

Document 3

Comprehensive Asset Management (CAM) Initiatives

Following are descriptions of ongoing key CAM initiatives:

I. Leadership in Asset Management Program (LAMP)

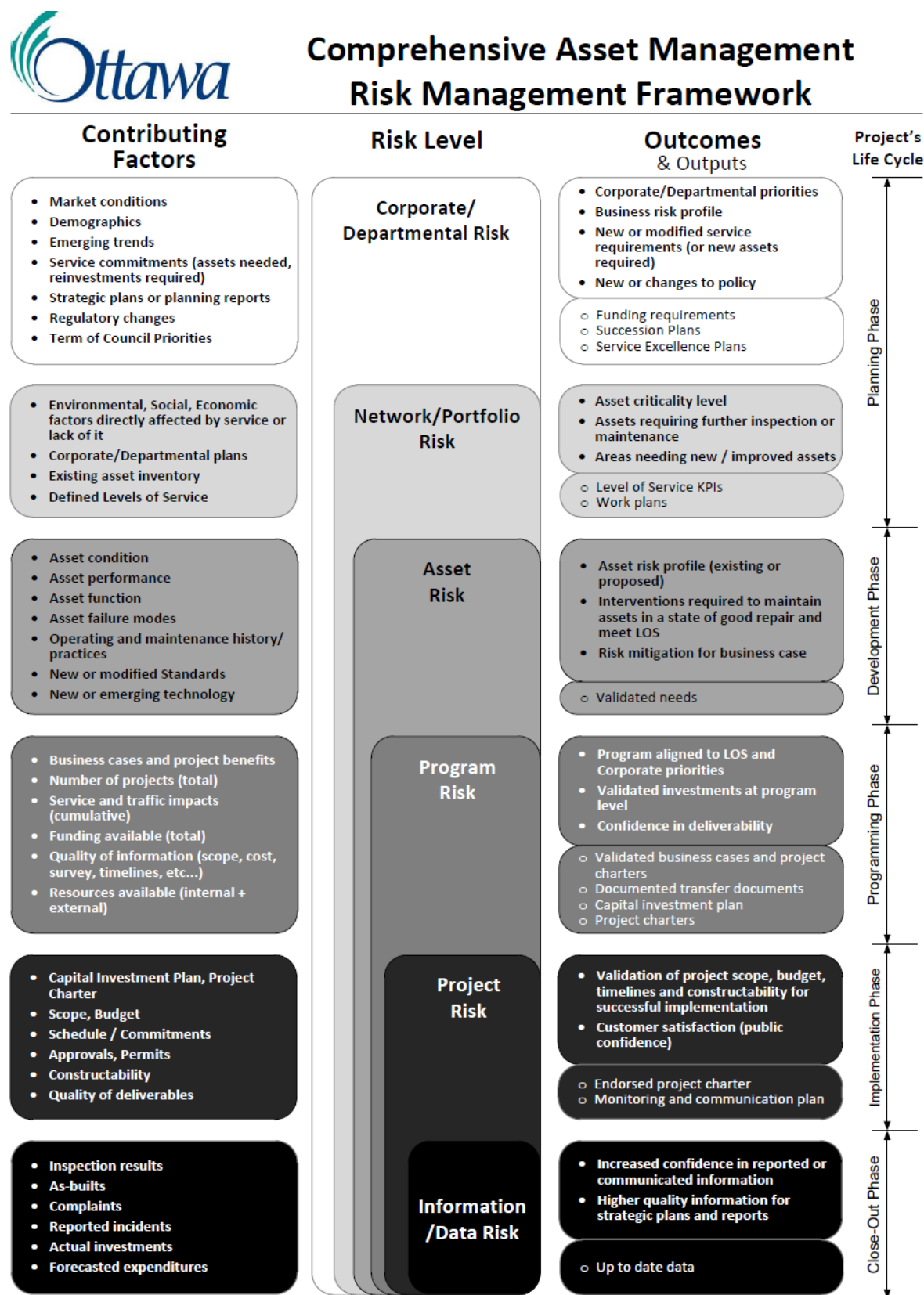
The City of Ottawa was one of the first 12 successful Canadian municipalities to be selected to participate in this innovative program launched by the [Federation of Canadian Municipalities](#) (FCM) to support the “pioneering efforts in asset management and sustainability”¹ The first phase consists of reviewing and updating the 2012 CAM Policy and CAM Strategy to further incorporate sustainability concepts and to ensure that the content aligns to industry best practices. For the second phase of the program, the City is one of four municipalities working to improve life cycle management processes to strengthen decision-making to better manage infrastructure assets.

