



cutting through complexity

Asset Management for Municipalities in Alberta

Alberta Association of Municipal
Districts and Counties

July, 2015



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Navigating the Asset Management Journey

Alberta Association of Municipal Districts and Counties

Glossary

Asset Condition

The physical condition of the asset, often measured based on physical observation, testing or engineering judgement. The condition of the asset will often influence its performance, and ultimately the level of service derived from that asset.

Asset Management

The coordinated activity of an organization to realize value through the strategic management of its assets. Value is to be understood as a service to the community, stakeholders, public, employees, etc.

Asset Management Plan

A document that specifies the activities, resources and timescales required for an individual asset, or a grouping of assets, to achieve the organization's infrastructure objectives.

Asset Management Policy

A document that specifies the guidelines and goals relating to asset management set by senior leadership or, in the case of a municipality, council.

Critical Assets

Assets that can impact the organization's objectives in a significant manner. These are typically assets for which a failure would result in, for example, a significant service disruption, damages, costs, and reputational or environmental impact.

Long Term Investment Plan

A financial plan outlining expected infrastructure investments related to sustainment and growth over an extended timeframe, typically 10 years or more. Values presented are typically based on best estimates have a degree of uncertainty and may include analyses and predictions of various scenarios. As time progresses, investments in the long term plan are re-evaluated and prioritized to be included in the budget. Asset management is a component of a municipality's long term plan.

Levels of Service

An evaluation of an asset's performance that can be based on a number of factors, such as cost-effectiveness, user experience, or operational performance.

Needs Assessment

A process to identify gaps or improvement requirements in an organization's strategy, process or performance by comparing its current situation with desired outcomes. This process can be a useful in identifying opportunities where an additional focus on asset management can contribute to the quality of a municipality's services.

Risk

The exposure of someone or something to danger, harm, or loss. In an asset management context this is typically expressed through the evaluation of the likelihood of an event occurring (e.g. asset failure) and its potential impact on service delivery.

Risk Management

The coordinated activity of identifying, assessing and mitigating risks. Used to support the identification and planning of critical assets and management activities.

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1 Executive Summary

Asset management is about managing infrastructure in a coordinated, integrated way to maximize its value in providing a given service. By adopting a structured approach to asset management, elected officials and administration can ensure that their residents' needs are properly addressed with the right balance of sustainable funding, stable tax regimes, and service priorities. Asset management also brings an additional layer of accountability and transparency to municipal decision-making.

As infrastructure challenges grow alongside increased demands for services from residents, municipalities are increasingly being asked to do more with less. This requires a new approach to decision-making and explains why asset management has become a priority for governments around the world. Asset management introduces lifecycle thinking to the management of assets so that municipalities can plan for and accommodate needed maintenance, repair, renewal and decommissioning. Asset management planning can take different forms and there is no single correct way to management municipal assets. Instead, each context is unique and municipalities need to decide how to maximize the value of their assets to achieve the overall economic, social, and environmental goals of their municipality.

In many of Canada's largest municipalities, asset management planning is well underway; however, in small and medium sized municipalities, many barriers to adoption remain, including a lack of resources and capacity. Without clear financial or regulatory drivers, asset management is often viewed as something "extra", and stakeholders tasked with championing asset management often experience apathy or push-back when trying to build momentum for change.

Increasing focus on sustainable infrastructure funding has created a drive for better alignment between funding programs and asset management planning at both the provincial and federal levels. The 2012 *Canadian Infrastructure Report Card* estimated that over \$100 billion of Canada's municipal infrastructure is in fair or poor condition, confirming the need for improved long term planning and action around sustainable infrastructure. In response, grant funding is being increasingly linked to asset management principles. For instance, the Gas Tax Fund component of the federal government's New Building Canada Plan will require provincial governments to track and report on municipal asset management improvement over the term of the agreement.

Under the Canada-Alberta Federal-Provincial Gas Tax Program, the Government of Alberta will oversee the development of minimum requirements for municipal asset management development. They have committed to working with municipal stakeholders such as the Alberta Association of Municipal Districts and Counties (AAMDC) and the Alberta Urban Municipalities Association (AUMA) to develop requirements that are reasonable and achievable given timeframes and local intricacies and constraints. Alberta Municipal Affairs will be working with stakeholders to finalize requirements by the end of 2015. At a minimum, these will require that municipal governments prepare a multi-year capital plan that includes projects funded through the Gas Tax Fund, but may extend to include other areas of infrastructure investment.

Implementing asset management is not a one-time action, but rather a journey of continuous improvement. While all municipalities practice some form of asset management, understanding the strengths and weaknesses of current practices and evaluating the gaps and opportunities help to rationalize how best to proceed. Though standards and best practices exist, every organization is different. Understanding what is appropriate and achievable given local needs and constraints is critical to achieving overall success. A structured process focused on building buy-in and support, formalizing commitment, and setting a clear direction will serve as a key building block in setting a plan for successful development.

In 2015, the AAMDC enlisted KPMG to complete this report on asset management to serve as both a tool and guide for AAMDC's member municipalities, as well as other municipalities in Alberta.

2 Project approach and methodology

2.1 Project approach

The objective of this project is to evaluate the current and emerging asset management needs of Alberta municipalities, and identify how these can be addressed by available supports. To do this, the project team has researched ongoing initiatives, interviewed representatives from small and medium sized Alberta municipalities and asset management industry groups, and identified available resources supporting public sector asset management development.

While there have been many initiatives aimed at supporting municipal asset management, both in Alberta and nationally, these have generated mixed results. While some have produced effective materials furthering the state of asset management within organizations, many more have been viewed as wasted effort and failed to achieve meaningful results. A key shortcoming of many of these initiatives is that they have taken a segmented view and sought to improve or address only on a piecemeal basis. Only by establishing asset management as a core business function will it truly align thinking and generate the buy-in and support needed to achieve meaningful outcomes and sustainable change.

In order to overcome these shortcomings, this report emphasizes the need to engage stakeholders and create buy-in to support organizations in sustaining asset management efforts over the long term. To do so, this report focuses less on the mechanics of building an asset management plan and instead highlights the process, stakeholders, and inputs required to establish a successful and sustainable asset management regime. With the objective of moving beyond a disjointed collection of documents, procedures, and software tools, stakeholder input has been gathered to align and transform available resources into a practical approach.

2.2 Stakeholder involvement

The authors wish to thank the following municipalities and stakeholder organizations for their formal input during this project:

AAMDC Members:

- Strathcona County
- Parkland County
- County of Stettler
- Smoky Lake County
- M.D. of Smoky River
- County of Grande Prairie
- Thorhild County
- Lacombe County
- Cypress County
- Clearwater County

Other Stakeholders:

- Province of Alberta, Municipal Affairs
- Alberta Urban Municipalities Association
- City of Red Deer
- Consulting Engineers of Alberta
- Association of Municipalities of Ontario
- Federation of Canadian Municipalities
- Canadian Network of Asset Managers
- Infrastructure Asset Management Alberta

We also express our thanks to the many people who took time to provide us with comments and informal feedback.

