

Asset Management Guide for BC First Nations

This Guide Belongs to

Community



Dandachea
Tse'Khene

Hindah! wila win?
Gitxsan

had'ih
Wet'suwet'en

'Nít
Nisga'a

Ki'suk kyukyit
Ktunaxa

Dénht'ā
Denek'eh/Kaska

Nú
Squamish

“Niit
Tsimshian

Yaw
Nuxalk

Yáú
haízaqv̓la

Kalhwá7acw
St'át'imcets

Waytk
Secwepemc

Gasán uu dǎng giidang?
Haida

Déht'ā
Tagish

'Yo
(Kwak'wala)

Yak'éi yagiye
Tlingit

čáčim hihak k^waa
Nuu-chah-nulth

Yawć
Haisla

Nāsän
Halkomelem

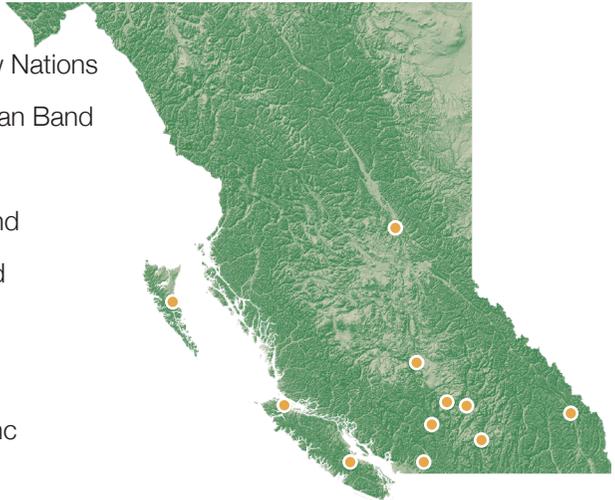
With Gratitude

The Guide has been developed by British Columbia (BC) First Nations, for BC First Nations – with ongoing input from community representatives across all stages of their own asset management journey. These communities have shared their time, experiences, and hard work to support improvements to the quality of life of their members through asset management. Stories profiled throughout this Guide detail their programs with the hope that other communities will build on these experiences and lessons learned.

Contributing Communities

Thank you to the following major contributors, who have worked together to make this Guide a valuable and relevant resource for communities across the BC Region and beyond:

- Esk'etemc
- Gwa'sala-'Nakwaxda'xw Nations
- Little Shuswap Lake Indian Band
- Lytton First Nation
- McLeod Lake Indian Band
- Skeetchestn Indian Band
- Skidegate
- Sts'ailes
- Tk'emlúps te Secwepemc
- Tseshaht First Nation
- Westbank First Nation

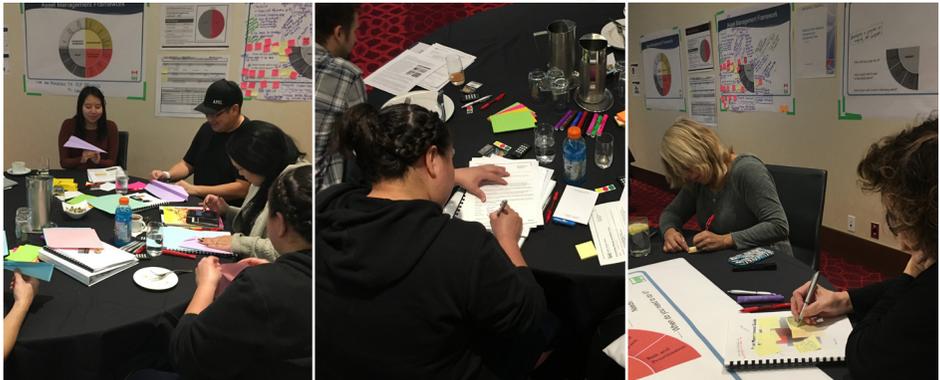


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A Note about Artwork

We offer our thanks to the following artists for sharing their work and allowing us to feature it within this Guide:

- **Jamin Zuroski** – ‘Namgis First Nation
- **Darcy Deneault** – Skeetchestn Indian Band
- **Sam Mountain** – Gwa’sala–’Nakwaxda’xw Nations



Top: Asset Management Guide Working Group, **From Left to Right:** Kevin Potter, Little Shuswap Lake Indian Band; Tara Gonzales–Nicholas, Skeetchestn Indian Band; Carrie Danczak, Little Shuswap Lake Indian Band; Babs Stevens, Skidegate; Amanda Spinks, Lytton First Nation; Rochelle Porter, Skeetchestn Indian Band; Lisa Gallic, Tseshaht First Nation; Warren Brown, Lytton First Nation; John terBorg, Tk’emlúps te Secwepemc; Leo Lawson, Gwa’sala–’Nakwaxda’xw Nations

Bottom: Guide Development Workshops



Haida Cultural Centre Construction, Skidegate, Haida Gwaii

Contents

PART 1

Carving Our Future: Understanding Asset Management	10
The Journey Thus Far	11
What is an Asset?	12
What is Asset Management?	13
Why Practice Asset Management?	14
How Do We Get Started?	16
The Asset Management Framework	17

PART 2

Weaving the Pieces: Developing your Asset Management Program	20
Your Asset Management Journey	21
Community	27
Working with Chief & Council	30
Communicating with Members	31
Information	35
Inventory	36
Valuation	40
Condition Assessment and Life Expectancy	41
Systems and Processes	45
Vision and Strategy	46
Levels of Service	49
Maintenance Management	50
Managing Risk and Prioritizing Projects	52
Money	57
Long Term Financial Planning	58
Annual Budgeting	64
Funding	65

PART 3

Paddling Together: Implementation and Keeping Momentum	68
Ongoing Staff and Council Support	69
Planning for Staff Turnover	70
Keep Information Current	71
Monitoring Performance	72
Community Contact List	76

Guide Overview

This Asset Management Guide is designed to help First Nation communities sustainably manage their infrastructure assets over their full lifecycles. It introduces concepts, systems and tools to start a new asset management program, or to further develop an existing one. This Guide reflects the unique context and needs of the BC Region, recognizing the small rural context that makes up the majority of the 198 distinct First Nations. It is intended to serve as a reference for Chief and Council, staff, and community members who are interested in learning about management of their Nation's infrastructure.

Purpose of this Guide:

- Introduce **key** asset management **concepts**
- Provide a **framework for designing** your community's Asset Management Program
- Identify resources to support program **implementation**
- Share **lessons learned** from communities across all stages of the asset management process

This Guide is made up of three parts:

Part 1: Carving our Future

A reference guide for understanding *what* asset management is and *why* asset management principles are essential to community sustainability. This section also includes an overview of the core concepts, terminology, local context, and framework.

Part 2: Weaving the Pieces

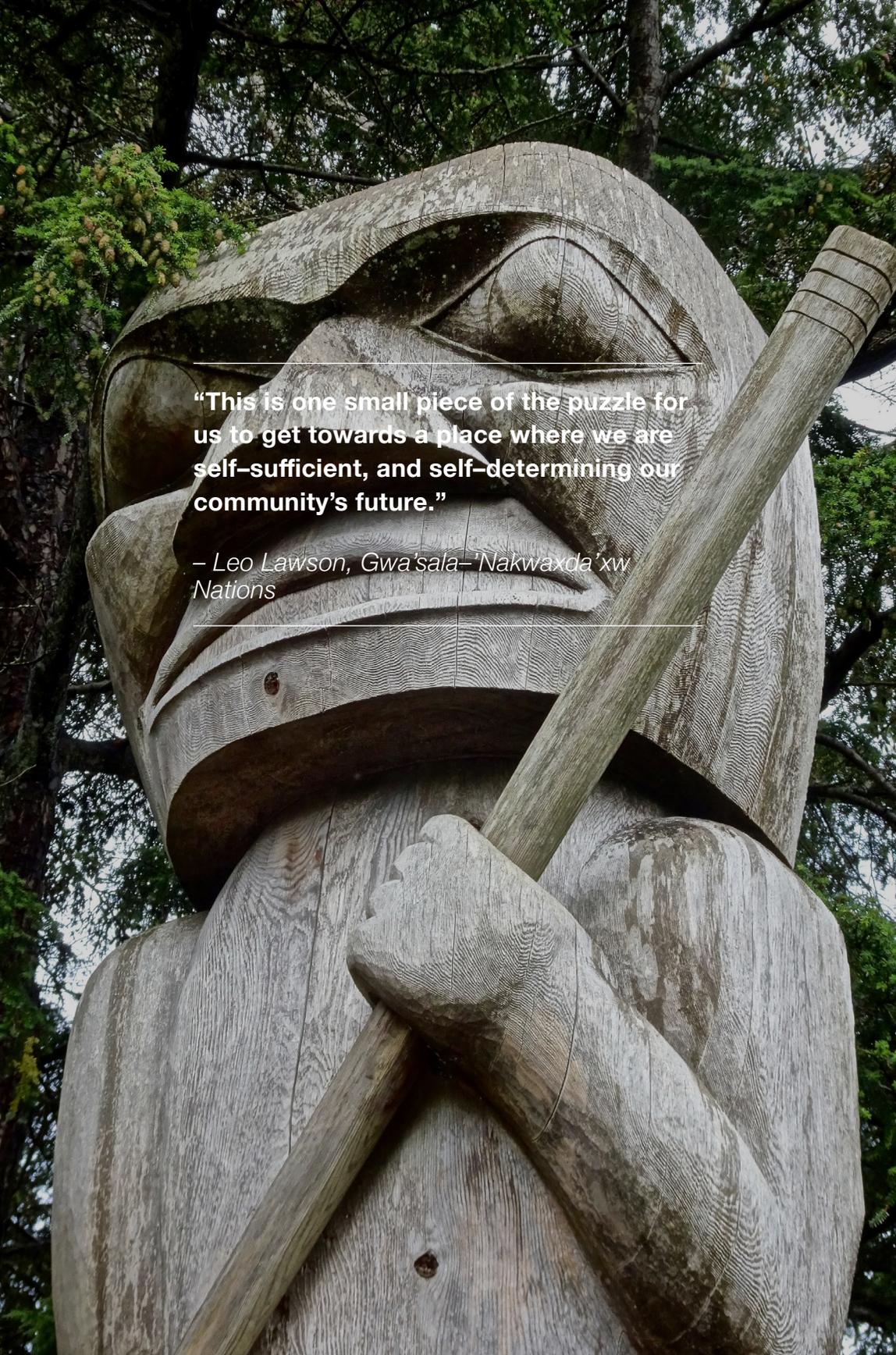
A technical guide, or *how to*, for developing your asset management program. This section includes a step-by-step process, case studies, and sample resources.

Part 3: Paddling Together

An implementation guide for considerations once you are *doing* asset management. This section is about keeping the momentum going and monitoring performance.

A digital package has been developed to accompany the Guide, including supplementary details online and social media material. Any references to this digital package will be illustrated throughout the document with this symbol.





“This is one small piece of the puzzle for us to get towards a place where we are self-sufficient, and self-determining our community’s future.”

