Workshop 1 Asset Management and Level of Service Refresher







This initiative is delivered through the Municipal Asset Management Program, which is delivered by the Federation of Canadian Municipalities and funded by the Government of Canada.

fcm.ca/assetmanagementprogram









Welcome!







WHO'S IN THE ROOM? INTRODUCTIONS







Course Introduction

This course is designed to:

- ✓ Help you, as municipal staff, continue your asset management journey.
- ✓ Build on your understanding of asset management and to help your municipality advance the effective use of asset management principles within the organization, through a more thorough understanding of levels of service.







Course Introduction

By the end of this course, you will be well on your way to defining levels of service:

- **Step 1:** Define service categories and assets
- **Step 2:** Define primary customer groups
- Step 3: Develop Indicators of the community/customer experience
- Step 4: Determine the current level of service
- **Step 5:** Identify target level of service
- Step 6: Identify capital, operational, and maintenance activities required to meet the target level of service
- Step 7: Determine the costs of meeting the targets and affordability
- **Step 8:** Adjust your target level of service until it is affordable
- Step 9: Review the accuracy, completeness, and reliability of your information and identify if improvements are needed

Asset Management Handbook and Toolkit: https://www.alberta.ca/municipal-asset-management.aspx





WORKBOOK HOW-TO





















Module 1 Define Asset Management







SCHEDULE

Module 1—Define Asset Management

Learning Goal 1—Define asset management, service, risk and cost

Learning Goal 2—Articulate the benefits of asset management

Learning Goal 3—Describe the tools used in asset management

Learning Goal 4—Describe the attributes of a successful asset management team

Learning Goal 5 – Using the Asset Management Readiness Scale (AMRS) as an Implementation Guide







What is Asset Management?

"The process of making decisions about the use and care of infrastructure to deliver services in a way that considers current and future needs, manages risks and opportunities and makes the best use of resources"

Source: Handbook & Toolkit for Alberta Municipalities







Some Vocabulary...



Assets | Also known as a tangible capital asset, a physical component of a system that enables a service, or services, to be provided.

Asset management system | A set of processes and procedures that support asset management. Components may include a plan, policy, and/or strategy.







Asset Management Focuses On

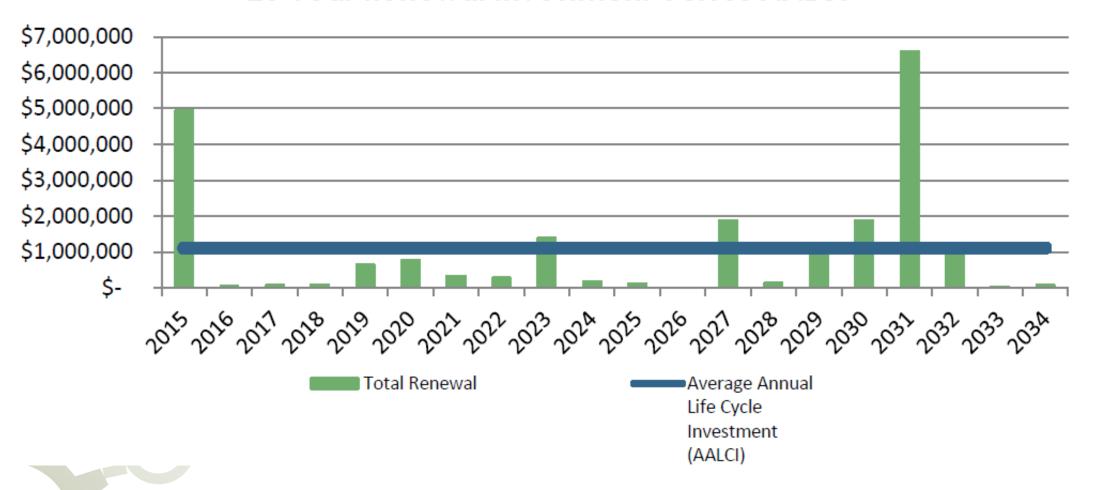
- The purpose of your organization and how assets support community goals
- Value, purpose, and long-term outcomes of assets
- Managing risks and understanding the context of risks
- Holistic approaches to budgeting
- Collaboration across municipal service areas and with service partners







20 Year Renewal Investment Versus AALCI









Group Discussion

Do you have this kind of information in your community?

How would you respond to this if you received this information about your community's infrastructure?









Trade-Offs and Asset Management

- Council makes decisions and sets direction
- Decision-making means recognizing and thinking about trade-offs between service, risk, and cost
- Staff help prepare information about tradeoffs to inform council's decisions







Asset Management Lens

Often the trade-offs in decisions won't be explicit.

