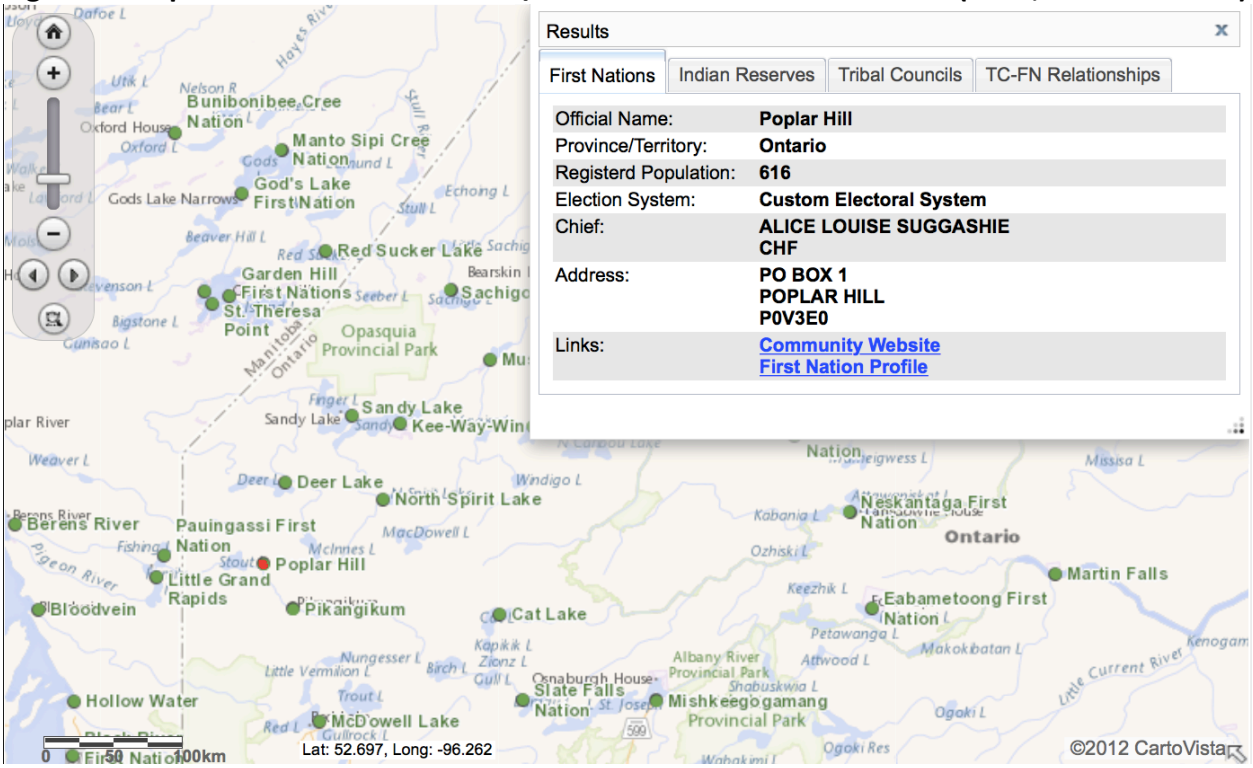
2. Background Information about Poplar Hill First Nation:

Much of the information about Poplar Hill First Nation is available online from a number of different sources. The community has its community web site at http://poplarhill.firstnation.ca and a closed Facebook community information sharing site called Obesahdekong Nishnabs. The community leadership working with several other First Nations in northwestern Ontario established a second-level support organization as a First Nation council called Keewaytinook Okimakanak (http://kochiefs.ca). The First Nation intermediary organization includes their telecommunication network, the Kuhkenah Network or KNET (http://knet.ca).

The history of the adoption of digital technologies in Poplar Hill since the early 1990's can be found on the KNET media site by doing a search for the stories about Poplar Hill and their First Nation council work at (http://media.knet.ca). Another useful site is http://smart.knet.ca that documents the work Poplar Hill was involved with from the late 1990's to 2005 as they planned, developed, and delivered on ICT projects as part of the work completed under Keewaytinook Okimakanak's Smart First Nations demonstration project. Poplar Hill First Nation completed and continues to sustain many of the same digital technology development projects undertaken by Fort Severn First Nation as highlighted in section five of the main report.

The following map from the INAC web site shows where Poplar Hill (red dot) is located on the Berens River down-river from its nearest neighbouring community of Pikangikum First Nation and up-river from Little Grand Rapids First Nation in Manitoba. Strong family and historical ties exist between these communities.

