



MUNICIPAL FINANCE  
OFFICERS' ASSOCIATION  
OF ONTARIO



A guide to asset  
management for  
municipalities in  
Ontario

## ASSET MANAGEMENT FRAMEWORK

This publication was made possible through funding from the  
Province of Ontario, MFOA and its members

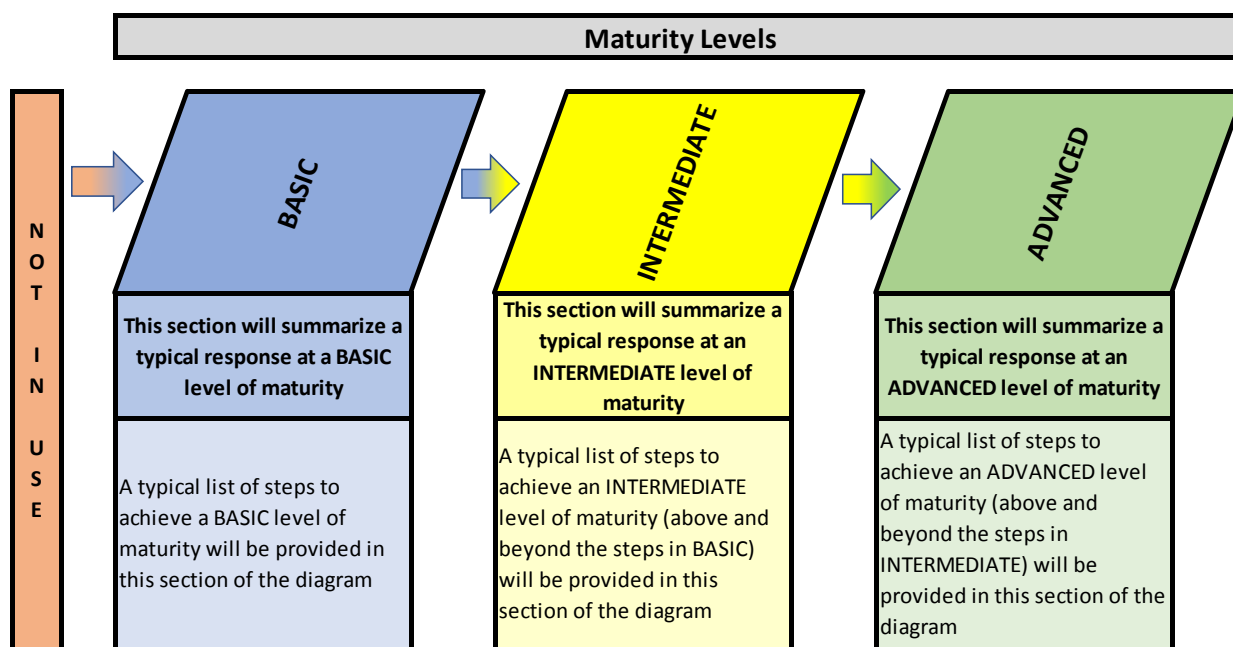
© 2018 MFOA

2	Asset Management Policies and Strategies .....	2-1
2.1	Using this Framework .....	2-1
2.2	Overview .....	2-2
2.3	Asset Management Policies and Strategies .....	2-5
2.4	Use of the Asset Management Policies and Strategies.....	2-10
2.5	Asset Management Performance and Effectiveness.....	2-11
2.6	Resources and References.....	2-14

## 2 Asset Management Policies and Strategies

### 2.1 Using this Framework

This framework is intended for municipalities of all sizes and maturity levels. The use of the maturity diagrams within this framework can help municipalities identify their current levels of maturity for each AM area. In addition, the diagrams provide possible approaches for municipalities to undertake to move to a higher level of maturity over time. Adaptations of the following diagram are used throughout this document to summarize maturity levels according to the themes and questions explored in each chapter:



This document is intended to help municipalities make progress on their asset management planning. By enhancing the readers' understanding of asset management maturity, they can more accurately determine their current, and work toward achieving the desired or appropriate, level of maturity for their municipality.

