

Asset Management Primer

For Elected Officials



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AMO Association of
Municipalities Ontario

Introduction

Local governments exist to provide safe, secure, and sustainable municipal services in a predictable and cost-effective manner. This requires keeping infrastructure assets in a state of good repair. These assets make up our roads, bridges and transit networks, water and wastewater systems, community and recreation centres, social housing and much more. They are essential for driving economic growth and a major reason why our residents and businesses choose to live and operate in different communities.

The significant costs associated with managing these assets is an important component of municipal budgets. This is why it is important for you as Council member to have a good understanding of the role of councils in adopting a structured approach to strategically determine infrastructure investment priorities in their municipalities.

With limited financial capacity, staff resources, and increasing service expectations, planning for future capital investments while minimizing risk exposure is challenging. And yet it is a key responsibility of elected officials.

This primer is developed to provide councils with a better understanding of their role in adopting a strategic approach to determine infrastructure investment priorities. The following topics are covered, with links to additional resources throughout this primer:

- [Understanding of asset management](#) and its [fundamentals](#);
- [Developing a policy](#) that includes governance structure;
- [Determining service levels](#) and [engaging the community](#) to set realistic expectations;
- Anticipating [emerging risks](#) such as climate change;
- Reviewing and Implementing [asset management plans](#);
- [Checklist for councils to assess state of asset management](#) in their municipalities;
- [Available support](#) to build internal capacity for making progress in asset management; and
- Asset management [requirements in Ontario](#).



Managing Municipal Infrastructure Assets

Municipal infrastructure assets are typically [categorized](#) into core and non-core assets:

Municipalities manage and maintain these assets to promote local economic development and quality of life for their residents. Each municipality actively decides what infrastructure assets are required to deliver services, and what service levels are appropriate and affordable. This has been the standard practice for decades.

As municipal governments are accountable to citizens through their councils, decisions to invest in infrastructure are based on the needs, desires and aspirations of local communities, and their

ability to pay for the costs of providing these services.

Even though these considerations have always been part of the infrastructure decision-making process in local governments, municipalities are now undertaking a comprehensive and more transparent process in managing assets and the associated services.

This structured and strategic approach, commonly known as asset management, help municipalities to save costs and manage community expectations.



Core assets

Major infrastructure groups representing the most costly municipal infrastructure.

Non-core assets

Services that tend to be unique to each municipality but equally critical and help define the quality of life for residents.

Fact Box: What is Asset Management?

- A structured approach that helps municipalities strategically make cost-efficient decisions with a long-term vision;
- Expands on the traditional approach to managing assets by proactively considering asset renewal using a whole lifecycle approach to meet pre-defined service levels;
- Supports long-term capital investment decisions that balances asset performance, risks and costs to optimize services; and
- Helps prevent service failures and disruptions by better ensuring that all capital investment activities are performed in a timely manner.

The Financial Accountability Office of Ontario (FAO) has [estimated](#) that 45% of municipal assets are not in a state of good repair, with a combined infrastructure backlog of more than \$50 billion. **The backlog is commonly referred to as infrastructure deficit and is defined as the cost required to bring assets up to a state of good repair.** To ensure residents' continued

access to vital services, municipal governments invest strategically in infrastructure through an asset management lens.

In the last few decades, Ontario's municipal governments have made great strides in adopting asset management as a decision-making tool for councils. AMO monitors sector progress in asset management on an [annual basis](#).

Despite the progress made, many small municipalities struggle with advancing asset management in their communities due to lack of:

- **Adequate staff resources and training;**
- **Financial resources to collect and maintain the required data; and**
- **Accurate data on costs, condition and risk assessment for their assets.**

What Do You Need to Know?

The following sections cover some of the steps your Council can consider to support progress in asset management in your municipality.

Understanding and Applying Asset Management Fundamentals

The term asset management has been defined in different ways. According to [international standards](#)¹, **asset management is based on four fundamentals: value, alignment, leadership, and assurance.**

1. VALUE

The **philosophy behind asset management is maximizing asset value by nurturing an organizational culture of coordination and collaboration between staff and Council.** This is done by balancing the associated costs of providing services and the underlying risks against the expected service levels needed to achieve organizational objectives. Staff collect and provide information on costs, risks, and existing performance of assets - also known as service levels - for Council's consideration.



