



## **ASSET MANAGEMENT STRATEGY**

**City of Airdrie  
2018–2023**



---

# CONTENTS

ACRONYMS AND ABBREVIATIONS	5
.....	
TERMS AND DEFINITIONS	6
.....	
BACKGROUND	10
OUR COMMUNITY	10
OUR COMMUNITY'S VISION	12
SUSTAINABILITY	12
CHANGE	15
ASSET MANAGEMENT	15
ASSET MANAGEMENT AT THE CITY	17
.....	
PURPOSE AND SCOPE	18
PURPOSE OF THE ASSET MANAGEMENT STRATEGY	18
INTENDED OUTCOMES OF THE ASSET MANAGEMENT STRATEGY	20
ASSET MANAGEMENT SERVICES AND ASSOCIATED ASSETS	21
THE PERIOD OF RESPONSIBILITY	22
.....	
STRATEGIC ALIGNMENT OF THE ASSET MANAGEMENT SYSTEM	23
.....	
NEEDS AND EXPECTATIONS OF STAKEHOLDERS	29
MAYOR AND COUNCIL	29
EXTERNAL STAKEHOLDERS	30
EXTERNAL STAKEHOLDER ENGAGEMENT	30
INTERNAL STAKEHOLDERS	30
INTERNAL STAKEHOLDER ENGAGEMENT	31

---

BUSINESS CONTEXT	<b>32</b>
EXTERNAL BUSINESS CONTEXT	33
INTERNAL BUSINESS CONTEXT	34
ASSET MANAGEMENT MATURITY ASSESSMENT	35
<b>ASSET MANAGEMENT DECISION MAKING</b>	<b>37</b>
CURRENT DECISION MAKING PROCESS	37
EVOLUTION OF THE DECISION MAKING PROCESS	40
DOCUMENTS TO SUPPORT DECISION MAKING	41
<b>ASSET MANAGEMENT OBJECTIVES &amp; PERFORMANCE TARGETS</b>	<b>43</b>
ORGANIZATIONAL OBJECTIVES	44
ASSET MANAGEMENT PROGRAM OBJECTIVES	46
LEVELS OF SERVICE	47
<b>ASSET MANAGEMENT SYSTEM</b>	<b>48</b>
FRAMEWORK	48
DOCUMENTS	50
ASSET MANAGEMENT PROCESSES	51
INFORMATION MANAGEMENT	53
<b>GOVERNANCE, ROLES AND RESPONSIBILITIES</b>	<b>56</b>
ORGANIZATIONAL GOVERNANCE FRAMEWORK	56
CURRENT STATE OF PROGRAM RESPONSIBILITY	58
ORGANIZATIONAL GOVERNANCE MODEL	58
OVERSIGHT	59



SUPPORT, CONTINUAL IMPROVEMENT AND MONITORING	59
ADVOCACY AND LEADERSHIP	61
THE ASSET MANAGEMENT STEERING COMMITTEE	62
COLLABORATION, EXPERTISE AND IMPLEMENTATION	63
ROLES AND RESPONSIBILITIES	63
.....	
RISKS	<b>64</b>
.....	
KEY IMPROVEMENT INITIATIVES	<b>66</b>
.....	
CONTINUAL IMPROVEMENT AND MONITORING	<b>68</b>
.....	
APPENDIX A – ASSET MANAGEMENT PLANS	<b>70</b>
.....	
APPENDIX B – ASSET MANAGEMENT ROADMAP	<b>74</b>

# 1 | ACRONYMS AND ABBREVIATIONS

Airdrie	City of Airdrie
AMS	Asset Management Specialist
CAMRA	Comprehensive Asset Management Review and Assessment
CAO	Chief Administrative Officer
City	City of Airdrie
CMMS	Computerized Maintenance Management System
FDM	Fire Data Management
GIS	Geographic Information System
ISO	International Organization for Standardization
IAM	Institute of Asset Management
KPI	Key Performance Indicator
LAMP	Leadership in Asset Management Program
LOS	Levels of Service
O&M	Operations and Maintenance
PSAB	Public Sector Accounting Board
SLT	Senior Leadership Team
SMART	Specific, Measurable, Achievable, Relevant, and Time Bound
TBL	Triple Bottom Line
TCA	Tangible Capital Assets

## 2 | TERMS AND DEFINITIONS

**Asset** – an item, thing or entity that has potential or actual value to the City, including natural assets.

**Asset Condition** – the measure of the physical state of an asset, but may also include functional and demand considerations.

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

**Asset Management Program** – the goal of the Program is to embed asset management into the City’s daily operations.

**Asset Management Policy** – the intentions and directions of the organization as formally endorsed by its Council and executed by senior management.

**Asset Management Information** – meaningful data relating to assets and asset management.

---

**Asset Management Plan** – documented information that specifies the activities, resources and timescales required for an individual asset, or a grouping of assets, to achieve the organization’s management objectives.

**Asset Management System** – the management system for asset management whose function is to establish the asset management policy and asset management objectives

**Business Case Evaluation** – the framework to develop and evaluate business cases for investment decisions.

**Capital Maintenance** – the capital funded activities required to maintain the current level of service to the community and/or other stakeholders.

**Critical Assets** – assets for which the financial, business, or service level consequences of failure are sufficiently severe to justify proactive inspection and rehabilitation. Critical assets have a lower threshold for action than non critical assets.

**Infrastructure** – the system of core assets such as roads, bridges, water distribution system, sanitary system, storm water system and fibre network.