The asset management framework can be likened to a continuum, whereby municipalities should aim to implement the components described in a subsequent maturity level. For example, municipalities that are not practicing asset management

should strive to meet components at the *basic level*, and likewise, municipalities that currently meet the *basic* or *intermediate* levels should strive to advance their practices to meet the components of the next level. However, it should be noted that during this self-assessment process a municipality may decide to skip over maturity levels (i.e. move from basic to advanced, skipping intermediate). This is perfectly acceptable. Further, not every municipality will need to strive for the highest level of maturity in every area. For example, it may not make sense for a small municipality to meet certain advanced level components.

Readers can use the following descriptions of the maturity levels to guide their assessment throughout the various sections of this framework:

Municipalities that are not undertaking the components described in a particular section of this framework should focus on meeting the *basic level* requirements outlined in the maturity level diagram.

At the **basic level of maturity**, a municipality is undertaking the components of asset management shown in blue and will take steps to advance their asset management by implementing the components described under the *intermediate level* heading.

At the **intermediate level of maturity**, a municipality is currently meeting the requirements shown in yellow and to advance their asset management will take steps to implement the components described under the *advanced level* heading.

At the **advanced level of maturity**, a municipality is currently meeting the requirements shown in green.

These maturity framework visuals are found throughout this document. Preceding all maturity level diagrams is a self-assessment question for the reader to consider to help determine where their municipality best fits within the framework.

## 2.2 Overview

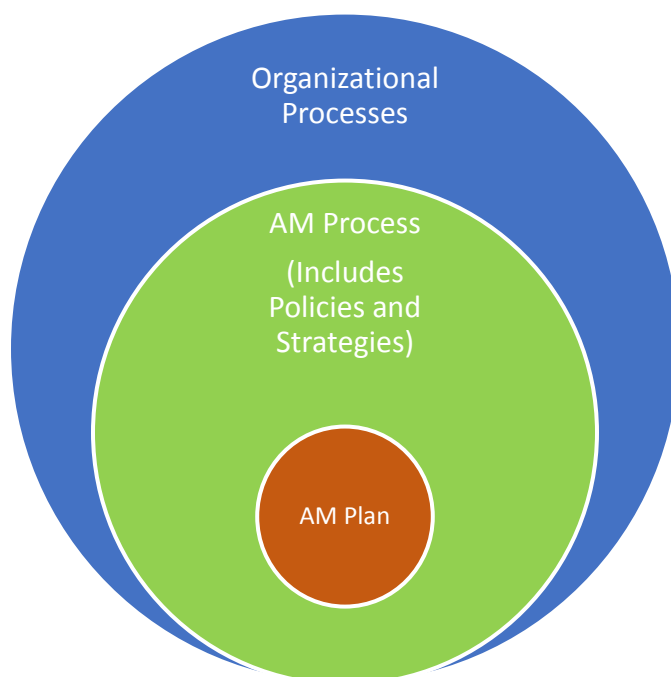
Asset management planning is a process<sup>1</sup>, which should be informed by policies that assist in outlining overall approach, requirements, and roles/responsibilities, and should link to other organizational processes. A process should also detail the strategies,

---

<sup>1</sup> Note that the ISO 55000 series refers to this as an asset management *system*.

methods, and activities to undertake in order to achieve the planning objectives. One output of the AM process is the creation of an AM plan. See Figure 2-1 (below).

**Figure 2-1**  
**AM Process Output – AM Plan**



Infrastructure for Jobs and Prosperity Act (IJPA) and O. Reg 588/17 requirements:

A Strategic Asset Management Policy (SAMP) must be developed and adopted by *July 1, 2019*, reviewed and updated at least every 5 years, and include the following:

1. Identify which municipal goals, plans or policies the AM plan would support (e.g. official plan, strategic plan, master plans, etc.);
2. A process for how the AM plan is to be considered in the development of the annual budget and any applicable long-term financial plans;
3. The municipality's approach to continuous improvement and adoption of best practices regarding AM planning;