II. Risk-Based Decision Support

Since 2012 there has been significant effort in implementing a robust and repeatable way of quantifying the risk to a service based on the properties and location of the supporting assets. The process identifies the assets most at risk of impacting the community or the environment, to better inform staff of assets that require more immediate attention (whether through inspection, maintenance, renewal or simply collection and validation of required asset information). An example of a further application of this approach is used as part of the City’s risk-based policy for consideration of applications for development above in-ground City-owned infrastructure.

Document 3

Comprehensive Asset Management (CAM) Initiatives



Document 3

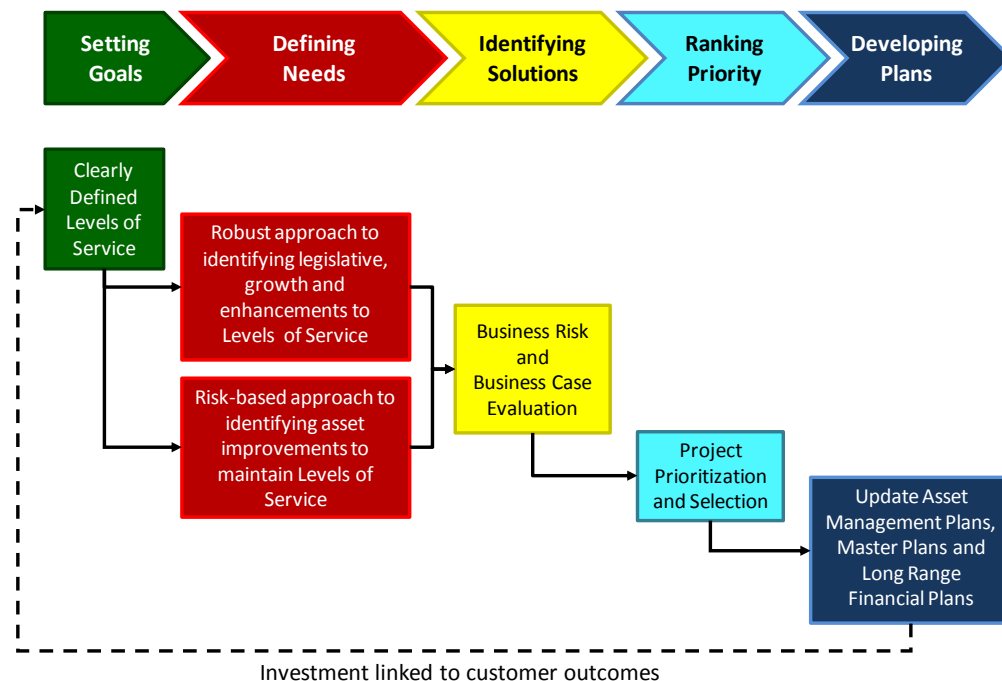
Comprehensive Asset Management (CAM) Initiatives

III. Capital Project Valuation Assessment

The Capital Valuation Assessment (CPVA) has been developed to a functional model. It is a repeatable process that provides the means to compare different projects against each other. It is a process that aligns with risk management and project management frameworks and it is consistent with industry best practices. The process consists of evaluating the benefits of a given project against established criteria reflective of the city's goals and objectives, the number of people that will be impacted (internal and/or external) and the financial cost of realizing the project. The process consists of evaluating four questions; What are the benefits of doing this project?; How many people will benefit?; How much will it cost?; What is the relative value compared to other projects?

This process was tested against preliminary 2017 budget projects and still requires some refinement. The project selection process for future budgets could be informed by this process. The figure below is a good representation to illustrate how several of the initiatives discussed in this report are related and contribute towards a more informed and efficient approach to investing towards customer outcomes.