**Levels of Service (LOS)** – the service objectives that the City intends to deliver, includes measures at the corporate, customer and asset maintenance levels of the organization.

**Objectives** – a result to be achieved. Objectives can be expressed in a variety of ways and can be either strategic, tactical or operational.

**Outcome** – the overall desired or actual result of a service. Service level outcomes define what the service is supposed to achieve (for example, a “reliable” service).

**Key Performance Indicator (KPI)** – a qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.

**Risk** – the effect of uncertainty on objectives. An event that impacts the achievement of objectives and deals with the uncertainty. It is measured in terms of consequence and likelihood.

**Risk Management** – the application of a formal process to the range of possible values relating to key factors associated with a risk to determine the resultant ranges of outcomes and their probability of occurrence.

**Senior Leadership Team (SLT)** – the group of people at the City of Airdrie who direct and control the organization at the highest level. Represents the Chief Administrative Officer (CAO) and the Directors who are responsible for setting direction within the organization.

**Stakeholders** – a person, group, or organization that can affect, be affected by, or perceive themselves to be affected by a decision or activity.



---

**Triple Bottom Line (TBL)** – an expansion on the traditional view of an organization’s financial bottom line by also measuring the organization’s commitment to social and environmental factors.

---

The City of Airdrie is a **young, vibrant community** where citizens enjoy the availability of new, effective infrastructure, extensive transportation networks, reliable water systems and valued cultural and recreation facilities. The opportunity is now to put in place a framework that **ensures responsible financial management** is maintained and that will see assets well looked after and maximized. Only in this way, can community sustainability be met, bringing citizens today and tomorrow, municipal services that greatly contribute to **quality of life**.

---



## 3

# BACKGROUND

## OUR COMMUNITY

Airdrie continues to be one of the fastest growing communities in Alberta and Canada. Over the past five years, Airdrie has experienced an average annual growth rate of 7.48 percent and has doubled in population over the last ten years. On average, Airdrie continues to attract eight new residents every day.

The influx of people and increase in development has created an unprecedented demand on available land within the City limits. In 2007, the population was 31,512. In 2017, the population grew to

---

64,922, which is an average increase of 5.14 percent per year over that time period and a 206 percent increase overall. In 2012, the Alberta government approved the annexation of 12,640 acres of land from Rocky View County. The annexation more than doubled the geographic footprint of the City. Planning for the annexed lands (79 quarter sections) is underway.

In order to support our community and citizens, the City offers a diverse suite of services with the associated service-supporting assets. These assets include water services infrastructure (fresh water, wastewater, and stormwater), roads, parks, buildings, technology, and vehicles and equipment.

---

Airdrie is a **vibrant, caring community** rich in urban amenities and opportunities for everyone. We value a healthy, sustainable environment **connecting people and places.** (AirdrieONE)

---

## **OUR COMMUNITY'S VISION**

The City is responsible for managing assets that support the services provided to the community in an effective, efficient and sustainable manner.

The performance of the City's service-supporting assets provides the foundation for economic development, competitiveness, prosperity, reputation and the overall quality of life for residents. Reliable and well-maintained assets are essential for the City to deliver core services to the community.

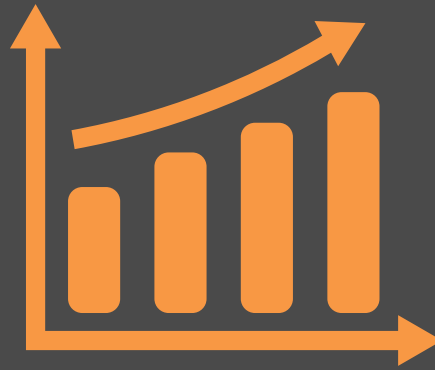
## **SUSTAINABILITY**

Sustainability is a key component of all corporate strategies and plans at the City. The City aligns strategic planning objectives and priorities to the AirdrieONE Sustainability Plan, which is used as the guide for sustainable decision making throughout the City.

In terms of asset management, sustainability includes applying sound environmental, social and economic principles which take into account present and future needs of users.

This includes consideration of all asset and non-asset based solutions required to deliver services, as well as the ability and willingness of the community to pay for services on both a short and long-term time horizon.

The following principles outlined in the City's Asset Management Policy which directly supports the City's sustainability model.



## GUIDING PRINCIPLES

**STRATEGIC AND FORWARD LOOKING:** the ability to make informed decisions and provisions for future growth and development.

**CUSTOMER SERVICE FOCUSED:** defined levels of service that support customer needs.

**BALANCED DECISION MAKING:** A decision-based model that includes balancing service, risk and whole-life costing.

**LONG TERM SUSTAINABILITY:** Triple bottom line considerations, long term planning, climate change awareness and implementing resiliency actions designed to meet customer expectations, legislation and compliance with regulation.

**RISK-BASED:** Ongoing monitoring and management of risk with focus on public safety, resources and risk assessment priority.

**HOLISTIC:** Comprehensive view of the asset that considers the complete life cycle.

**SYSTEMIC:** Formalized methodology managed through governance and compliance adherence.

**INNOVATION AND CONTINUOUS IMPROVEMENT:** Learning, innovation and improvement over time.

**DOCUMENT AND KNOWLEDGE SHARING:** Shared information enables departments to work collaboratively.

---

The Asset Management program will provide **systematic changes** in existing asset management practices at the City and provide a **comprehensive approach** to managing the City's assets to meet established levels of service at the best value, and at an **acceptable level of risk.**

---

---

## **CHANGE**

In the face of challenging local and global environmental issues, increasing costs and changing economies, the City must consider new ways to incorporate sustainability and long-term financial planning into all activities. A scenario of prolonged funding shortfalls will create a backlog of priority projects that will eventually affect the City's ability to deliver quality public services to its residents.