4. The principles that would guide AM planning in the municipality, including principles identified in section 3 of the IJPA;
5. A commitment to consider:
  - a. the actions required to address the risks/vulnerabilities caused by climate change to the municipality's infrastructure assets, including to operations, levels of service, and lifecycle management, including the anticipated costs that could arise from these impacts, and the adaptation opportunities that may be undertaken to manage these potential risks;
  - b. Mitigation approaches to climate change, such as greenhouse gas emissions reduction goals and targets;
  - c. Disaster planning and any required contingency funding;
6. A process to ensure AM planning would be aligned with water and wastewater financial plans, including any financial plans prepared under the Safe Drinking Water Act, 2002.
7. A process to ensure AM planning would be aligned with Ontario's land-use planning framework, including any relevant policy statements issued under section 3(1) of the Planning Act; Provincial plans as defined in the Planning Act; and, municipal official plans;
8. A discussion of capitalization thresholds used to determine which assets are to be included in the AM plan and how this compares to the municipality's Tangible Capital Asset policy;
9. A commitment to coordinate planning between interrelated infrastructure assets with separate ownership structures by pursuing collaborative opportunities with upper-tier municipalities, neighbouring municipalities, and jointly-owned municipal bodies;
10. Identification of who would be responsible for AM planning, including an executive lead;
11. An explanation of Council's involvement in AM planning; and
12. A commitment to provide opportunities for municipal residents and other interested parties to provide input into AM planning.

Item (4) above references principles outlined under section 3 of the IJPA. These principles indicate that infrastructure planning and investment should:

- Take a long-term view, considering the needs of citizens and being mindful of demographic and economic trends;
- Take into account any applicable budgets and fiscal plans of the municipality;
- Be based on clearly identified infrastructure priorities;

- Ensure the continued provision of core public services such as health care and education;
- Promote economic competitiveness, productivity, job creation, and training opportunities;
- Ensure that the health and safety of workers who are involved in the construction and maintenance of infrastructure assets is protected;
- Foster innovation through the use of innovative technologies, techniques, and practices developed in Ontario;
- Be evidence based and transparent;
- Be undertaken with consideration of any provincial or municipal plans or strategies established in Ontario, even when they are not binding, but may still be relevant (e.g. Section 3 of the *Planning Act*, water sustainability plans under the *Water Opportunities Act, 2010*, Lake Simcoe Protection Plan established under the *Lake Simcoe Protection Act, 2008*, transportation plans established under the *Metrolinx Act, 2006*);
- Promote accessibility for persons with disabilities;
- Minimize environmental impact—as well as respect and help maintain ecological and biological diversity—with infrastructure designed to be resilient to the effects of climate change;
- Endeavour to make use of acceptable recycled aggregates; and
- Promote community, social, and economic benefits, such as local job creation and training, improvement of public spaces, etc.

## 2.3 Asset Management Policies and Strategies

AM policies and strategies provide structure and guidance as to how a municipality will execute, maintain, and continuously improve AM planning, in order to provide services to stakeholders.

*Is the asset management planning process supported by asset management policies and strategies?*