Linking Investments to Customer Outcomes



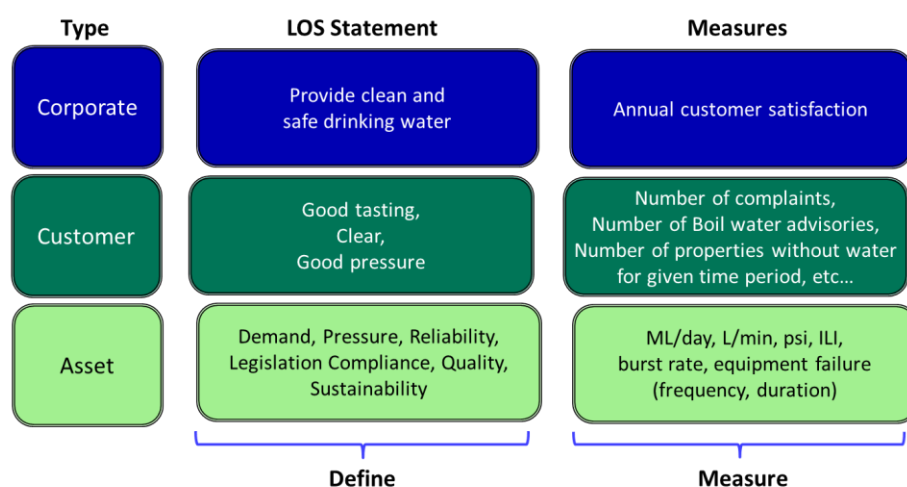
Document 3

Comprehensive Asset Management (CAM) Initiatives

IV. Level of Service (LOS)

Levels of Service (LOS) consist of describing how a service is delivered. ISO 55000 describe it as being delivered through *“parameters or combination of parameters that reflect social, environmental and economic outcomes that the organization has agreed to deliver”*. Thoroughly understanding the level at which a given service is provided allows an organization to compare the actual LOS to the desired LOS. The difference between the existing situation and the desired one can then inform future plans. To fully inform future long range financial plans and asset management plans, the City needs to develop a sound understanding of existing levels of service to quantify the difference that exists between where we are and where we want to be. This is a cornerstone for the City’s CAM program and requires significant effort in the next few years. Following is a representation of the CAM Level of Service Framework.

There are various types of level of service; all of which are interlinked and each has expectations associated with them than can be measured.



Document 3

Comprehensive Asset Management (CAM) Initiatives

Effectively documenting level of service expectations requires a resident/taxpayer perspective. To facilitate the documentation, process the CAM framework sets out to capture core values along eight key areas one would associate with service delivery.