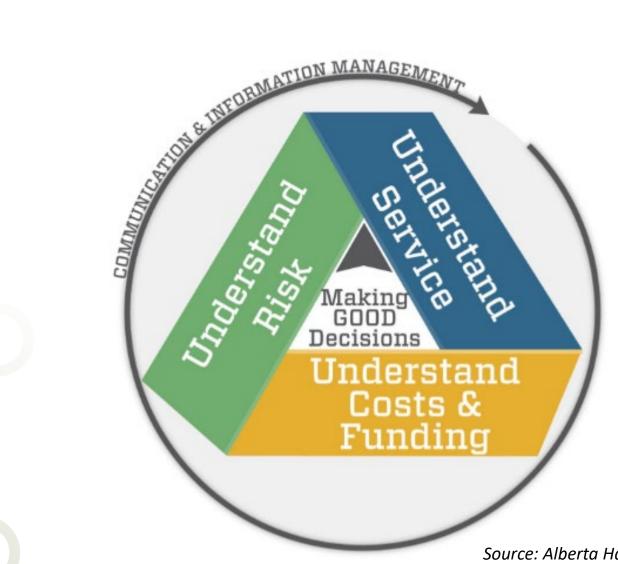
This means thinking about:

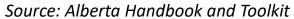
- What information is available?
- What information is needed?
- What trade-offs are being made?
- How do these trade-offs connect to the community's long-term goals and needs?

















Service

Types of services

 Does our municipality need to provide this service? Why?

Benefits

- Who benefits from these services?
- Who may not benefit?







Service

Level of service

- What is the current level of service provided?
- What is the desired level of service and timeline for achieving it?
- What are the regulatory requirements (i.e., minimum level of service)?
- How do council and staff understand what level of service is needed or wanted by recipients?
- What is the appropriate level of service to deliver?







Service

Service demands

- How will service demands change over time?
- What are the ways that the municipality can influence the demand for a service?
- How do service demands vary in different areas of the municipality?







Activity











Risk

RISK = IMPACT x LIKELIHOOD

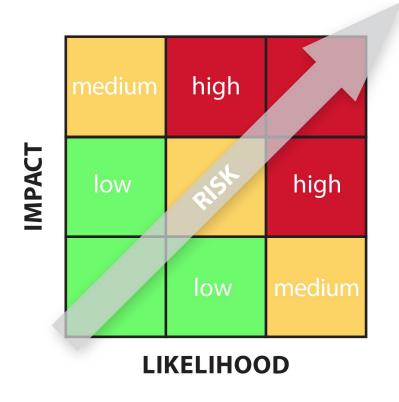
(how severe will the negative consequences be?) (how probable is it that these negative consequences will happen?)







Risk









Types of Risk



Strategic risk | Risk of change that could impede your ability to achieve an overarching strategic goal

Asset risk | Risk of an asset failing to perform as needed







Climate Change & Risk

- Climate change is both an asset and strategic risk:
 - Asset Risk: changes in weather patterns may impact ability of infrastructure to perform as intended.
 - Strategic Risk: changes the assumptions for how services are delivered.







Climate Change & Risk

- Climate change introduces impacts that may:
 - Amplify risk of asset failure
 - Reduce useful life of assets
 - Reduce levels of service
 - Increase costs of managing risks







Risk Tolerance

- Not all risks can be eliminated
- Some risks can be mitigated at a cost
- Risk tolerance means the level of risk a municipality can reasonably handle

What is an example of a risk you might choose to tolerate?

What is an example of a risk you would want to mitigate?







Costs and Funding

- Relationship between capital cost and O&M costs (full lifecycle cost)
- Past and projected trends in operating and maintenance costs over time
- Revenue sources for future capital and operational costs
- Opportunities to reduce costs through partnerships or other alternate service delivery mechanisms









Align the organization with things that matter most.

- Service delivery, from the lens of people receiving the service
- Alignment with other municipal plans







LEARNING GOAL 2:

Benefits of Asset Management

Defensibly prioritize projects and allocate resources.

- What needs to be replaced, when, and how much it will cost
- Systematic approach to resources and addressing risk







Benefits of Asset Management

Systematically manage risks to service delivery.

- Helps to:
 - identify overall funding needs for sustainable service
 - prioritize where and when money should be spent
 - identify how much should be saved for long-term maintenance, and
 - understand how to effectively respond to complaints







Benefits of Asset Management

Demonstrate accountability to the community.

 Be able to articulate why decisions are being made







Benefits of Asset Management

Position your community to take advantage of federal or provincial government incentives or meet requirements.