### **Background**

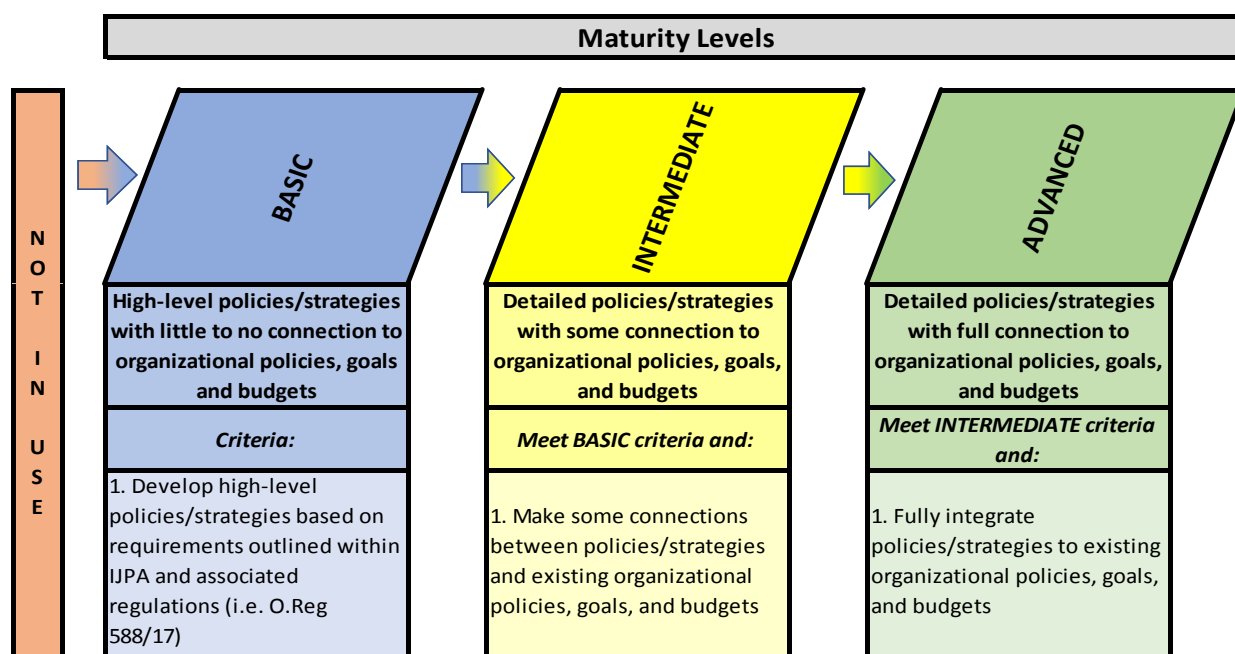
Asset Management policies and strategies provide direction to municipal staff throughout the entire asset management process. They provide a framework for the

asset management process and provide the connection to other organizational processes outside of asset management.

The regulation to the *Infrastructure for Jobs and Prosperity Act, 2015* (IJPA) requires that municipalities develop a strategic asset management policy (SAMP) with a number of principles and prescribed elements. The SAMP, which combines asset management policies and strategies into one requirement, support the asset management planning process through its connection to long-term organizational policies, goals and objectives.

### Levels of Maturity – AM Planning and SAMP

*Is the asset management planning process supported by asset management policies and strategies?*



At the **basic level of maturity**, municipalities often have high-level AM policies/strategies (which adhere to the requirements of O.Reg 588/17). It is likely that there is little connection between the AM policies/ strategies and other organizational policies, goals, and budgets. The AM policies/strategies have likely been developed at a high level based upon the requirements outlined within the IJPA.

At the **intermediate level of maturity**, the municipality should prepare detailed AM policies/strategies based on the requirements of the IJPA and its associated



regulations. Some connections should be made between the AM policies/strategies and the organizational policies, goals, and budgets.

At the **advanced level of maturity**, the municipality should prepare detailed AM policies/strategies based on the requirements of the IJPA and its associated regulations. The AM policies/strategies should be fully integrated with organizational policies, goals, and budgets.

### **Asset Management Policies**

From a broad perspective, asset management policies set forth how a municipality uses asset management planning to fulfill its objectives and goals that have been established in other organizational policies and strategies. These AM policies will broadly explain how the asset management process will align with and carry out a municipality's mission statement as outlined in strategic planning documents.

Creating and maintaining asset management policies are vital steps in developing a robust and sustainable asset management process. These steps set forth the municipality's commitment to AM, offer high-level guidance, and ensure accountability throughout the process. Ultimately, these policies are the broad foundation on which the rest of the asset management planning process will build upon.

Examples of policy topics:

- Explain how all legislated rules and laws will be followed, or how the asset management process will assist in current reporting practices.
- Detail the municipal-wide principles and vision to which the AM process must adhere, and how it will integrate into existing municipal planning and operational processes.
- Describe how the annual budgeting process will be advised by the outputs of the asset management process.
- Outline existing departments/divisions responsible for AM, or the creation of a specific asset management group (e.g. committee), that will be tasked with creating, maintaining, updating, and managing the entire asset management process.
- Detail and define all asset classes/categories that will be managed and how they will be kept up to date (e.g. valuations, conditions, etc.). This can also be outlined in a process manual that supplements the AM policies (more on this below).