3 Asset Management

3.1 What is asset management?

Asset management is about managing infrastructure in a coordinated, integrated way to maximize its value to the community. Most municipalities are already practicing asset management in some shape or form. Asset management activities include financial planning, maintenance, capital investments, replacements, risk analysis, asset accounting, engineering, and others. Asset management covers the entire life cycle of an asset from initial conception, through design, construction, delivery, and operations, until replacement or decommissioning. During that life cycle, many departments touch upon these assets and make decisions that will impact how well they deliver their intended service and at what cost. While every department will make decisions in the best way it can, some of these decisions can be improved through stronger planning and integration, which can be facilitated through coordinated asset management planning.

Asset management as a coordinated activity is about bringing all of these functions together into a consistent approach, so that the entire organization makes informed and effective decisions that provide the best benefit to the community.

3.2 Why is it important?

Asset management supports municipalities in creating value through informed and effective infrastructure investment. Most municipal services are supported by infrastructure such as roads, water and wastewater systems, recreation centres, and parks. By applying asset management principles, both the sustainability of existing infrastructure and the requirements for future growth are incorporated in the planning process - improving the consistency, transparency and defensibility of outcomes and results.

By adopting a structured approach to asset management, municipal councils can ensure that their constituents' needs are properly addressed with the right balance of sustainable funding, stable tax regimes, and service priorities. Additionally, asset management helps them to demonstrate accountability and enhances transparency around municipal spending. For chief administrative officers (CAOs) and senior administrators, asset management provides the benefit of a consistent process to translate diverse and competing needs into long term planning and the efficient delivery of services. Understanding levels of service, applying life cycle costing principles, and prioritizing needs based on risk and opportunity will allow municipal leadership and staff to select the most cost-effective strategy for managing infrastructure, focusing on decisions that provide the greatest public benefit.

When addressed effectively, asset management brings together engineering design, operations and maintenance, financing, demand planning, and risk management to collectively optimize decisions surrounding when, where, and how to invest. To be effective, this collaborative approach needs a structure and an organized method to collect and disseminate the right information throughout the municipality. The benefits of a coordinated approach flow back to the public in the form of enhanced services, lower costs, and improved long term sustainability.

3.3 Common issues, challenges, and concerns

In small and medium sized municipalities, the most common barrier to the adoption of asset management planning is a lack of resources. Many struggle to keep up with administrative and maintenance requirements, and lack the professional or financial capacity needed to build and sustain additional asset management activities and procedures into their operations. Additionally, implementing asset management often creates the need for increased analysis, enhanced data collection, and updated technology. This can tax already stretched staffing, operating, and capital budgets.

Without clear financial or regulatory drivers, stakeholders tasked with championing asset management often experience apathy or push-back when trying to build momentum for change. Whether asset management

originates with council, senior leadership, finance, or on the shop floor, it can often prove difficult to generate the buy-in and commitment needed to support sustainable business change. Commonly cited objections include: limited understanding, a concept that is difficult to communicate, apathy or resistance to change, increased workload, and difficulty in demonstrating measurable benefits in a short period.

A particular pitfall that surfaces is the circular nature of asset management implementation. As asset management is built on continuous improvement, there is no clear start or end point for needed work. Additionally, some components are dependent on one another, and may require an iterative approach to progress. Overcoming this requires a brave first step and acceptance of an imperfect first iteration, the limitations of which will be overcome by moving forward with improved knowledge over time.

Another risk is that asset management is seen as a hurdle as opposed to an opportunity. While the required investments or time and energy can be significant, the greatest benefits of an asset management initiative are often experienced through a shift in which individual components of a municipality work with one another. Organizations that have embraced asset management as a driver and opportunity for business change report increased engagement and sustained operational improvements. They often cite the changed mindset and culture of cross-departmental collaboration as a key achievement, and critical to realizing long-term success. Those which view it as an additional or independent reporting or compliance exercise often fail to realize these results.

Within the scope of this report, it is not possible to address all of these concerns. However, where supported by stakeholder feedback, guidance on these subjects has been included.

4 Asset Management Drivers

An increased nationwide focus on sustainable infrastructure funding has created a drive for better alignment between funding programs and asset management planning at both the provincial and federal levels. The 2012 *Canadian Infrastructure Report Card* estimated that over \$100 billion worth of Canada's municipal infrastructure is in fair or poor condition, confirming the need for improved long term planning and action around asset management. In response, grant funding is being increasingly linked to asset management principles.

4.1 Ontario: Building Together

With the introduction of its *Building Together Municipal Infrastructure Strategy* in 2012, Ontario's Ministry of Infrastructure moved to require municipalities to justify their need for infrastructure funding support. This was accomplished by linking grant program requests to front line service needs by requiring municipalities to complete an asset management plan in order to receive certain provincial grants. Formalizing the linkage between funding support and asset management planning has caused many outside of Ontario to take notice. It is speculated that it is only a matter of time before other jurisdictions follow suit.

Overall, asset management planning requirements in Ontario have sparked a significant interest in asset management by municipalities across Canada. Limitations in guidance and support have minimized consistent adoption of asset management in other provinces and resulted in clear differences in focus and approach among municipalities within Alberta and elsewhere. While some municipalities have used this as an opportunity to improve coordination and align investment with broader community goals and priorities, most remain focused on technical tasks like confirming inventory and documenting known spending requirements. Continued encouragement of asset management planning, combined with education and support for asset management objectives will be needed to ensure that all municipalities are able to capture the value that a properly implemented asset management plan can provide.

4.2 Federal-Provincial Gas Tax Agreements

The Gas Tax Fund component of the Government of Canada's New Building Canada Plan promotes the need for improved asset management across Canada, which is being reinforced through the development of federal-provincial Gas Tax Fund agreements. While the nature and structure of support varies from province to province, there is broad commitment to promote asset management at the municipal level and to require municipalities to demonstrate significant progress over the term of the current funding program. Most provinces are working with regional stakeholders to define the nature of requirements and supports in 2015 for roll-out over the next few years.

In most provinces, the Gas Tax Fund agreement between the province and the federal administration requires the province to develop the asset management criteria. Alberta follows this model, and the province will oversee the development process but has committed to working with municipal stakeholders such as the AAMDC and AUMA to develop requirements that are reasonable and achievable given the timeframes, local intricacies, and constraints. In a few provinces, the federal-provincial agreement specifically involves municipal associations in the development of asset management criteria. British Columbia is one such example where the province is looking to the Union of British Columbia Municipalities (UBCM) to define the nature of these requirements. The UBCM is currently gathering input from members to shape this process.

Looking forward, Alberta will at a minimum, require that local governments prepare a multi-year capital plan that includes projects funded through the Gas Tax Fund. Alberta has also agreed that the approach to asset management planning will be finalized and presented to the joint federal and provincial Oversight Committee Co-

Chairs by December 31, 2015.¹ This commitment is considered an excellent opportunity to build upon the experiences from Ontario in 2014.

¹ <http://www.infrastructure.gc.ca/prog/agreements-ententes/gtf-fte/2014-ab-eng.html#annexb10>

5 The Asset Management Journey

Implementing asset management is not a one-time action, but rather a journey of continuous improvement. While all municipalities practice some form of asset management, understanding the strengths and weaknesses of current practices and evaluating gaps and opportunities help rationalize how to further develop municipal uptake of asset management practices. Though standards and best practices exist, every organization is different, and understanding what is appropriate and achievable given local needs and constraints is critical to achieving overall success.