 Asset management is increasingly being required to access grants

















Ongoing Decision-Making

- Information Management
 - Collecting information
 - Consolidation and organizing information
 - Storing and accessing information
 - Updating and improving information
- What information is important to collect?







Asset Management Software

- Best used when good processes are already in place
- Review what data your organization has, and what it needs to collect and keep track of
- Does not need to be overwhelming start simple!







Collecting Information

- Information doesn't need to be perfectly accurate—it depends on what you need it for
- Start with anecdotal data or estimates if that's all you have (qualitative data is still data)
- Improve data over time







Consolidating and Organizing Information

- Data needs to be accessible when needed
- Some communities prefer specialized software
- But you can start small—basic GIS with an Excel inventory







Building a Team

- Cross-functional groups
- A champion
- Involvement of staff who have knowledge in:
 - Finance
 - Public works
 - Engineering
 - Planning







Building Corresponding Competency in People and Leadership

Key attributes of AM Champion and Team:

- Leadership and influence
- Understanding of asset management and how it connects from policy to specific activities
- Ability to communicate about asset management to others







Building Corresponding Competency in People and Leadership

The asset management team should possess:

- Commitment to work together and promote a culture of communication
- Ability to consider and give weight to all perspectives
- Sense of accountability to asset management and improvement in asset management







Activity











Asset Management Readiness Scale

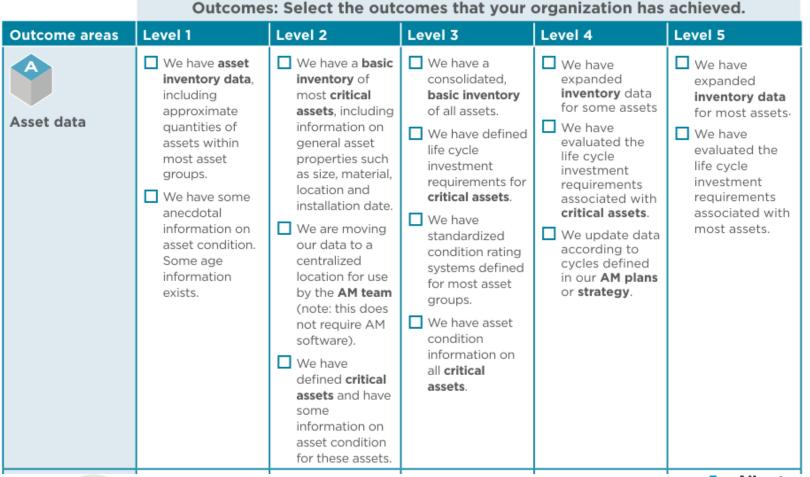
- Identifies five competencies that are required for successful AM
 - Policy and Governance
 - People and Leadership
 - Data and information
 - Planning and Decision-making
- Tool for evaluation of AM practices
 - That can be used many times!







Data and Information









Data and Information









Data and Information

	Outcomes: Select the outcomes that your organization has achieved.				
Outcome areas	Level 1	Level 2	Level 3	Level 4	Level 5
Financial information	We have financial information on our assets, supporting minimum PS-3150 reporting requirements.*	■ We have major capital renewal and operating & maintenance (O&M) expenditure data for some assets. ■ We have a strategy to link AM and financial information.	■ We have capital (new and renewal) and O&M expenditure data for most assets. ■ We have linked AM and financial information for all critical assets. ■ We can demonstrate the gaps between forecasted infrastructure needs and current spending levels.	We understand the cost of sustaining current levels of service for all critical assets.	We understand the trade-offs between investment and the level of service we deliver and use this to optimize our financial plans.







SCHEDULE

Module 2—Understanding & Defining Levels of Service

Learning Goal 1—The role of local government in delivering services

Learning Goal 2—Identify how your community currently understands levels of service

Learning Goal 3—Understand perspectives, roles, and responsibilities in service delivery







MODULE 2

Understanding & Defining Levels of Service







Role of Local Government

- Municipalities are responsible for providing services and managing assets to deliver these services.
- Continually review and evaluate...Over time, community needs, service expectations and financial means of municipalities change.
- Different groups hold differing expectations of services that should be provided.





Planned Abandonment

- Consider where there is no need to renew assets at the end of their useful life or demand for a certain level of service is no longer relevant.
- Municipalities can choose to reduce the investment in assets or eliminate them all together.





Talking About Level of Service

- How often snow should be cleared, and what roads get cleared first.
- Assets that are not performing as they need to, like culverts that are blocked.
- Resident complaints about flooding.





Activity

See page 23 in the Workbook.

How does your municipality currently discuss and evaluate levels of service?









