



**Waabnoong Bemjiwang Association
of First Nations**

Enhancing your Housing Data

Randy Roy – Infrastructure Specialist

Presenter Information - Background

Who We Are – Our Mandate

- ❖ Provides advisory and technical services to member First Nations.
- ❖ Advises and assists in the development, planning and administering of programs and services, as well as conduct, collect, review, write and disseminate information.
- ❖ Organizes and maintains the planning and coordination of networks of First Nation affiliates.



Enhancing Your Housing Data – Overview of Presentation

Introduction

Background information on WBAFN Asset Management Project

Problems to solve (with respect to housing data)

WBAFN's vision and implementation methods

Lessons learned



Waabnoong Bemjiwang Association of First Nations

Introduction notes – Enhancing your Housing Data

This presentation was formed from my Asset Management experience in the last few years....

My experience is largely based on a project our Tribal Council is working on:

Started out as a pilot project intended to Design/Develop, Implement, Populate and test an information management system that will maintain complete, accurate and highly functional First Nation ***Infrastructure*** Asset information.

The AM project is to address many challenges we are facing including:

Need for a Computerized Single Database for Data Management

Sharing of Information (Internally and Externally)

A movement towards a digital based file/record keeping system



Background – WBAFN Asset Management - Project Team

Acknowledgement of WBAFN Team

Executive Director – Irvin George

Project Manager (Contracted) – Scott McKeever (Canyon Logics)

2 GIS technicians (on contract)

1 intern – primarily engaged in data collection

3 civil technologists – WBAFN staff

Steering Committee

WBAFN Board of Directors

Our 6 member FN Communities



Background – WBAFN Asset Management Project

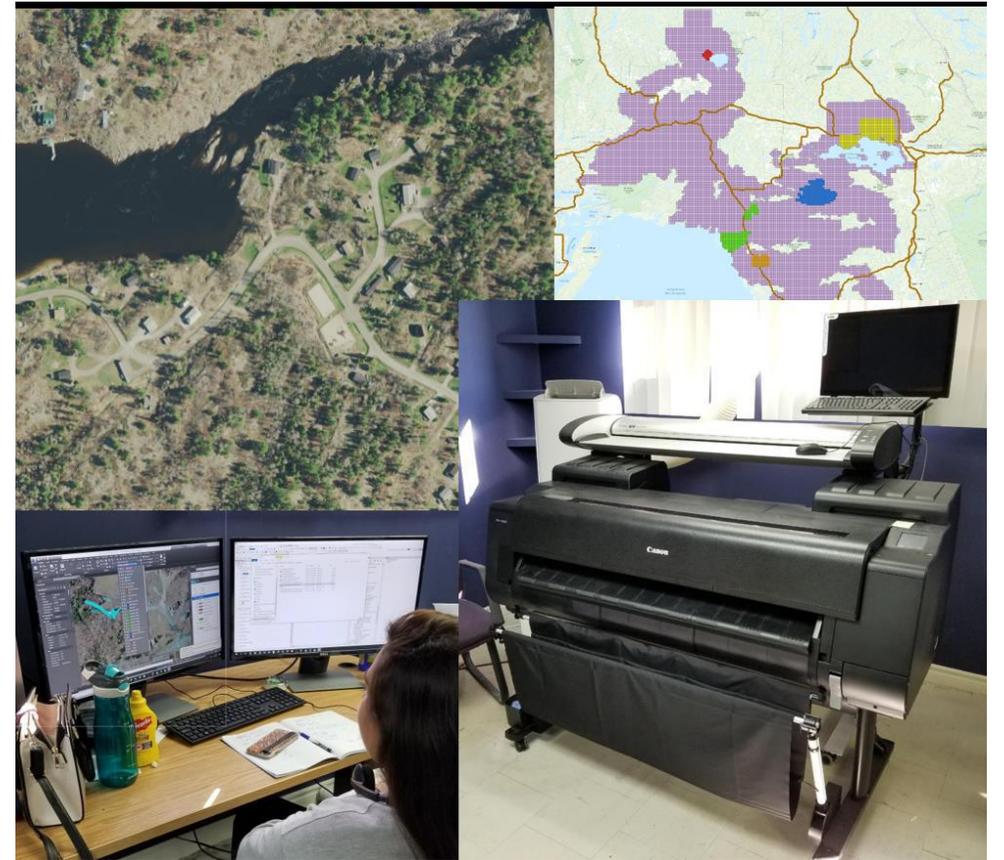
Phase I – 2018 :