## **ASSET MANAGEMENT**

To address these and other challenges, the City has adopted an asset management approach. Asset management is a business model and management system made up of many elements (called asset management practices) for the sustainable creation, acquisition, maintenance, operation, rehabilitation and disposal of assets.

The most compelling reason for implementing asset management is the focus on evidence-based decision making. Asset management practices will help the City find the responsible balance (economic, environmental, social and cultural) between what it can provide and what it can afford to provide.

Asset management will help the City determine Levels of Service (LOS) and asset priorities and options. It will help clarify future consequences and impacts of different asset and service level decisions by providing decision makers with information and the decision support tools to:

- make well-informed, evidence-based decisions
- validate priorities in a defensible way
- understand what factors impact service and their associated costs
- optimize the life cycle of assets
- minimize the cost of service provision



Asset management will also enable the City to provide proof of good governance and measures of current and long-term service delivery performance and sustainability.

As it progresses, the Asset Management Program has been referring to the following for guidance:

- Institute of Asset Management – a professional body for those involved in acquisition, operation and care of physical assets. IAM is recognized worldwide and is dedicated to furthering knowledge and understanding of asset management.
- ISO 55000 – an international standard covering management of physical assets.
- Leadership in Asset Management Program (LAMP) – a Government of Canada program that enables municipalities to better integrate sustainability goals into decision-making about infrastructure assets and services, such as roads, drinking water and sanitation. The goal is to ensure municipalities provide the best environmental, economic and social value for communities over the long term. Twelve municipalities are participating in the program.



---

## **ASSET MANAGEMENT AT THE CITY**

The City defines asset management as *“the process of making decisions about the use and care of infrastructure to deliver services in a way that considers current and future needs, manages risks and opportunities and makes the best use of resources”*. Asset management at the City, relies on the integration of four key organizational components to achieve the desired service outcomes:

- well planned strategies
- good physical assets
- highly trained professionals with respect to practices and procedures
- integrated business processes

These components, supported by appropriate technologies, provide a robust foundation for efficient service delivery.

# 4 | PURPOSE AND SCOPE

The Asset Management Strategy is a core component of the City’s Asset Management System. This strategy is a high-level document that describes how the policy will be implemented. It documents the City’s objectives for asset management and describes the role of the Asset Management System in supporting achievement of those objectives by:



**Describing the role of asset management in achieving organizational objectives within the scope of mandated principles and requirements as stated in the Asset Management Policy**



**Documenting information that specifies how organizational objectives have been translated into asset management objectives**



**Describing the Asset Management System and its role in supporting achievement of asset management objectives**

The functional relationship between the Asset Management Strategy and other documents and activities in the Asset Management System is outlined in Figure 4-1 below.

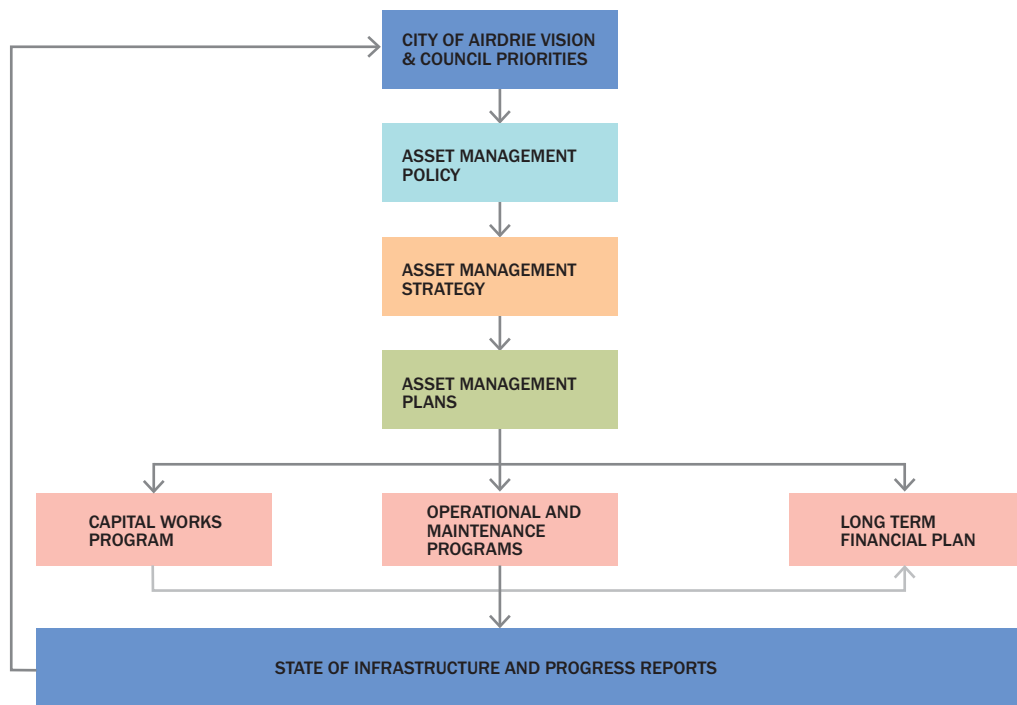


Figure 4-1. Asset Management Document Relationships



**Providing a framework for the implementation, operation and maintenance of the Asset Management System and implementation of specific asset management practices**



**Informing the approach for developing Asset Management Plans. (More information on Asset Management Plans is provided in Appendix “A”)**

## **INTENDED OUTCOMES OF THE ASSET MANAGEMENT STRATEGY**

The Asset Management Strategy serves to:

- Determine the scope of the Asset Management System.
- Document and demonstrate an integrated approach to planning and coordination of asset management outcomes across the defined core services and levels of service.
- Detail the role of the Asset Management System to achieve the asset management objectives.
- Identify key initiatives that support delivery of the Asset Management Policy.
- Define what the City intends to achieve from asset management activities and by when.
- Specify how organizational objectives are to be converted into asset management objectives.
- Develop a set of actions aimed at improving asset management practices across the City.