Core Values – defined for each individual service



Core Values – EXAMPLE

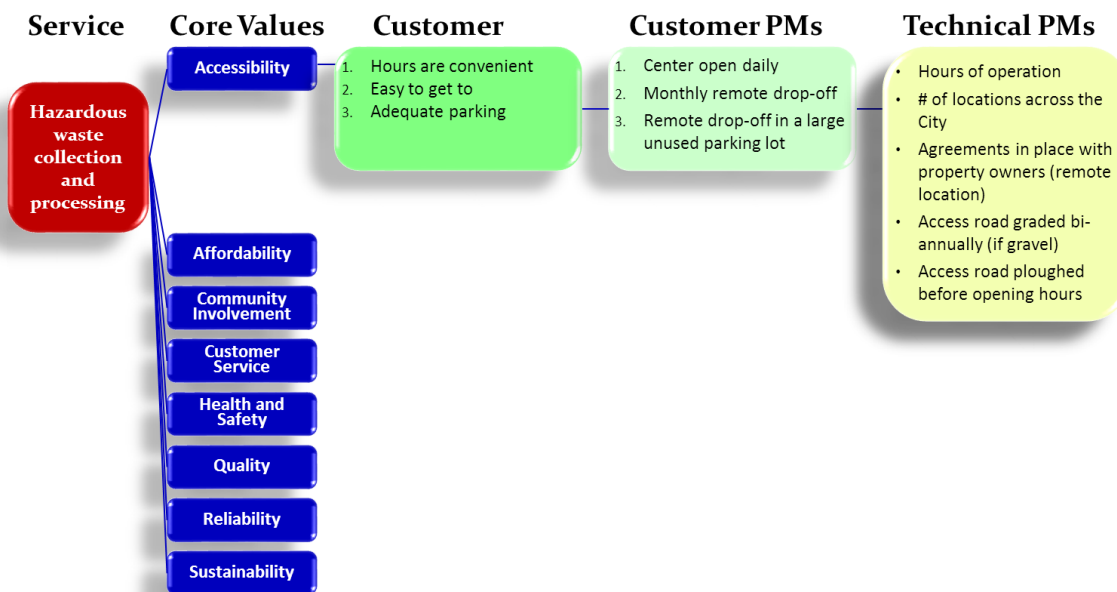


Document 3

Comprehensive Asset Management (CAM) Initiatives

Documenting customer level of service expectations against value expected by the service allows the City to translate what the asset are required to deliver and, in turn, how they need to be maintained and perform.

LOS Framework



V. Life Cycle Costing

Conceptually, life cycle costing is an evaluation method that allows two different scenarios to be compared on a common platform – time and money. Over the last several years, the concept of life cycle costing has been gaining importance and various examples can be demonstrated to show how it has gained use in the organization.

Following the adoption of the CAM program, the City endorsed new Master Plans. As part of that process, there was a distinct inclusion of infrastructure life cycle costs to gauge the impact of future construction on the ability of the City to maintain the existing assets. Also, as part of the Leadership in Asset Management Program, the second phase of the grant will focus on life cycle management. One of the objectives of the project is to refine and increase the use some of the life cycle costing tools that exists in the City at this time.

Document 3

Comprehensive Asset Management (CAM) Initiatives

VI. Asset Knowledge and Continuous Data Improvement

In 2014-2015 the City undertook an exercise to identify the data that supports the various asset management processes in place at the City. The objectives of the exercise were to review the existing data repositories and business applications that support decision making and document findings, gaps, opportunities, and risks.

Some of the recommendations are listed below:

- i. Revisit the configuration of some of the core systems to enable dynamic data to be captured
- ii. Improve integration of systems to reduce duplicate data entry and data maintenance
- iii. Incorporate asset knowledge management into the preliminary phases of planning and design of the asset's life cycle.
- iv. Improve the data collection processes for existing assets using a risk-based approach to improve the quality and the confidence level of the source data

The overall findings and recommendations are encouraging in that the City has good systems in place and continues to work at improving the quality of the data. There remains a need to continue to work at improving integration or simplifying some business processes to ensure that the people who need the data, get the data.

Document 3

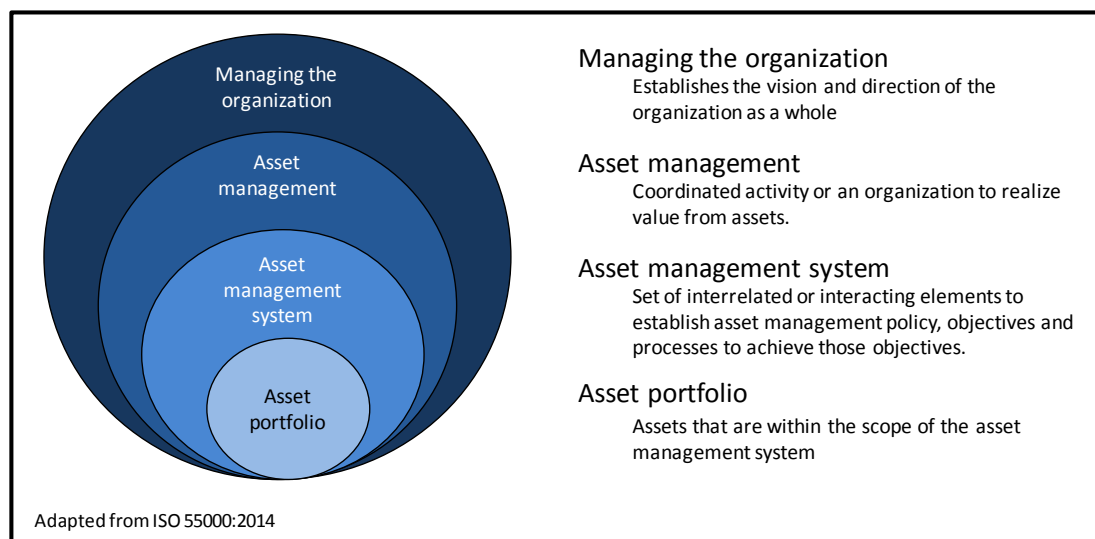
Comprehensive Asset Management (CAM) Initiatives

VII. Strategic Asset Management Plan (SAMP)

Asset management is a discipline that “provides for coordinated activities of the organization to realize value from its assets. It involves the balancing of costs, opportunities and risks against the desired performance of assets in order to achieve organizational objectives”.