Figure 1: Map of Northwestern Ontario/Eastern Manitoba First Nations (INAC, accessed 2016)



Poplar Hill First Nation is a remote Ojibway-speaking community on the Canadian Shield in northwestern Ontario near the Manitoba border. The community is within the boundaries of the territory described by the Winnipeg Treaty of 1875 – Treaty No. 5 that covers much of southeastern Manitoba. Poplar Hill First Nation achieved full Band and reserve status in 1978 when it formally separated from the Pikangikum Band. Due to its location in northwestern Ontario, Poplar Hill leadership works with other First Nations in the Treaty 5 and Treaty 9 Ontario region to access services. The people understand their ancestors have always lived and

survived in this special environment. Most community members, including the children, still speak Ojibway as their first language.

Poplar Hill First Nation is approximately 120 km north of Red Lake which is the nearest road accessible town. The community is accessible by air year round and winter road for approximately 2 months of each year. As of January 2016, there are 587 band members living in the First Nation with only 16 community members living off-reserve (INAC online community profile). Community members tend to remain in the community but spend a lot of their time in their traditional territories surrounding the community conducting land-based activities such as hunting, fishing, trapping, and harvesting material required for their survival.

Band Office Staff positions listed on the community web site at http://poplarhill.firstnation.ca include the Chief, Deputy Chief, Councillors (4), Band Administrator, Band Administrator Assistant, Welfare Administrators (2), Ontario Works (2), Band Office Secretary, Band Office Secretary Assistant, Economic Development, Power Authority, Public Works (2), Tikinagan Community Support Worker (Casual Relief Worker), Lands and Resources (2), Cleaning Staff (3), Recreation Coordinators (2), Radio Station Managers (2), and Housing Construction Foremen (2). The band office is a centre hub and gathering spot for community members throughout the day. Its central location near the health centre, the police station, the old school, the northern store, the gas station, and the motel make it a beehive of activities every day. There is a public access computer available at the band office and everyone shares the local wi-fi hotspot.

The Abe Scatch Memorial School was constructed in the early 1970's. Its staff positions include the Education Director, Principal, Secretary/Financial Officer, Janitor, Teachers (7) and Teachers Assistants (7) and the Keewaytinook Internet High School teacher. The KIHS classroom is separate from the school and contains computers designated for each of the students. Videoconferencing facilities are available in the KIHS classroom and in the school. A new school is presently being constructed and is scheduled to be opened in September 2016.

The Nursing Station is a temporary facility as a new facility is being planned and constructed. The positions supported at the health centre include Health Director, Assistant Health Director, Mental Health Worker, NNADAP Worker, Crisis Team Intervention Worker, Home Care Coordinator, Community Telemedicine Coordinator, Homemakers, Personal Support Worker, Healthy Babies/Healthy Children Coordinator, Health Babies/Healthy Children Resource Centre, Pregnancy/Nutrition Worker, Tobacco Prevention Program Coordinator. As the positions indicate a variety of health related programs and services are available for community members and their families.

The Poplar Hill Police Station is a secure building delivering a number of community security and safety programs. There is suppose to be 2 Nishnawbe Aski Police Services (NAPS) officers in the community. The First Nation also employs local Band Constables (3) and a team of Peace Keepers (4).

The North Western Company store (The Northern) employs 12 people with the majority of them from the community. The local Canada Postal Worker works out of the Northern store. Included in this complex is an eight room motel that employs two people.

Seasonal construction work involving the construction of housing and any special project employs several community members depending on funding allocations. Winter road construction and maintenance employs at least two local heavy equipment operators and the use of the community's machines. The provincially operated airport employs a local heavy machine operator to maintain the run-way and the road to the airport.

3. Adoption of Digital Technologies in Poplar Hill First Nation

Poplar Hill First Nation is a close-knit, family-centred community rooted in a long history. Everyone in the community has strong connections to their traditional lands and all its resources. Sharing information with each other and having good communication links has always been important for everyone's well-being.

The history of how Poplar Hill community members have been communicating and sharing information starts with the time before digital technology existed in the community. Community telephone services were only introduced across the region in the late 1970's as the First Nations were developing their schools and health centre across the region. Over the years, Poplar Hill demonstrated its leadership with broadband and digital technologies by developing and implementing a community radio station, a community cable service to deliver internet connections and a community television channel, a community mobile phone service, and community-led and supported services including telemedicine, distance education and videoconferencing. These community services were set up by community members, working together to decide what was best for the community. In each of these developments, the Poplar Hill leadership worked closely with their First Nation council Keewaytinook Okimakinak (KO) and its telecommunications service KNET to develop and support these community services.