2. ALIGNMENT

A municipality will perform better when Council's strategic goals and infrastructure investments are aligned. This involves ensuring a clear understanding of how assets help Council achieve its strategic objectives. Infrastructure decision-making must be guided by and aligned with the Corporation's vision and goals. The [Township of Centre Wellington, for example](#), has developed a strategic plan that includes good financial management and having safe and well-maintained infrastructure as one of the goals that defines a common vision for the municipality.

Asset Management helps achieve alignment by translating strategic objectives of a municipality such as healthy, safe and connected community into technical, financial and operational decisions.

These decisions include having a dedicated operating and capital budget to keep majority of your roads and bridges in good condition, and ensuring municipal buildings meet capacity demands with changing demographics while being clean and accessible. It also promotes alignment between different departments and service areas by requiring staff to speak the same language and by collecting similar data attributes for assets. To make this possible, it is important to establish an asset management system that aligns Council's vision with staff approach to asset management.

The City of Brampton, for example, has established an asset management system that aligns its strategic plan, official plan and master plans with its asset management policy, strategies and departmental asset management plans.

¹ The [ISO 55000 series](#) represent a global consensus on the definition, terminology, principles, requirements and guidance for implementing and improving asset management at an organization.

Vision and Official Plan

Reviewing the objectives of your Official Plan to use as a guiding document in development of an Asset Management Plan.

Asset Management Policy

Specify guiding principles and staff roles in the development and implementation of the Asset Management Plan.

Budgeting

Setting long-term financial goals and forecasting capital budgets for infrastructure replacement.

Corporate Objectives and Strategic Plan

Determining the goals and strategic vision of the Corporation related to service provision and allocation of municipal resources.

Asset Management Plan

Developing strategies for long-term maintenance and management of infrastructure, monitoring service delivery levels, proactively looking at asset lifespan and planning for upgrades, expansion or replacement.

An asset management system is a framework consisting of various tools, including a policy, governance structure, strategy, and plan that is aligned with strategic objectives of Council. The system works in conjunction with the use of financial, analytical or business intelligence software.

The value of asset management planning is achieved when it impacts the overall budget and specific investment decisions. **Municipalities are expected to consider recommendations from their asset management plans in the development of their annual budgets and long-term financial plans.** These are aligned with Council's vision through the corporate strategic plan.



3. LEADERSHIP

Council has a key role in fostering and supporting asset management through its leadership. This is done by:

- **Engaging** the community to determine expected service levels, affordability and long-term sustainability;
- **Establishing an asset management policy** that defines roles and responsibilities and guiding principles for staff;
- **Providing a supportive environment for staff** to build internal capacity and collect relevant data required to develop, improve and implement asset management plans aligned with Council's strategic objectives;
- **Reviewing recommendations** of the plan and asking the right questions to staff before endorsing the plan; and
- **Determining infrastructure investment priorities** based on future service targets that are realistic and achievable.

This cyclical asset management process is illustrated below:

Community's Input:

Helps Council determine desired service levels

Staff Analysis:

Collect asset data on costs, risks, and current service levels to determine financial capacity



Council Decision-Making:

Set target service levels that are sustainable, identify priority projects and funding sources

Staff Input:

Recommend Actions for Council by developing and presenting an asset management plan for Council's consideration

4. ASSURANCE

By adopting asset management as a strategic decision-making tool, councils can provide assurance to residents that they meet regulatory requirements, address community needs through appropriate service levels and invest in future development in an objective, consistent, and cost-effective manner. This will help you deliver on community infrastructure while maintaining fiscal integrity, accountability and transparency.