Acquire and organize inventory information for our 6 member FN Communities

Phase II -2019 (not yet official)

Using the established inventory information as a foundation – acquire and organize condition information and financial information

Technology – GIS Mapping



WBAFN – Asset Management Project

Development and testing of:

First Nations Asset data standards and Asset Management practices

Development of database Capacity training and training manuals

Consistent functional standards and work-flows,

Technology designed specifically to manage First Nation Assets

A First Nations approach to asset management

A system that can be automated, maintained, and analyzed in a shared environment by WBAFN member Communities

Asset management system templates, documentation, and best practices that establish consistent approaches and delivery.

Acquisition of a detailed and organized infrastructure inventory and customization of infrastructure management software. Implementation of field data capture techniques and processes

Adherence to INAC Policies, Regulations, and guidelines as referenced in individual FN (capital) Funding agreements.

Leverage previous asset management studies ,asset management theories, , financial strategies, software, and First Nation specific programming

Identify capacity and gaps in GIS functionality with respect to infrastructure

Accurate Property and Asset Data will allow Chief & Council and Finance to make better capital/infrastructure investment decisions by being able to:

Prioritize projects based on a life cycle costing approach

Undertake long and short-term infrastructure planning



Management of technical information....

Note about this presentation:

With respect to FN housing challenges, this presentation does not address the social housing needs, nor the financial or day to day administrative requirements of delivering a local housing program.

That said, it is intended to facilitate or compliment these and other requirements.



Enhancing your Housing Data



Housing Data – Problems to Solve

First Nation Housing and related Infrastructure – Hosting Data

Currently, ISC supports funding allocations and requests that are largely based on information disseminated through their ICMS database. ISC conducts an annual data call intended to update this information – known as the “Housing and Infrastructure Annual Report”.

In addition, other agencies such as AFN, periodically request housing specific data which may be used on a more regional basis....

The requested data is not always readily available at the Community level and usually requires some effort to obtain it....



Introduction – Problems to Solve

First Nation Housing and related Infrastructure – Paper based Data

Lack of digital data, hardware, software, communication technology, local skills, and related standards and processes to build and maintain Housing information makes it difficult for First Nations to manage finances and be self-sufficient.

Obtaining details for Member's Housing and Asset information is difficult since it is maintained in a variety of different systems/locations and in an assortment of electronic/paper formats, resulting in:

- Gaps in the data required for reporting
- Inaccurate assessments of the state of the Member nations' infrastructure and housing conditions



Introduction – Problems to Solve

First Nation Housing and related Infrastructure – Disparate Data

Lack of complete and dependable Housing information makes it difficult and costly to

- Carry out financial planning with respect to managing the existing stock;
- make decisions on investments for housing and related infrastructure requirements;
- support related initiatives in land use and property management;
- report the conditions and needs of the Community's housing and infrastructure;
- identify and implement economic development opportunities