After 40 years of operating and upgrading their local community radio station, this service continues to be the central means of sharing information. Local programming often runs for 15 or 16 hours daily in the local Ojibway dialect. In 1994, the chief and community school directed their staff at Keewaytinook Okimakanak to establish a computer communication network that they called the Kuhkenak Network (KNET). Dial-up modem connections to the regional KNET bulletin board provided a means for local residents to share their stories with other First Nations across the region. Mario's Park Bench discussion forum, operated by a Poplar Hill band member who worked at the school became a popular online blog to visit in the mid-90's.

4. Community Access Sites and First Nation SchoolNet in Poplar Hill First Nation

Poplar Hill First Nation established their first public Community Access Sites with support funding from Industry Canada's CAP program in 1997. These original public access sites introduced community members to early digital technologies with connections to the Internet. This early effort led to many of the local developments that followed. When access to internet became available via an Industry Canada First Nations SchoolNet satellite connection and the KNET bulletin board in the late 1990's, local web pages were produced by community members and organizations sharing their stories, pictures, and experiences. The MyKNET.org social media environment became so popular that the organizations began exploring ways to block it from their computers during working hours.

By 1998 with capital project funding from Poplar Hill's First Nation council (KO), Bell Canada upgraded their regional microwave network serving Poplar Hill improving the connection speeds across the region. In 1999, Poplar Hill leaders worked with their staff at Keewaytinook Okimakanak (KO) to develop a comprehensive IT strategy that resulted in their participation in KO's application to become Canada's Aboriginal Smart Communities demonstration project. The 1999 digital technology planning workshop organized by KO and KNET with representatives from Poplar Hill is documented online at http://smart.knet.ca/archive/confpack.html. The planning workshop led to the development of the KO-KNET smart communities demonstration funding proposal (available online at http://smart.knet.ca/archive/vision.html).

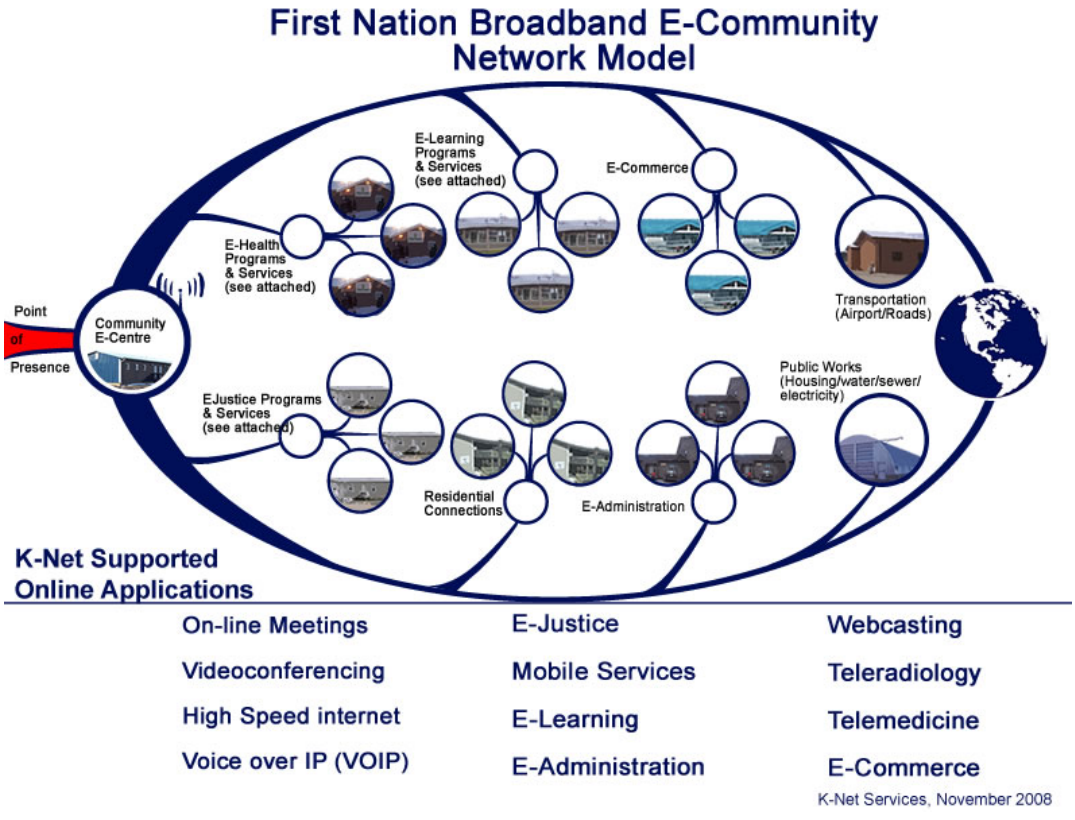
To secure the initial funding matching funding for the Smart Communities funding application, Poplar Hill First Nation leaders committed one million dollars towards the project (similar matching contributions were secured from the other four Keewaytinook Okimakanak First Nation partners). As soon as Industry Canada officials announced the KO proposal was selected to be Canada's Aboriginal demonstration project in May 2000, the community leaders worked with their council staff to identify additional funding programs to match the Smart Communities program contributions. Indian and Northern Affairs Canada (INAC) was able to support the development and ongoing operation of the Keewaytinook Internet High School (KIHS – http://kihs.knet.ca). Health Canada supported the development and ongoing operation of the Keewaytinook Okimakanak Telemedicine Network (KOTM – http://telemedicine.knet.ca). The federal regional economic development program (FEDNOR) was able to support the development of local and regional networks. The federal National Satellite Initiative supported access to satellite bandwidth over the years. The provincial Northern Ontario Heritage Fund program supported the development of the regional network. Over the four-year duration of the Smart Communities project in Poplar Hill, from 2001 to 2005, several million dollars of digital network infrastructure, hardware, applications, and local capacity development were introduced into Poplar Hill First Nation.