This “vagueness” often leaves municipalities feeling lost as they start out on this journey. There is no single “right” approach to implementing asset management, which makes it harder to select a starting point and develop a roadmap for moving forward. The following sections draw upon best practice, feedback from AAMDC members and stakeholders, and previous experience from other jurisdictions to present sound building blocks upon which to build a successful asset management program.



5.1 Building buy-in and support

Stakeholders contacted for the production of this report indicate that the greatest risk to any asset management initiative lies in not having sufficient buy-in from council, senior leadership, and staff. Unlike building a bridge or paving a road, asset management initiatives generally do not result in a physical end product. While initiatives can produce noticeable outcomes, such as improved service, greater efficiency, or more robust capital plans and budgets, these can develop slowly and sometimes take time to produce measurable results. Without buy-in and continued support, an asset management initiative can quickly lose momentum, get side-tracked or shelved, and fail to produce the desired business outcome. To initiate a lasting change and truly unlock improvements in sustaining infrastructure, internal buy-in is required.

The first step towards achieving buy-in is raising awareness around asset management and how it relates to the municipality. The term asset management has been around for decades, but means different things to different people. Council may view asset management as the allocation of resources to achieve key priorities. Finance may relate asset management to tangible capital asset (TCA) accounting, and to meeting the requirements of PS-3150 financial reporting standards. Engineers and community planners may relate it to master planning and developing strategies to meet future demand for service. Operations staff could link it to condition assessment and maintenance planning, and keeping systems operating in a safe and reliable manner. In reality, all of these components could contribute to the formation of a robust asset management plan, but none are sufficient on their own. Establishing a common vision for asset management within the municipality, and communicating how it will impact and address various needs and priorities, is critical to building buy-in and support.

Based on experience in other jurisdictions and stakeholder feedback, the following steps can be helpful in building buy-in and support for your asset management program.

5.1.1 Understand Stakeholders and Perspectives

Different stakeholders within a municipality may have different views on the purpose of asset management and how it fits within the organization. This can be magnified by variations in business language, focus, and needs. To overcome this barrier, a common understanding of the asset management function must be established.

Many successful municipalities start their journey by gathering and communicating information on key stakeholders and perspectives. Summarizing this information in a table as in the example below can provide a simple but effective tool for identifying and communicating various active viewpoints within the organization.

Stakeholder	Key Issues	Business Goals	Area of Influence	Expected benefit from asset management
Finance (Example)	<ul style="list-style-type: none"> ■ PS-3150 reporting requirements ■ Financial stability 	<ul style="list-style-type: none"> ■ Maintain compliance ■ Fair valuation of assets ■ Understand cash-flow requirements ■ Stable financial plan 	<ul style="list-style-type: none"> ■ Historic financial information ■ Financial accounts ■ Financial plan 	<ul style="list-style-type: none"> ■ Stable long term financial plan ■ Cost savings ■ More readily available information
Council				
Leadership				
Engineering				
Operations				
Etc...				

Once established, the table provides a clear understanding of the various viewpoints which should ultimately be represented when developing an asset management plan. In larger municipalities, organizations have found it helpful to form an asset management committee or steering group with representation from key stakeholders to guide the development initiative. In smaller organizations, the table can serve as a checklist, highlighting internal stakeholders who should be consulted as part of the program’s planning and execution.

While the above table is focused on internal stakeholders, many municipalities have found it helpful to include external perspectives a part of this review. The public, regulators, auditors, lenders, and industry groups all have objectives when it comes to service delivery, operational effectiveness, and financial and performance outcomes, which should be understood and reflected in a municipality’s asset management planning initiative. While broad consultation is not always necessary, engaging the public and other external stakeholders early in the process can improve the level of trust and transparency between municipalities and these groups.

5.1.2 Build a Common Vision

Municipal asset management often starts out as a technical initiative, focused on improving the overall understanding of asset inventory and condition, or a financial initiative, focused on refining net book value for reporting. While these can result in positive outcomes, they fall short in capitalizing on broader benefits and opportunities related to setting a municipality-wide vision for long-term planning. The most successful initiatives step back from the needs of individual stakeholders and seek to unlock broader benefits by aligning and integrating infrastructure-related business activities across the organization.

The key to unlocking this opportunity is to build a common vision for asset management within the organization. Building upon a sound understanding of stakeholder views and objectives, priorities can be integrated into a meaningful vision statement to provide focus and context to short term improvement, and guide ongoing

enhancement of the asset management function over time. In larger organizations, it is often an asset management committee or steering group which takes responsibility for crafting and promoting this message among leadership and staff. In smaller organizations, this task often falls to an individual who collects and combines the needed input and champions the statement within the organization. In all cases, it is critical that the vision be widely communicated in a way that is meaningful to key stakeholder groups and linked to existing municipal initiatives.

Examples of effective asset management vision statements adopted in other municipalities follow.

- “Have a practical Asset Management Program which follows leading principles and practices to meet the community’s current and future infrastructure needs by achieving sustainable and cost effective service.” Bradford West Gwillimbury, ON (Pop. 28,000)
- “Asset Management at the City deals with the strategy of infrastructure renewal, replacement, and maintenance so that the needs of present and future users are met within the financial realities of the community.” Vernon, BC (Pop. 60,000)
- “A robust asset management program that provides sustainable services for the City through optimized infrastructure and facility life, capital financial plans and reserves in place to adequately fund major maintenance and replacement costs, and minimized service disruption and risk to public health and property.” Nanaimo, BC (Pop. 84,000)
- “Sustainable infrastructure, maintained through sound financial policies and asset management practices, will contribute to the vibrancy of the City’s economy; the vitality of its neighbourhoods; safety of its citizens; protection of the environment; and its capacity to accommodate growth.” Edmonton, AB (Pop. 900,000)

Many of the municipal stakeholders interviewed expressed hesitancy to involve uninformed staff in the early stages of their asset management initiatives, feeling that they lacked the context and understanding needed to effectively contribute. Proactive and open communication of a common vision, along with goals and objectives as they relate to various stakeholders, have the potential to provide a clear explanation of how an initiative will benefit the broader organization. Experience shows that the more active that champions and committee members are in promoting and relating the vision to stakeholder needs, the higher the level of awareness and engagement among leadership and staff.

In Alberta’s municipalities, broadly supported asset management policy and commitment promotes continuity between four-year election cycles, supporting the long-term nature of asset management. In addition, it addresses a key risk that many small municipalities face in having limited capacity. Having a common vision for asset management will allow municipal administration to share the load and work together toward the desired outcome over time.

5.1.3 Evaluate Needs and Opportunities

Many municipalities embark on asset management without a clear vision for what they want to achieve or how to get there. This can be the result of taking too narrow or too broad of a focus, or by not clearly understanding their municipality’s needs or the opportunities available to achieve success through asset management. While a detailed

needs assessment² can be a significant undertaking, a basic asset inventory can provide valuable insight into current operations, and help identify areas of early and meaningful progress to help launch an asset management initiative, create early benefits, and grow buy-in and support to advance the program.