Primary outcomes are expected to:

- Achieve alignment between corporate objectives and asset management objectives.
- Establish clear and common understanding between all stakeholders of the asset management objectives, tactics and actions that reflect the principles of relevant corporate policies.
- Provide internal stakeholders with direction, alignment and prioritization for system-thinking and development of long term management plans for assets.

The Asset Management Strategy applies to all assets identified in the City’s asset register and is concerned with their whole life cycle planning, namely: strategy, investment, design, selection, purchase, build, commission, operation, maintenance, support and disposal.

## ASSET MANAGEMENT SERVICES AND ASSOCIATED ASSETS

Table 4-1 provides an overview of the City’s core services and associated assets. The table is organized to show the major assets associated with each Business Unit. The Asset Management Program considers these services and assets in all references to “City assets”.

Table 4-1. City of Airdrie Business Units and Major Assets

#	Business Unit	Major Asset(s)
1	<b>Arena Operations</b>	Plainsman Arena, Ron Ebbesen Aena and Twin Arena
2	<b>Parks</b>	Parks, Green Space, Play Structures, Pathways, Outdoor Sports Courts, Trees
3	<b>Building Operations</b>	All City Buildings/Facilities
4	<b>Water Services</b>	Water Distribution, Sanitary Collection and Storm Drainage
5	<b>Fire Services</b>	Fire Vehicles and Equipment
6	<b>Engineering Services</b>	Bridges and New Engineered Structures
7	<b>Fleet Services</b>	Corporate Fleet
8	<b>Genesis Place</b>	Genesis Place and related assets and equipment
9	<b>Information Technology</b>	User Devices, Network Infrastructure, Software and Equipment
10	<b>Roads</b>	Roads, Sidewalks, Signs
11	<b>Transit</b>	Transit Fleet, Bus Stops, Bus Barn
12	<b>Bert Church LIVE Theatre</b>	Theatre Equipment
13	<b>Community Development</b>	Public Art
14	<b>Waste and Recycling Services</b>	Recycle Depots, Residential Bins
15	<b>Corporate Properties</b>	Land, Corporate Building New Construction and Redesign, Office Equipment and Furniture

Each of these business units operates within unique environments. Asset Management Plans will be developed by units which will provide greater asset type detail by the various functions. The fifteen business units listed above represent the asset intensive business areas. The City owns three subsidiaries (Airdrie Main Street Square, Airdrie Public Library and Airdrie Housing Limited). Each subsidiary has custody of assets. In future years, the Asset Management Program will look to align best practices within these organizations.

Natural assets currently exist and include such amenities as ponds, streams and other natural ecological areas. This category of asset will not be part of the core focus however will be considered in future program scope.

### **THE PERIOD OF RESPONSIBILITY**

The period of responsibility for the assets and services that are owned and managed by the City are indefinite. The City will manage all assets throughout their reasonable lifespans and will provide the service that the assets support indefinitely, unless alternative methods are employed or the service is no longer required.

The processes and activities described in this document are continually changing, and therefore, this document is only up-to-date at the time of publication. Any significant changes to the City's strategic priorities and policies will trigger a review, but any other changes will be captured during the next periodic review.



# STRATEGIC ALIGNMENT OF THE ASSET MANAGEMENT SYSTEM

This Asset Management Strategy is the basis for delivery of the Asset Management Policy, as well as efficient compliance with the business needs and alignment of corporate goals and priorities. Asset Management objectives are SMART (Specific, Measurable, Achievable, Relevant and Time Bound) and aligned to the City's strategic direction statements. Figure 5-1, on the following page, shows the concept of line of sight from the City's Vision, Mission and Values down through the Organizational Strategic Plans, Asset Management Policy, Asset Management Strategy and Asset Management Plans.



Figure 5-1. Asset Management Line of Sight

How the City’s assets are managed and operated plays a key role in achieving the City’s strategic goals and objectives. Many of these goals and objectives are reliant on the long-term sustainability of the City’s infrastructure; therefore, one of the aims of this Asset Management Strategy is to put in place a clear line of sight between those high level objectives and the day-to-day activities carried out on the assets. The Asset Management Program, in effect, is helping to create the Asset Management System, which will allow the City to achieve defined asset management objectives. Figure 5-2 below illustrates how the Asset Management System and the practices of asset management relate within an organization.