– Leo Lawson, Gwa’sala-’Nakwaxda’xw Nations

A close-up photograph of a person's hands using a chisel to carve a piece of wood. The person is wearing a dark, textured jacket. The chisel has a light-colored wooden handle and a metal blade. Wood shavings are visible on the surface of the wood being carved. The background is slightly blurred, focusing attention on the carving process.

PART

1

Carving Our Future:
Understanding Asset Management

What is an asset?

What is asset management?

Why practise asset management?

The Journey Thus Far

Many First Nations in BC are already practicing elements of asset management in their communities through systems to record and store information about community assets, to manage maintenance of infrastructure, and to make decisions about building new community infrastructure.

Since 2010, Indigneous Services Canada (ISC) has delivered a series of Sustainable Infrastructure Workshops annually to support the implementation of Extended Asset Condition Reporting System (E-ACRS) outcomes by First Nation communities in BC. These workshops, the first of which was held at Quaaout Lodge, have been the catalyst for growing interest, awareness, programs, and skills in managing infrastructure within communities across the Region.

After participating in these workshops, a number of First Nation communities have taken the next step and developed their own asset management programs as part of a cost-shared project with ISC. Many lessons have been learned from these experiences, and some consistencies have emerged that are helpful for other communities choosing to initiate a program.

Providing for the Heart of the Community

A core function of every First Nation government is providing services to the community. These services, from fire protection to clean water to housing, affect the quality of life for community members, and often enable economic development. All of these services rely on the Nation's infrastructure assets.



What is an Asset?

When we refer to “assets” or “infrastructure” in this Guide, we are referring to the physical structures and systems (hidden and visible) that your community owns and uses to deliver services. These may include buildings, roads, pathways, underground pipes, parks, vehicles, and machinery. The scope of this Guide also includes Nation–owned housing.



Gwa'sala–'Nakwaxda'xw Nations

This Guide is focused on human–made assets. While natural assets encompass nearly all spiritual and gathering places and provide our communities with culturally–significant medicine and food, the land and its many gifts and are outside the scope of this Guide.

Often underground infrastructure (like the water mains running under your roads) can be easily forgotten. These assets play a vital role. For example, when you turn on your tap, consider the journey that water makes to get to you from the aquifer, lake or river.

You can find definitions and descriptions for the terminology used in this Guide in the Glossary, which is included in the supplementary material.



What is Asset Management?

Asset management is an approach that communities can use to make informed decisions about their infrastructure. Many communities see asset management as an important step on the path to greater self-reliance.



Lesson Learned: *At its core, asset management is about delivering services to your community in a sustainable way.*

The Circle of Care

We are the caretakers for our natural world and our community infrastructure. Healthy assets are the foundation of a safe and healthy community. They allow us to provide for ourselves and our community. By taking care of community infrastructure, we are building a strong future for ourselves and our families; a place where the traditions, language and teaching of our ancestors can live on through generations.

Focusing on the sustainable delivery of services will help your community remain resilient and adaptable to changing circumstances; think about it as maintaining a balance.

To me, asset management means...



Why Practice Asset Management?

How can we best use our limited resources (people, time and money) to sustain service delivery? This is what asset management is all about. It enables us to take important steps towards sustainability and self-governance.



Lesson Learned: *Asset management gives us tools for making informed decisions.*

Asset management helps us answer key questions such as:

- What assets do we own?
- How do these assets support us in delivering essential and reliable community services?
- What is the value of our assets?
- What condition are they in?
- What do we need to do so they continue to operate as expected?
- How can we extend the life of our infrastructure?
- When do we need to maintain and/or replace our assets?
- How much will it cost?
- How do we pay for it?
- What new assets should we build?
- How can we most cost-effectively invest in our community?

We can use asset management principles and processes to make decisions about infrastructure maintenance and renewal that are transparent, relevant to our community, and that consider the full lifecycle of our assets. Most importantly, having this information available helps staff, Chief and Council **make informed decisions.**

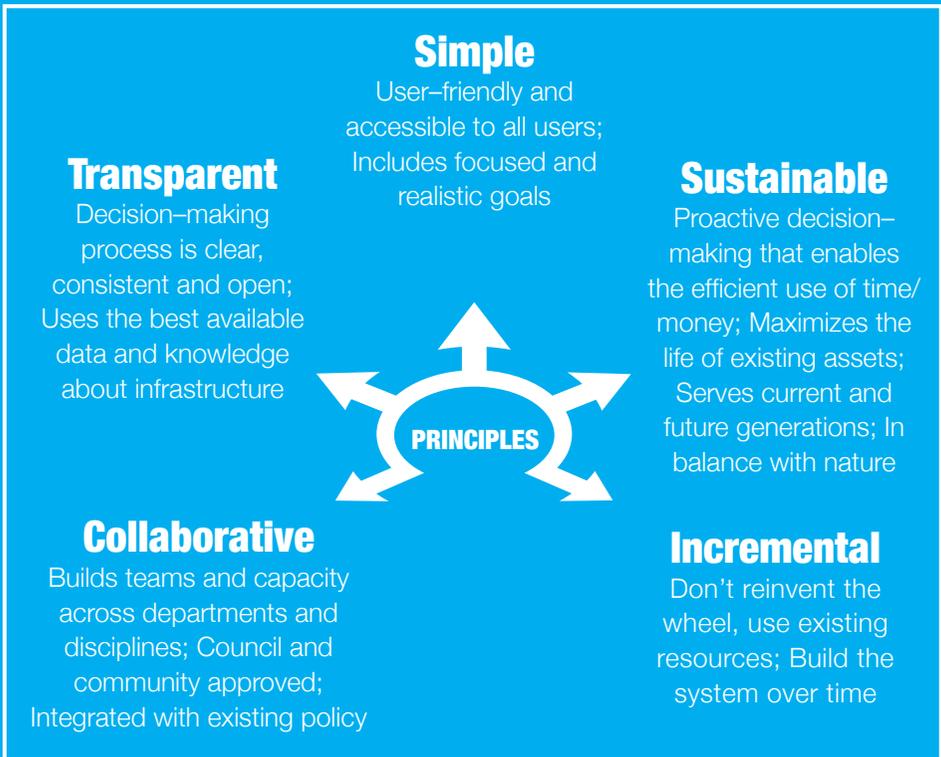


Making Infrastructure Decisions

An asset management program is about more than data or a series of steps to develop plans and processes. It's about formalizing a way of thinking about your community's infrastructure into daily decision-making. This affects the bigger picture of how services can be sustainably delivered throughout the community now and into the future.

The experience of communities that have gone through the process shows that programs are more likely to be successful when the following principles guide decisions.

As your program is designed and rolled out, ask yourself and your team if the decisions you are making align with these principles.



Are there other principles that are important to your community? How would these principles affect decisions about infrastructure? Consider how you might change the principles on this page to include what is specifically important to your community.

How Do We Get Started?

Asset management is a living and cyclical process that takes time. You're already practicing elements of asset management, even if no formal process is in place.

This Guide focuses on the basic pieces of asset management to help you build a program that is right for your community. Whether you are just getting started, or re-igniting your program, there are ideas here to help you take the next step. The Guide also makes note of more advanced steps you can take as your journey progresses, referring to tools and other resources available in the supplementary digital package.



Lesson Learned: *Start simple and build complexity over time. It's not about doing everything perfectly at the beginning; it's about making meaningful and incremental changes to best meet the needs of your community.*

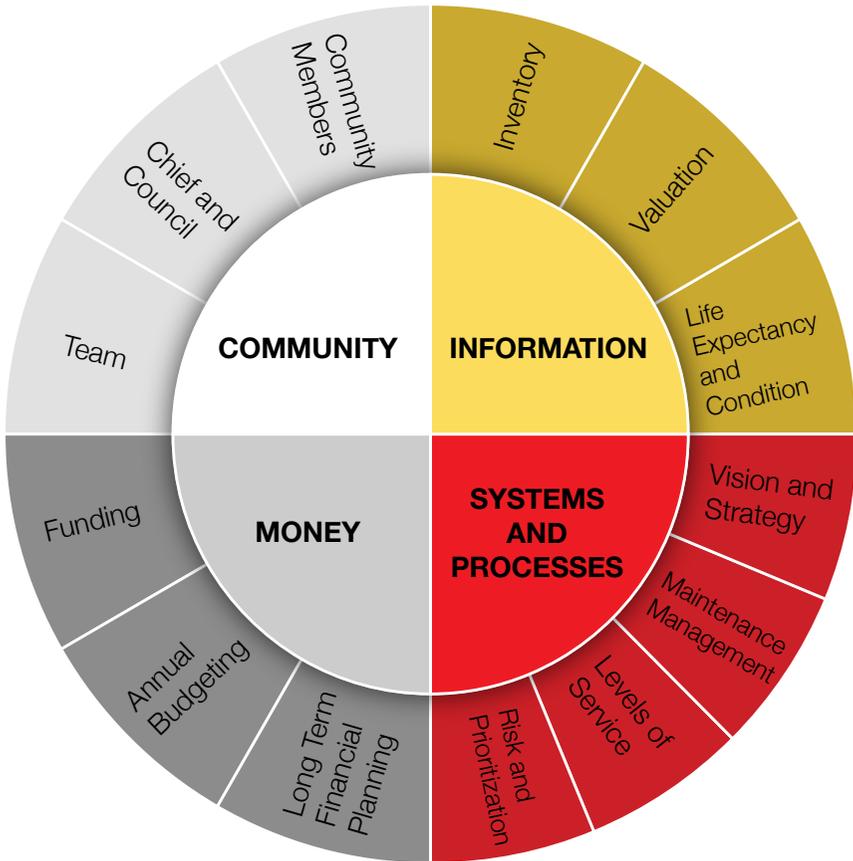


The Asset Management Framework

At its core, asset management is made up of four essential elements. It involves gathering important **information** about community assets, creating **systems and processes** for managing and making decisions about infrastructure, and developing tools to help your community make the most efficient use of **money**. Your program's effectiveness ultimately depends on your **community** (including staff, Chief and Council, and community members).