Figure 1 below presents a visual representation of the key concepts surrounding asset management within an organisation. It clearly shows the relationship between the assets, the system defining the rules of operation, the coordinated activities encompassing all the related roles, and how those activities align with the corporate vision.

Figure 1 – Key concepts surrounding asset management



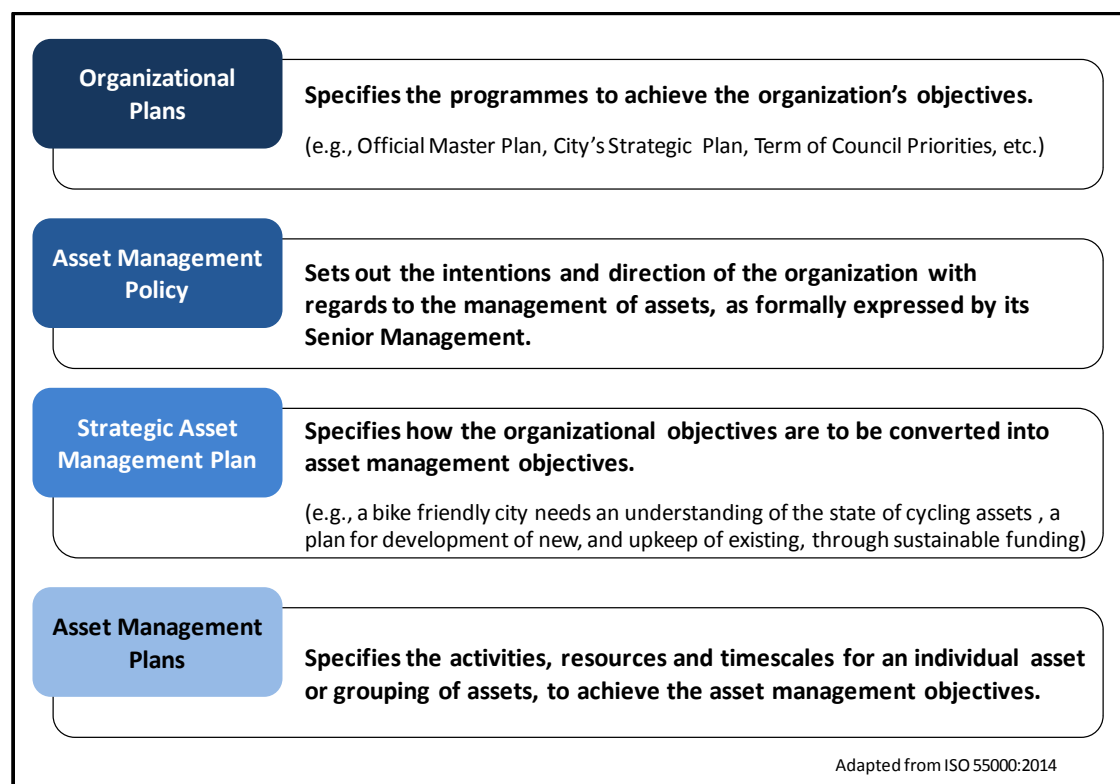
These key relationships are enabled by people throughout the organization. To ensure that people across the organization understand the impact that their daily activities have on the organization’s goals and priorities, the line of sight between the organization’s vision and people’s actions must be clear.

Document 3

Comprehensive Asset Management (CAM) Initiatives

The line of sight or the connection between the strategic, the tactical, and the operational activities are outlined by the following core documents supporting one another.

Figure 2 – Line of sight between the City's vision and the daily activities



The CAM Policy, SAMP, AMP and Operational plans are only components of an asset management system. In other words, completing one or several of the documents does not signify that the organisation has fully achieved sound and optimised asset management practices. Rather, adopting sound asset management practices facilitates reporting through the SAMP.