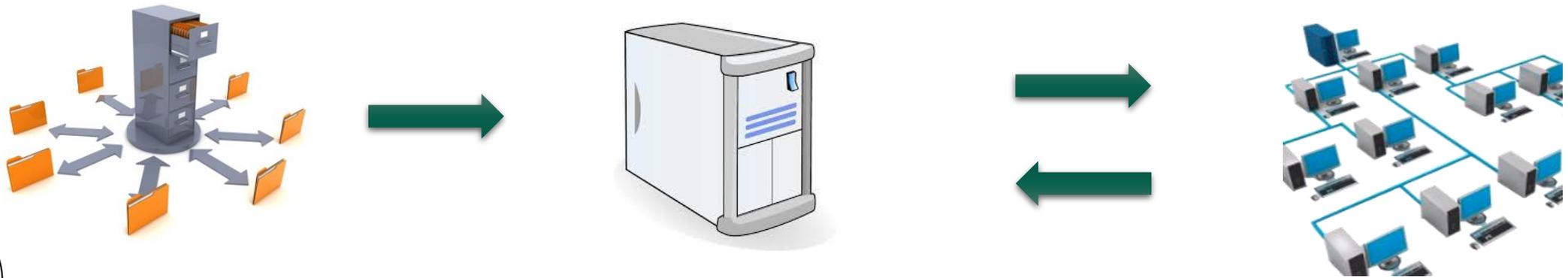


Introduction – Reforming existing information

Our Vision – Data Sovereignty

To design and develop a First Nations housing and infrastructure database for the 6 member First Nations.

By developing an Infrastructure Data Program for our member First Nations, it will give them the capabilities of managing their assets in one single entity shared community wide.



Databases and data hosting:

General Objectives and considerations of a Database:

Usability – considering all the staff who require to use it

Suitability for users – consider different levels of permission

Visualization and reporting – displaying results effectively

Security – privacy issues, what can be shared and what cannot

Functionality – what are the primary functions – who is using

Support and development - improvements

Integration – considering compatibility of data and data exchanges

Scalability – can it be expanded or modified

Cost – technology must be included as a management tool

Hosting – desktop, shared workspaces, subscribed services

Updating – keeping the data current

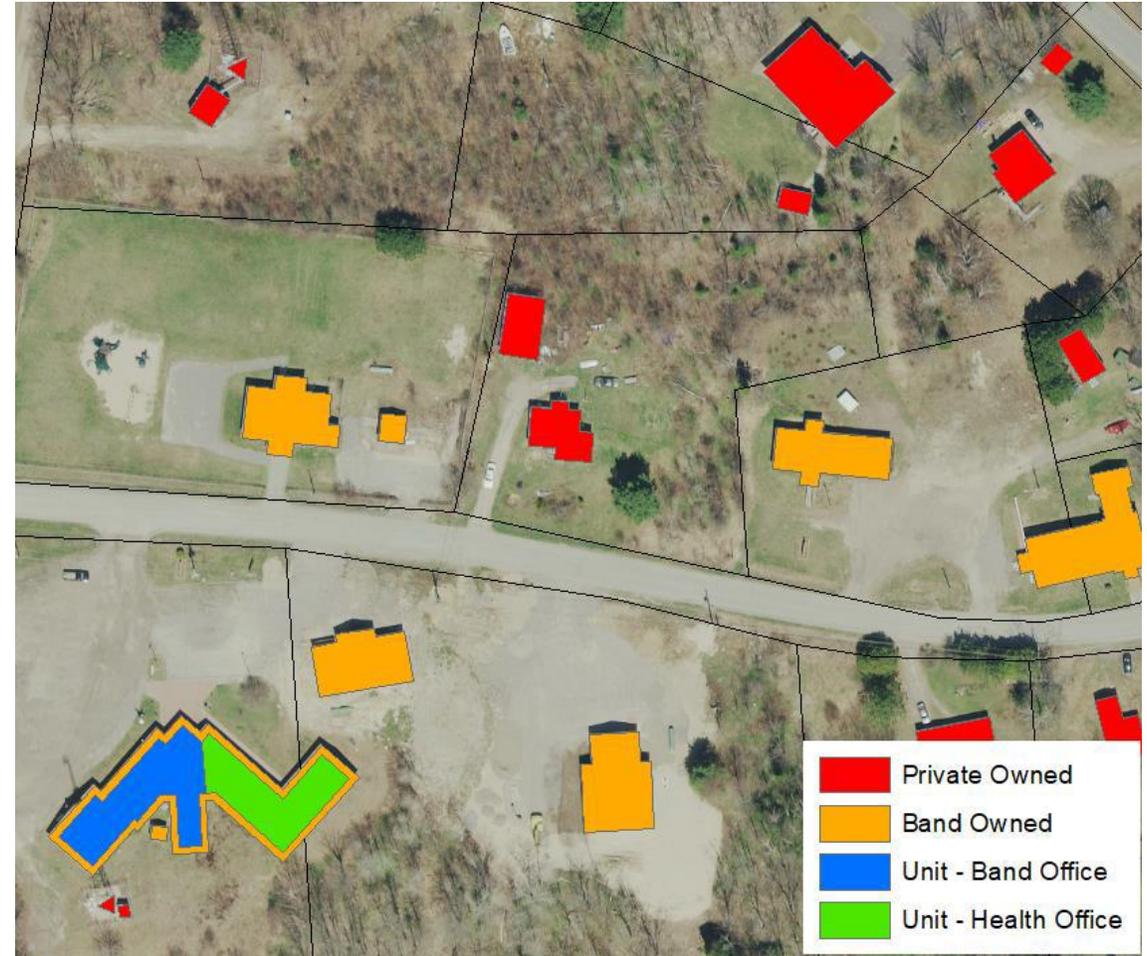


Database Development – Visual enhancements – Map based information

Spatial information - Mapping

- Reconciles map with paper
- References can be made to real world coordinates
- Orthographic imagery
- Climatic information – considered when specification writing
- Geographic specifics – logistics and sourcing resources

When applying for Federal funding, how often do we need a site plan? Answer: EVERY TIME



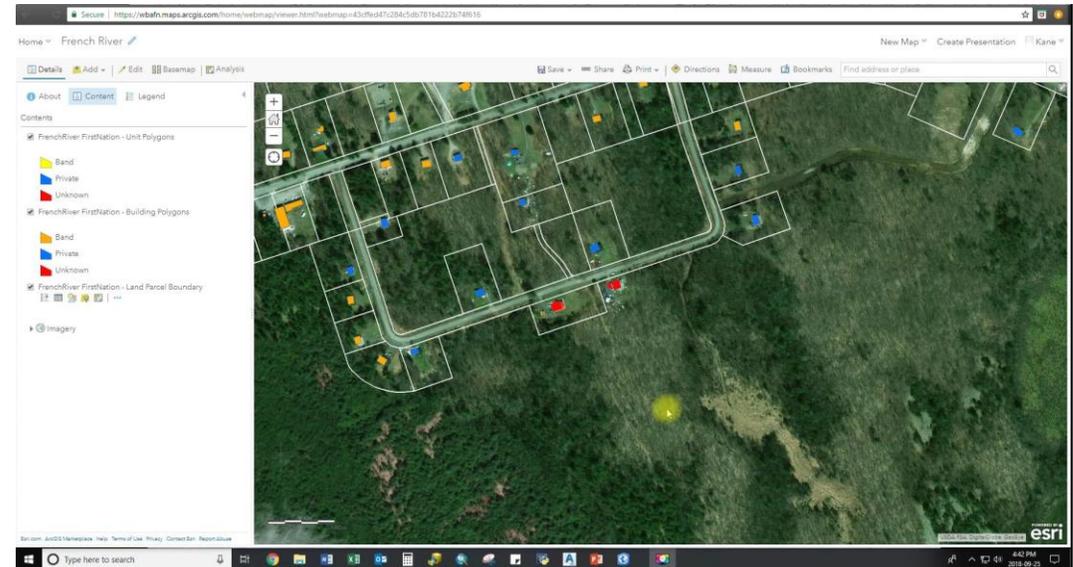
Database Design considerations

The importance of establishing your own Unique IDs

We assigned every building a unique identification number.

The unique ID is used to link information together.

For housing, civic addresses or CLSR land parcel information is not always established or available.



Capturing Data in the field...