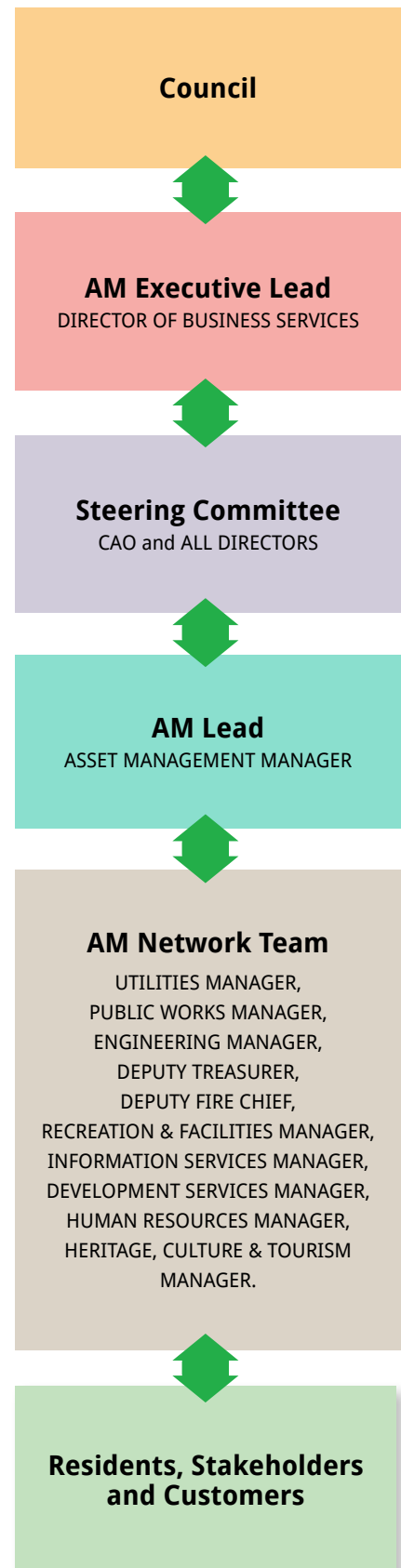
Developing an Asset Management Policy

An [asset management policy](#) outlines the principles and framework for developing an asset management plan. **It is a statement of the community’s expectations through council on how assets will be managed to deliver services.**

Some of the [key guiding principles](#) that can be included in the policy are:

- Strategic alignment with Council objectives
- Understanding the interdependency of assets and services to minimize redundancy
- Integration with budgeting and financial planning
- Incorporating whole lifecycle costing to evaluate fiscal impact of investment decisions
- Meeting compliance requirements to access provincial and federal funding streams
- Consistency with federal and provincial objectives, and climate change resilience, mitigation; and adaptation efforts

Once approved, your asset management policy will apply to all departments in your municipality that manage assets providing infrastructure-related services. **Your policy should specify a governance structure listing roles and responsibilities according to the size of your municipality to ensure effective coordination and collaboration between staff.** [Loyalist Township](#) has a comprehensive governance structure in its policy to illustrate all staff responsible for delivering infrastructure services understand their role in the achievement of asset management goals:



The Municipality of Central Elgin has been nurturing an asset management culture by adopting a policy that defines roles and responsibilities of its Staff and Council:



Determining Service Levels

Service levels are determined by resident expectations, legislative requirements and available financial resources of a municipality. It typically involves:

- Assessing current condition and functionality of assets that provide services to the community;
- Estimating total costs, from asset acquisition to replacement or disposal, associated with providing a service over the life of an asset;
- Meeting minimum legislative requirements prescribed by senior levels of government. For example, [O. Reg. 239/02](#) of the Municipal Act, 2001, requires minimum maintenance standards (MMS) to provide municipalities with a defense against liability from actions arising regarding levels of care on roads and bridges.
- Determining appropriate service levels is a function of balancing community expectations against what the municipality can sustainably afford, as well as the level of service risk the municipality is willing to take.

The [City of Richmond Hill](#) has developed an extensive list of community and technical service level indicators in their asset management plan to help Council and the public understand current infrastructure performance levels and to identify areas of improvement. **It helps Council determine if its levels of service are achievable in the long term given the current level of investment into the assets that provide those services.** If they are not achievable, Council needs to have a different conversation.

The [Municipality of Neening](#) is establishing service levels for their non-core assets by defining service objectives that resonate with community expectations. These are supported by technical performance indicators based on different service criteria such as availability, maintenance, cleanliness, capacity, safety, and accessibility.



DID YOU KNOW

Service levels are often divided into two categories: community levels of service, which are qualitative statements that Council and public can relate to; and technical levels of service, which are more complex quantitative indicators that staff can track internally to monitor asset performance. In the case of safe drinking water, community service level can be defined as whether safe and potable water is available to residents at an appropriate pressure, while technical performance indicators may include age and condition of water pipes and the capacity of water treatment plants.