- Set forth expected services, community expectations, and service levels that will be maintained over time.
- Introduce key metrics that are easily understood, functional, and reviewable in order to set standard functionality and performance levels for each asset class/category.
- Determine how inspections and reviews will be carried out to ensure service standards are being maintained at agreed upon levels. This can also be outlined in a process manual that supplements the AM policies (more on this below).

### **Asset Management Strategies**

Asset management strategies build upon the structure set in the AM policies and lay a path, or action plan, to accomplish the municipality's organizational goals at a more detailed level. The AM strategies answer how the municipality intends to provide expected service levels to the public through sustainable assets. In so doing, the AM strategies should aim to minimize the costs and risks associated with the AM process. It should be noted that the ISO 55000 series as well as some organizations refer to asset management strategies as a "strategic asset management plan". These terms are interchangeable and this document will always reference the former.

Comprehensive AM strategies are important because they provide a clear link between the asset management policy and asset management plan. If policies largely answer "why" to undertake asset management planning and asset management plans answer the "what" and "when", the strategy answers "how" this will all be undertaken. The strategies will provide guidance on how staff will go about executing the duties necessary in maintaining the municipality's asset management process.

Examples of strategy topics:

- Detail, through a schedule, the frequency of review and updates to all facets of the asset management process.
- Identify the current state of all asset classes/categories within the AM process and include all relevant info (e.g. replacement costs, service levels, risk, probability of failure) to be maintained, as well as the municipality's policies.
- Specify how the outputs and strategies of the asset management process will tie into existing municipal documents and plans.
- Clarify how all departments/divisions will incorporate asset management into their decision-making process.

- Specify the AM plans and processes that will be implemented, and how.
- Specify the metrics that will be utilized to measure the progress of the asset management process (e.g. service level metrics or additional metrics).
- Create timelines or roadmaps that detail progress and provide accountability to the municipality.
- Specify the roles and responsibilities of staff that will carry out the administration of the asset management process, as well as the roles of Council and the public.
- Identify all the data that will be collected and maintained on all assets, and set schedules for these updates (e.g. reviews every 1, 3, 5, etc. years).
- Specify any technical tools (e.g. IT systems, asset databases) that will be utilized in the asset management system and their level of integration.

### **Process Manual**

Given the number of possible updates to the asset register, the number of sources of information, and the breadth of staff and potential consultants in an organization involved in the various aspects of asset management planning, a formal process manual can be beneficial to ensure a consistent application of methodologies across the asset register. The manual can be used to identify how the asset register is to be updated, when updates take place, and by whom. The major assumptions to be made can also be identified and documented as part of the process manual.

In order to facilitate consistency, issues such as staff/consultant hiring, training, and performance review (see Chapter 10 for more discussion on these issues) should be touched upon in the manual. Having a manual in place and included with other AM strategies should assist in providing a level of consistency to the AM updates being performed.

### **Strategic Asset Management Policy**

The *Infrastructure for Jobs and Prosperity Act, 2015* (IJPA) requires asset management planning for public sector entities. The Province of Ontario has created a regulation under the IJPA (O.Reg 588/17) requiring municipalities to create a Strategic Asset Management Policy (SAMP). Please refer to the Overview section of this chapter (see above) for the detailed requirements of this SAMP as outlined in O.Reg 588/17.

## 2.4 Use of the Asset Management Policies and Strategies

Commitment to following AM policies and strategies ensures structure, consistency, and accountability in the AM process.