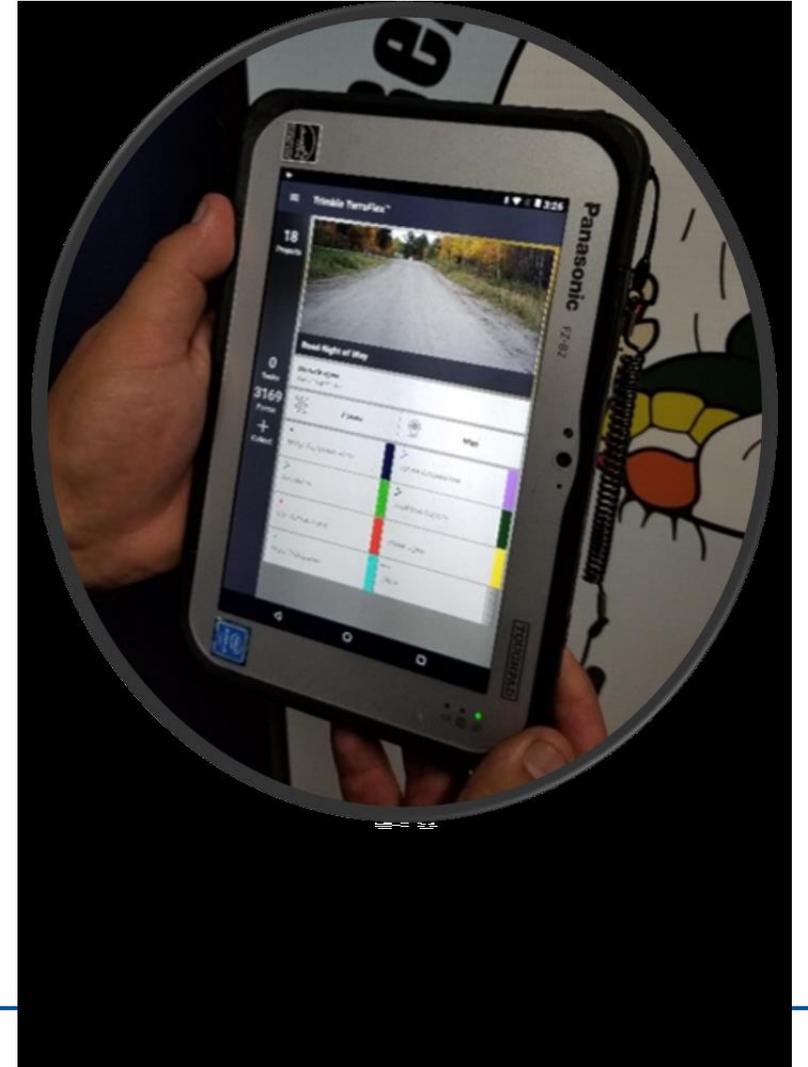
Tablets...

Implementing GIS based field data collection tablets to capture housing information...

The tablets show the location of the user relative to the location of the building on the map...

The data collection forms used on the tablet can be customized so that the field staff know what data to collect.

Information can be transferred to the central database as soon as an internet connection is made...