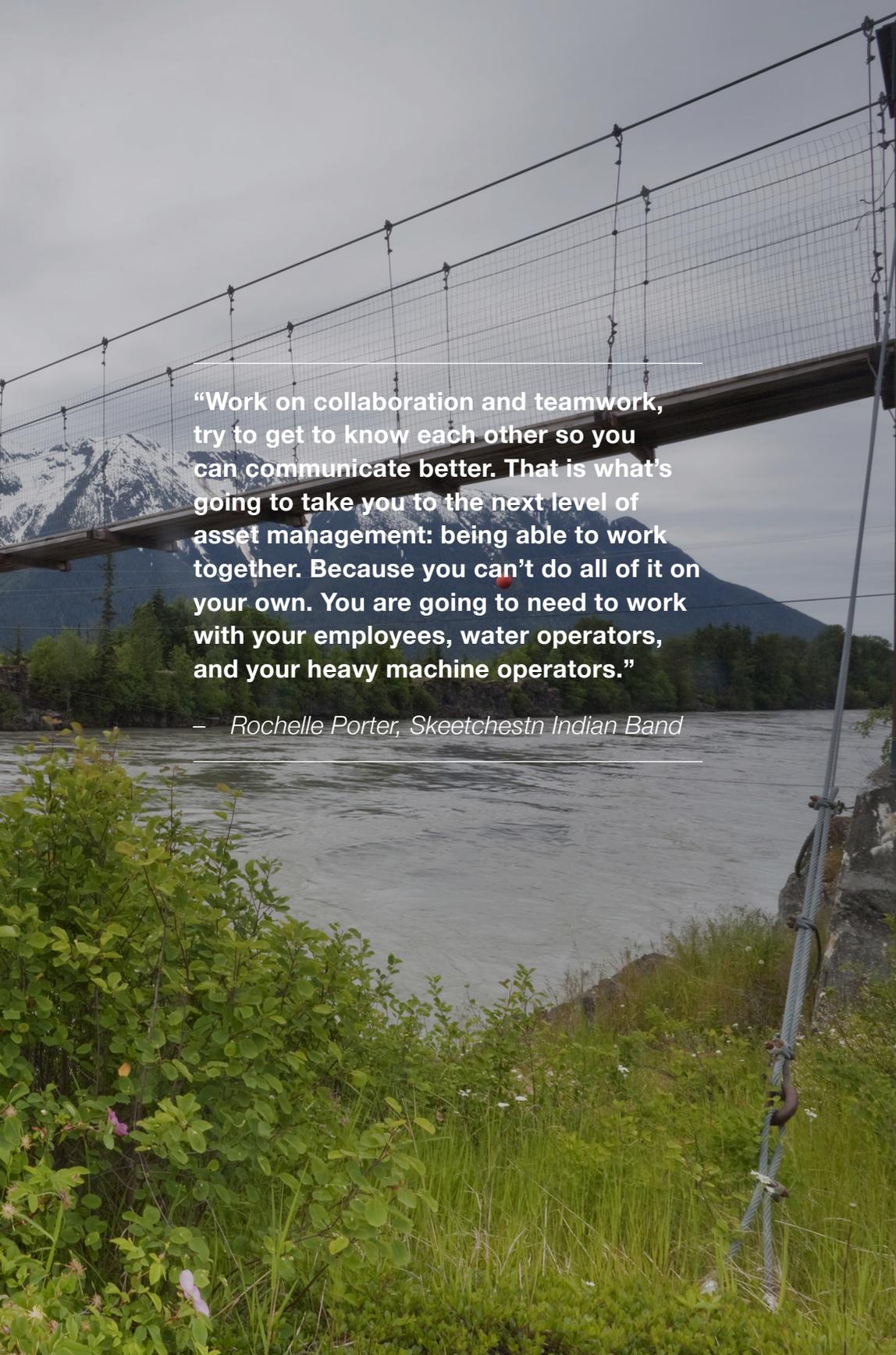
These elements serve as a framework for an asset management program, which will be discussed in more detail in the next section of this Guide. They can also be used as a basis for assessing the current state of your community's asset management practices and help to identify areas you may choose to focus on to strengthen your program over time.

Asset Management Framework





GitwinLsihlkw, Nisga'a Village, Nass Valley

A suspension bridge with a metal mesh railing spans across a wide river. In the background, there are large, rugged mountains with patches of snow under a grey, overcast sky. The foreground is filled with lush green vegetation, including bushes and tall grasses. A thick steel cable is visible on the right side, attached to the bridge structure.

“Work on collaboration and teamwork, try to get to know each other so you can communicate better. That is what’s going to take you to the next level of asset management: being able to work together. Because you can’t do all of it on your own. You are going to need to work with your employees, water operators, and your heavy machine operators.”

– Rochelle Porter, Skeetchestn Indian Band



PART

2

Weaving the Pieces:

Developing your Asset Management Program

How should we begin?

What does a program look like?



Your Asset Management Journey

Communities have dedicated their energy to caring for the land and its innumerable resources since time immemorial. In order to continue this legacy, we must work with knowledge keepers from inside and outside our communities to understand how we can best use and protect our physical structures and systems, in addition to our natural assets.

Each of the four elements of the **asset management framework** contribute to a strong program for your community. Because every community has unique needs and is at a different stage in their asset management journey, the solutions or areas of focus that are right for you may differ from those of your neighbours.



Lesson Learned: *Each asset management journey is unique because every community has different needs.*

There are three key questions to consider as you develop and weave the pieces of your asset management program together; regardless of whether you're just starting your journey, or re-igniting a program:

1. Where is your community at today?

Considering where you are today could be as simple as getting together in a room with representatives from each department to share your day-to-day role in delivering community services. Or you could undertake a workshop-style assessment to create a quick picture of where you're at, including your strengths and opportunities for improvement. More information on undertaking a current state assessment can be found in the supplementary digital material.



2. Where do you want to go?

You don't need to do everything at once. Understanding your community's highest priorities will set you on a path towards success. These priorities could come out of a workshop-style current state assessment or be decided at your first asset management team meeting. Communities have found it helpful to create a roadmap like the sample provided below. Begin by filling out your community's asset management priorities.



Remember, if you participated in a Sustainable Infrastructure Workshop delivered by ISC, then you already have a roadmap! If you haven't participated in a workshop, consider attending the next one in your area along with a couple of your colleagues.

Asset Management Program

FIRST NATION NAME: **TURTLE ISLAND**

Asset Management Guide for BC First Nations

TEAM MEMBERS: Council, Elders, Finance, Housing, Public Works, Capital Projects

What features of asset management would you like to see in your community?
Use the space below to make note of the key resources, tools or concepts that you feel would be useful in managing your community's assets. Then make an action plan for how to make it happen!

	ASSET MANAGEMENT PRIORITIES		ACTIONS			
			WHAT NEEDS TO HAPPEN?	WHO?	WHEN?	
Community Awareness eg. an asset management team terms of reference...	<ul style="list-style-type: none"> Form an AM Team Develop Terms of Reference 		<ul style="list-style-type: none"> Set-up Meeting Draft TOR 			
Information eg. an asset inventory, GIS system, condition assessment process...	<ul style="list-style-type: none"> Prepare an Inventory 		<ul style="list-style-type: none"> Meeting with AM Team Gather Background Information Create Infrastructure Maps 			
Money eg. a long-term financial plan, additional funding...	<ul style="list-style-type: none"> Identify New Sources of Funding 		<ul style="list-style-type: none"> Proposals to Acquire Funding 			
Systems and Processes eg. an Asset Management Policy	<ul style="list-style-type: none"> Prepare a Maintenance Management Plan 		<ul style="list-style-type: none"> Summarize Current Maintenance Schedule Tasks Review Existing Infrastructure Maintenance Needs 			
Implementation and Monitoring	<ul style="list-style-type: none"> Establish an Program AM Monitoring System 		<ul style="list-style-type: none"> Review Progress Annually Update Goals and Metrics 			

3. How will you get there?

Once you've identified your community's priorities, you can add to your roadmap by determining actions (eg. what needs to happen, by whom, and when).

The sub-sections that follow in this Guide will lead you through the core elements of an asset management program. This will allow you to determine what steps are appropriate for achieving your community's priorities. The resources you have available, and where your community is at right now, will determine how far and fast you move forward with these actions.

Some communities may feel comfortable doing this on their own. Others may choose to engage a consultant to help them establish their program. Regardless of your choice, the ultimate outcome should be a program that can be led and implemented in-house once it has been set up.

If you are just getting started, or have been stalled in your program, it may not make sense to advance all the pieces at the same time. Your community may need to spend some time gathering resources, observing your existing systems, or establishing goals.

No matter where your community is at with asset management, whether you are just getting started or well on your way, **there are small, meaningful steps you can take right now!** First Nation communities who are on this asset management journey have learned that there are some common steps that every asset management program needs. This Guide outlines these steps to support you on your way.

Skeetchestn School



Developing your Program

As you go through each element in the **asset management framework** (introduced on page 17 and described in detail on pages 24–67), consider which initiatives are best suited to your current situation:

BASIC—Just Getting Started

Carving out some time, even a week, to focus on asset management can get you well on your way. You will be amazed by how much can be accomplished in this time and the impact it will have on staff working together as a team. This could be as simple as sending staff to a Sustainable Infrastructure Workshop provided by ISC. The workshop allows key staff to build a shared understanding, take those early critical steps of identifying top priorities, and set an action plan in place. Alternatively, you may chose to host a workshop in your own community centered around your team and its priorities.

INTERMEDIATE—The 1–3 Year Journey

This is the most common approach that BC First Nation communities are taking once staff have attended a Sustainable Infrastructure Workshop hosted by ISC. A typical asset management program is developed over a 1–3 year period, followed by an initial test year of implementation to help round out the program. The intention is that this journey to establish your program will set you on the path for long term success.

ADVANCED—Renewing or Growing

If your community has already started a formal asset management program but it was stalled somewhere along the way, or perhaps you've achieved all of your initial priorities, this is an opportunity to take your program to the next level.



BASIC—

Just Getting Started

- *Sets a Foundation*

INTERMEDIATE—

The 1–3 Year Journey

- *Develops a program*

ADVANCED—

Renewing or Growing

- *Advances an existing program*





Community
Members

Chief and
Council

Team

COMMUNITY

Community

Who will do the work?

Who will make decisions?

Who is receiving the services?

The “Community” element of the Asset Management Framework (page 17) is focused on three areas:

1. Team – Who will do the work?
2. Chief and Council – Who is making the decisions?
3. Community Members – Who is receiving the services?

Team

Caring for infrastructure involves staff from across departments working together as an asset management team. Supportive and interested staff are valuable advocates for the program.



Action: Establish an Asset Management Team

To get started, hold a meeting with staff who play a key role in managing infrastructure, setting budgets, and delivering services.

Consider including representatives with responsibilities and skills in the following areas:

- Band Administration (eg. CAO)
- Chief & Council
- Housing
- Community Planning
- Public Works & Operations
- Information Technology
- Finance

Once your asset management program and team are up and running, you may want to incorporate asset management into job descriptions for key staff positions. Sample job descriptions are included in the supplementary material as a starting point.



Action: Hold Regular Team Meetings

Over time, your team may expand to include youth, community representatives, and business partners, such as Municipal Type Servicing Agreement (MTSA) partners and leaseholders; Holding regular meetings is important for ongoing action, continuous improvement, and maintaining a shared vision.



Lesson Learned: Working in isolation from existing processes can lead to unnecessary time and effort “reinventing the wheel”.



Action: Establish a Team Terms of Reference

You may decide to develop a terms of reference to help establish and record roles and responsibilities of your asset management team and how the team will operate. A terms of reference is a document that outlines how your team will work together and who is responsible for key features of your asset management program. A sample terms of reference is included in the supplementary material.