Try it Out

After the workshop, reach out to nearby municipalities to understand how they discuss and evaluate levels of service and what approaches they have found to be challenging or successful.









- Clearly defined levels of service support the prioritization of resources in our communities.
- When clearly defined, dialogue can be supported in terms of willingness to pay for services.
- Defined levels of service also support improvements in service delivery efficiency and effectiveness.
- Defining levels of service is unique to each municipality and can be dependent on geography, lifestyle, culture, and density.





Customer level of service describes level of service from the perspective of the person using the service in non-technical terms.







Technical level of service describes operational measures that support achieving the customer level of service. These measures are for staff and may be in technical terms.







- Different roles within the municipal organization have different perspectives on defining level of service
- Consider different perspectives among planning, finance, engineering, operations, council, and citizens.





Activity

See page 25 in the Workbook.

Take 5 minutes for your personal reflection, then share with the group, and then consider other perspectives.









It is crucial to understand the specific roles that are at play in a municipal organization among:

- Council
- CAO
- Staff
- Service delivery partners





Council

- Determine services to provide, in alignment with the Municipal Government Act
- Determine level of service
- Determine how to pay for services
- Determine how the service will support municipal strategic goals





CAO

- Accept direction set by council and work with staff to develop policies and technical level of service to achieve customer level of service
- Work with staff to provide necessary information to council to make level of service decisions





Staff

- Focus on the 'how' of service delivery
- Be technical implementation experts
- Develop and implement technical level of service
- Identify risks to service delivery
- Engage with the community around service levels





Service Delivery Partners

 Deliver services that are agreed upon between the partner and municipality







Try it Out

At your next staff or council meeting, provide an update on your attendance at this course and share your learnings on the roles and responsibilities of municipal council, staff, and service delivery partners.









Activity

See page 43 in the Workbook.

Consider the three services you are focusing on and then See page 28 to discuss their current level of service









SCHEDULE

Module 3—The Connection Between Assets and Service Delivery

Learning Goal 1—Understand how assets provide services

Learning Goal 2—Understand current state of assets







MODULE 3

The Connection Between Assets and Service Delivery







Understand How Assets Provide Services

- It is the role of municipalities to deliver services to residents and manage the physical components of the system to enable service delivery.
- This applies to both built and natural assets.
- Natural assets such as trees provide a valuable level of service and play a significant role in air quality, stormwater management, soil management and even public safety.





Roads Example

What are the various components of a road and how do they collectively provide services?

Consider: gravel roads, asphalt roads, shoulders, ditches, culverts, wetlands, signage, bridge culverts, bridges, rail crossings, line painting, cross walks, signals, streetlights, curb and gutter, catch basins, etc.







Activity

See page 29 in the Workbook.

With your municipal asset management teams, identify the assets required for your chosen services considering both natural and built assets.









Condition and Performance

The current state of an asset can be thought of in two ways:

- Condition: the physical characteristics of an asset.
- Performance: the ability of an asset to fulfill its desired function.

Example: a cracked and potholed road is in poor condition and provides poor performance for those driving on its surface.



Condition and Performance

- There is variability in the strength of the relationship between condition and performance depending on:
 - Asset type
 - Defined levels of service
 - Community context
- Defined level of service helps communicate the relationship between condition and performance in decision making.





Age and Useful Life

The age of an asset does not give you information about its useful life.

- Age: how old an asset is, referenced to its install date.
- Useful life: the period of time in which an asset is expected to fulfill its desired function.

Age can't be changed, but useful life can increase with proactive maintenance or decrease when damage is sustained, or maintenance is deferred.





Age and Useful Life

- Your TCA can be a place to estimate the useful life of assets for accounting purposes, but not for predicting asset failure.
- The useful life of assets can be different across communities, so any assumptions should be checked with condition and performance information over time.





Information Collection and Storage

- It is crucial to balance the amount of information with the usefulness of that information.
- Data is important, but it should be considered in terms of quality, quantity, and accessibility.
- Centralization of data could look like a map on a wall, a spreadsheet or software program – there is no single way of doing things.





Activity

See page 32 in the Workbook.

Think back to work completed in Level 1 and discuss how you addressed information collection activities in your asset management strategy.









Roads Example

- Municipalities have many kilometers of roads and do not have capacity or resources to assess every road every year.
- Roads deteriorate at a rate that makes yearly assessment unnecessary.
- Consider the process your municipality might take to develop a plan to make sure all your roads get a periodic condition assessment.



Activity

See page 34 in the Workbook.

With your municipal asset management teams, discuss what you know about the current state of assets that support your selected service in both condition and performance.









MODULE 4

Detailed County of Forty Mile Case Study







The Task

The County of Forty Mile asked:

What does it cost us to maintain our roads every year?