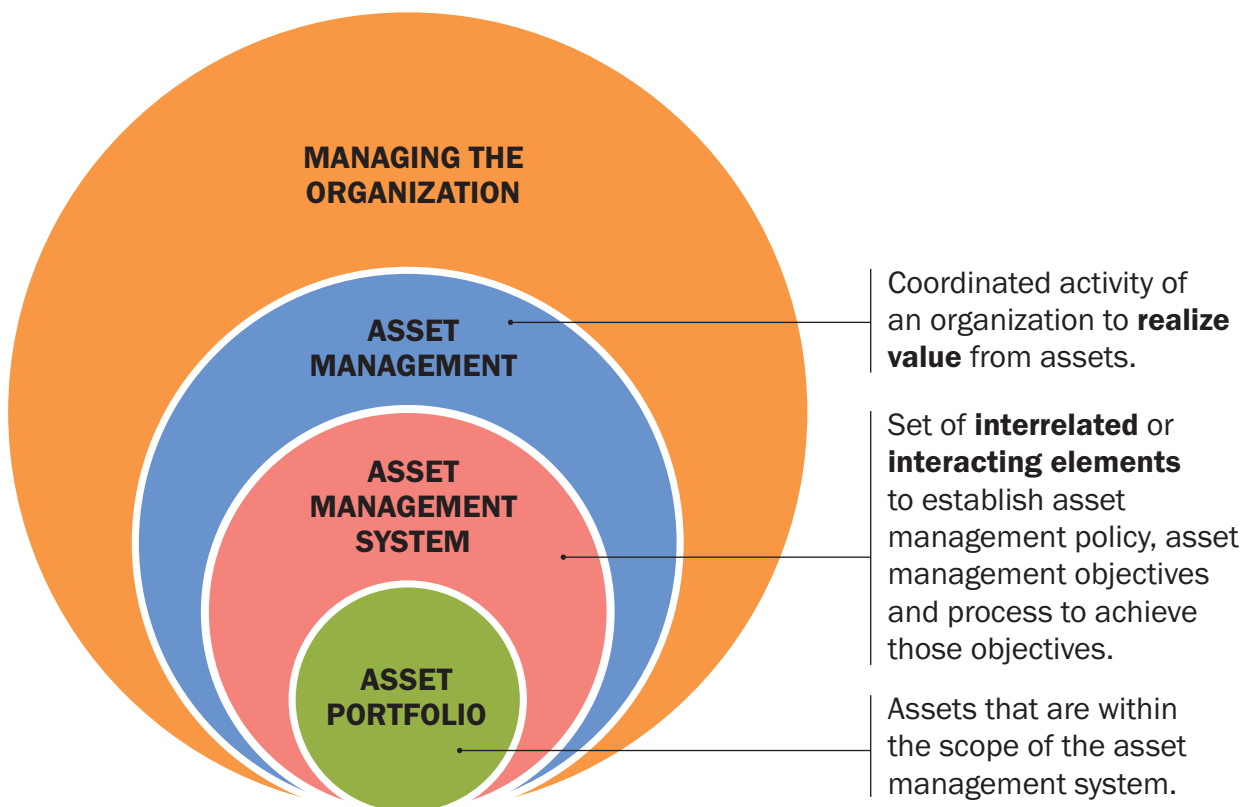


Figure 5-2. Asset Management Relationships

The following Figure 5-3 further illustrates where asset management practices and the Asset Management System are integrated into daily business, corporate functions and management practices.