Action: Facilitate Training and Learning Opportunities

To build support, it is important that staff have a clear understanding of their responsibilities, the appropriate knowledge and skills, and see the value of their work to the community. Providing training and learning opportunities to staff across the organization builds awareness and interest in asset management. Investing in your team is important to create a group of champions and manage staff turnover.

Dzawada'enuxw | Artist: Marianne Nicholson's neo-petroglyph cliff painting, Kingcome Inlet, BC



Working with Chief & Council

Chief and Council are ultimately responsible for the delivery of community services. In this way, they play an important role in asset management as they communicate key messages to your membership and represent community interests in decision-making. They can also serve as valuable members of an asset management team.



Action: Develop an Asset Management Policy

An asset management policy can be very effective at building buy-in and providing strategic direction for decisions. A policy is a series of statements that articulate the community's commitment to effectively manage assets, outlining integration across the organization, and providing clear direction to staff, Chief and Council, and community members on their roles. Some principles to consider are included on page 15 of this Guide.

It is important to incorporate Chief and Council priorities early on when defining objectives of an asset management program, and for the team to communicate program achievements regularly. When developing a policy for your community consider linking your approach for managing infrastructure to existing community visions and plans. A sample asset management policy and Band Council Resolution are included in the supplementary material.



Haida Cultural Centre Construction, Haida Gwaii



Communicating with Members

Communicating with membership builds awareness about the value that infrastructure provides as a foundation for community services. There are a variety of ways you can do this, depending on the situation, as illustrated below. The more engaged your membership is, the higher the likelihood they will buy into the process and support key decisions.



Adapted from the Spectrum of Public Participation by the International Association of Public Participation (IAP2)

Action: Communication Material & Community Events

A simple approach to begin with is preparing communication material that informs membership about what assets the community owns and how this is related to the services they receive. The information could be shared at one or more community events, or through print and online media. Suggestions and samples of engagement materials are provided in the supplementary material.



Action: Community Awareness Strategy

Over time, your community may want to expand to more complex engagement initiatives. A Community Awareness Strategy will enable you to organize your approach for engagement. Mentorship programs, job shadowing, and infrastructure tours can foster interest among youth and highlight asset management work opportunities. A sample strategy is included in the supplementary material.



Action: Identify a Community Champion

Community engagement can also uncover community champions who may share key messages and objectives of the program with the membership. Strategies and tips for communicating with members on asset management are provided in the supplementary material.



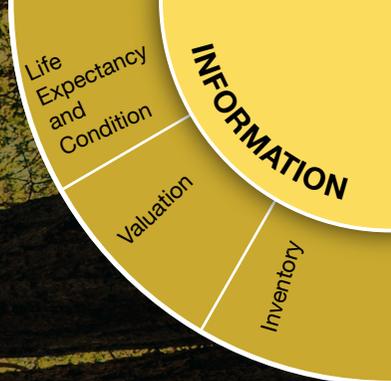




“It’s important for the future of every community to have properly maintained housing and infrastructure, ensuring the next generation is not left to worry about fixing or replacing those assets.”

– *Carrie Danczak, Little Shuswap Lake Indian Band*





Life
Expectancy
and
Condition

INFORMATION

Valuation

Inventory

Information

What assets do we own?

What is the value of our assets?

What condition are they in?

The “Information” element of the Asset Management Framework (page 17) is focused on three areas:

1. Inventory
2. Valuation
3. Life Expectancy and Condition

This information forms the basis for asset management decision-making.

Inventory

In most cases, communities start their asset management program by developing a shared understanding of the infrastructure they own and operate.



Action: Prepare a Consolidated Inventory

An inventory is a record of key information about community-owned infrastructure assets. Building an inventory involves gathering this information and consolidating it in one place.

Step 1: Before gathering data, consider:

- How do you want to group your data?
- What data do you have? Where can you find it?
- Who is going to collect this data?
- How do you prioritize which information to collect first?

Assets are typically grouped according to major infrastructure categories, or systems (eg. water, wastewater, community buildings/facilities, housing, drainage, solid waste, road networks, etc.) and subcategories (eg. for the road network: roads, sidewalks, bridges, pathways/trails, etc.)

Sample Inventory Layout

INVENTORY								
Asset ID	ACRS ID	CAIS ID	Asset Category	Subcategory	Asset Description	Location/ Address	Diameter/ Width/ Area	Units
Housing								
HRH-001	-	-	Housing	Residential Housing	Joe's House	Frog Street	75	Sq.m.

Step 2: Design your inventory spreadsheet

Your inventory should be tailored to your community and easy for different groups across the organization to access. Consider how you will use the data to make decisions.

A basic inventory includes the attributes (descriptors) for each asset shown in the table below. A sample spreadsheet is available in the supplementary material, which can be tailored to your community’s needs. That’s all you need to get started!



What Does an Asset Inventory Include?

Basic asset information includes:

Asset ID —A unique and permanent code assigned to every asset in an inventory.	Units —Standard of measurement
ACRS ID —A unique code provided for each asset included in an ACRS report. Not all of your community assets will have this code.	Length/Quantity — another way to describe asset size, such as the length of a water main, or the number of buildings
CAIS ID —A unique code provided for each asset included in a CAIS report. Not all of your community assets will have this code	Material — what an asset is primarily made of (for example, water mains may be made of “PVC”)
Asset Category —Major infrastructure groupings by system type (for example, “water”, “sewer”, “roads”, “buildings”, “housing”).	Condition Rating —a point system used to describe a snapshot in time of an asset’s state of repair, at a current point in its life
Subcategory —Asset name (for example, “water main”, “gravel road”).	Install Year — The year each asset was installed, based on installation records
Asset Description —A brief description of what the asset includes.	Expected Useful Life —how long an asset is projected to last based on its age before it requires replacement or renewal, or its performance or risk of failure becomes unacceptable
Location/Address —Information on the location of an asset (for example, “12 Frog Street”).	Remaining Life —The number of remaining years in which an asset is expected to continue to be functional
Diameter/Width/Area —one way to describe asset size, such as the diameter of a water main or the area of a building	Adjusted Remaining Life —how long an asset is projected to last based on its condition before it requires replacement or renewal, or its performance or risk of failure becomes unacceptable

INVENTORY							
Length/ Quantity	Units	Material	Condition Rating	Install Year	Expected Useful Life	Remaining Life	Adjusted Remaining Life
1	ea.	Wood	–	1978	40	2	–

Step 3: Collect inventory data

Enough information on your community infrastructure already exists to begin your asset management journey. This step is about gathering data that already exists, as opposed to collecting new data.



Lesson Learned: *You don't need to have all of the information about all of your assets to begin – you can always add more data later.*

Think of yourself as a detective, piecing together a story. Information can be gathered from:

- E-ACRS Report or most recent Annual Performance Inspection (for assets that were funded by ISC)
- Existing as-built drawings and past engineering reports
- Conversations with public works staff
- Maps
- Equipment photos or receipts from recent repair work
- Records and reports held by ISC

Resources to help you build on existing information are provided in the supplemental material.



Lesson Learned: *Start small and build over time. If there are gaps in your data, that's okay. Make assumptions and put placeholders into your inventory to start.*

Step 4: Keep your inventory up-to-date

Assign someone to manage the inventory and set meetings at least once a year with the asset management team to review any updates. Every time you build an asset, fix an asset, replace an asset, or come across new information it should be updated in your inventory.



Lesson Learned: *Workshops with the asset management team and other staff from across departments can be very effective at each step outlined in this section.*



Action: Create Inventory Maps (Using GIS)

Eventually, your inventory spreadsheet could be transitioned into a Geographic Information System (GIS) where spatial information can be stored. From this, maps can be created for each asset category and more in-depth analysis can be undertaken. The supplementary material provides more information about GIS.



Action: Data Gap Analysis

A data gap analysis is a tool to help your community identify what information you currently have and what information still needs to be collected for your asset inventory. The simplest way to complete a data gap analysis is to create a table that lists the type of information you need in your inventory with a colour coded rating showing the availability, quality, and reliability of the information you currently have. The next step is to develop a strategy for how you will fill information gaps identified in your analysis, and when. An editable data gap analysis template is provided in the supplementary materials.



Action: Transition to a Software Tool

At a later date, the inventory can be incorporated into a more robust asset management software if this is the right approach for your community. The supplementary material provides more information on software tools, and how to decide when and if they are appropriate.



Power Generation Service



Valuation

For asset management purposes, we determine the value of assets using their replacement cost. This tells us how much money is needed to replace, or renew, an asset in today's dollars. If you add this up for each asset, you will have a much better community-wide picture of the infrastructure you're responsible for.

Replacement costs include all typical expenses you would need to pay to replace an asset, including materials, labour, equipment, engineering, and administration.



Action: Determine the Replacement Cost of Each Asset

The replacement cost of each asset can be added to (or calculated for) your inventory. This information can be stored in your spreadsheet the same way other attributes are stored, like material and age.

You can find replacement cost information here:

- E-ACRS Report (for assets that were funded by ISC)
- From existing service providers (eg. insurance, contractors/suppliers, engineers/consultants)
- Unit costs for asset components (eg. \$/m of a water pipe)
- Online equipment manuals

Resources for determining the value of community assets are included in the supplementary material.



Consider expressing the value of assets and your program in a way that aligns with and emphasizes Council's expressed priorities. Understand that the monetary value and the worth to a community are not necessarily the same.

Condition Assessment and Life Expectancy

Assets don't last forever! How can we determine how long they will last? When we think about assessing the remaining life and condition of, for example, a water treatment plant, what we're really doing is gathering information to ensure that we can continue to provide reliable and safe drinking water to community members.



Action: Calculate the Remaining Life of Each Asset

Understanding the anticipated time that assets will remain functional helps to plan for their eventual replacement. Knowing the type and material of an asset gives us a good indication how long it should last under ideal conditions.

Creating a life expectancy (or expected useful life) table that can be linked to your inventory will support you in calculating the remaining life of each asset. The supplementary material includes a list of typical life expectancies and a sample life expectancy table that can be tailored to your community. Life expectancy can be linked to each asset in your inventory as a new attribute and used to calculate the remaining life (another new attribute).



$$\text{Remaining Life} = \text{Installation Year} + \text{Expected Useful Life} - \text{Current Year}$$



Lesson Learned: *General life expectancy information for each asset can be found in your E-ACRS report – you can use this to calculate the remaining life.*

Dzawadaenuxw School





Action: Prepare a State of the Assets Summary

Once you get to this point, you have all the information required to create a 'state of the assets' summary. This means you can communicate key information about your infrastructure and how it relates to delivering services. The supplementary material includes a sample one page state of the assets summary.



Action: Adjust Life Expectancies Based on Condition

Construction practices, weather, frequency and intensity of use, and maintenance all impact an asset's actual life. If you have condition information, it will give you a better indication of how long an asset should last. In other words, having accurate information on the actual condition of an asset will allow you to replace your calculated remaining life for an asset with a condition-adjusted remaining life, where possible.