5. Poplar Hill's Local Internet Connections

The locally-owned and operated coax cable network distributing the internet to the homes and organizations was completed in 2002. From the cable head-end, 1.5Mb of pipe bandwidth (a T1 pipe) was purchased from Bell Canada and connected to the KNET distribution network where internet bandwidth is purchased; traffic management services are in place; essential applications are provided including telemedicine, the internet high school, training, videoconferencing, email, along with a host of other online services.

Figure 1 shows the local network and its connections to homes, organizations and services throughout the community. The e-community network model was introduced by Keewaytinook Okimakanak and its member First Nations, including Poplar Hill First Nation to the Assembly of First Nations (AFN) in 2005. Several national AFN resolutions from 2005 to 2010 showed national support for both the First Nation intermediary organizations and the e-community network development strategy in First Nations. This pioneering work became a national AFN effort resulting in a chapter in INAC's Aboriginal Policy Research book on Technology and Community Well-being.[1]

Figure 1: Poplar Hill First Nation e-Community Network Model

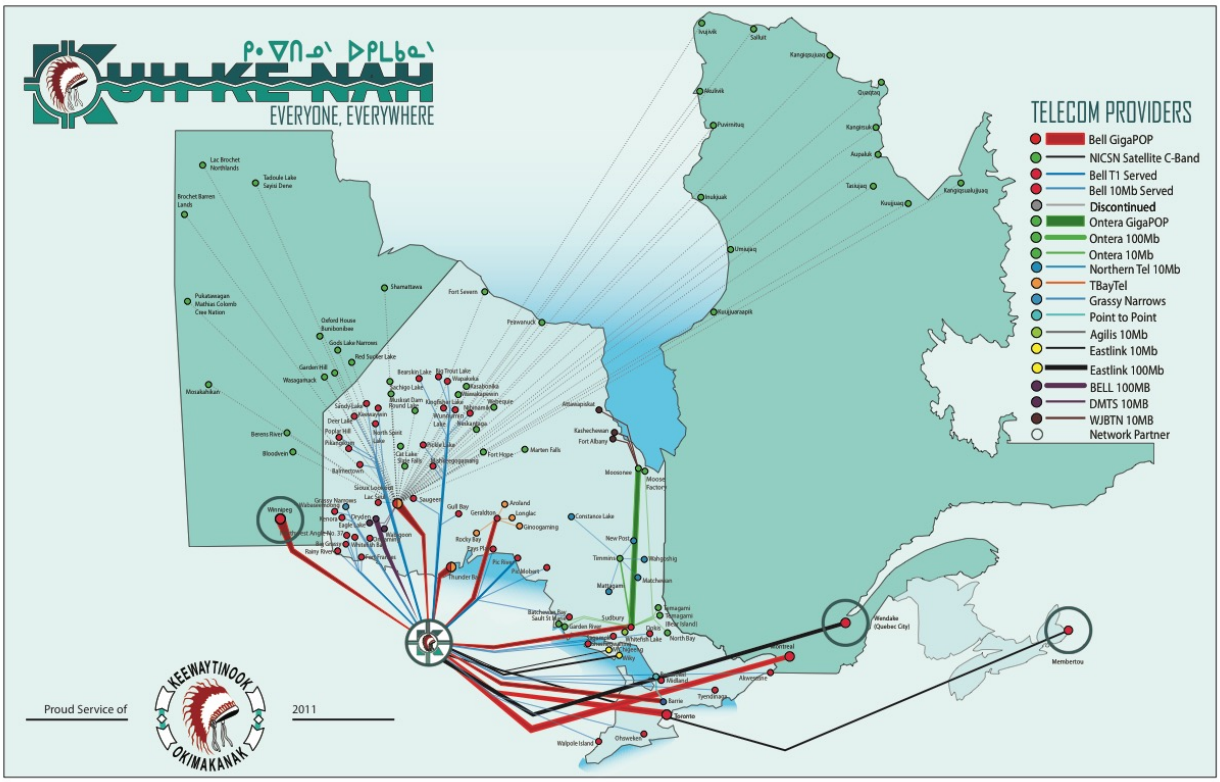


[1] Whiteduck, J. (2010). Building the First Nation e–community. In J. P. White, J. Peters, D. Beavon, & P. Dinsdale (Eds.), *Aboriginal Policy Research VI: Learning, Technology and Traditions* (pp. 95-103). Toronto, ON: Thompson Educational Publishing.