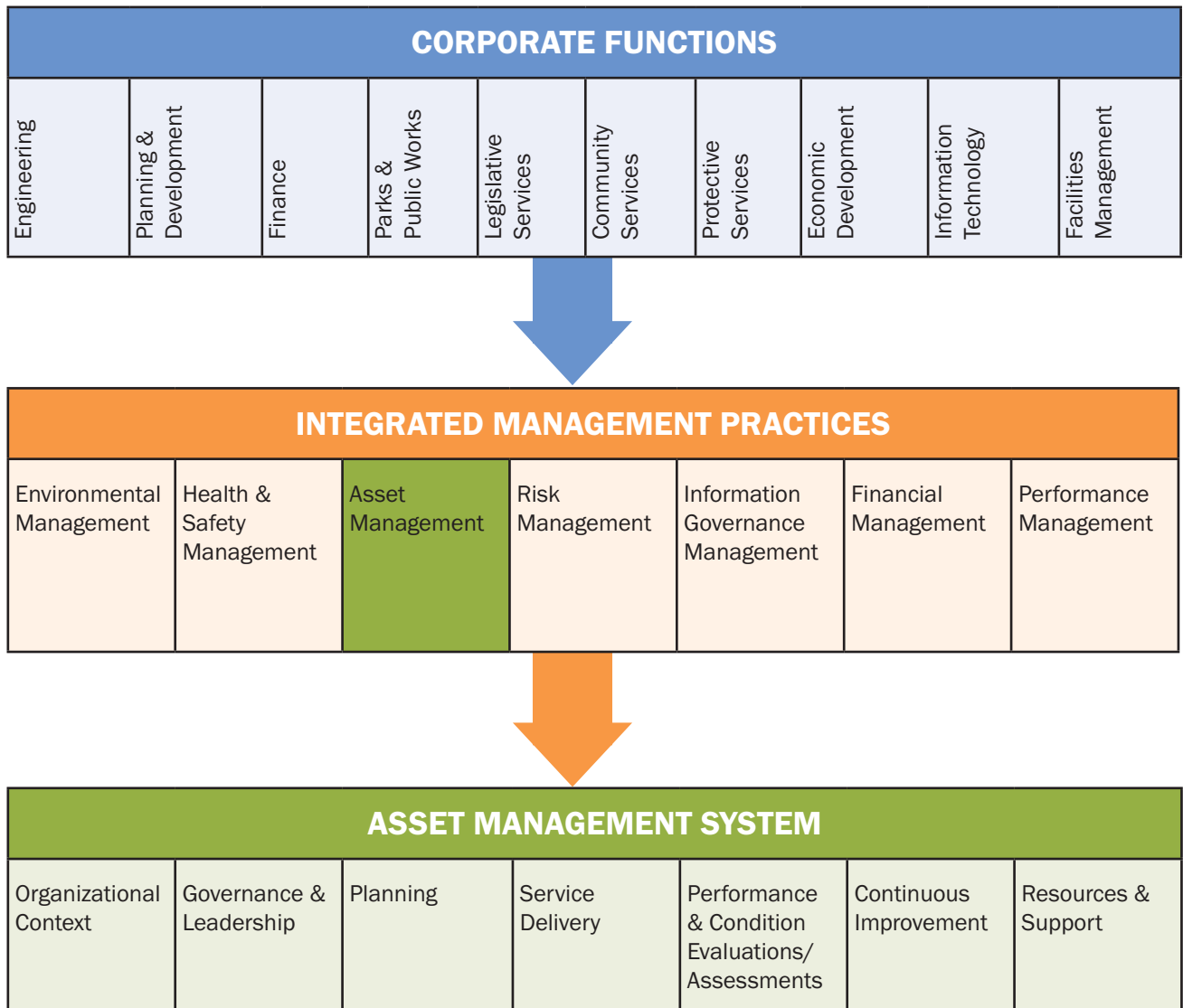


Figure 5-3. Asset Management Practices

Building on the City’s Vision, Mission and Values, there are a number of corporate documents that guide and direct the planning and management of assets which help to translate organizational goals into asset management objectives. Key corporate strategic planning documents at the City include the following:



**AIRDRIE ONE SUSTAINABILITY PLAN (2012) – is a high level strategic document for the City that identifies sustainability goals, objectives, actions and measures. It informs the City’s strategic planning and business planning functions including the City’s priority setting and future investment decisions, with the intent of moving the City towards a more sustainable future. It provides guidance for updating and aligning key planning documents, such as the Great Places Parks Master Plan, Airdrie City Plan and the Land Use Bylaw. It reflects the vision statement, guiding principles and priorities that were developed through community input and adopted by Council.**

.....



**AIRDRIE CITY PLAN (MUNICIPAL DEVELOPMENT PLAN – BYLAW NO. B 17/2014) – provides the overall framework for land use planning decision-making geared toward creating livable, sustainable communities. It is a strategic document that guides future statutory and non statutory planning documents, including Area Structure Plans (i.e., the Community Area Structure Plan and the Neighbourhood Structure Plan), Area Redevelopment Plans, the Land Use Bylaw, Master Plans, municipal servicing standards and landscape standards and urban design guidelines.**

In addition to these strategic documents, the City has a number of master planning documents that have been developed. These include the Transportation Master Plan, Emergency Services Master Plan, Recreation Master Plan, Community Needs Assessment, Great Places Parks Master Plan, Utility Master Plan and the Master Stormwater Drainage Plan.

Asset management will take corporate objectives and translate them into technical and/or financial objectives, decisions, plans and asset management related activities. Asset management will ensure that those objectives can be achieved sustainably over a reasonable, realistic, or appropriate amount of time.



## 6 | NEEDS AND EXPECTATIONS OF STAKEHOLDERS

Stakeholders are defined as those people, groups, or entities that can positively or negatively affect projects, programs, initiatives, or change. In the realm of asset management, stakeholders are those that affect decisions regarding assets and the linkage to service provision. Asset management should consider both the provision and delivery of services, as well as the acceptance and use of services. Naturally, both internal and external stakeholders will exist. Internal stakeholders are involved in asset management practices and the Asset Management System. External stakeholders are those that are affected by the services that are provided and the quality thereof.

### **MAYOR AND COUNCIL**

As the voice of the community, the Mayor and Council are key stakeholders. This body is responsible for setting policy and making choices for the community.



## **EXTERNAL STAKEHOLDERS**

The following are primary examples of people or groups that use or participate in the provision of service:

- Citizens / Residents
- Local Business Owners
- Goods and Services Providers to the City
- Regulators
- Developers
- Visitors

While not direct stakeholders, it is recognized that all levels of government and associated agencies can influence asset management practices and decisions.

## **EXTERNAL STAKEHOLDER ENGAGEMENT**

The City of Airdrie facilitates stakeholder engagement activities for certain instances. There is an intention, moving forward, to engage the Community (for example, in order to determine Levels of Service, the Community (Residential and Business) would be consulted).

As asset management practices integrate into the City's daily activities, stakeholder engagement and stakeholder expectations will factor into decision-making.

## **INTERNAL STAKEHOLDERS**

The following stakeholders are considered participants in the Asset Management System and Asset Management practices:

- Mayor and Councillors
- Senior Leadership Team

- Asset Managers (Business Units responsible for the care of Assets)
- Asset Management Team
- Operational Staff

## **INTERNAL STAKEHOLDER ENGAGEMENT**

As the Asset Management System is built and practices are embedded into daily business, a Change Management approach will be utilized to foster adoption and integration of the resulting changes in process, roles and responsibilities, as well as expected outcomes.

A Change Management Strategy was created to help identify obstacles, stakeholders and audiences. Change Management Plans and tactics have been created and are executed accordingly. Change Management tactics comprise communication, training, unique learning mediums and marketing-type campaigns.



# BUSINESS CONTEXT



The context of the City of Airdrie is composed of two facets:

- **EXTERNAL** – is outward facing and looks to issues and trends, many of which are beyond the City’s control. However, the City should be able to leverage some positive trends and manage the assets in a way that mitigates any negative impacts.
- **INTERNAL** – is inward facing and looks to matters that are within the City’s direct control.