Lesson Learned: *Condition information can also be found in your E-ACRS report, along with the condition-adjusted remaining life (shown as the estimated remaining life) – don't forget to convert the remaining life to the present year if the assessment was completed in a previous year!*



Action: Undertake Condition Assessments

Assets that were not funded by ISC may not have condition information. There are many different ways to collect this information depending on the asset type. Sample resources for recording condition assessment data are provided in the supplementary material.

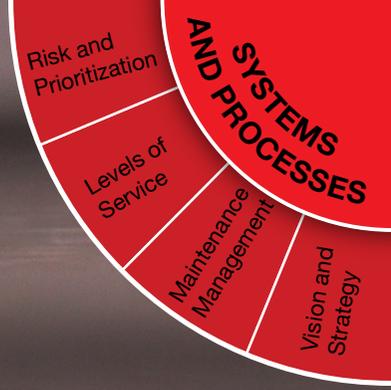




“Just start small, it doesn’t have to be a big thing. We started off with little spreadsheets, and slowly worked up to a program that the guys can actually use. And are excited to use, because it will make their lives easier.”

– *Rochelle Porter, Skeetchestn Indian Band*





Systems and Processes

What levels of services are we providing?

How do we assess risk?

How will we maintain our assets?

The “Systems and Processes” element of the Asset Management Framework (page 17) is focused on four areas:

1. Vision and Strategy
2. Maintenance Management
3. Levels of Service
4. Risk and Prioritization

Vision and Strategy

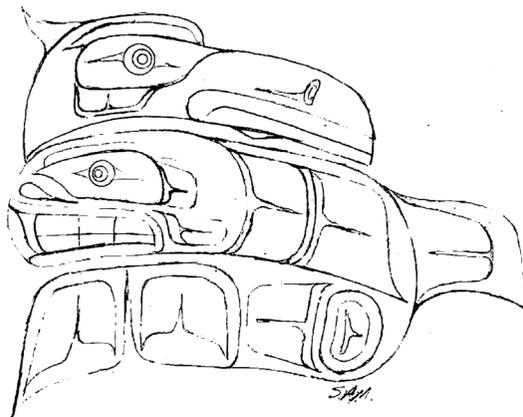
Consider using your community vision as a starting point when developing priorities and objectives for an asset management program. This vision can be developed in parallel with your asset management policy, and both will inform your strategy. It provides direction for what is most important to your community and is something you should keep coming back to as your asset management program is delivered. If decisions aren't being made to support this vision, why is time and effort being spent on those initiatives?



Action: Prepare a Vision for Service Delivery

Depending on what your community vision includes, you may want a more specific vision that focuses on delivering community services, and the infrastructure used to support this. Strategies and ongoing processes are what transform asset management from a static project to a living process.

A guideline to help you get started on developing a vision for service delivery is included in the supplementary material.



Artist: Sam Mountain | Community: Gwa'sala–Nakwaxda'wx Nations



Action: Prepare an Asset Management Strategy

An asset management strategy is a core component of an asset management program. It defines at a high level what the community intends to achieve and an action plan (or roadmap) for both developing and implementing the asset management program. The strategy is important because it:

- Involves a diagnosis of challenges your community is intending to overcome
- Identifies key initiatives, resources, and timelines that support delivery of asset management
- Promotes coordinated decision-making to achieve your community's vision
- Tracks progress on core asset management competencies

This is something your team may have already developed as you answered the questions: Where do you want to go? How will you get there? Make sure your strategy has been recorded so that new team members can be quickly brought up to speed.

Additional resources to help you develop an asset management strategy is included in the supplementary material.



Skidegate Water Treatment Plant





Action: Process Gap Analysis

A process gap analysis involves assessing a community's asset management policies, practices and procedures compared to best practices. The purpose is to document the maturity of formal and informal infrastructure decision-making capabilities at an organization-wide level. This type of gap analysis helps identify opportunities for involvement, informing next steps and priority areas for implementing the asset management program.

There are a number of regional and national tools and standards that can help with this assessment, including the Union of BC Municipalities' AssetSmart 2.0 and the Federation of Canadian Municipalities' Readiness Scale. More information about these resources are provided in the supplementary materials.



Action: Document Decision-Making Processes

There are a variety of decision-making processes that relate to asset management. Where to start and what to focus on will change with each community. Begin by documenting what you already do and then think about what can be done differently to be more effective, including any known gaps.

This could involve business case analysis, structured decision-making techniques, scenario analysis, or risk-based prioritization.

More information about documenting decision-making processes is included in the supplementary resources.



Construction Stage of Old Massett Wastewater Treatment Plant



Levels of Service

We know that asset management is about service delivery. What services do you provide to community members? Are these services meeting needs, falling below expectations, or exceeding expectations?

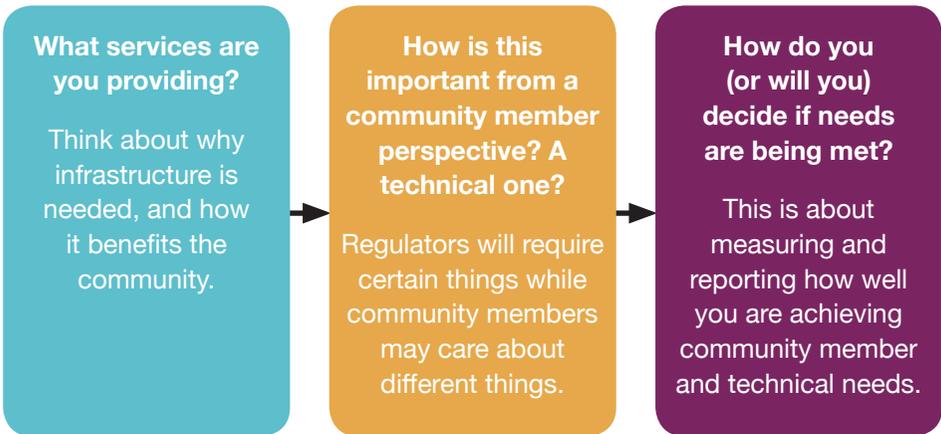
Consider what level of service is required to meet your community vision, establish asset management priorities, maximize functionality while minimizing the cost of maintenance, and reduce the number of repairs while providing that level of service.

This area of asset management can be quite difficult and is arguably where the least progress has been made to–date across the region, and in fact across the country. However, it is also one of the most important areas. This Guide focuses on a process for documenting (or establishing) existing service levels. Just like with the inventory, start small and add detail over time.



Action: Document Existing Service Levels

The process for documenting (or establishing) existing service levels for each asset category is shown in the figure below.



There are two perspectives, (or types) of service levels to consider:

- **Technical Service Levels** – based on the physical characteristics of an asset (eg. “water meets Canadian Drinking Water Standards”)
- **Membership/Community Service Levels** – based on the experience and expectations of the community (eg. “water doesn’t have a bad taste or smell”)

For each asset category, identify how the service you are providing is important from a community member and technical perspective. This could be one or more level of service.

ASSET CATEGORY	LEVEL OF SERVICE EXPECTED	
	TECHNICAL	MEMBERSHIP/COMMUNITY
Water System	<i>eg. Meets Canadian Drinking Water Standards.</i> –Lead < 0.010 mg/L	<i>eg. no bad taste or odour</i>

A sample list of service levels for each major asset category is included in the supplementary material.



Details regarding procedures for measuring the performance of service levels, once established, are provided in the supplementary material.

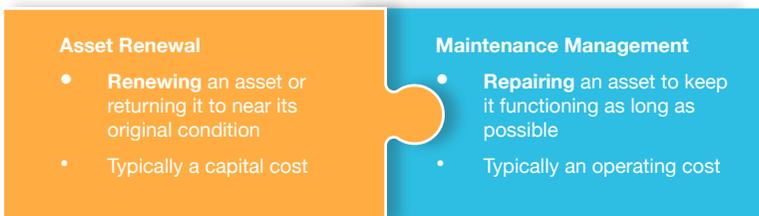


Maintenance Management

Maintenance management is about undertaking preventative work to optimize how long assets last. Consider what maintenance tasks you need to complete, how often, and who is going to do them.

As shown in the figure below, maintenance management can be considered as a distinct and important component of an asset management system.

ASSET MANAGEMENT





Action: Prepare a Maintenance Management Plan or Schedule

A maintenance management plan is a resource that outlines required maintenance tasks, when and how frequently they should occur, and who will do them. This could be in the form of a poster, a list, or a more comprehensive report. Think about what format will be most helpful to your staff.

Core features of a maintenance management plan include:

- A list of the major components of all infrastructure sub-categories in your community (eg. water system: mains, valves, hydrants, etc.)
- Health and safety requirements for the community and staff
- Operational control tasks and timelines
- Inspections and maintenance tasks and timelines
- Roles and responsibilities for maintenance work

Tips and samples for developing a maintenance management plan are included in the supplementary material.



A sample maintenance management plan poster created by Little Shuswap Lake Indian Band is shown below.

 **Little Shuswap Lake Indian Band Annual Maintenance Schedule**

Enter First Monday of the Year		01-Jan	14-Jan	21-Jan	28-Jan	04-Feb	11-Feb	18-Feb	25-Feb	04-Mar
January 7, 2013	Task Description	1	2	3	4	5	6	7	8	9
1.0										
1.1	Weekly Work Planning	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
1.2	Weekly Report	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
1.3	Monthly Report	2.0					2.0			
1.4	Monthly Budget Review	1.0					1.0			
1.5	Prepare Annual Budget									
	Administration Hours Sub-Total	3.8	0.8	0.8	0.8	0.8	3.8	0.8	0.8	0.8
2.0										
2.1	Daily Water Quality Testing, 2hrs/wk	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2.2	Chlorine and Bacteriological Sampling in Community 2 hrs/site	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
2.3	Independent Lab - Send Treated Water Samples to Kamloops 5 hrs/mth	5.0					5.0			



Lesson Learned: Draw on local expertise in the community, hold monthly budget meetings to confirm spending responsibilities, and work with your ISC Capital Officer.

Managing Risk and Prioritizing Projects

Risk refers to the potential for undesirable outcomes resulting from an incident, event, or occurrence. It can be determined by the likelihood and the associated consequences to an asset if an event was to occur. A risk assessment is a tool for helping communities prioritize which existing assets most urgently need to be repaired or replaced.



Action: Undertake a Risk Assessment

Think about what could happen, what services infrastructure provides and what the impact would be of those services not being delivered to your community in terms of financial, social, and environmental cost. A four step process for evaluating risk is shown in the figure below.



Start at an asset category level or service level (eg. overall risk to the road network). This process can also be done on an asset-by-asset level. Identify potential risks, such as fire, earthquake, flooding, structural failure, power outage, etc. Remember, your services are vulnerable to climate change; this should be considered in evaluating risks.



Lesson Learned: To mitigate risks, schedule daily inspections, (eg. water sampling) and track historical data in a long term spreadsheet. Distribute these regular tasks evenly among managers. Acknowledge that fixing one thing can lead to many subsequent responsibilities and plan for this outcome.

