First Nations Infrastructure Institute
Institut des infrastructures des Premières Nations

Lessons Learned

August 2026

What we have learned

Since FNII was first imagined in 2017 and throughout its development phase and ongoing work with communities, FNII has learned from First Nations and regional Indigenous organizations through a wide variety of engagements.

Since 2017, FNII has engaged with hundreds of leaders, managers and staff people responsible for infrastructure within their First Nations and Indigenous organizations.

PROOF OF CONCEPT — Proof-of-Concept projects with the Chippewas of Kettle and Stony Point, Atlantic First Nations Water Authority, and First Nations Health Authority.

WEBINAR SERIES — A growing webinar library covering shovel ready projects, procurement, building a business case and more.

LEADING THE WAY — Annual First Nations Leading the Way conferences since 2017.

DEVELOPMENT BOARD — Wisdom, experience and business acumen of Development Board Members from across Canada.

QUERIES FROM NATIONS — Ad hoc inquiries to FNII, emerging from Nations who became aware of the Institutions' evolution through one of the above avenues

PROJECT SUPPORT — Collaboration with Nations and other Indigenous organizations to move forward their infrastructure projects.

These engagements have informed FNII about the nature and scope of infrastructure development needs of First Nations in Canada. This document is a compilation of 20 of the key lessons learned during the evolution of FNII.

Key learnings

1. It is vital to consider the whole infrastructure project life cycle

The most common areas of focus for infrastructure projects are planning, design, construction, operations and maintenance. FNII's work with Nations and Indigenous organizations has underscored the importance of the entire life cycle of infrastructure projects, from the earliest stages of pre-planning and problem definition through feasibility studies to select the most appropriate solution, followed by design, construction and then operations and maintenance. Beyond operations and maintenance, asset sustainability through rehabilitation of key asset components at appropriate times is also critically important.

2. A business case needs to be developed for all infrastructure projects.

There are many dimensions of an infrastructure project. While the most appropriate technical solution – such as how to treat and distribute water; or, how to design a safe, comfortable and culturally reflective community building – are extremely important, there are many other considerations to be taken into account. FNII has developed a business case approach which reflects these considerations. The overall business case includes the following sub-cases which should be completed for all projects.

I. **Strategic case** – why is the infrastructure project required, and what Nation objectives does it address?

II. **Technical Case** – what are the optional infrastructure solutions, and which one is preferred following evaluation from multiple perspectives?

III. **Financial Case** – how will the infrastructure project be financially sustainable over its entire lifecycle?

IV. **Commercial Case** – what is the most appropriate approach for the Nation to engage others outside the organization to design, construct, and possibly operate its infrastructure project?

V. **Management Case** – how will relevant parties come together and be organized to implement the infrastructure project?

3. Nations and indigenous organizations have diverse needs

There is no one size fits all situation with respect to Nation and Indigenous organization need for support across the infrastructure life cycle. In contrast to one size fits all, FNII has found a diverse array of needs. Some communities have considerable experience and capacity to plan, operate and maintain their infrastructure, and require assistance only with technical design and construction (and in some cases, participating in construction through Nation member and business entity involvement). Other communities require more thorough support at each step along the infrastructure life cycle.

In the broader business case context described above, some communities have deep experience with infrastructure projects. To address these diverse needs, FNII applies the principle of meeting communities where they are. In some instances, FNII support would be required throughout the infrastructure project. In others, this support would be only in selected areas of the life cycle and/or business case.

4. A collaborative approach is critical to success

FNII has taken a collaborative approach to all of the projects it supports and believes firmly that this approach will be fundamental moving forward. This collaborative approach can be characterized by the following:

- Working with a spirit of togetherness and common interest, rather than in place of them – offering expertise, support, and options, not direction
- Seeking opportunities to guide Nations and Indigenous organizations through the relevant portion of the infrastructure life cycle according to their need, respecting that decision-making rests with the Nation
- Ensuring common expectations which are clear and consistent throughout the infrastructure life cycle
- Maintaining positive, constructive and respectful relationships
- Working with other advisors, including for example, engineering and architectural consultants

5. Desire for capacity building

The communities with whom FNII has worked do not want FNII to simply do the work in isolation. In contrast, the Nations and Indigenous organizations have welcomed the opportunity to work alongside FNII and gain experience and build capacity. This has occurred through in-person workshops and via virtual platforms. And the experience and capacity gained by the communities has been diverse. Examples include clearly defining the scope of work to advance an infrastructure project, finalizing contracts with outside agencies for feasibility studies, financial analysis, procurement options analyses, and other valuable and enduring skills.