In 2012, Poplar Hill First Nation and the other KO member First Nations introduced their e-Community work at the AFN's annual conference in Toronto. Their e-Community web environment showcases how these First Nations are using digital technologies in all aspects of their communities[2].

Over the years, the use of digital technologies as pioneered in Poplar Hill First Nation and the other KO First Nations is being adopted in other Indigenous communities across the region and the country. The telemedicine network and associated health services now available in Poplar Hill First Nation can now be found in over thirty First Nations. Similarly, the Keewaytinook Internet High School that is now graduating students in Poplar Hill First Nation can be found in other First Nations. Other regional First Nation intermediary organization are developing similar network models and services to support their member First Nations. This growth can be understood in Figure 2 showing the KNET Network and its partnerships with the First Nations and the different regional telecom providers across Ontario in April 2011.

Figure 2: The Kuhkenah Network (KNET) - 2011



[2] http://e-community.knet.ca and http://e-community.knet.ca/poplarhill

In September 2009, Poplar Hill, working with their KNET team, turned on their locally owned 2G cellular service. The next year, the community worked with neighbouring First Nations to raise $82 million to construct a Bell Canada owned fibre network to replace their aging microwave and satellite service across the region. The Bell Canada fibre network became operational in Poplar Hill in 2012. This infrastructure development now supports additional bandwidth on the Poplar Hill local network and it introduced locally owned fibre connecting several buildings in the community. An ongoing challenge for the community continues to be the monthly cost for the transport bandwidth being charged by Bell Canada. As more community members acquire more digital technologies and as the various organizations increase their use of these tools, the bandwidth is quickly consumed making their online experience unacceptable.

6. Poplar Hill First Nation Asset Map Methodology

Creating a Poplar Hill First Nation Asset Map related to digital technology adoption is an initiative developed by several well-established partners. The partnership includes community and its First Nation council research department (Keewaytinook Okimakanak Research Institute - KORI), the First Nations Innovation (FNI) research project at the University of New Brunswick, and the First Mile Connectivity Consortium (FMCC). The goal of the research is to support community and economic development initiatives based on existing skills, resources and assets already present in Poplar Hill First Nation.

The research involves working and contributing to a process of community and economic development by identifying the skills, talents and resources that already exist in the people, organizations and the community and how digital technologies will support their current and future needs. The goal of the research will involve working with the different groups across the community to identify skills, talents, resources and ideas for community based initiatives. It will also identify other resources in Poplar Hill such as community, business and government organizations that contribute to the development of community-based initiatives.

The community asset map methodology has 10 steps, detailed below.

1. Ethics review. In April, the UNB researchers will submit the proposed research protocol for review by the UNB research ethics board (REB), as a study conducted with the First Nations Innovation project. One of the requirements is to have written permission from the leadership of Poplar Hill First Nation as part of the REB submission.

2. Community preparation and identification community researchers. In April and May, in Popular Hill First Nation, the UNB researcher based in Fredericton - using telecommunication tools including the internet, cell phones and videoconferencing - will work with KORI in Thunder Bay Ontario and community leaders in Poplar Hill First Nation to identify three Poplar Hill community members to work on the project. Contracts will be put in place to hire the community members during the June research period.

3. Meeting with community leadership. The UNB researcher, Brian Beaton, will fly into Poplar Hill in early June (proposed date is June 9). After arrival the researcher will meet with the Chief and council, the Lands and Resource Coordinator (Garius Owen), the three contracted community researchers, and other interested community members, to discuss and finalize the overall plans. The proposed plan, to be approved by the community leadership is basically that the community asset map survey will have two parts, each with its own survey instrument. The questions on the survey instrument will be taken from the two sample bank of questions presented later in this document. OCAP requirements will be discussed and agreed.