As municipalities become more familiar with defining service levels, they can be further refined to reflect the organization's needs based on the following considerations:



Measure Infrastructure System Success

Does current performance meet service objectives?



Provide clarity on priorities to Staff and Public

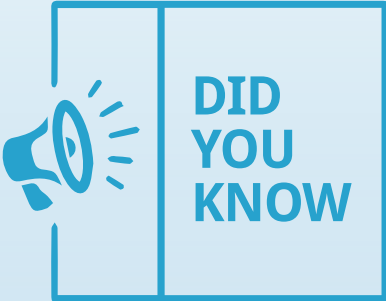
Does the level of service provide insight into which assets are higher priority and rely on collectable data?



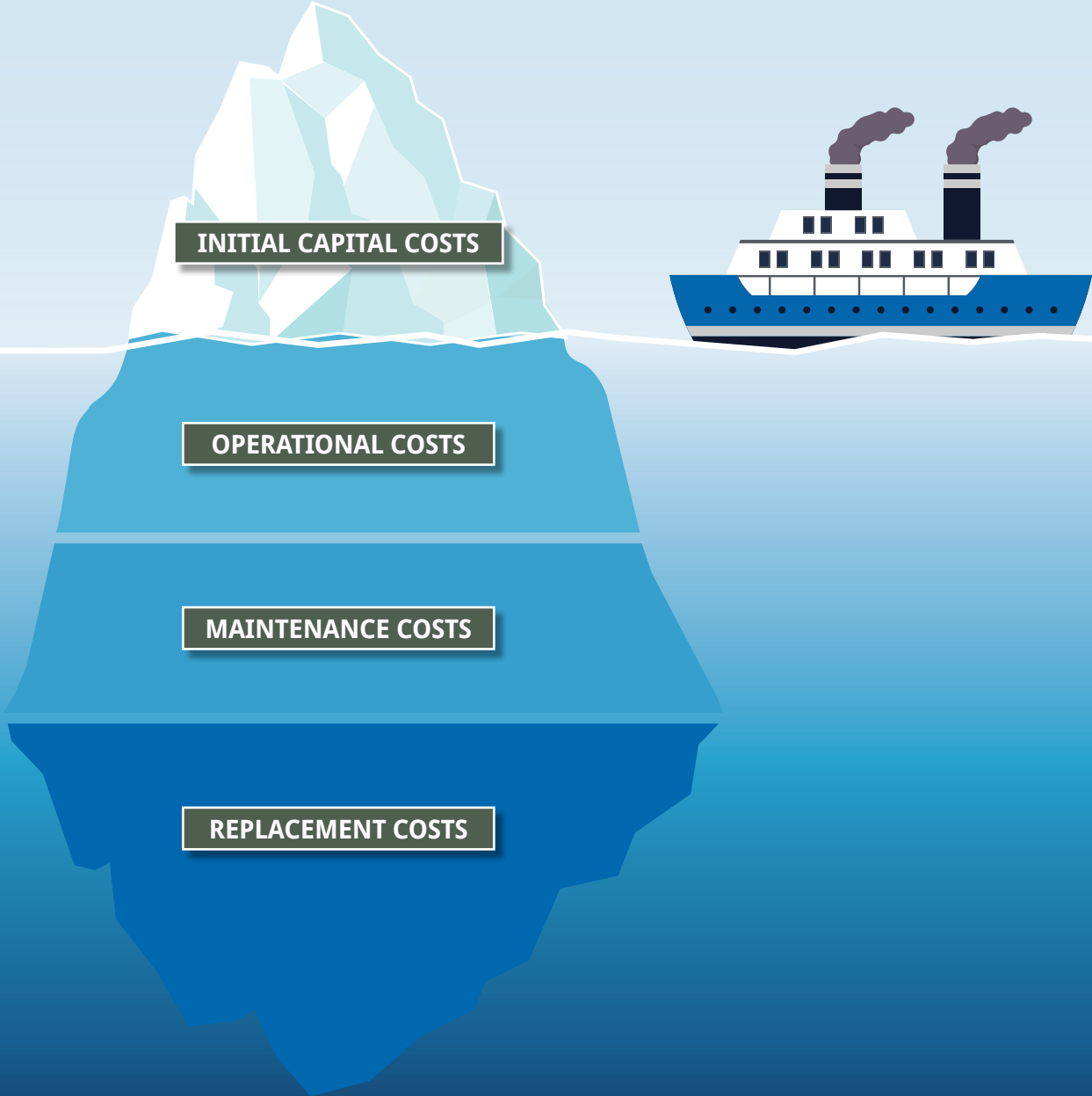
Are inversely related to Cost and Risk

Can service levels be improved without an increase in cost and risk?

Assets Whole Lifecycle Costing



When considering your assets, it is important to apply a whole lifecycle perspective. Think about the total cost of ownership of your assets in the future and not just the initial build cost. The total cost of an asset throughout its life includes planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs. All of the cost elements above should be considered when determining the true cost of an asset over its useful life.

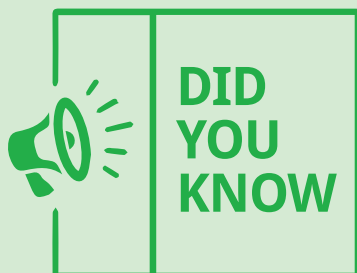




Engaging the Community to Set Realistic Expectations

Consulting the public regarding levels of service is an opportunity to engage the community's feedback on how to balance service levels with risk, and cost. O. Reg. 588/17 requires municipalities to complete public consultation as part of the process to determine proposed or target levels of service. Discussion points could include:

- Breakdown of funding, e.g. [Where Your Tax Dollar Goes \(Peel Region\)](#)
- The cost of inaction and Return on Investment, e.g. quantify potential damages through actual infrastructure failure events or use of a [Risk and Return on Investment Tool \(RROIT\) \(Credit Valley Conservation Authority\)](#)
- What service is needed vs. what asset is required, e.g. reducing leakage in water system rather than building a larger water treatment plant.
- Options to fund a particular service at the required service levels e.g. the [City of Mississauga](#) has a dedicated stormwater fee to keep its stormwater infrastructure system in good condition that was once underfunded under property taxes and development charges due to other competing priorities.
- The [Municipality of Central Elgin](#) has developed an asset management plan for its core assets that meet the requirements of the provincial regulation. This plan is informed by a level of service survey that was published on the municipality's community engagement website.