Identify the consequence of a change in service (or to an asset) due to an event occurring. If you have a map available, consider using this to help trace the effects. For example, a water main break due to an earthquake would have a low consequence if it served only a few homes. It would have a high consequence if it served the health centre, or if it was the only connection between the water source and the whole community.

Identify the likelihood of an event (how possible it is that this would occur). A good starting place is to use the remaining life of an asset, or average remaining life of a system, to rank likelihood. The closer the asset is to reaching its expected useful life, the higher the likelihood of asset failure.

Use a risk matrix tool to determine a risk rating, which is based on the consequence and likelihood you've just assigned. A simplified example is provided below, however this can be expanded to a larger matrix and numerical values assigned for more detailed results.

Risk = Consequence of Failure x Likelihood of Failure				
Likelihood of Failure	High	Low Risk	Medium Risk	Highest Risk
	Medium	Low Risk	Medium Risk	Medium Risk
	Low	Low Risk	Medium Risk	Medium Risk
		Low	Medium	High
Consequence of Failure				

The result will tell you what services (or assets) have the highest risk of failure. Of those, consider asset criticality, which is how important assets and services are relative to each other. Those rated “high risk” can be prioritized for further action, such as renewing key assets first in your long term financial plan. Supportive resources for developing a risk matrix are provided in the supplementary material.





Action: Prioritize Proposed Assets and Services

You now know how to prioritize the renewal of existing assets. You can also prioritize new capital projects. The information from these two prioritization activities flow into your long term financial plan.

The process for prioritizing new assets involves weighing your community goals to use as a benchmark or guideline to define community values and priorities. Then, consider each project according to how well it achieves each community goal. Add up the total score to determine which project(s) are the highest priorities. This exercise, like the risk assessment, is most effective when undertaken as a team, using a workshop-style approach. A sample prioritization table is provided below, with supportive resources provided in the supplementary material.



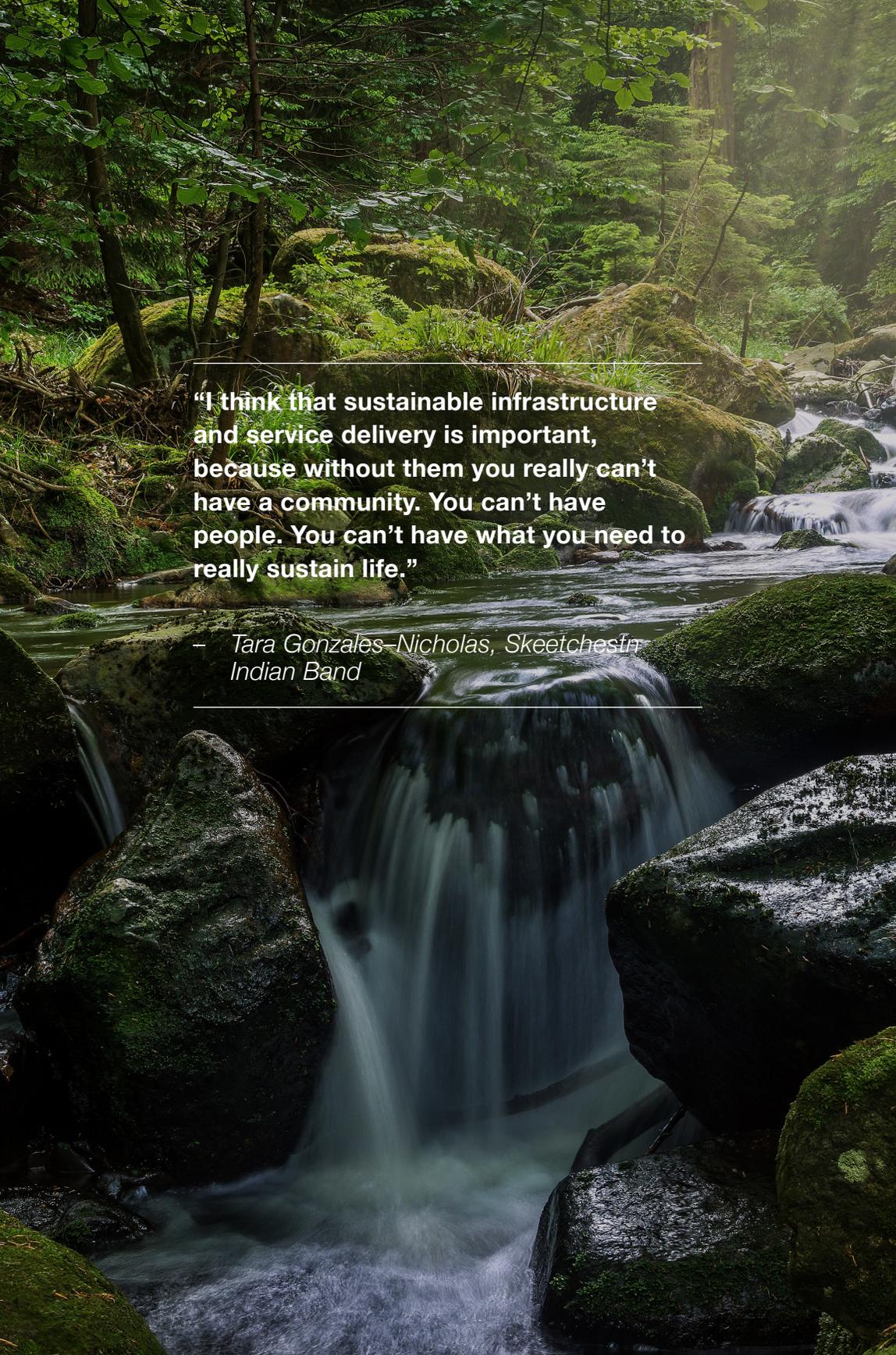
Sample Prioritization Table

		New School Project No. 1		Paved Road Project No. 2		5-Lot Subdivision Project No. 3	
Community Goals	Weight	Weight	Total	Weight	Total	Weight	Total
Health and Wellness	5	5	25	5	25	4	20
Economic Development	4	4	16	4	16	2	8
Community Engagement	3	4	12	1	3	3	9
Education	5	5	25	2	10	1	5
TOTAL SCORE	—	74		54		42	

As part of this prioritization exercise, make sure everyone is aware of the whole cost of each project if it moves ahead. The whole cost is also known as the lifecycle cost, which includes both the cost to build/undertake the project as well as the ongoing cost (operations and maintenance). Often, the ongoing costs are a lot higher than you would expect. In fact, there are communities that have built new offices, recreation centres, and other facilities only to realize that they can't afford to use them!

A checklist of the top questions and issues is provided in the supplementary material to support Council in making infrastructure investment decisions.

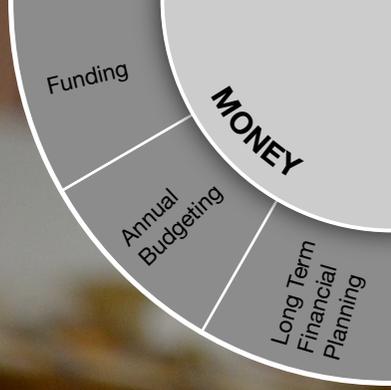


A lush forest stream with mossy rocks and a waterfall. The water flows over large, dark, moss-covered boulders, creating a series of small cascades. The surrounding forest is dense with green foliage, including ferns and various trees. The lighting is soft and natural, highlighting the textures of the moss and the movement of the water.

“I think that sustainable infrastructure and service delivery is important, because without them you really can’t have a community. You can’t have people. You can’t have what you need to really sustain life.”

– *Tara Gonzales-Nicholas, SkeetchesIn Indian Band*





Money

How Much Will it Cost?

When Will We Need to Pay for it?

How Will We Pay for it?

The “Money” element of the Asset Management Framework (page 17) is focused on three areas:

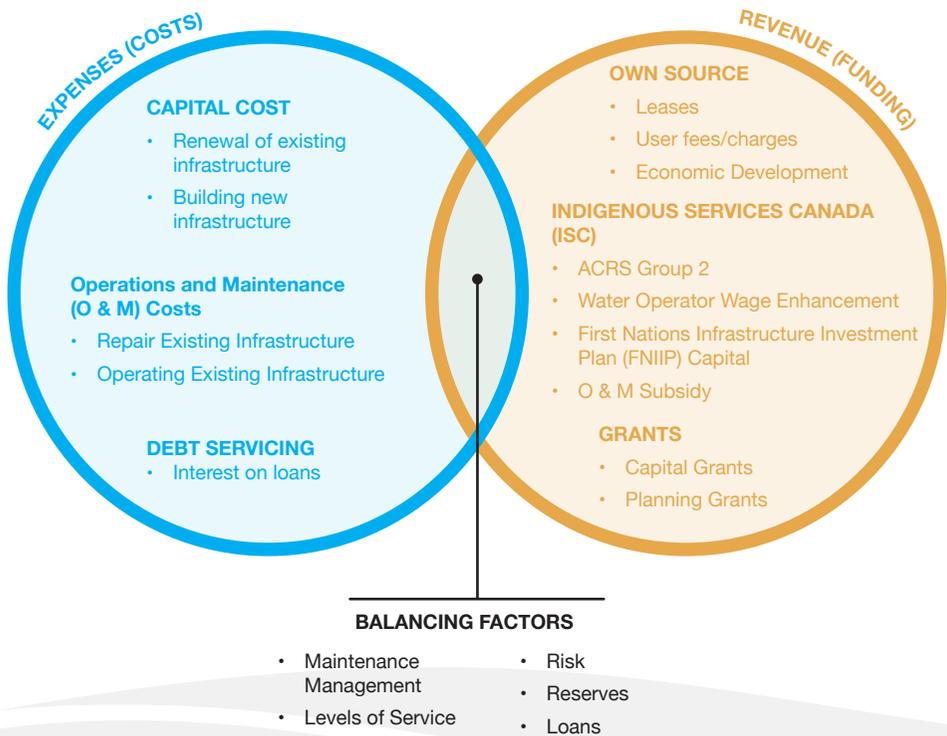
1. Long Term Financial Planning
2. Annual Budgeting
3. Funding

Ultimately, this element is about creating a long term financial plan that is specific to your community’s needs and priorities, and is both practical and sustainable.

Long Term Financial Planning

Long term financial planning is about using infrastructure information and community priorities to make decisions about when and how to spend money. It allows communities to proactively manage the full lifecycle of community assets, address immediate service gaps, and react more effectively to unanticipated events and emergencies. The goal is to create a realistic, balanced financial plan.

CREATING A BALANCED PLAN



Preparing a long term financial plan is an iterative process that involves weighing reality and theory. At its core, it is about balancing costs with available funding in a strategic way. You can do this in small steps or all at once.