4. Developing the study implementation strategy. The first week of the study (June 13-17), the researcher and the community researchers will devise an implementation strategy, adapting to accommodate local needs and priorities. The work in the first week will include:

- developing a strong team spirit
- agreement on why the research is important for the community
- identifying the location of all the community houses. These will be indicated on the community map
- finalizing survey instrument #1, including the appropriate mix of questions related to community assets and access and use of digital technologies (see next step)
- that process for administering the first (household) survey in the community that will include the "script" for introducing the survey in the households.
- preparing posters and information sheets
- distributing the info in the community including in the appropriate Facebook groups
- printing copies of survey instrument #1, one each for each household, plus extras
- agreeing on a plan for the next week, including daily or twice-daily meetings to review progress as the household survey is underway.

5. Administering Survey #1: community household survey. The second week of the study (June 20-24), the research team will administer the first survey to every household in the community. The completed survey instruments will be scanned for back-up at the end of the week.

Survey instrument #1: community households and the people who live there. This will be a very short paper-based survey, administered orally by the community researcher to one member of each household in the community. The goal of the survey is to understand basic information about community household adoption of digital technologies and the community assets used by the household. The survey instrument will be designed so it can be completed in three minutes or less. It will contain the same basic questions about digital technology adoption and a selection of questions (may be different in different households) about community assets. As part of the instrument development, the community research team will pilot the survey with a few people to test for timing and the correct wording of the questions.

6. Finalize and begin administering Survey #2: survey of community assets and the people who work there. The third week of the study (June 27-30) the research team will review the results of the household survey related to the identification of the community assets (there will be

time to do a complete analysis after the community visit). They will identify and list the names of key community assets who should be included in Survey #2. If there are more than 20 people on the list, a random sample of 20 people will be drawn. A plan for administering the survey will be agreed and survey #2 will begin.

Survey instrument #2: community assets and the people who work there. This will be a longer more comprehensive paper-based survey, administered orally by the community researcher to someone who works in a community asset. The goal of the survey is to have a comprehensive understanding of the adoption and use of digital technologies by people who are and who work with community assets, to identify how the technologies are assisting their work and their future technology needs. The instrument will be designed so it can be completed in 30 minutes. It will contain questions only about digital technology adoption. It will be administered to 20 people in the community, selected randomly or with another process agreed by the community research team. The research participants will be remunerated $20 for their time.

7. Complete the survey administration and follow-up meeting with the leadership. The fourth week of the study (July 4-7) the team will finish up any outstanding survey work. Scanned copies of all paper surveys will be completed. The originals may be retained by the community if requested. The team will meet to review and discuss the process. The team will meet with the community leadership to report on the project and discuss the next steps. Timings and formats for reporting will be agreed. For example, it would be possible for the researcher to analyze the data in late summer and make a presentation by videoconference or in person to the community in September or October. The planned date for the UNB researcher (Brian) to fly out of the community is July 7.

8. Analysis and report preparation, Presentation of study results and Follow-up work with the community.

The research will include sharing the information gathered and presenting it at a community workshop. The follow up will also be assisting with the development of community-based initiatives.

The project includes training local community researchers to conduct the household and organization asset map surveys on local adoption of digital technologies. Local working groups such as workers, unemployed youth and sole parents will also be coordinated to identify available skills and talents and generate ideas for community based initiatives. The planning and coordination of the on-site research work will be completed before the FNI researcher is scheduled to arrive in Poplar Hill in June, 2016.

Information on digital technology use by community members and local organizations can be collected using different means. We are proposing to use a combination of computer assisted telephone or personal interviews. In some cases, we will also attempt to collect information using self-administered surveys that will be available by paper questionnaires or online

questionnaires. Our goal is to include every household and organization in Poplar Hill in the asset map survey.

Sample bank of questions to identify local community assets[3]

This part of the survey will identify local assets. In week one of the study, the local research team will review these questions and agree on which ones will be included in survey instrument #1 that will be administered to community households.

Where do you go to buy groceries?

+ Grocery stores - small private homes
  Northern
  In Red Lake
  In larger urban centre, Winnipeg / Thunder Bay
+ How often?

Where do you go to shop for non-food items, e.g. clothes, household items, etc.?

+ small private homes stores
+ Northern store
+ In Red Lake
+ In larger urban centre, Winnipeg / Thunder Bay
+ How often?

Where do you go to get involved in community/issues?

+ Band office / Who?
+ Radio/TV Station
+ Local programs and services / Which one(s)
+ Local groups / Which one(s)

Where do you go for health care?

+ Local Clinic
+ Elders
+ Traditional medicine
+ Mental Health Program
+ Elderly Care Program
+ Hospitals
+ Other

Where do you go for school and training?

+ Local school

[3] Kretzmann, J. & McKnight, J. (2003). Introduction to Asset-Mapping. Asset-Based Community Development Institute - School of Education and Social Policy. Northwestern University, IL, USA. Retrieved on March 2016 from http://www.abcdinstitute.org

+ Elders
+ Internet High School
+ Distance education
+ Workshops
+ Other

Where do you go for other services and resources?