6. Community engagement is key

FNII has witnessed time and again the need for and value of community engagement when undertaking infrastructure projects. This engagement needs to be broad in nature and include all dimensions of the community – membership, all staff who interface with an infrastructure project (such as operations, public works, finance, lands, and other staff), Chief and Council, Nation businesses, other stakeholders and partners – as they all touch infrastructure projects in one way or another and need to be engaged. And this level of engagement should not be confined to a few steps in the project life cycle (such as design and construction) but should start early and continue through operations and maintenance, and on to asset rehabilitation.

7. Importance of community planning – strategic and operational

Strategic-level documents such as comprehensive community plans (CCPs) are so important to set the foundation for infrastructure projects and the objectives which the community wants to achieve by completing the projects. FNII has found that those communities which have taken the next step and created operational-level plans are further-equipped to move forward with individual infrastructure projects. Ideally, these operational-level plans include:

- **Land Use Plan** – identifies the Nation's land base, those areas slated for member and economic development activities which will require linear infrastructure (roads, water, wastewater, etc.) and community buildings, and the nature of land uses within those areas (residential, commercial, etc.). In communities where there are Certificate of Possession (CP) lands, it is very useful if the projected uses of those lands can be included along with commonly-held Nation lands

- **Infrastructure Plan** – lists of capital projects required to serve member and economic development needs, their priority, and ideally cost estimates (best available) and timing; individual infrastructure projects can then be drawn out of this overall community infrastructure plan
- **Financial Plan** – broad-level identification of sources of revenue to fund the capital, operation and maintenance, and asset rehabilitation of each infrastructure project (particularly those which are higher priority).

8. Infrastructure beneficiaries can be diverse – so should sources of funding

The majority of the Nations and Indigenous organizations with whom FNII interacts speak about infrastructure projects which would benefit both Nation members directly (i.e. through providing clean water and safe, appropriate buildings), as well as economic development initiatives which were advanced by the Nation. In many cases, the same infrastructure project benefits both Nation members and economic development activities (such as a common water supply or wastewater disposal system). Given that there are often diverse beneficiaries of infrastructure, it follows that there should be equally diverse sources of funding. These can be generally expressed as follows:

- **Member needs** (for residences and community buildings) – focus is Indigenous Services Canada for sources of funding for capital, operations and maintenance, and rehabilitation
- **Economic development initiatives** – cost recovery tools under the *First Nations Fiscal Management Act* including property and service taxes, development cost charges, user fees are very well-suited for application by Nations to recover costs associated with economic development.

9. Strong interest in monetization

Building on the prior point regarding diverse sources of funding, Nations and Indigenous organizations have expressed to FNII their strong interest in monetization. These communities and organizations recognize that the Government of Canada and other partners with whom they are engaged may not be in financial positions to support large one-time expenditures for capital projects. Their thoughts have therefore turned to the methods which they often use with their own funding sources to support capital expenditures – monetization. In this context, monetization means using a committed funding stream to support borrowing a larger sum of money for a capital expenditure. Nations and Indigenous organizations recognize the potential for broader applicability of this approach using committed funding streams from Canada and other partners, and would welcome this in their communities.

10. Interoperability with other First Nation Fiscal Management Act Institutions

Early engagement with the other *First Nations Fiscal Management Act* institutions revealed strong interest in the interoperability of FNII with each of them — the First Nations Financial Management Board, the First Nations Finance Authority and the First Nations Tax Commission. With FNII now established under the Act, this interoperability is being put into practice.