## EXTERNAL BUSINESS CONTEXT

Outside of the organization, business context and factors can be described as:



**POLITICAL** – Airdrie City Council addresses the concerns and manages expectations of Airdrie citizens and the business community. Growth management is a key issue.



**ECONOMIC** – Maximizing value against minimal financial expenditure is an expectation of any municipal community. However, this may not be the reality, as factors such as growth and infrastructure upkeep become the increasing dichotomy.



**SOCIAL** – Growth management cannot ignore the vast range in population demographics that transfer in and out of the community (i.e. financial status, stage of career, familial situations and educational background).



**ENVIRONMENTAL** – The arid climate of southern Alberta precludes the community from the immediate force of water, as in other North American regions; however, climate change and environmental sustainability must be integrated into infrastructure planning and maintenance.

## INTERNAL BUSINESS CONTEXT

Looking holistically at the City (along with current initiatives progressing) the internal business and the place of asset management.

Figure 7-1 on the following page identifies four major organizational assets: physical, people, financial and information. The City has strategic activity underway that addresses each of these areas. Along with strategies in place to deliver an asset management program, core teams have been assembled to deliver on the following:

- Information Governance and Management Program
- Fiscal Sustainability Framework

Synergies exist between all three of these areas and the teams ensure that alignment exists within each of the frameworks and strategies.

The final element, or People element, is a key pillar in the organization. Corporate training programs, support and change management strategies will continue to support the delivery of strategic outcomes.

### MANAGING FOUR ASSETS

PHYSICAL



PEOPLE



FINANCIAL



INFORMATION



Figure 7-1. Organizational Assets

## ASSET MANAGEMENT MATURITY ASSESSMENT

An assessment was conducted by CH2M Hill Consultants in the form of a workshop with an excellent cross-section of leaders and staff from across the organization. Thirty-five questions were asked of the group and a consensus score/rating was assigned. A score of “5” indicated that the concept or practice referenced in question was complete and fully implemented, while decreasing scores, with “0” being the minimum, indicated a decreasing level of completion or readiness.

A formal report was created by CH2M Hill Consultants with detailed descriptions on what each question relates to and the levels of readiness for each score.

As per CH2M Hill Consultants, the City of Airdrie has been assessed as having a maturity level between Level 1 (Awareness) and Level 2 (Developing).

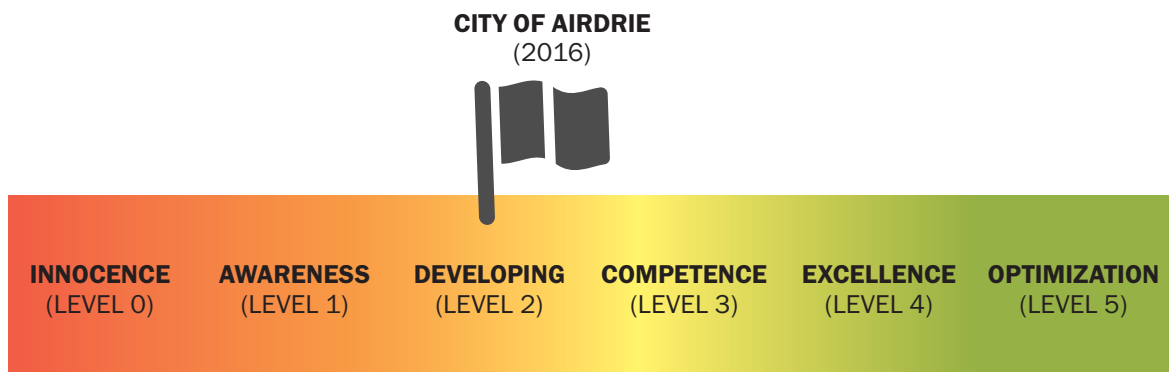


Figure 7-2. Overall Assessment of Asset Management Maturity

The supporting data arrived at this assessment and has been captured in a radar chart that contemplates a series of 35 questions. The following figure provides a summary of the corporate-wide results.

1	Organizational Strategic Plan	3.5
2	Monitoring Performance Against the Organizational Strategic Plan	2
3	Scope of the Management System for Asset Management	1
4	Asset Management Policy & Strategic Asset Management Plan	1.5
5	Asset Management Leadership & Governance	3
6	Asset Management Roles & Responsibilities	2
7	Master Plan for Development of Asset Management Business Processes & Procedures	1
8	Master Plan for Development of Asset Management Skills & Competences	1
9	Master Plan for Development of Asset Management Information Technology	1
10	Level of Service Framework including Sustainability Considerations	2
11	Cost of Delivery	2
12	Forecasting	2
13	Future Trends (Impact Of Growth)	2.5
14	Service Engagement/Goal Setting	2.5
15	Legal, Regulatory & Statutory Requirements	2.5
16	Asset Inventory	2.5
17	Asset Information	2.5
18	Information Management	2.5
19	Business Applications	2.5
20	Risk Framework – Strategic Level & Asset Level	2
21	Optimized Asset Intervention Planning	2.5
22	Asset Management Plans	2
23	Capital Investment Plan Development & Governance	2.5
24	Capital Projects – Planning, Design & Construction	3
25	Operations Management	4
26	Maintenance Management	3.5
27	Investigation and Recording of Routine Asset Failures & Reactive Work	2.5
28	Materials Management	.5
29	Emergency Preparedness and Response	4
30	Control of Documented Information	2
31	Learning & Development	2
32	Knowledge Retention & Succession Planning	2
33	Asset Management Quality Assurance & Management Review	1
34	Continual Improvement Culture	2
35	Communication & Change Management	3