Several industry-developed self-assessment tools are publicly available and provide a good starting point for initial review. Depending on their size and complexity, municipalities may benefit from expanding the scope of the assessment to improve alignment with organizational business functions or to expand the review of certain assets or areas. Many organizations, particularly those new to asset management, have benefited from enlisting outside resources to help refine and facilitate the review process.

Typical Asset Management Self-Assessment Questions

- Does a vision for asset management exist and how well is it communicated throughout the organization?
- Is the state of infrastructure assets well understood by key staff, and clearly communicated to elected officials and the public?
- To what extent are asset management roles and responsibilities defined and understood?
- To what extent do corporate and business unit-level asset management plans exist and are endorsed within the organization?
- To what extent are decision making practices within the organization defined and understood?
- To what extent are the relationships between municipal strategic priorities, infrastructure performance objectives and required investments understood?
- Is the critical infrastructure in the municipality known and are the risks to which it is exposed identified, assessed and managed using a risk management plan?

The goal of a self-assessment is not to establish a comprehensive picture of needs and opportunities, but rather to identify early priorities and quick wins that can be used to gain buy-in and support for broader asset management uptake within the organization. One common pitfall is to embark on too much, too soon. A grand scheme aimed at implementing best practice solutions requires significant effort and financial resources, as well as time to show results. By tackling short term priorities of a manageable size first, organizations are able to demonstrate rewards and benefits much earlier, and gain support for continuing improvements based on initial successes. Examples of quick wins could include improved communication between functions and gaining a better understanding of the asset portfolio. Taking the time to assess and evaluate the organization's particular situation establishes a strong foundation to build on and helps to maintain focus throughout the implementation. Examples of results that show progress and tangible results include:

- Undertaking a risk assessment that identifies and ranks critical infrastructure based on its role in service delivery and relative impact of failure
- Creating a financial forecast and sustainment plan based on known asset inventory, anticipated asset life and

² A needs assessment is a process to identify and address existing 'needs' or 'gaps' between the municipality's current condition and the desired outcome. An asset management self-assessment tool can be found [here](#).

estimated replacement costs

- Undertaking an asset analysis or performance review based on already available data
- Implementing business cases that include life cycle costing

5.1.4 Communicate the Business Case

Particularly in smaller municipalities, funds allocated to asset management improvement can come at the expense of immediate investment to roads, parks, community facilities, or other infrastructure and services. Despite being good business, the diversion of already limited resources can create opposition and push-back from council, the public, and within the organization. Even where asset management requirements are regulated or imposed, programs are often truncated to meet minimum requirements at minimum cost, and fall short of their true potential benefits. Developing a robust business case, which clearly explains the benefits and costs of implementation, can be invaluable in justifying needed investment and bringing stakeholders on side at all levels of the organization.

Generally speaking, a business case has three main components: business needs and desired outcomes, recommended course of action, and resource requirements. Based on its understanding of stakeholder perspectives, its common vision, and understanding of needs and priorities, a municipality can build a sound business case for moving forward with asset management. Doing so serves multiple purposes: it validates the need to expend time and financial resources on implementation, shows internal and external stakeholders the expected benefits and how these will impact them personally, and provides a benchmark against which progress can be measured and tracked.

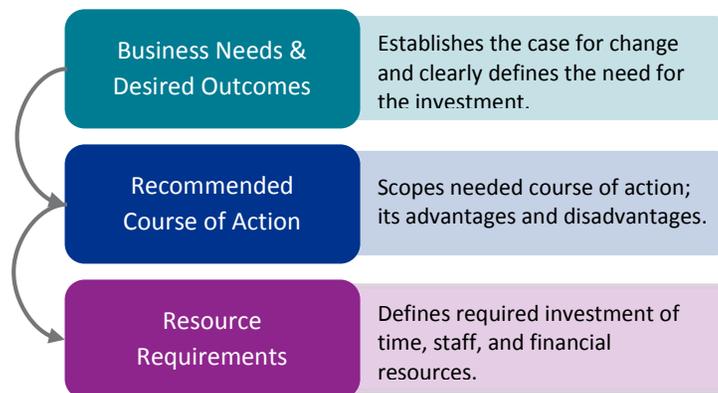


Figure 1 - Business Case Outline

It is important to recognize that implementing asset management involves more than just developing and introducing new practices, data, and tools. The effort and costs associated with changing the way people work and how they incorporate new practices and tools into their day-to-day activity should not be underestimated as they will have a profound impact on the initiative's overall success. Building a robust business case around key priorities, quantifying and managing change from the start of the initiative, and communicating the progress of the plan all play a role in improving asset management.

5.2 Formalizing commitment – Developing an Asset Management Policy

While asset management is about long-term sustainable thinking, many organizations face challenges in keeping focus and momentum over time, particularly when faced with changing political, regulatory, and operating environments. As such, it is often beneficial to formalize commitment to asset management, even once needed buy-in and support has been achieved. Formalization is generally accomplished through the introduction of an asset management policy which demonstrates an organization's commitment to asset management as a key part of its operations. An asset management policy sets the tone for establishing a wider asset management framework which provides the much needed long-term platform and continuity across elections and changes in leadership. Through this document, council can lay out its vision for moving forward, providing direction and guidance, identifying goals and priorities, and assigning accountability for progress. As a strategic document, it confirms direction and objectives, but does not dictate specific actions to achieve the outcomes desired.

There are many excellent resources and examples supporting asset management policy development, a number of which have been included in Section 6 of this report. Generally speaking, an asset management policy includes the following components but should be tailored to the size, complexity, and nature of the organization:

- **Vision** – A statement around why asset management is important and how it will support the organization in meeting its business goals and objectives. Vision statements typically vary in length between one sentence and two paragraphs and combine several key goals and priorities.
- **Objective** – A definition of the overall goals for asset management within the organization. These are typically established at a high level and provide general targets for moving forward. Typical objectives include the adoption of systems thinking in asset investment planning and decision making, the use of levels of service to evaluate infrastructure performance and effectiveness, the use of risk management, and lifecycle thinking to identify needs and priorities.
- **Guiding principles** – It may be beneficial to start by defining the guiding principles around which asset management goals and objectives will be developed. In addition to providing high-level guidance, this will allow objectives to be grouped and prioritized based on short, medium and long-range requirements. It also provides support in adding or adjusting objectives as work progresses over time. Guidelines tend to be more suitable for municipalities where council is comfortable establishing general priorities, as opposed to approving individual details.
- **Roles and responsibilities for implementation** – An assignment of accountability for the application of the policy and its various components. Assigning accountability and responsibility to a specific role will create motivation to push asset management forward. It is important to also empower people in that role to perform the work needed, including the allocation of necessary resources, training, and delegation ability.
- **Relation to other documentation and policies** – A reference to other policies and strategic documents influencing or supporting asset management within the organization. Many municipalities already have policies related to reserves, debt, services, sustainability, and others in place that should play a key role in influencing asset management direction. Explicitly referencing them defines these relationships, and establishes linkages, hierarchies, and priorities for what needs to be done.
- **Review period** – It is desirable to revisit the policy from time to time to review whether it is achieving the intended outcomes, if the objectives are being met, and where improvements can be made. This information is particularly important if there is no external trigger to ensure that the policy is periodically reassessed. If it's the municipality's culture to revisit policies on a regular basis, or such commitment is included in a general policy, an explicit commitment may not be needed separately.