It is common for smaller municipalities that lack financial and staff resources to share assets, services, staff resources and asset management software. The Municipality of Wawa hired an asset management coordinator as a shared staff resource with three other small municipalities in Algoma district: the Township of Hornepayne, the Township of White River and the Township of Dubreuilville. This partnership with other small municipalities helped Council advance asset management programs, despite having limited financial resources and technical expertise.



Anticipating Emerging Risks Such as Climate Change

Local governments can respond to climate change through a combination of mitigation and adaptation strategies.

Municipal assets such as transportation systems, water management systems and facilities are vulnerable to climate change which can increase the cost of delivering desired service levels with a higher risk of failure and potential service consequences.

Integrating climate change mitigation and adaptation into asset management provides a systematic approach for evaluating trade-offs between service, cost, and risk for built and natural assets. It makes use of existing processes and helps local governments to balance investments, working toward the goal of sustainable service delivery.

There are opportunities for councils to consider

mitigation and adaptation to climate change when investment decisions are made throughout the asset lifecycle, which includes planning and design, construction, maintenance, rehabilitation and decommission. Some municipalities are working to add 'green infrastructure' options as part of their asset lifecycle management, such as the City of Thunder Bay's use of low-impact development options in stormwater management.

The best time to prepare for future design needs is in today's renewal opportunities. Small improvements in design flexibility today can unlock significant long-term

cost savings by enabling cost effective disaster mitigation and improving building resilience and operational flexibility. Future infrastructure could be designed so that inspection, maintenance or replacement of any of your assets does not require a full shutdown.

For example, if a road washes out and must be replaced, it is the best time to update the technical standards to ensure the road and drainage systems can withstand a 100-year storm in the future. Taking advantage of these opportunities requires insight and understanding of future design needs in advance, as well as the ability to leverage climate modelling forecasts.