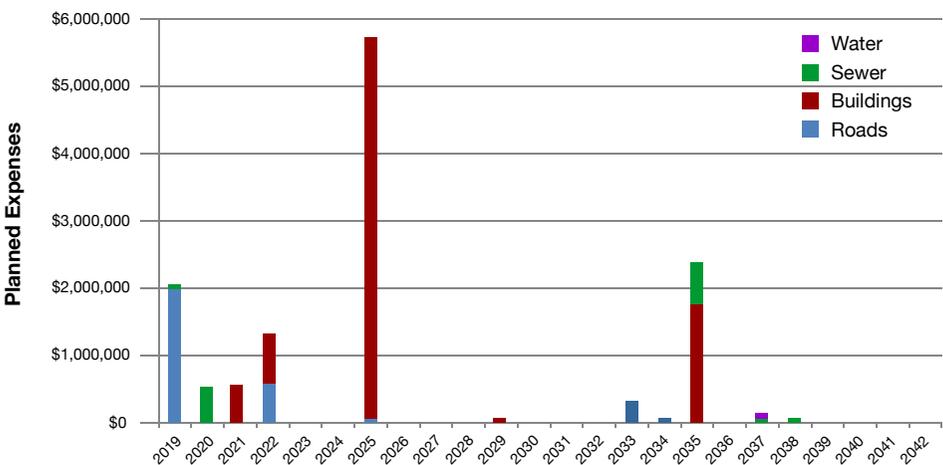
Through this process you will no doubt find that you have a gap between what your community is spending and what you should spend in an ideal world. This is expected, and in fact it's where every community starts. Don't be alarmed! Ultimately, it's about managing this gap, as opposed to closing it. Understanding this will arm you with the information required to have important discussions, start making trade-offs, and enable decisions grounded in fact.

Long term financial planning also helps reduce uncertainty over future costs by giving your community the information it needs to plan for and build up reserves for large capital investments. Being prepared with a plan looking 10–25 years ahead may make it easier for your community to access funding from ISC or other grants programs.



Action: Prepare a Renewal Plan

Step 1: To begin, consider preparing a preliminary 25 year renewal plan for your existing assets (25 years is a typical horizon, but decide on the horizon that will work for you). The inventory, valuation, and remaining life information you've gathered to-date is all you need. The graphic below shows an example of how information in your inventory can be used to illustrate when investments will likely be needed, and the magnitude of these investments.



The first iteration of your renewal plan will be unconstrained, meaning that it hasn't been balanced with available funds. Over time, you can adjust the renewal plan to be more reflective of community needs, priorities, levels of service revenue, and risk.

Add to the renewal plan, by gathering information on operations and maintenance costs from approximately the last 5 years. This might be easiest for your water and wastewater systems, so consider starting there. If you don't have historical cost information, start tracking ongoing repair and maintenance costs for each asset category.



Lesson Learned: *If you haven't already, involve staff from the finance department. They hold a wealth of knowledge and information that you will rely on as you go through this process.*

Determine any debt servicing costs if you have infrastructure-related loans.

Finally, if you are planning for new infrastructure over the next 25 years (typically because you are accommodating growth, increasing the services being delivered, or addressing regulatory requirements) then add this to the renewal plan as well. If you don't have a list, or if it only looks out 5 years, then use what is available for your first iteration. New infrastructure costs should account for the whole lifecycle of an asset—both initial capital as well as ongoing operations and maintenance.

The result is how much, ideally, you would spend on your infrastructure. But, how much do you actually have to spend?

Resources to help your community develop a short and long term financial plan are included in the supplementary material.



Action: Calculate Your Community's Expenses

Step 2: Estimating your expenses for approximately the next 25 years will involve:

- 1) Determining how much you will be spending on renewal over the next 25 years (your renewal plan)
- 2) Adding your projected operations and maintenance costs (an average amount per year based on the last 5 years)
- 3) Adding debt servicing costs
- 4) Adding costs for new infrastructure needed (as available)



Lesson Learned: *Your community is probably already preparing a short term financial plan under the First Nations Infrastructure Investment Plan (FNIP) for identified capital and maintenance projects. The FNIP details community infrastructure projects and the priority that a community has assigned to them, the estimated cost for completion, funding sources explored, and funding requested from ISC.*

Skidegate Elders Centre





Action: Calculate Available Revenue

Step 3: Using available budget information, identify revenue that is intended to pay for services that your infrastructure supports. This revenue could be from your community's own sources, ISC funding, or other grants.

Now, compare this to your expenses. The difference between the revenue you have and your expenses (what's needed) is the gap we've been referring to. Remember, this gap will likely be large, and that's expected. Now you can begin to create a strategy for managing this gap.



Lesson Learned: *Weigh the costs of investment in rehabilitating and maintaining your existing community assets with the cost of acquiring or building new assets. If you are planning to build something new, don't forget to account for the costs to operate and maintain it into the future.*



Action: Calculate Your Target Reinvestment Rate

As you move into additional iterations of your renewal plan, consider looking at the whole lifecycle of each asset. This will give you a more sustainable target reinvestment rate based on the service level you are currently providing to community members. Remember, your initial target (and likely your long term target) should be about managing the 'gap' between expenses and revenues, as opposed to closing it! Start where you are and move a step closer to where you need to go. It's about stretching your available dollars as far as possible.

Resources to help your community calculate its target reinvestment rate are included in the supplementary material.





Action: Prepare a Long Term Financial Plan

Step 4: All of the steps you've taken have given you the information needed to prepare a long term financial plan. Long term financial plans are forecasts looking out 25 years (sometimes longer) into the future. They look at your revenue and expenses, and consider factors to help balance the two until you reach a direction that is realistic.

To begin balancing expenses and revenue, use the knowledge that staff and others hold to answer the following questions:

- **Maintenance management** – what maintenance activities might delay the need for replacement?
- **Levels of service** – are there opportunities to decrease service levels in some areas while still meeting basic community needs and expectations?
- **Risk** – which assets, if they failed today, would have the most catastrophic impact?
- **Prioritization** – are some projects, particularly new infrastructure, a lower priority than others?
- **Borrowing** – are there opportunities to borrow funds to support major infrastructure expenditures?
- **Reserves** – can you start setting aside funds now to address some of the 'peak' years when more than average money will need to be spent?

Adjust your plan based on your answers. This will help close the gap between expenses and available revenue. Over time, you may want to undertake additional studies or more advanced asset management actions to support further decision-making. The "Systems and Processes" element of the Asset Management Framework (pages 45–55) has more guidance on maintenance management, levels of service, risk, and prioritization.



Lesson Learned: *You probably can't do it all! Consider the risk of deferring a project or eliminating it. Are there opportunities to reduce the existing number of assets or services provided? Are you able to phase a project over a number of years?*

Annual Budgeting

Once you have a long term plan, think about operationalizing it by adding detail to the first 1–5 years. Your community already goes through an annual budgeting process and reports on your financial status each year. You now have an opportunity to incorporate infrastructure financing into this process. Things to consider:

- If you haven't already, start tracking costs according to the services being delivered
- Hold a meeting at the beginning of each year to understand each department's budget needs and link them back to service delivery and community priorities
- Consider linking your maintenance management plan to your budget
- Where possible, set money aside in a reserve fund for renewal or major new infrastructure expenses
- Consider how to budget for emergencies
- Hold a meeting at the end of each year to gather information from each department on their spending, especially as it relates to infrastructure projects
- Share key decisions at the your community's Annual General Meeting (AGM)



Lesson Learned: *Draw on local expertise in the community, hold monthly budget meetings to confirm spending responsibilities, and work with your ISC Capital Officer.*

Tools to help link asset management with your community's annual budgeting processes are included in the supplementary materials. Tools include a snapshot of a sample budget and resources to support cash flow forecasting.





Action: Identify New Sources of Funding

Consider how you can generate additional revenue to support your community's infrastructure plan.

Are there opportunities to develop a resort that leverages natural assets and available capacity in existing infrastructure, or market housing that serves a demand and builds an economy of scale that reduces the unit cost of housing for community members?



Action: Develop a Tangible Capital Asset Policy

Another important consideration is how to align your infrastructure planning process, and specifically your inventory, with your annual Tangible Capital Asset (TCA) reporting process. Doing so will allow for a more streamlined, efficient, and accurate result each year. To guide this process, consider developing a TCA Policy if you don't already have one. If you aren't sure what TCAs are, it's time to sit down with your finance department!

Funding

Carrying out infrastructure operations, maintenance, repairs, replacements, and new projects requires money. Funding is available through ISC's ACRS, CAIS, FNIP programs. Other sources of revenue can include grants, loans, user fees, economic development revenue, etc. A more comprehensive list of funding sources is listed in the supplementary material.



Lesson Learned: *Consistently look for new sources of funding to match community needs, priorities, and opportunities.*



“Most people are focused on the new things, the next development. But a lot of our past investments need to be maintained, so that’s where asset management comes in. It’s really bringing forward planning and prioritizing for the limits and budgets that all communities have, in a way that maintains these investments into the future.”

– *John TerBorg, Tk’emlúps te Secwepemc*

PART

3

Paddling Together:

Implementation and Keeping Momentum

**Once our program is developed,
what's next?**

How do I measure success?



Implementation

At this point you should know where your community is at today, where you want to go, and how you will get there. Once your program is set up though, you aren't done. Now it's time to paddle ahead together, implementing your program and keeping the momentum going.



Lesson Learned: *Many communities decide to do a test year or two of implementation. This allows everyone to get used to the day-to-day, monthly, and annual tasks that help your team make decisions. Challenges can be dealt with as they arise. It also lets everyone know that it's okay to try things that may not work – it's a great way to learn! The result is a process that will be effective for your organization.*

A few important considerations as you embark on this important step of implementation are:

- Maintaining ongoing staff and Council support
- Planning for staff turnover
- Creating a learning network
- Keeping information current
- Knowing when to hire an expert

These are described further in the subsections below.

Ongoing Staff and Council Support

Asset management is a long term process that requires ongoing support from the entire community, including staff, Chief and Council, and community members.

Supportive and interested staff are extremely valuable as advocates for the asset management program. To build support, it is important that staff have a clear understanding of their responsibilities and the value of their work to the community. Provide training and learning opportunities to staff across the organization to build awareness and interest in asset management.



Skeetchestn Indian Band Staff

Invest in your team to create a team of champions and mitigate staff turnover. Communities can prepare for staff turnover by recording key information in manuals and holding exit interviews to ensure key information is transferred to incoming team members.

Building community awareness of what asset management is and why it is important is essential for encouraging support for your asset management program. People are more likely to prioritize something that they understand.

Resources to help build staff and Council awareness and support are included in the supplementary materials.



Planning for Staff Turnover

Frequent changes in staff can pose a challenge for the development and implementation of your asset management program. Staff not only provide valuable energy and support for asset management planning, but also hold important information about how administration operates.

When a staff member leaves, they take their knowledge with them and may leave a gap in the skills and role they provided. When new or existing staff work to fill that gap, there may be a need to provide additional support or training to return to normal operation.

Document important procedures, keep good records in central files, and train more than one person to complete critical tasks.

Resources to help your community plan for staff turnover are included in the supplementary material.