+ Banking
+ Child Care
+ Social Services
+ Police Services
+ Fire Prevention
+ Utilities (water, electricity, waste water)
+ Cable Service
+ Phone Service
+ Local Band / Government services
+ Transportation
+ Other Governmental Departments and Agencies
+ Library Service
+ For-profit businesses
+ Merchants
+ Business Groups

Where do you go for arts and recreation?

+ Family Camp location
+ Historical and Cultural Groups
+ Arts
+ Community gardens
+ Rivers and lakes
+ Natural resources and Landmarks
+ Playground
+ Hiking / Walking Trail
+ Fishing spot(s)
+ Campsites

Sample bank of questions to identify adoption of digital technologies

This portion of the asset map survey will identify adoption and use of digital technologies by community members. Several key questions will be asked in survey #1 of community households and others in survey #2 of the people associated with the community assets. This survey tool is developed based on the information from the OECD's international standard for the production of indicators on the Information Society.

There is a need to ensure that new measurement tools and delivery strategies reflect evolving policy needs and priorities and to align them with current practices, as well as to take into account developments in standards and definitions – notably, that of e-commerce and e-government. The latest revised OECD model surveys were published for businesses, households, and individuals in 2015 and are being adapted for the Poplar Hill community asset map.

The proposed survey approach will work with 11 key areas listed below. These areas are identified from the OECD surveys[4]. The information being gathered is considered useful for monitoring local usage and requirements. This includes access to the internet, frequency and amount of usage and the type of activities performed, together with elements regarding the use of e- commerce, the use of e-government services, individuals' IT skills, measures in place to protect security and privacy and other online experiences. The additional information being obtained is meant to help understand satisfaction and perception of local issues, use of child online protection tools and to the use of digital technologies at school. The survey includes areas on Internet use for business purposes and on the level of digital technology skills. Other considerations include the mobile use of the Internet, the use of apps, e-purchases, and reporting broadband speeds and connection types.

Household and Individual access and use of digital technologies:

A. **Access to computer**: type of computer, speed(s), and access issues.

B. **Access to Internet**: connection types, speed, signal, and reasons for non-access.

C. **Access to technologies and Internet use**: Use of different types of ICT equipment, frequency of use, place of use, amount of time of use, type of connection, and obstacles to mobile connection.

D. **Internet activities for private purposes**: Activities online, activities via mobile connection, frequency by major online activity type, web site management, intensity of use, and any health-related issues/concerns.

E. **Internet use for business purposes**: Frequency of Internet use at work, teleworking, web site management, and other purposes of the remote connection purpose of online work-related activities.

[4] OECD. (2015). The OECD Model Survey on ICT Access and Usage by Households and Individuals - 2nd Revision. Working Party on Measurement and Analysis of the Digital Economy. Retrieved on March 2016 from https://www.oecd.org/sti/ieconomy/ICT-Model-Survey-Access-Usage-Households-Individuals.pdf and The OECD Model Survey on ICT Usage by Businesses - 2nd Revision. Retrieved on March 2016 from https://www.oecd.org/sti/ieconomy/ICT-Model-Survey-Usage-Businesses.pdf

F. **E-government**: Use of ICT to interact with public authorities, ways and types of interaction, the level of satisfaction and perceived obstacles.

G. **E-commerce**: Types of goods and services purchased on line, frequency of use, intensity and amount of purchases, payment methods, geographical location of providers and perceived obstacles.

H. **ICT skills**: Level of computer and Internet skills and methods for ICT skills acquisition.

I. **Security and Privacy**: IT protection tools, security incidents encountered, update frequency of the IT protection tools, reasons for not using such tools, the types of incidents, and actions post-incident.

J. **Protection of children online** (household level): Victimization forms encountered and protection measures related to children's use of Internet at home.

K. **Internet activities at school**: Access to ICTs, intensity of Internet use, frequency of computer/Internet-based activities, households/individuals' characteristics (age, gender, educational attainment and employment situation).