Asset management adoption is completed in many stages, many involving stakeholders from across the organization, and public consultation. Having a policy supporting the organization's core vision and principles is effective in keeping everyone focused and working in the right direction. Also, as official policies are adopted and changed through acts of council, introduction will ensure that asset management is on council's radar, and that future changes to the document will be made consciously after suitable discussion and debate.

5.3 Setting Clear Direction – Developing an Asset Management Strategy

Where an asset management policy sets out the vision and principles for asset management within an organization, the asset management strategy defines the actions through which this vision will be achieved. These actions form the basis for developing a more specific asset management plan(s), which scope and prioritize the business improvements and investments needed to meet the stated objectives. Relationships between these documents are highlighted below. An objective to assess investment decisions based on lifecycle costing, for example, might yield activities of incorporating lifecycle costs of new assets as part of the annual budget submission, or incorporating lifecycle costing and net present value principles when assessing competing intervention options in business cases and asset disposal strategies. These in turn would support needed business improvements aimed at introducing required procedures and tools into the business units, and establishing governance mechanisms to oversee and support their effective application.

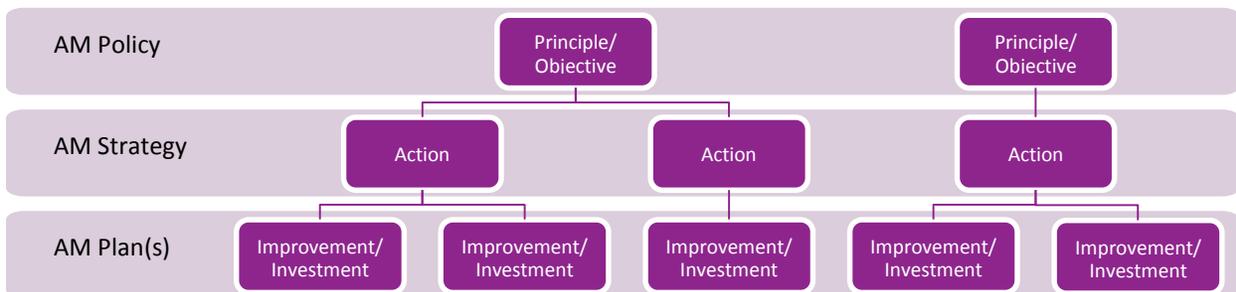


Figure 2 - Relationships in Document Content

In addition to detailing the actions needed to advance asset management objectives and principles, an asset management strategy generally contains the following information:

- **Strategic Context** – The strategy works along with the asset management policy and other business documents to provide a high-level action plan for improvement. The strategic context section defines the relationships between the strategy and these documents, and highlights how these will be applied to the organization’s physical asset base.
- **Needed Improvements** – The strategy highlights the actions needed to bring asset management in line with objectives and principles set out in the policy. The needed improvements section defines key actions needed to advance asset management with respect to each of these areas. These can be presented using the SMART principle (specific, measurable, achievable, relevant and time-bound). For example, an action item could be to produce council-approved asset management plans for all major business units within the next three years.
- **Stakeholder Supports** – The strategy defines actions which will impact a number of individuals and groups inside and outside the organization. The stakeholder supports section identifies these impacts and rationalizes supports needed to effectively engage stakeholders and manage the operational change required to achieve the desired business outcomes. Typical stakeholders would include council members, municipal staff from public works, finance, engineering, procurement, long term planning, external communication as well as the general public.
- **Roles and Responsibilities** – The strategy establishes a long-term action plan for asset management improvement within the organization. The roles and responsibilities section defines an effective governance structure and assigns appropriate responsibilities to council, administrative leadership, and various stakeholders and groups within the organization.
- **Supporting References** – The strategy includes links to other documents supporting the strategy and its content. These could include the asset management policy, organizational business plans, and other related

policies, strategies, and studies which influence and support asset management at the corporate or business unit level.

Depending on the organization, it is sometimes preferable to combine the strategy’s content with either the policy or supporting asset management plan. While the outcome is the same, maintenance of several separate documents can be viewed as excessive, particularly in smaller municipalities.

5.4 Developing the Plan

An asset management plan guides the activities and operational and capital investments needed to achieve the objectives and actions defined in the policy and strategy, and to meet desired service levels using infrastructure assets. The plan provides a platform to detail and systematically examine the relationship between business objectives, required service levels, and investment in operations and the physical asset base. It also establishes a program to progressively address identified gaps and deficiencies. Once established, the asset management plan allows the organization to:

- ✓ Show that services are being delivered efficiently and effectively
- ✓ Demonstrate that the asset base is being managed responsibly, and that attention is being given to its long-term stewardship
- ✓ Inform decision making and communicate infrastructure issues and investment requirements to council, the public, and funding partners
- ✓ Demonstrate how regulatory compliance will be achieved and growth accommodated

Once established, asset management plans integrate with and guide the investment planning process. In addition to identifying needed changes to assets, people, and processes, the document’s long-range outlook provides insight into the affordability of delivering service at a defined level. Initial plans should aim to incorporate existing infrastructure sustainment and capacity planning whereas more advanced plans can also consider incorporating other risks and opportunities for infrastructure sustainment such as depopulation or growth, changes to technology, climate change, etc.

While there are some occasional variations in terminology or the granularity used in defining plans, asset management from all jurisdictions generally contain the following information:

Business Goals and Objectives	Desired Levels of Service	State of Infrastructure	Asset Management Strategy	Financial Strategy
<ul style="list-style-type: none"> ■ Why are we here? ■ What is our vision and what do we want to achieve? 	<ul style="list-style-type: none"> ■ What services do we need to support these goals? ■ At what level do we need to provide them? 	<ul style="list-style-type: none"> ■ How does our infrastructure support service delivery? ■ Where are the gaps and opportunities? 	<ul style="list-style-type: none"> ■ What do we need to do to achieve this? ■ What capital and operating investments are needed? 	<ul style="list-style-type: none"> ■ What will this cost us and how will we pay for it? ■ What trade-offs are needed to make this sustainable?

■ **Business Goals and Objectives** – This section describes how asset management planning is aligned to and will help deliver business objectives. The plan may be integrated with and informed by other key business documents (e.g. strategic plan, growth forecast, master plans, etc.). Scope can also be limited in terms of a minimum value, or component size, for instance a park asset management plan could include an analysis of play structures, but may not include analysis of specific swings or monkey bars.

■ **Desired Levels of Service** – This section defines how infrastructure performance and effectiveness will be measured, and aligns community goals and objectives (e.g. provide a safe and efficient route for through traffic) to technical performance requirements (e.g. construction to a certain specification, traffic loading, or

roughness measurement not exceeding certain thresholds, etc.).