Lesson Learned: *You are not alone! Connect with neighbouring communities doing asset management or neighbouring municipalities through Municipal Type Servicing agreements (MTSAs).*

Keep Information Current

Why do we need to keep information up to date and what questions should we be asking at the end of the year?

Collecting asset information when you build or acquire a new asset is just the beginning. Keeping your asset management inventory up-to-date can be a full-time job and its importance cannot be understated. In order to make informed decisions you need to have up-to-date information on the current state of your community assets.

Depending on the number of assets your community has, the level of maintenance activities that are required and staff constraints, your community may update your asset information weekly, monthly, semi-annually, or yearly. It is important that you set aside time each year to make sure that you are planning the next year's capital projects and operations and maintenance tasks based on the current asset state in your community.

Hire an Expert when Needed

Sometimes you won't have the resources or skills you need for certain aspects of your asset management program. Consider what role you'd like that expert to play and the value they could bring to your program.



Keeping Momentum

Monitoring Performance

How do you know that you're achieving your objectives?

To make asset management work for your community it may require changes over time to operations, planning, tools, reporting, and processes. You'll need to revisit your plans and programs regularly to make sure that they are still meeting your community needs.



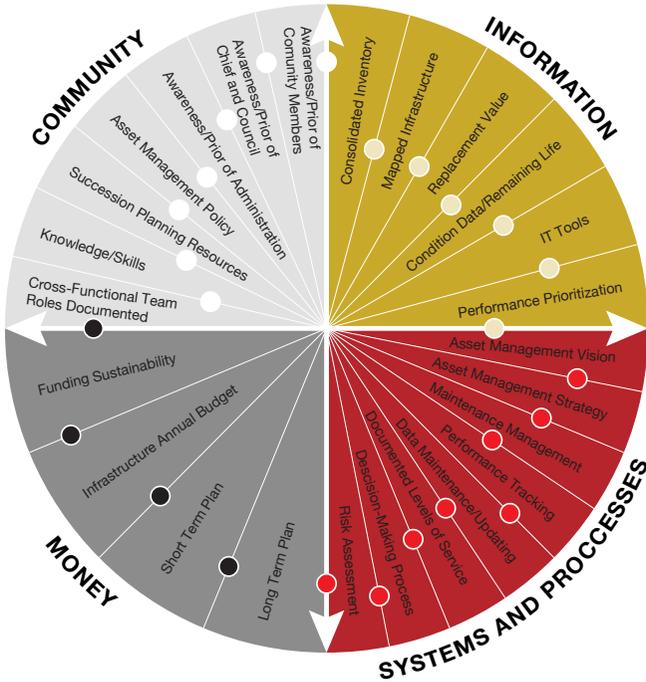
Action: Establish your Asset Management Monitoring Program

To set up your monitoring program:

Step 1: Begin by establishing a baseline of how you are currently delivering services. Think back to the question: "Where is your community at today?" in Part 2 of this Guide. If you haven't already, consider doing a current state assessment workshop. This will illustrate where your community is at with respect to each asset management element, and can be an activity you repeat regularly (perhaps each year or two). You'll be able to track your progress in certain areas compared to the basic, intermediate, and advanced actions discussed in this Guide (or using a similar tool).



The graphic below is a tool communities can use to visualize where you feel you are at with your asset management program. The wheel shows detailed competencies, or aspects for asset management grouped by the five elements used in the framework for this Guide. The coloured dots show progress for a hypothetical community.

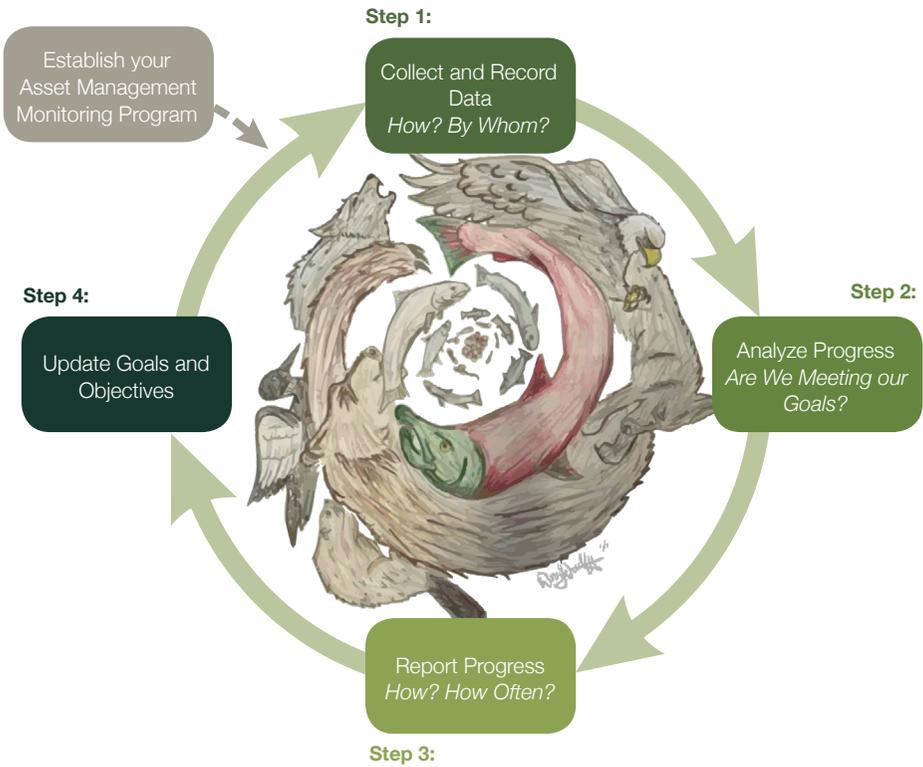


Step 2: Understand where you're going. Your community's vision, goals and/or objectives are an important consideration in order to determine if you are achieving success. Think back to the question: "Where do you want to go?" in Part 2 of this Guide. You should have a roadmap that identifies priorities, actions (also known as goals and objectives), and a timeline. If you haven't already, identify your community's asset management priorities by creating a checklist of short term (and potentially long term) goals or objectives. If you have established levels of service, this could be an advanced way to monitor performance. Remember to use SMART goals: **S**pecific, **M**easurable, **A**chievable, **R**elevant, and **T**ime-bound.

Step 3: Set up a monitoring system. If you undertook a current state assessment, the tool you use for this assessment can be part of your system. Similarly, your roadmap can be another part of your system. Combine that with a commitment to hold a meeting (perhaps once a year) with your asset management team to focus on reviewing your roadmap.



Action: Document Asset Management Program Progress



Artist: Darcy Deneault | **Community:** Skeetchestn Indian Band

To track your progress regularly:

Step 1: Collect and record data. The most efficient approach is to hold a workshop where, as a team, you can look at your roadmap or checklist and document your progress for each item. This is also an opportunity to gather any documents produced, and store them in a central location.

Once you formalize your levels of service and establish performance metrics, this process becomes more in-depth with respect to data collection and recording.

Step 2: Analyze, or evaluate, progress to determine if goals are being met. Highlight priorities that should have been achieved according to your roadmap. Due to unforeseen circumstances, there could be some actions that had to be delayed. It's important to document these situations. In other cases, you may be ahead of where you thought you would be. Again, make note of these. Any steps forward should be considered progress. Be sure to take time and celebrate those successes!

At the same time, think about whether your asset management vision, policy, and framework still align with community plans and policies. Sometimes there is a need to adjust your program to accommodate changes in your community.

Step 3: Report on your progress. Your team has done a lot of hard work. Make sure this is documented and passed along to the right people. You could create a report to Chief and Council, prepare a newsletter, or add some information into your Annual Report. The important thing is to let everyone know that progress is being made.

Step 4: Establish/Update program goals and objectives. You will have achieved some or all of your priorities and be ready for next steps. Any delayed tasks can be carried over to be completed in the future. Using a similar approach to develop your baseline (your current-state assessment), go through the process again to determine your new status with respect to asset management. A workshop with your team will likely be the most efficient method. This process will show you where there are opportunities for further improvement.



Lesson Learned: *Ultimately, monitoring performance is about achieving progress and continuous improvement.*

Use this process to also reflect on learning, any changes to your community context (eg. growth), and community values. Think about how you can do even better.



Reconciliation Pole, University of British Columbia |

Hajda master carver, Zidansuu (Edenshaw) James Hart, with assistant carvers

Closing

Key take-aways from First Nation communities across BC practicing asset management include:

- Attending a **sustainable infrastructure workshop** hosted by ISC is a great way to get started.
- **Start small and share the work.** You don't have to do everything at once. Use a team approach that recognizes the unique and individual strengths of your members. Pick a couple of priority areas and begin there.
- **Know that you're not alone; stay the course and reach out.** Other communities have gone through many of the same challenges you'll encounter along the way. Connect with local champions, learn from their experiences, use their processes, and don't reinvent the wheel.
- **Keep working at it.** Asset management takes time to come together and sometimes may seem overwhelming. Be willing to make a sincere commitment to the process.
- **Asset management is an ongoing process with no end date.** Plans can grow with you, so take next steps at the pace that makes sense to you recognizing that it will continue to evolve.
- **Support from Chief and Council is critical.** Take the time to explain the benefits to your community so that they may understand 'the why' (eg. service delivery, sustainability, future generations).
- Asset management can seem **costly to set up, but it's worthwhile.** Think about the small steps you can take to achieve basic milestones first. Understand the **funding resources** available to you, and how initial investments can lead to longer term efficiencies and benefits.
- **Understand the full lifecycle costs** of capital projects and use this information in **decision-making** (planning, design, construction/purchase and maintenance, renewal/decommissioning).



COMMUNITY

- Establish an Asset Management Team
- Establish a Team Terms of Reference
- Hold Regular Team Meetings
- Facilitate Training and Learning Opportunities
- Develop an Asset Management Policy
- Communication Material and Community Events
- Community Awareness Strategy
- Identify a Community Champion

MONEY

- Prepare a Renewal Plan
- Calculate Your Community's Expense
- Calculate Available Revenues
- Identify New Sources of Funding
- Calculate Your Target Reinvestment Rate
- Prepare a Long Term Financial Plan
- Develop a Tangible Capital Asset Policy

IMPLEMENTATION AND KEEPING MOMENTUM

- Establish your Asset Management Monitoring Program

INFORMATION

- Prepare a Consolidated Inventory
- Determine the Replacement Cost of Each Asset
- Calculate the Remaining Life of Each Asset
- Create Infrastructure Maps (Using GIS)
- Prepare a State of the Assets Summary
- Adjust Life Expectancies Based on Condition
- Data Gap Analysis
- Transition to a Software Tool
- Undertake Condition Assessments

SYSTEM AND PROCESSES

- Undertake a Risk Assessment
- Prepare a Vision for Service Delivery
- Prepare and Asset Management Strategy
- Prepare an Annual Maintenance Schedule
- Process Gap Analysis
- Document Decision-Making Processes
- Document Existing Service Levels
- Prepare a Maintenance Management Plan
- Prioritize New Assets and Services
- Process Gap Analysis

- Document Asset Management Program Progress