These institutions perform distinct but mutually supportive roles: financial management systems and certification (FMB), access to long-term borrowing at preferred rates (FNFA), and local revenue law-making and cost recovery tools (FNTC). FNII's infrastructure standards, review and certification services complete the set. Collectively, they offer interested First Nations a suite of optional tools and supports which, used together, help Nations better manage the risks inherent in infrastructure projects and achieve more sustainable infrastructure outcomes across the full life cycle.

11. Clarification of roles and responsibilities throughout project life cycle

Infrastructure projects can be complex from several perspectives. They have long life spans, ranging from their point of conception in a comprehensive community plan or similar document to decommissioning, often many decades later. They involve many people along this life cycle, both within the host community and often outside where external partners are involved. And the nature of the experiences and skills required for an effective and efficient infrastructure project is incredibly varied – architects, engineers, lands managers, contractors (with their range of trade skills), operators, accountants and financial managers, lawyers, elected officials and others are all examples.

FNII has found that the key elements of a successful infrastructure project are not always clearly laid out, nor are the parties responsible for providing three key ingredients – funding, human resources, and decision-making responsibility. There is a significant opportunity to clarify infrastructure project roles and responsibilities at the project outset, and at key points in its evolution.

12. Importance of project charter

Building on the points raised above regarding roles and responsibilities, FNII is a strong advocate for use of a Project Charter where two or more entities are working together on an infrastructure project.

A Charter is very valuable at the outset of the project, can look as far forward as is reasonably known, and can be revised and refreshed as the project life cycle evolves. A draft table of contents which provides a useful framework when developing a Project Charter is available on our website.

13. Working with Indigenous organizations

FNII has had the opportunity for significant interaction with three Indigenous organizations: the Atlantic First Nation Water Authority (with many signatory Nations in New Brunswick, Nova Scotia and Prince Edward Island), the First Nations Health Authority in British Columbia (with Province-wide reach), and the First Nations Capital and Infrastructure Agency of Saskatchewan (with members from across the province).

This has deepened FNII's understanding of the valuable services these organizations deliver to their members, including infrastructure-related services across each phase of the asset life cycle. Much like individual Nations, these organizations have diverse needs, some of which FNII is well-suited to fulfil. Examples include infrastructure planning (linking strategic-level, land use, infrastructure and financial plans), procurement and alternative service delivery, infrastructure cost recovery using the tools of the *First Nations Fiscal Management Act,* and organizational frameworks to support infrastructure asset management.

14. Need for flexibility of FNII when engaged with a Nation or Indigenous organization

As noted earlier, infrastructure projects are often complex. They take time to develop, have long life cycles, and involve many people. During a project's evolution, various events can occur which impact project teams and leadership, such as staff transitions and Chief and Council elections. The involvement of FNII in infrastructure projects has provided continuity in circumstances such as these. FNII has been able to bring forward prior work which was completed, brief new leadership and staff on this work, and collaborate on charting the path forward.

15. Partnering to deliver infrastructure to meet multiple interests' needs

In the context of this discussion, partnering means where two or more entities have common and/or complementary interests and objectives which are expressed through the development of infrastructure – buildings, water and wastewater systems, roads and so forth – within a First Nation.

This infrastructure can facilitate joint use of a Nation's land base and the roads and utilities which service it, as well as Nation buildings (such as a multi-purpose building that houses cultural, recreational, administrative, economic development and other uses under one roof). Where these and other partnering examples exist, FNII has learned that clear thinking is required as part of the infrastructure development process to ensure that planning, design, constructing, operating and maintaining, and financing activities are carried out in an equitable and transparent manner. This clear thinking is also very important in the application of fair and equitable cost sharing methodologies for the infrastructure project throughout its life cycle, founded on the benefiter pays principle.

16. Infrastructure projects should consider multiple commercial and procurement models

Much First Nation infrastructure is developed using the traditional design – bid – build process wherein an engineer or architect designs the utility, road or building, tenders the design and receives bids from contractors, awards the work to a selected contractor, who then builds the infrastructure. The infrastructure is then turned over to the owner – in this case the First Nation – to operate and maintain. This is a very common approach to infrastructure development across Canada and among all levels of government. There are emerging options which have potential to streamline the infrastructure development process.