- **State of Infrastructure** – This section details the relationship between an organization, its service requirements, and its physical infrastructure assets. Typical metrics used to assess the state of infrastructure can be split into output measures of the asset portfolio (cost, performance, productivity, etc.) and stewardship measures reflecting the overall health of an asset portfolio (asset condition, average lifespans, etc.). Having a full understanding of an asset’s role in service delivery is important to ensure that the drivers behind needs and investment requirements are clearly understood. If there are gaps in information, these too should be clearly identified and documented, along with any assumptions used to establish values used.
- **Management Strategy** – This section examines how the organization identifies and deals with risks to service delivery through the application of investment and operational controls, and identifies the capital and operating expenditures and business improvements needed to meet defined service objectives over time. For example, a wastewater pumping station which does not meet reliability standards will require an investment in renewal or refurbishment. Another example is a roadway which meets current traffic requirements, but will be unable to handle population growth over the next five years and will require upgrading.
- **Financial Strategy** – This section maps required capital and operating investments with the appropriate funding streams, including taxes, fees and charges, reserves, and grant funding from higher levels of government. Where funding is insufficient to address investment requirements, a rationalization of trade-offs will need to be made by evaluating priorities and the risks associated with deferring needed work. Various scenarios may need to be considered, depending on the size of the shortfall and the organization’s tolerance for service impacts or risk.

Several asset management examples are presented in Section 6.3.2. As noted earlier, moving ahead with asset management can be a significant undertaking. Although there is agreement around asset management plan content, many of the municipalities interviewed for this report were concerned that they lacked the information and capacity needed to develop a detailed asset management plan on their own. Many also suggested that diverting resources to an expanded asset management planning initiative would mean taking them from someplace else – possibly even impacting infrastructure maintenance and front line service.

In building an asset management plan – particularly the first version – it is important to consider and work within current limitations. Starting simply and using available information will help in identifying and rationalizing where additional effort is warranted and where it is not, and in establishing a path to improvement over time. Selecting the scope of the assets and the detail of the data collected are decisions that will significantly influence the cost of the asset management initiative. Although storage of data has become more cost-effective in recent years, the effort of collecting and updating data remains significant both from a cost and effort perspective. Utilizing existing information will support municipalities in focusing on value creation rather than perfection. In addition, the following consideration can guide the decision making around the detail of the asset management plan:

- **Scope breadth** – Start with those assets that have a crucial impact on municipal service delivery. These typically include arterial roads, treatment plants, large water and waste-water collectors, facility health and safety, and emergency response equipment. Once the decision makers are comfortable in understanding how to assess the risks related to this infrastructure and associated service delivery and have completed appropriate plans, the process can be replicated on less critical assets.
- **Scope depth** – Start by identifying the assets and components whose failure would have a significant impact on users. Assets which support critical services should be tracked closely and managed proactively to ensure that risks are managed, whereas less critical infrastructure may warrant less intensive action, as failure can be reactively addressed with limited impact to service. As an example, a leak in the piping in the fire hall will not disrupt fire services significantly, whereas a leak in the pool’s piping may lead to prolonged closure. In the same manner, the blade on a snow plow may be more important than any recreational services vehicle. Evaluating these can only be done according to each municipality’s service priorities, but the principle provides guidance on where and how much attention should be paid to each group of assets.
- **State of the infrastructure** – Information on the actual performance of an asset relative to its intended performance can be measured and tracked using a range of different methods from simple to advanced. The

most simplistic measure, an asset's age, can provide a useful basis to estimate future investment needs. More accurate information will allow refinement of maintenance, rehabilitation, and replacement decisions and is typically based on condition assessments, failure and maintenance data, or even real-time performance measuring. The value of additional data resides in the benefits gained from deferring or reducing future sustainment costs. As asset managers gain experience, it will be easier to assess the cost-benefit trade-off of the costs of additional data collection with the benefits of improved decision making.

To address resource limitations, municipalities can consider collaborating on some aspects of asset management planning. Benefits can be realized by leveraging existing tools and sharing the efforts of developing further refinements with neighbouring communities. Especially in a case where urban and rural municipal infrastructure connects, a common asset inventory and joint decision-making can be beneficial. In such a scenario, clear agreements and an open and collaborative working relationship will be required in which all partners understand and respect one another's autonomy.

6 Asset Management Resources

Over the past decade, significant advancements have been made in the field of municipal asset management across Canada, and much information aimed at supporting this process introduced. The following sections identify organizations that provide asset management support and resources to municipalities as well as materials that are relevant to municipalities in three aspects of implementing asset management: understanding concepts and educating stakeholders, developing an asset management policy, and developing an asset management plan. This list does not attempt to be exhaustive, but rather serve as a starting point for a fruitful asset management journey. In addition, the last sections of this chapter provide references to examples of asset management policies and plans developed by other Canadian municipalities.

The summary table below provides a quick guide to the references included in this document. It lists which types of documents have been produced by various organizations, and what areas of asset management planning they focus on.

Organization	AM Policy/ Direction	AM Concepts	Practices and Tools	Peer Network	Training initiatives
Infrastructure Asset Management Alberta				✓	
Alberta Association of Municipal Districts and Counties			✓	✓	
Alberta Municipal Affairs	✓				
Alberta Urban Municipalities Association			✓	✓	✓
Asset Management BC		✓	✓	✓	✓
Saskatchewan Municipal Asset Management			✓	✓	✓
Municipal Finance Officers' Association of Ontario		✓	✓	✓	✓
Association of Municipalities Ontario			✓	✓	✓
Union of British Columbia Municipalities	✓				✓
Centre d'Expertise et de Recherche en Infrastructures Urbaines (CERIU)		✓	✓	✓	✓
Infrastructure Canada	✓				
Canadian Network of Asset Managers		✓	✓	✓	✓
Federation of Canadian Municipalities	✓	✓	✓	✓	✓
Institute of Public Works Engineering Australasia		✓	✓	✓	✓
The Institute of Asset Management		✓	✓	✓	✓
Plant Engineering and Maintenance Association		✓	✓	✓	✓
International Standards Organization	✓	✓			

6.1 Sector organizations and resources

For the digital version of this report, click on the resource titles to link to the respective organization's resources and tools.

6.1.1 Alberta

6.1.1.1 Infrastructure Asset Management Alberta

Infrastructure Asset Management Alberta³ (IAMA) is a network of organizations (mainly municipalities) engaged in or with an interest in infrastructure asset management. IAMA supports Alberta communities through workshops and discussion groups. The IAMA tackles both asset management related topics, such as asset management policy and asset data, and tangible capital asset (TCA) related subjects. The sessions discuss case studies presented by attendees or take the form of facilitated workshops on a specific subject. Any municipality interested in learning about the experiences of other Alberta municipalities in adopting and developing asset management plans is encouraged to join IAMA, as it provides a forum for sharing information and experiences.

6.1.1.2 Alberta Association of Municipal Districts and Counties

The Alberta Association of Municipal Districts and Counties (AAMDC) is an independent association comprising Alberta's 69 counties and municipal districts. Their purpose is to help rural municipalities achieve strong, effective local government. They act as a liaison between its members and the provincial government on asset management related issues. The AAMDC also collects and shares information with its members to assist rural municipalities in developing asset management plans and are also active members and promoters of Infrastructure Asset Management Alberta (IAMA).