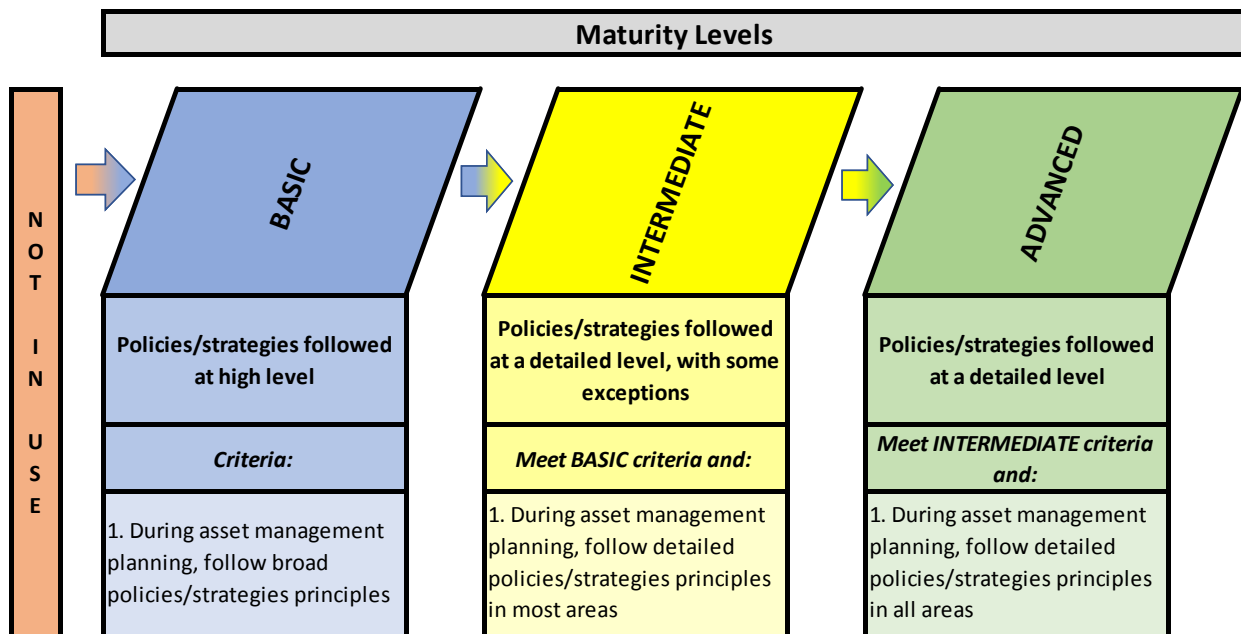
*To what extent do the AM policies/strategies guide the asset management planning process?*

### Background

AM policies and strategies can be great guides for the asset management process, once in place and approved by Council. The extent of their use in guiding a municipality in AM planning going forward is the optimal method of determining their overall effectiveness and AM maturity level.

### Levels of Maturity – Use of AM Policies/Strategies

*To what extent do the AM policies/strategies guide the asset management planning process?*



At the **basic level of maturity**, municipalities will follow their AM policies/strategies at a high level only. Broad AM policies/strategies principles would be followed during asset management planning.

At the **intermediate level of maturity**, municipalities will follow the AM policies/strategies at a detailed level, with some exceptions and/or gaps identified in policy/strategy areas.

At the **advanced level of maturity**, the municipalities will follow the AM policies/strategies at a detailed level in all areas, with no gaps in policy/strategy areas.

### **Use of AM Policies/Strategies**

This section provides an overview of municipalities' ability to follow the AM policies and strategies in place (see examples discussed above). These policies and strategies are present to put structure, consistency, and accountability in the AM process. Following them shows commitment to asset management over the long-term.

A municipality will typically put in place initial policies and strategies based on early interpretations of AM planning needs within a municipality. It is only through ongoing trial and error that these policies and strategies are improved and updated to the point where they effectively guide the municipality in AM planning. Improvements and updates can take the form of:

- Relating existing policies and strategies to the specific needs of the municipality;
- Filling gaps in policy/strategy areas that were not addressed in previous updates; and
- Refining the ongoing action plan (e.g. strategies) to take into consideration recent decisions by Council, new information and available tools and techniques.

## **2.5 Asset Management Performance and Effectiveness**

Incorporating performance measures and other metrics into AM policies and strategies allows municipalities to evaluate whether their AM process is producing the desired outcomes.