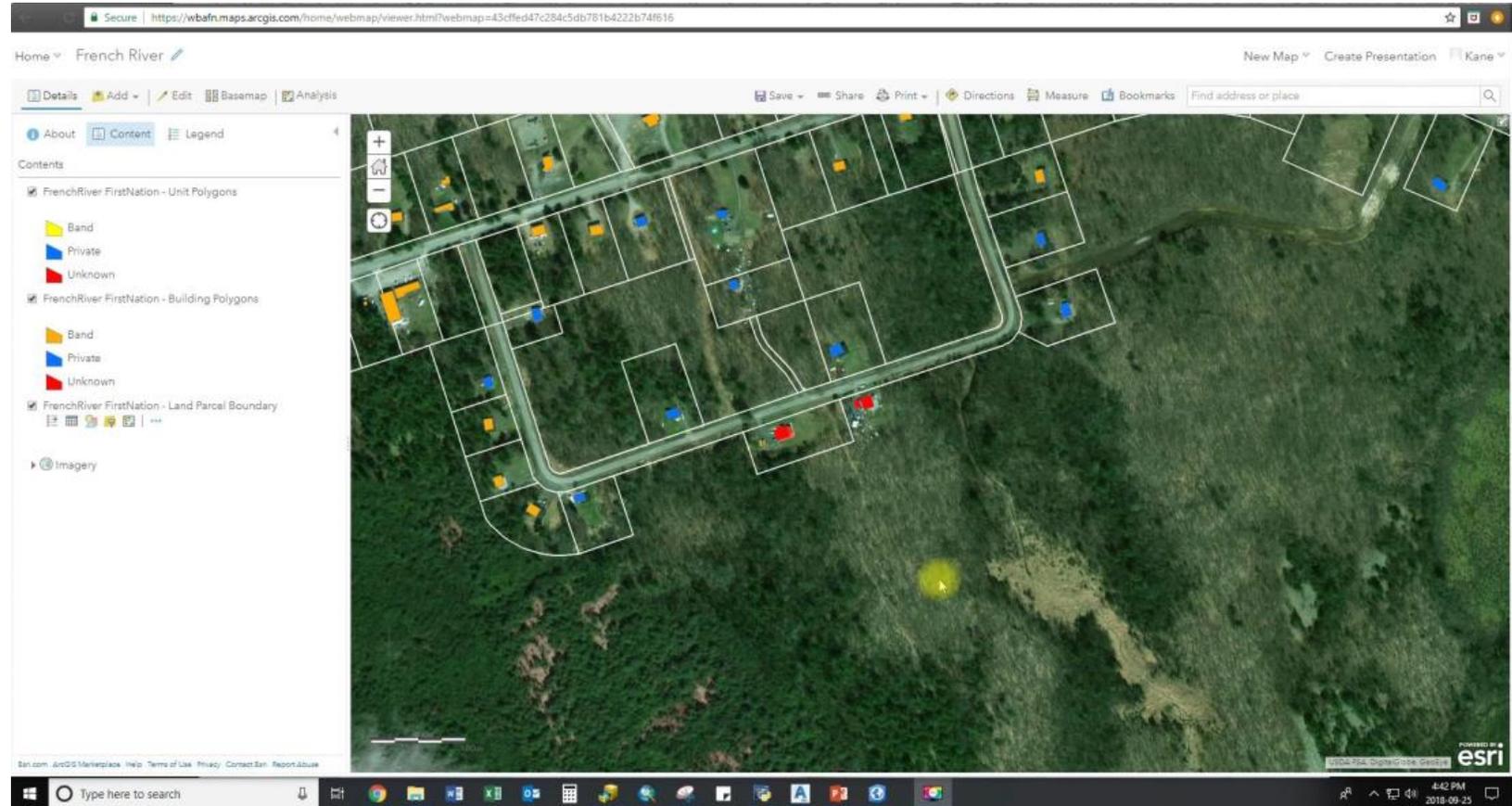
Field Data capture – WEB GIS tools

In addition to the tablets....

We have developed a GIS web tool to enable users in each FN who now can add, update and query housing information form any device with an internet connection

User password access

Integrated the web tool with our GIS based inventory and field data collection tablets



Data Quality

- Performing Quality Assurance and Quality Control on all of the data we have collected.
 - Filling in all of the fields with attributes for Band Owned buildings.
 - Ensuring 911 and Street signs gathered in the field have the correct numbers and spelling.
 - Comparing water infrastructure gathered in the field to as built engineering drawings we digitized.
- We are also working on ensuring our road networks are of the correct standards to be submitted to LIO for 911 purposes.



WBAFN AM Project

Lessons learned:

First Nations communities need to harness housing data, since they are the source....

Creating and maintaining an inventory in a GIS format (for us) has been the best first step to host this type of data.....

There are no real templates that can be followed.....

First Nation core base funding administration should include a budget for Information Technology infrastructure....



WBAFN Asset Management Project

Harnessing housing data:

WBAFN will continue to research and test methods of harnessing FN housing data...

We have learned a lot, and continue to learn what can work and what does not...

In order to sustain this type of data, supports are required for the technologies and our capacities on how to use....

Using methods described earlier, we see tremendous opportunities to expand and improve FN data management practices...





**Waabnoong Bemjiwang Association
of First Nations**

Enhancing Your Housing Data – Question/Discussion Period