Reviewing and Implementing Asset Management Plans

An asset management plan is a tool to communicate a municipality's current state and anticipated funding needs to the community and other levels of government. **A good asset management plan will provide the data, analysis and financial requirements to ensure that infrastructure investments are consistent and adequate for your community now and in the future.**

The [Municipality of South Huron](#) has developed a comprehensive asset management plan along with a [guide](#) to assist Council and the public with the terminology used in the plan.

It is also common for some municipalities like the [City of Cambridge](#) to develop an annual report for Council to highlight the findings of its asset management plan and any variances.

When determining priority projects, recommendations in the plan should be weighed against additional considerations that you have insight into such as:

- Impact on the municipality (reputation; legal) if an infrastructure asset does fail;
- Reliability of critical services, health and safety of residents;

- Leveraging cost saving opportunities and availability of external funding while taking into account the long-term financial implications in terms of whole lifecycle costs associated with providing a new service;
- Avoiding redundancies through multi-year planning by working in an integrated manner across your municipality;
- Community attachment to assets with historical and cultural significance; and
- Current demographic profile that helps Council understand future community needs and aspirations, and the current socio-economic conditions in the municipality.



DID YOU KNOW

A municipality's asset management plan is often a single document covering all municipal assets, but for large urban municipalities, plans are sometimes developed at the departmental level. For example, the City of Barrie, with a population of 141,430, developed a [Stormwater Asset Management Plan](#) that highlights the state of stormwater assets and the associated costs associated with mitigating flooding and protecting Lake Simcoe and Little Lake.



Checklist for Councils to Assess State of Asset Management

To identify opportunities for making further progress in asset management in your municipality, here are some key questions that need to be revisited every year:

<input type="checkbox"/>	Do you know what services your municipality provides and what infrastructure assets are required to provide those services?	<input type="checkbox"/>	Is your asset management plan developed in compliance with your policy?
<input type="checkbox"/>	Do you know your community's service level expectations? Are you meeting them and do you have the required financial resources to do so?	<input type="checkbox"/>	Does your plan meet the provincial regulatory requirements and include all infrastructure assets?
<input type="checkbox"/>	What is the total cost of providing these services at the current service levels? Are these costs sustainable?	<input type="checkbox"/>	Does the plan take into account the whole lifecycle cost of assets?
<input type="checkbox"/>	Has your Council engaged the community to set realistic expectations?	<input type="checkbox"/>	Does the plan identify capital investment priorities?
<input type="checkbox"/>	How reliable is your assets data on costs, risks and service levels?	<input type="checkbox"/>	Are there any assets that should be retired and do not need to be replaced?
<input type="checkbox"/>	Does your staff have the required resources and expertise to pursue asset management?	<input type="checkbox"/>	Are there any additional factors that affect service delivery that are not captured in the asset management plan?
<input type="checkbox"/>	Does your municipality have an asset management policy that is aligned with your municipality's strategic plan?	<input type="checkbox"/>	What is the appropriate infrastructure deficit or funding gap for our community? How will it impact service levels, now and into the future, if we continue along the same trajectory?
<input type="checkbox"/>	Does your policy include a governance structure that specifies role and responsibilities?	<input type="checkbox"/>	Does your plan include a financial strategy to address the funding gap? Have you considered debt and alternative revenue streams?

Available Support for Municipalities

Your staff are required to provide reliable information on assets' performance, risks, and costs to enable your Council to deliver sustainable community services. **As an elected official, you can provide the strategic leadership needed to invest in staff training and data collection initiatives to build internal capacity and foster a culture of collaboration and coordination across your municipality.**

AMO supports municipal sector progress in asset management through several capacity-building projects, [policy directives](#), and assessment of sector progress as part of its administration of the Canada Community-Building Fund.

AMO also provides support for municipalities by developing [educational resources](#) for

elected officials, and by delivering training program for municipal staff to build technical expertise and facilitate the adoption of better practices in asset management for Council. In this regard AMO acknowledges the important work of the [FCM's MAMP](#).