*To what extent do the policies/strategies provide an approach to evaluate the performance and effectiveness of the AM planning process?*

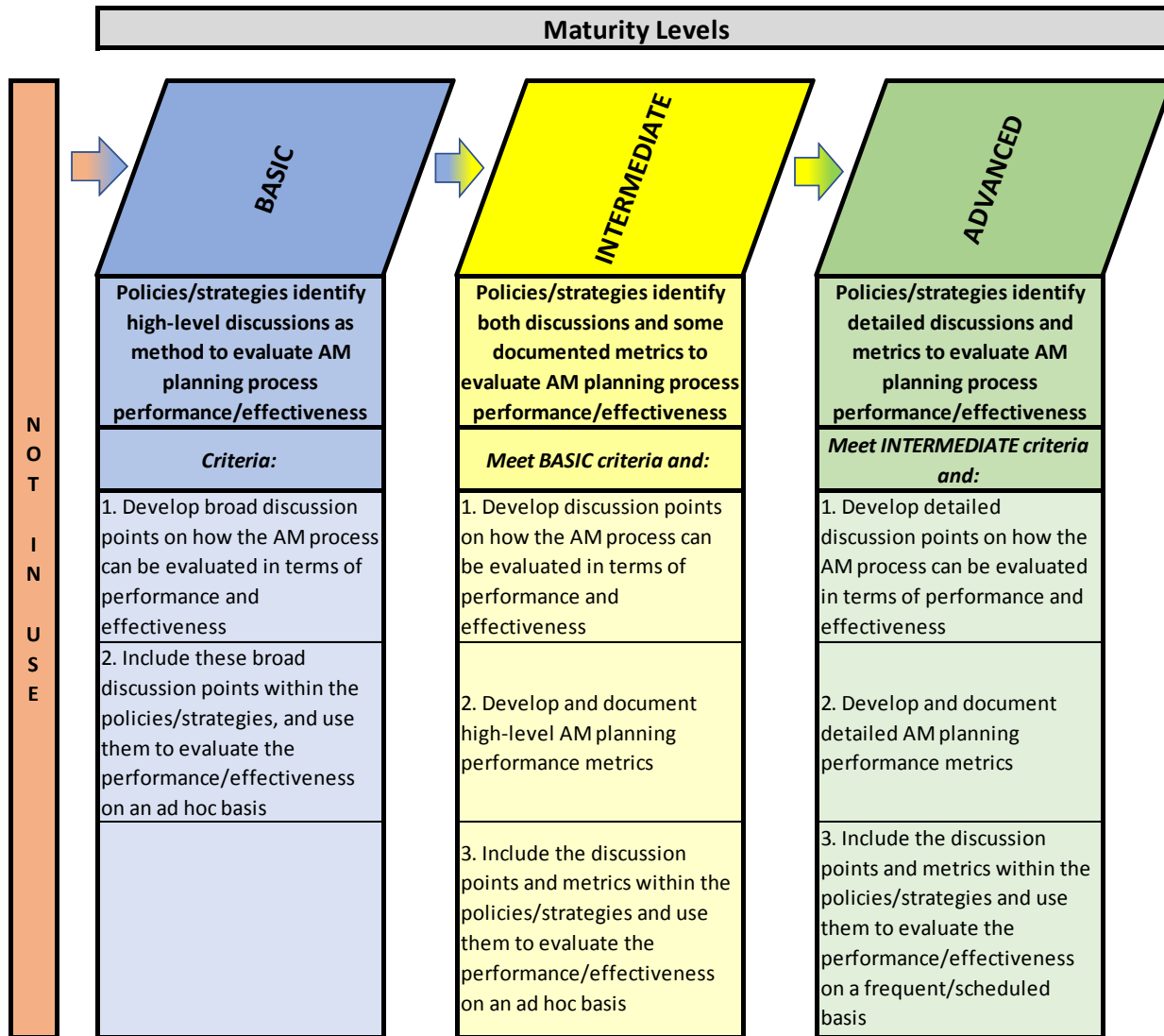
### **Background**

It is important to determine whether the AM planning process is resulting in the desired outcomes. There are different approaches available to accomplish this, from high-level

discussions (e.g. reach sustainability within 'x' years), to detailed performance metrics or ratios. The more rigorous and regular the evaluation process is, the higher the level of maturity for this issue.