... and how do we figure that out?







Building Buy-in

The AM team met to:

- Introduce the exercise and build buy-in
- Provide an idea of the time commitment required
- Confirm who needed to participate
- Define the outcomes and outputs of this exercise
- Engage with a consultant to help





Step 1: Prepare Necessary Information

- Individuals were identified to respond to the consultants' requests for information which included financial and other information
 - Draft level of service template
 - For a set timeframe.
 - A list of all the O&M activities you complete for your roads, and the costs for completing those activities per year
 - Any O&M activities you do not currently do but want to add
 - Audited financial statements for recent fiscal years





Step 2: Identify Necessary Information

- Director of Finance and Public Works staff worked to collect and prepare information
- Maintenance activities were put into a spreadsheet with total costs for 2020
 - Road Grading
 - Oil Maintenance
 - Bridge Maintenance
 - Sign Maintenance
 - Roadside Mowing

- Hamlet Maintenance
- Dirt Maintenance
- Gravel Maintenance
- Snow Plowing





Step 2: Prepare Necessary Information

- Identified individuals in Public Works to collect information
- Forty Mile employs "project costing"
- Downloaded raw information from Diamond, which exports to excel
- Processed data using pivot tables





Step 3: Review Information

- Consultant reviewed information, developed questions and clarifications required to understand data
- Meeting between consultant, AM team, and Public Works
 - Structured in two parts: first half to review Public Works data, second half to review Finance data
- Developed shared understanding of what the information included and didn't include





Step 3: Review Information

- Observations included
 - Operations and maintenance vs. capital costs
 - Determining when operations and maintenance is required
 - Tracking of operations and maintenance activities
 - Determining the costs associated with operations and maintenance activities

A good understanding of your data is integral to completing any analysis – the subtleties of what numbers represent can limit what you can accurately do with it!







Step 4: Analysis of Information

- Compared all sources of information with the task at hand
- Determined that not all the data provided would be necessary to complete the task
- Assessed data accuracy
 - Based on data provided, the spreadsheet model will not be 100% accurate
 - However, for the intended use, it is accurate enough!







Step 5: Model Development

- Consultant developed a simple spreadsheet model in the LOS excel template, in the categories that the County already tracks (gravel program, dust suppression, etc.)
- Connected the spreadsheet model results to the LOS template
- Included time % assumptions where appropriate
 - For example, how much of the Public Works administration time is dedicated to roads? Where do we include that assumption?
- Let's take a look!







Step 6: Review of Assumptions and Model Results

- Consultant presented model to AM team and Public Works staff
- Reviewed all assumptions, and made changes in real time as necessary
- An important calculation decision: cost per mile is determined over total number of County roads, rather than by just the ones that received maintenance
- Discussion on what this metric can be used for, and also what it's not for







County of Forty Mile - Learnings

The importance of team

The importance of different perspectives

The importance of tracking operations and maintenance efforts







County of Forty Mile – Next Steps

- Some changes to O&M tracking
- Share the results of the spreadsheet model
- Track and correlate weather/climate data
- Apply this process (with adjustments) to other services





Reflection Questions

What is your big takeaway from the story of the County of Forty Mile?







Reflection Questions

Do you think the County of Forty Mile approach would work in your municipality? What would you change from the case study process to suit your community?

What barriers are present in your community that would impact completing this process? How would you overcome/address them?







What we accomplished today...

• In today's workshop, we reviewed the fundamentals of asset management and the role of infrastructure in service delivery.







Looking Ahead to Workshop 2

- In the next workshop, we will be focusing on defining current levels of service.
- Your task before the next workshop is to identify up to 3 services you'd like to do this with.
- Review the process on pg. 43 to help with choosing the services you would like to focus on.
- Small Group Check-Ins Prior to Workshop





What are we doing in Workshop 2?

Day 1

- Define service categories, primary customer groups, develop indicators of the community/customer experience
- Barriers to Implementing Asset Management
- Connect Common Barriers with Strategies for Change Day 2
- Understanding and Articulating the Cost-of-Service Delivery
- Connecting Level of Service to Risk





Workshop 2 Pre-Work

- Collect capital, operational and maintenance activities and associated costs to provide current level of service
- Gather any reports or information related to the service. These may include things like policies, bylaws, master plans, or design standards.
- Talk to all the identified individuals that may help you fill some of the information gaps you identified.
- Do your best! Remember that you will need to start with where you are, and that high-level estimates are okay to get you going





Other Items

- Completing survey for this workshop
- Check ins
- Confirming dates for Workshop 2 April 6,7th?





Questions?