6.1.1.3 Alberta Municipal Affairs

Amongst other responsibilities, Alberta Municipal Affairs (AMA) assists municipalities in providing well-managed, collaborative, and accountable local government to Albertans. AMA supported municipalities in TCA implementation in 2009 with examples, case studies, and toolkits. The financial component of asset management imposed by TCA is very relevant within the wider asset management implementation being considered today.

AMA is also a key player in the financial sustainability of municipal infrastructure through the Municipal Assessment and Grants Division, which is responsible for administering municipal grants, including the Municipal Sustainability Initiative, which has allocated almost \$6.7 billion to municipalities since its launch in 2007.⁴ This program has categories for both capital and operational projects, the second of which includes capacity-building activities that improve efficiency or effectiveness, municipal services, planning activities, and assistance to non-profit organizations. This category is therefore very relevant to the development of asset management and provides financial support for the initial exploratory projects led by AAMDC and Consulting Engineers of Alberta (CEA).⁵

Alberta Municipal Affairs is responsible for developing the provincial requirements on asset management to meet the expectations set out in the Provincial-Federal Gas Tax Fund Agreement. As part this task, it is committed to working with AAMDC, AUMA, and CEA to develop a program that takes into consideration the wide range of municipal sizes and unique circumstances.

³ <http://www.assetmanagementab.ca/>

⁴ <http://www.municipalaffairs.alberta.ca/msi.cfm>

⁵ During the writing of this report, the CEA was engaged in an asset management pilot project with the Town of Elk Point and the Village of Boyle.

6.1.1.4 Alberta Urban Municipalities Association

The Alberta Urban Municipalities Association⁶ (AUMA) represents nearly 300 urban municipalities in Alberta including cities, towns, villages, summer villages, and specialized municipalities. AUMA advocates the interests of all members to the provincial and federal orders of government as well as other organizations and stakeholder groups. In 2013, the AUMA published the *Guide for Municipal Asset Management Plans*, which is available to all municipalities.

- [Guide for Municipal Asset Management Plans](#)

6.1.2 Regional

6.1.2.1 Asset Management BC

Asset Management BC⁷ (AMBC) includes the participation of local governments, professional associations, and the private and academic sectors. AMBC has put significant effort into building a collection of resources such as guidance documents, templates, and frameworks. AMBC also organizes workshops and is currently developing a toolkit for implementing asset management, including a roadmap and policy template. Many of the members have adopted the NAMS-Plus asset management toolset⁸, as promoted by the Institute of Public Works Engineers of Australia.

The AMBC framework serves as an introduction to asset management. It includes an overview of core elements to asset management and a three stage approach to implementation: assess, plan, and implement. The roadmap provides a step-by-step guide to implementing asset management with a description of the tasks required within each step. It is a non-sequential roadmap, allowing users to address topics that are most important to them first and gradually improve the level of asset management adoption. The guide also provides a step-by-step approach to developing an asset management policy.

- [Framework](#)
- [Roadmap](#)
- [Resources](#)
- [Guide and Template](#)

6.1.2.2 Saskatchewan Municipal Asset Management

Saskatchewan Municipal Asset Management⁹ (SMAM) is a collaborative effort of municipal associations such as the Saskatchewan Urban Municipalities Association, the Saskatchewan Ministry of Municipal Affairs staff and individual municipalities. Funding for SMAM's website was provided through a grant provided by the Ministry of Municipal Affairs. To date, SMAM has published a series of videos on asset management, including topics such as asset management principles and processes. The *Getting Started in Asset Management Guide* explains asset management in clear language.

- [Getting Started in Asset Management Guide](#)
- [Videos](#)

⁶ <http://www.auma.ca/live/MuniLink/About+Us>

⁷ <http://www.assetmanagementbc.ca/>

⁸ <http://www.namsplus.org.au/>

⁹ <http://assetmanagementsk.ca/>

6.1.2.3 Municipal Finance Officers' Association of Ontario

The Municipal Finance Officers' Association of Ontario¹⁰ (MFOA) represents individuals who are responsible for handling the financial affairs of municipalities and who are key advisors to councils on matters of finance policy. The MFOA has also developed a roadmap of courses for municipalities to implement, many of which are available as online webinars.

The MFOA has published a number of tip sheets and checklists that are useful for all municipalities. The set also includes excel spreadsheets for cost and revenue projections, and a template for drafting an infrastructure report card. The MFOA roadmap is a set of courses covering various topics of asset management implementation, many of which are available as on-demand or live webinars.

- Tools
- Roadmap

6.1.2.4 Association of Municipalities of Ontario

The mandate of the Association of Municipalities Ontario (AMO) is to support and enhance strong and effective municipal government in Ontario. Its role is comparable to AUMA and AAMDC in Alberta.

The organization has published two documents to support council members in creating a push for asset management. One document provides questions to facilitate debate at the council table, the other provides tips for evaluating asset management plans. Additionally, they provide the presentations from their annual Asset Management Symposium online.

- Questions
- Tips
- Presentations

6.1.2.5 Union of British Columbia Municipalities

The Union of British Columbia Municipalities¹¹ (UBCM) was formed to provide a common voice for local governments in British Columbia. Through their Asset Management Planning Program, they provide grants to strengthen municipal asset management practices. They have also published a range of documents on financial best management practices tailored to small community water systems that include guidance on asset inventory, asset management planning, and financial planning.¹²

- Asset Management Planning Program

¹⁰ <http://www.mfoa.on.ca/>

¹¹ <http://www.ubcm.ca/>

¹² <http://www.ubcm.ca/EN/main/resolutions/policy-areas/environment/small-water-systems-financial-bmp.html>

6.1.2.6 Centre d'Expertise et de Recherche en Infrastructures Urbaines

In the Province of Quebec, the Centre d'Expertise et de Recherche en Infrastructures Urbaines (CERIU) supports municipalities in the preservation of municipal infrastructure through the facilitation of research and distribution of knowledge, and a peer network for collaboration. CERIU organizes an annual conference on managing infrastructure. The publications and topics supported by CERIU range from technical to strategic management and financing, covering the entire spectrum of asset management competencies.

- Leveraging Infrastructure Management System

6.1.3 National / International

6.1.3.1 Infrastructure Canada

Infrastructure Canada administers multiple funding programs, including the Building Canada Fund and the Gas Tax Fund. In support of the new federal-provincial Gas Tax Fund agreements, Infrastructure Canada recently organized an asset management round table with a number of provincial and municipal stakeholders. While not active in practice or tool development, the organization has in the past supported such activity through coordination and funding.

6.1.3.2 Canadian Network of Asset Managers

The Canadian Network of Asset Managers (CNAM) was founded by municipalities and is the national association of public infrastructure asset managers in Canada. Their government and private sector members develop policy, tools and technologies to improve the level of service for public infrastructure assets in every province and territory.¹³ CNAM shares knowledge with other members and stakeholders through the CNAMpedia online library, an annual conference, and various committees and events. In anticipation of the 2015 Canadian Infrastructure Report Card, CNAM issued an asset management primer that contains an outline of an asset management plan and recommendations for municipalities that are implementing asset management.