The delivery of First Nation infrastructure projects should consider, for example, design – build, design-build-operate-maintain, construction management, and integrated project delivery (also referred to as alliance) options. Where Indigenous Services Canada is involved in project funding, it recognizes the potential application of these options. Each infrastructure project can involve assessment of the most appropriate option, given the nature of the project and the community. This assessment can be undertaken in both qualitative and quantitative terms. There is also potential to bundle projects where one Nation has more than one proposed infrastructure project, and/or where adjacent Nations have similar projects

17. Clarity of operations and maintenance – components and funding

FNII found through its engagements that the term 'operations and maintenance' is typically used in a very general manner and that there is much opportunity for elaboration of this vitally important aspect of the infrastructure life cycle. For illustrative purposes, operations and maintenance comprises a wide range of services - everything from routine day-to-day work to periodic (i.e. yearly) efforts, to less frequent yet vital major rehabilitation.

Using the example of a building, this would include daily / weekly cleaning and janitorial; yearly furnace maintenance; and 25-year roof replacement. Funding sources to support this diverse range of activities are also key and should include setting aside reserve funds for the less-frequent rehabilitation activities which are vital to asset longevity.

18. Continuing importance of contribution agreements with Canada

As noted above, FNII is engaging with many communities who have advanced economic development initiatives on their lands, along with the infrastructure to support those efforts. While many Nations have used their lands for economic development, require infrastructure to support this, and have taken on business and other partners to do so, there is still a core need in all Nations to provide for the needs of members. These include clean water, safe roads, functioning wastewater treatment and disposal systems, and proper buildings accommodating diverse Nation activities. Therefore, contribution agreements with Canada for capital, operations and maintenance, and asset rehabilitation activities remain foundational for First Nations.

19. FNII support for Asset Management

Most First Nations have a range of infrastructure assets such as roads, buildings and utilities already in place in their communities. For those assets funded by Indigenous Services Canada (ISC), support is provided to understand the condition of the assets in the form of periodic inspection through ISC's 'Extended Asset Condition Reporting System (E-ACRS)' program.

FNII has been made aware through its work with communities of the need for a broader asset management framework to properly manage its assets. FNII envisions this framework to include four key components – people (including a champion, supporting team and support from elected officials), information (incorporating the results of E-ACRS inspections), costs and funding (costs to maintain and rehabilitate assets, including sources of funding to do so), and planning processes (schedule for ongoing maintenance, capital plan for rehabilitation efforts, and financial plan).

20. FNII's role is to supplement, and not displace, project team members

The purpose of FNII, its mandate and powers are expressed through words such as 'support' and 'assist'. Here are some examples extracted from the *First Nations Fiscal Management Act*.

Mandate

113.3 The purposes of the Institute are to

(a) assist First Nations and entities referred to in subsection 50.1(1) in planning, developing, procuring, owning, managing, operating and maintaining infrastructure, including by providing review, analysis, assessment, certification and monitoring services;

Provision of services

(2) On the request of a First Nation or an entity referred to in subsection 50.1(1), the Institute may provide services relating to its purposes to that First Nation or entity, including

- *assistance in planning, developing, procuring, owning, operating and maintaining infrastructure;*
- *project management support with respect to infrastructure*
- *the review of funding and financing options for infrastructure projects; and*
- *support in asset management.*

These terms are used purposefully, and are meant to contrast with an approach wherein FNII would interfere with, or even displace, members of infrastructure project teams. The projects in which FNII has been and continues to be involved are excellent illustrations of FNII's countenance. In these projects (which involve water and wastewater utilities, buildings, storm drainage and roads), engineers, architects, land use planners, environmental scientists and other professionals were engaged with the community to advance the projects. FNII's role was and continues to be to come alongside the standing project teams to support and assist in moving the projects forward. This can include FNII bringing skills which the team may require but not have, either through FNII team member technical contributions (such as in application of First Nations Fiscal Management Act cost recovery tools), or through contributing to procurement efforts to bring other members to the project team that are not currently in place.