**Levels of Maturity – Evaluating the AM Process**

*To what extent do the policies/strategies provide an approach to evaluate the performance and effectiveness of the AM planning process?*



At the **basic level of maturity**, municipalities use high-level discussions to evaluate the AM planning process performance and effectiveness. Broad discussion points to be used as criteria for evaluation will be developed and documented within the AM

policies/strategies. These discussion points will tend to be used on an ad hoc basis as opposed to a scheduled or periodic basis.

At the **intermediate level of maturity**, municipalities should use both discussions and metrics to evaluate the AM planning process performance and effectiveness. High-level AM planning performance metrics to be used as criteria for evaluation will be developed and documented within the AM policies/strategies, along with agreed upon discussion points. These discussion points and metrics will tend to be used on an ad hoc basis.

At the **advanced level of maturity**, municipalities should use both detailed discussions and metrics to evaluate the AM planning process performance and effectiveness. Detailed AM planning performance metrics to be used as criteria for evaluation will be developed and documented within the AM policies/strategies. These discussion points and metrics should be used on a frequent and scheduled basis.

### **Performance Discussions**

Performance discussions relate to the ability to describe the outcomes of a successful asset management process. This discussion should feed directly from the municipality's AM policies and strategies. Performance areas to consider include:

- Asset condition ratings, functionality, and/or performance;
- Moving towards expected service levels;
- Implementing (or moving towards) a sustainable asset management planning position;
- Meeting legislative requirements;
- Customer satisfaction; and
- Mitigating risk to acceptable levels.

This discussion can take place within a municipality's AM plan, within a periodic update report to Council, or even in an internal report to staff (e.g. senior management). The overall objective is to describe whether the AM planning process in place is creating the desired outcome or outcomes.

### **Performance Metrics**

Performance metrics represent a more formal approach to measuring a municipality's success in achieving its desired objectives or outcomes. Performance metrics are designed to evaluate actual performance outcomes against desired service delivery-

based outcomes. In addition, measuring performance over time will provide trending information related to progress in moving towards important goals. This lends itself to greater accountability as objective measures can be used to evaluate AM performance of not only the corporation as a whole, but municipal departments or divisions.

Examples are as follows:

- Specific level of service performance measures (see Chapter 4);
- Infrastructure gap (see Chapter 6);
- Funding gap or sustainability ratio (see Chapter 6);
- Incidents of non-compliance with AM policies/strategies;
- Incidents of non-compliance with legislation; and
- Comparison of risk per service area in relation to acceptable levels.

## 2.6 Resources and References

Asset Management BC, Asset Management for Sustainable Service Delivery: A BC Framework, <https://www.assetmanagementbc.ca/framework/>

Institute of Public Works Engineering Australasia, 2015, International Infrastructure Management Manual,

<https://www.ipwea.org/publications/bookshop/ipweabookshop/iimm>

International Organization for Standardization (ISO), 2014, ISO 55000:2014, Asset management – Overview, principles and terminology,

[http://www.iso.org/iso/catalogue\\_detail?csnumber=55088](http://www.iso.org/iso/catalogue_detail?csnumber=55088)

Municipal Finance Officers' Association of Ontario, 2014, A Guide to Developing a Municipal Asset Management Policy,

<http://www.mfoa.on.ca/mfoa/main/VLFile.aspx?a=242&s=955758>

Province of Ontario, 2015, Infrastructure for Jobs and Prosperity Act,

<https://www.ontario.ca/laws/statute/15i15>

Province of Ontario, Ministry of Infrastructure, 2017, Infrastructure for Jobs and Prosperity Act – Draft Regulation, [https://www.ebr.gov.on.ca/ERS-WEB-](https://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTMyNTkw&statusId=MjAxMzgx)

[External/displaynoticecontent.do?noticeId=MTMyNTkw&statusId=MjAxMzgx](https://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTMyNTkw&statusId=MjAxMzgx)