- Asset Management Primer
- CNAMpedia

6.1.3.3 Federation of Canadian Municipalities

The Federation of Canadian Municipalities (FCM) is Canada's national organization of municipal government. Canada's largest cities, small urban and rural municipalities, and 20 provincial and territorial municipal associations form the FCM's membership. FCM advocates on behalf of municipalities to the Government of Canada and works to ensure that the needs of municipalities are reflected in federal policies and programs.

From 2001 to 2007, FCM, Infrastructure Canada and the National Research Council partnered to operate InfraGuide, which compiled the insights of a national network of experts that produced a collection of case studies, best practice reports and e-learning tools for sustainable municipal infrastructure.

Presently, FCM has developed the Leadership in Asset Management Program (LAMP). Phase I of LAMP provides participating municipalities with guidance in developing an asset management policy, plan and governance framework. Participation in this phase will be interactive with peers from across the country, providing learning opportunities and collaboration. The second phase will address levels of service frameworks and risk assessment frameworks.

- Leadership in Asset Management Program

¹³ <http://www.cnam.ca/>

- [InfraGuide](#)
- [Managing Infrastructure Assets](#)

6.1.3.4 Institute of Public Works Engineering Australasia

The Institute of Public Works Engineering Australasia (IPWEA) has developed training and workshops for public sector bodies under the New Zealand Asset Management Support (NAMS) banner. Although based in Australia and New Zealand, they have trained a wide range of Canadian municipalities. The training program links closely to the International Infrastructure Management Manual, which found its roots in public sector infrastructure management.

The International Infrastructure Management Manual (IIMM) contains a section on asset management policy development, as well as practical guides to implementation and planning. This guide is available for purchase only. The guide has its roots in IPWEA and NAMS and has seen wide adoption across the world. The most current version is 2011, with updates typically occurring every five years.

- [International Infrastructure Management Manual \(IIMM\)](#)

6.1.3.5 The Institute of Asset Management

The Institute of Asset Management (IAM) started in 1994 in the UK and is transforming into a worldwide member organization for asset managers. The IAM initiated the development of the PAS 55 asset management standard and supported the development of the ISO 55001 standard (detailed below). It is a not for profit organization that provides frameworks, competency maps, and materials for asset managers, as well as networking opportunities amongst its members. Its presence in Canada is increasing with the recent launch of a Canadian chapter.¹⁴

The IAM Big Picture video and education pack introduces the concept of asset management to an audience that may know the components of asset management but does not yet comprehend how they can fit together into a coherent plan.

- [The Big Picture](#)

6.1.3.6 Plant Engineering and Maintenance Association of Canada

The Plant Engineering and Maintenance Association of Canada (PEMAC) is a national association that provides global leadership, education, and certification in asset management practices.¹⁵ Its focus is on the engineering components of asset management, such as reliability, and maintenance management. PEMAC offers a certification for asset management professionals.

- [Asset Management Certification](#)

6.1.3.7 International Standards Organization

The International Standards Organization (ISO) has developed a series of standards specifically related to asset management (ISO 55000:2014 series). The standards were developed to be achievable for both large and small organizations. They provide an overview, principles, terminology, and guidelines as well as requirements against which an organization can assess itself or be certified. ISO will incorporate input from users into future revisions of the standards and it is recommended that users submit any comments to ISO's Canadian delegation for future consideration.

- [ISO 55000/1/2 documents](#)

¹⁴ <http://canada.theiam.org/>

¹⁵ <http://www.pemac.org/>

6.2 Examples

6.2.1 Asset Management Policies and Strategies

Examples of asset management policies and strategies in Alberta's rural and small urban municipalities are rare. At a recent IAMA workshop, only the participants from the City of Red Deer and City of Calgary indicated that they had developed such a policy. Policies developed by the municipalities of Gibsons and Prince George in British Columbia, as well as by Red Deer, provide examples of smaller urban communities' approach to asset management. The following is a non-exhaustive list of examples from various communities:

- Red Deer, AB
- Gibsons, BC
- Prince George, BC
- Calgary, AB
- Edmonton, AB (drainage services)
- Ottawa, ON

6.2.2 Asset Management Plans

Across Canada, a number of municipalities of various sizes have developed asset management plans. The following is a non-exhaustive list of examples from various communities:

- City of Calgary
- Squamish, BC (Public Works Asset Management Plan)
- City of Vernon, BC (Sustainable Infrastructure Investment Plan)
- Municipality of Wawa, ON (Municipal Asset Management Plan)
- Township of North Dundas, ON (Asset Management Plan)
- Town of Smooth Rock Falls (Asset Management Plan)
- Municipality of North Perth, ON (Asset Management Plan)

7 Conclusions and Needed Supports

7.1 Conclusions

Although this report does not make any specific recommendations, there are broad conclusions that are important to consider for any municipality currently engaging with asset management, or those considering embarking upon the asset management journey:

- Asset management works best when it is aligned with an organization’s goals and objectives. It should not be viewed as something ‘extra’ but rather part of day-to-day business. Understanding the relationship between assets, the services they support, and community priorities and commitments helps to target and justify action – and investment – based on needs and opportunities.
- While tools and advice are plentiful, many municipalities lack a clear understanding of where to start. Asset management impacts everyone, so doing this effectively will require broad support from across the organization. Engaging stakeholders early and often will evolve culture, and leverage and develop internal knowledge and capacity. Formalizing commitment and establishing a plan will maintain a common vision and encourage continuity in going forward.
- Though improving asset management can be a significant undertaking, it is something that can be accomplished over time. It is important to understand and consider local capacity and constraints. Start simply and build to the minimum level of complexity. It is beneficial to have an appreciation for how things operate across the organization. If something is working in one area, focus attention on areas in greater need of support.
- Asset management planning is very customizable and can be completed incrementally. Municipalities with limited resource and capacity can begin by incorporating asset management into key areas and at a relatively high level, and work to increase the depth and breadth of coverage over time. As long as this gradual incorporation proceeds in a logical way and follows a broader strategy it will support positive change.
- An asset management community exists in nearly every province. Support and resources are available for municipalities seeking to integrate asset management into their operations.

7.2 Needed Support

- Municipalities, particularly smaller ones, will benefit from clear guidance and targets for asset management deployment. Such targets can be successful and stimulating if they originate in aligning asset management with broader community goals and objectives, and on building internal capacity for using this information to improve planning and service delivery. Purely output-based requirements such as endorsing a pre-scripted policy or completing a reporting template may result in a more mechanical adoption of asset management that does not yield meaningful and sustained benefits for municipalities or stakeholders.
- Asset management will require resources in the form of staffing and finances. Many municipalities have indicated that this initiative will have a higher probability of success if it does not further burden their limited human and financial resources. Provincially funded peer-learning or pilot projects, or strategic funding through the Gas Tax Fund may be sound opportunities to kick-start the initiative.
- Smaller municipalities will need a forum to share resources and information at their level. There is an opportunity for IAMA, AAMDC and AUMA to develop and sustain this as a common platform and leverage cooperative development across their memberships.

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