The following information will be obtained about community members' access to and use of digital technologies in Poplar Hill First Nation:

1. Households with computer access at home (% of all households)
2. Households with internet access at home (% of all households)
3. Type of internet connection used in the household (% of households w/Internet access)
4. Maximum advertised download speed (% distribution by speed-tiers).
5. Use of selected ICT equipment (% of individuals, by equipment)
6. (Frequency of) computer use (% of computer users, by frequency)
7. (Frequency of) Internet use (% of individuals, by frequency)
8. Places of use of the Internet (% of users by location)
9. Activities performed over the Internet (% of individuals by activity – can be duplicated for handheld devices)
10. Frequency of internet use at work (% of persons employed with access to a computer)
11. Work-related activities performed remotely over the Internet (% of p.e. w/Internet access, by activity)
12. Use of public services on line by intensity of interaction (% of individuals by activity)
13. Use of public services on line by type of service used (% of individuals by service)
14. Most recent occurrence of online purchases (% of individuals buying online and frequency)
15. Types of goods and services purchased online (% relevance of each type of item)
16. Ability to perform selected IT tasks (% of capable individuals by task)
17. Protection from IT threats (% of individuals using protected devices)

18. Security incidents (% relevance of incidents by type)

Additional information to explore as the survey tool is develop and administered:

19. Type of computer accessed from home
20. Presence of distributed internet signal at home (% of households)
21. Number of devices connected to the Internet at home (% of households by number and type)
22. Reasons for not having access to the Internet (% relevance of each motivation)
23. Frequency of use of mobile phone (% of individuals by use brackets)
24. Time of use of mobile phone (% of individuals by time-of-use brackets)
25. Time of use of the Internet (% of individuals by time-of-use brackets)
26. Experience with Internet use (% of users by years-of-use brackets)
27. Devices used to access the internet (% relevance of each device and use of multiple devices)
28. Frequency of Internet use via handheld devices (% of users over handheld devices)
29. Type of Internet connection used: wired, fixed wireless and mobile (% of users by type of connection)
30. Difficulties experienced with mobile connectivity (% relevance by type)
31. Barriers to using mobile connectivity (% relevance by barrier)
32. Use of Apps on mobile devices by category (% of users by category)
33. Time of use of the Internet for communicating (% of users by time-of-use brackets)
34. Frequency of use of social networks (% of individuals by frequency)
35. Frequency of reading online newspapers (% of individuals by frequency)
36. Use of online information by type of access (subscription, RSS etc.: % of users by type)
37. Use of internet for health related purposes (% of individuals by activity)
38. Frequency of Internet use for audio-visual content (% of users by frequency and activity)
39. Use of own devices for work related activities (% of persons employed using own devices)
40. Level of satisfaction for online public services (% of users, by type of interaction and service)
41. Reasons for not using advanced e-government services (submitting completed forms) (% relevance)
42. Number of orders placed online in the last three months, by channel (% of brackets, and web vs. apps)
43. Location of sellers: national or foreign (% distribution)
44. Amount spent on online purchases (% of buyers by value brackets)
45. Payment channels for online purchases (% of buyers by channel)
46. Reasons for not purchasing online (% relevance of each reason)
47. Means of acquiring IT skills (% relevance of each mean)
48. Ability to address basic needs: work, communication, security and privacy (% of individuals, by need)
49. Frequency of update of protection tools (% of users by frequency, by tool)

50. Actions taken following a security incident in the last 3 months (% of individuals by type of action)
51. Reasons for not using protection tools (% relevance of each reason)
52. Diffusion of children online incidents (% of households with children, by type of incident experienced)
53. Diffusion of children online-protection (% of households with children, by type of action taken)
54. Availability of ICT tools at school (% of individuals in education, by tool)
55. Access to the Internet at school (% of individuals in education).
56. Activities performed over the Internet at school, by frequency (% of individuals by use brackets)
57. Frequency of Internet activities performed at school (% of individuals in education, by activity)

Working closely with their First Nation Council's (KO) Research Institute and other partners, Poplar Hill leadership will identify strategies to undertake the review and administration of the survey on a regular basis to track changes, requirements as well as update their reports. The Kativik Regional Government's statistics program for Nunavik provides an excellent model for gathering and presenting research data (http://www.nunivaat.org). As the need is identified by the community leadership, adding new questions and areas of interest to the survey to support local development is easily achieved. Being able to identify the time period when activities occurred is required so comparable analysis can be completed. Sharing the information with other agencies such as Statistics Canada and the CRTC is also possible with appropriate agreements and usage strategies. The present Lands and Resources team is presently engaged in mapping and populating their traditional lands geographic information system. This work is an example of an existing program that might be expanded to include the Community Asset Map survey work outlined, if adequate resources (staffing and financial) are available.

This community research development model would be sustained through ongoing strategic investments by the federal and provincial agencies requiring the community information. Employment training funding for local researchers would ensure local capacity to develop, operate and sustain the local research resources. Ongoing training would help the researchers to be able to update, maintain and gather the data; to modify the survey tool and delivery strategies; to host community workshops about the research and provide feedback about the results; and to adjust data collection requirements and reporting tools. The development model provides another means of local economic and social development that benefits the community, the region and the country. The proposed model is also transferable and adaptable for other small Indigenous communities to undertake as the resources and opportunity become available.