Every year, AMO profiles

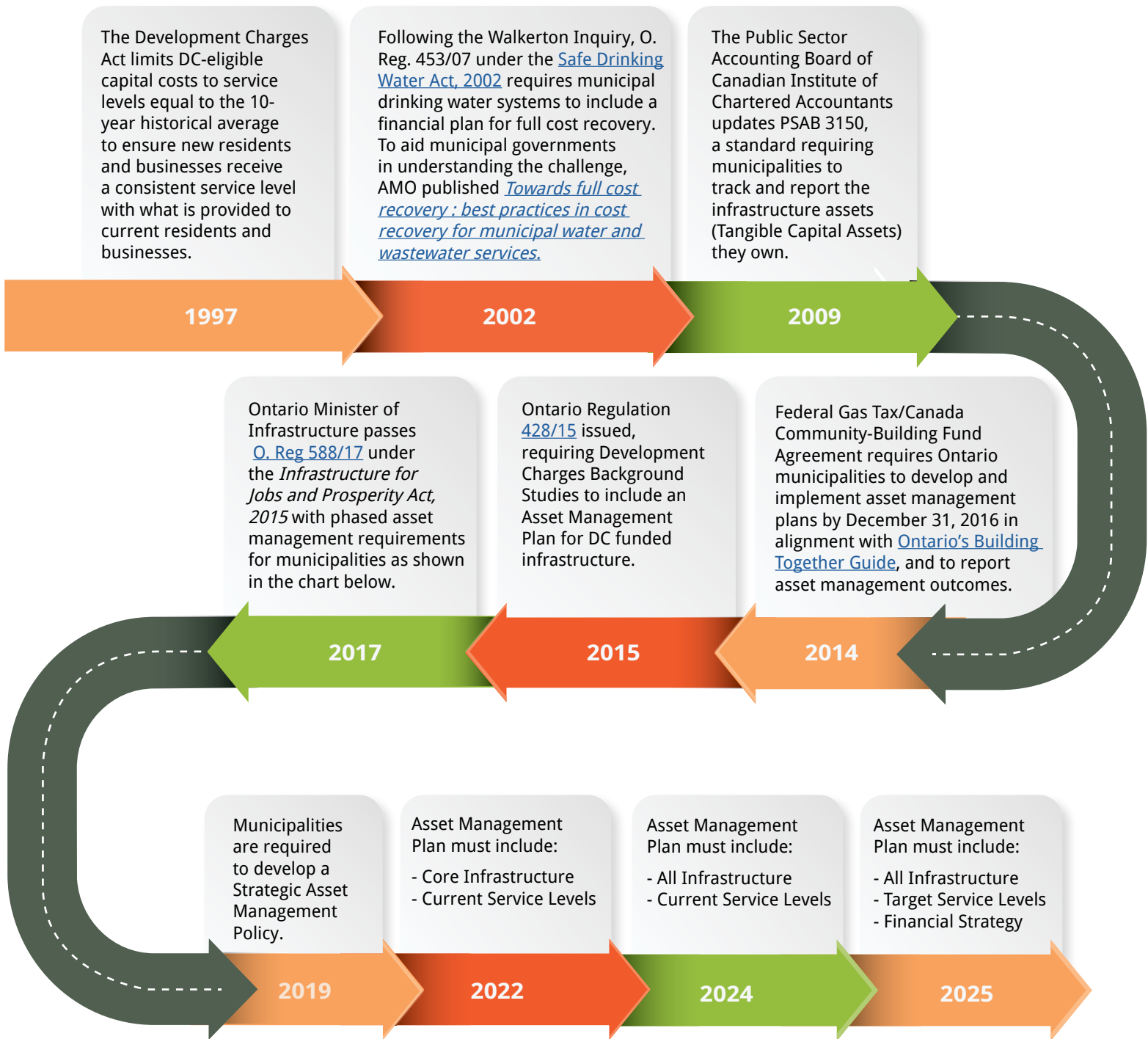
municipalities of different sizes as they make progress in asset management. These [videos](#) highlight the commitment and approach of municipal councils in using asset management as a decision-making tool.

To learn more about available resources and training opportunities or to let us know your story, please contact ccbf@amo.on.ca



Appendix: Asset Management Requirements in Ontario

Over the years, asset management requirements have been gradually introduced and have evolved to promote continuous improvement in successful adoption of asset management in Ontario:





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