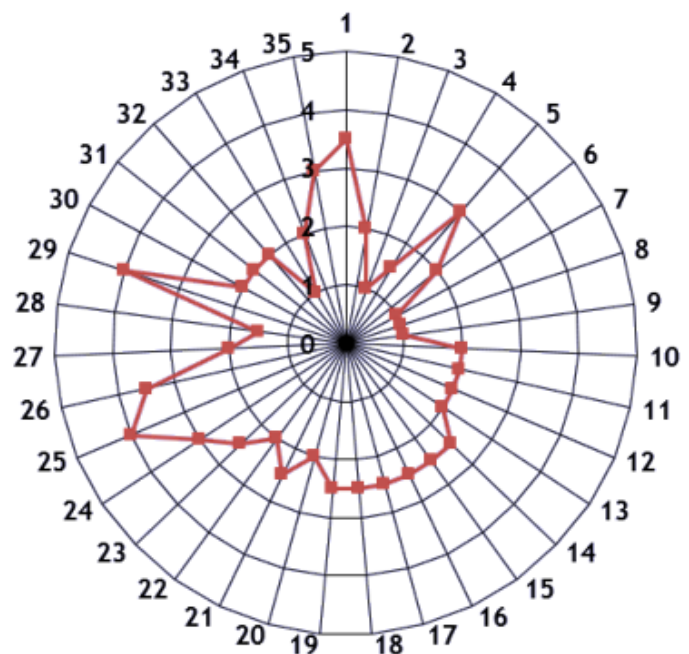


Figure 7-3. Plotting Results of AM Maturity Assessment

As the City of Airdrie moves ahead with Asset Management practices, these questions and scores can be revisited periodically as a measure of success and as a road map for moving forward.



8

# ASSET MANAGEMENT DECISION-MAKING

The fundamental goal of the Asset Management Program is to support informed decision-making. As can be seen within the Asset Management Framework, asset information is one of the seven significant components. Holistic, validated and relevant data associated with City assets and tied to level of services will be analyzed and brought forward to formulate future planning.

## **CURRENT DECISION-MAKING PROCESS**

The City currently follows a traditional method for making decisions. The annual budget and planning cycle is the avenue where maintenance and capital renewal/improvement programs are determined. New programs and services are also established. The planning process is a cyclical affair spanning each year from March to December. Figure 8-1 on the following page demonstrates the main elements.

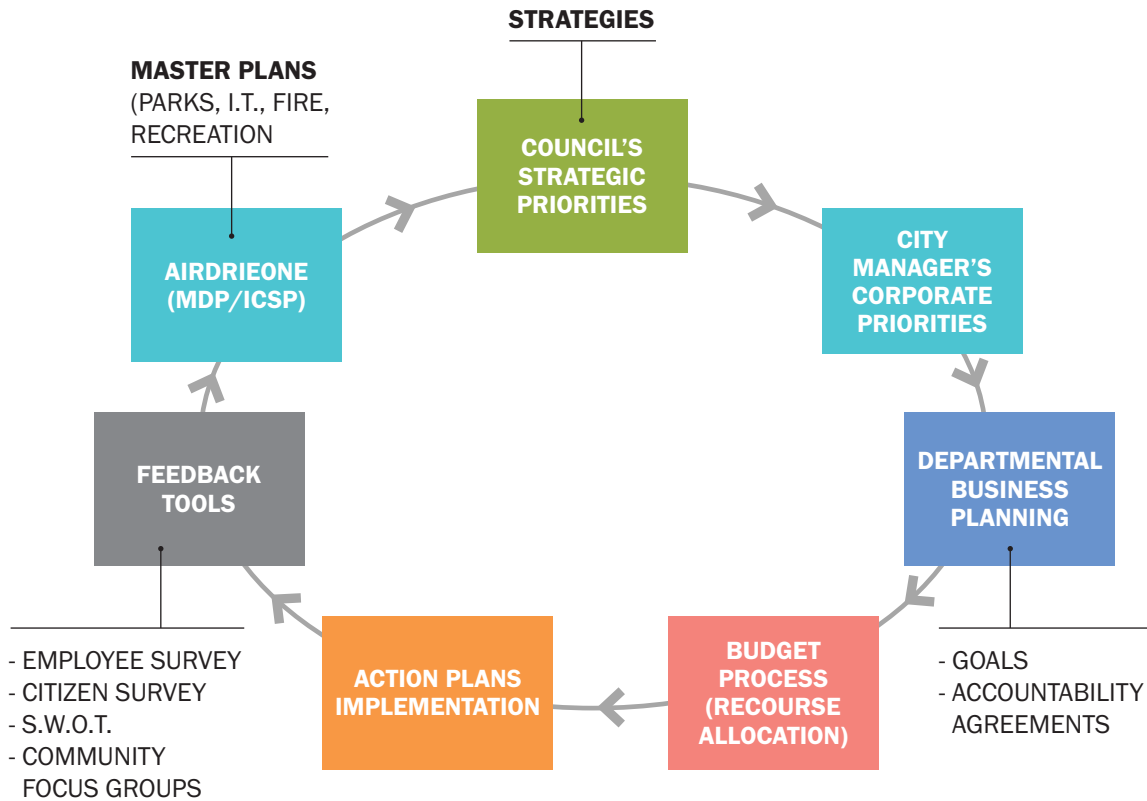


Figure 8-1. Asset Management Planning Cycle Elements

Holistic, validated and relevant data associated with City assets and tried to level of services will be analyzed and brought forward to formulate future planning.

This current process is built on a number of good practices. As well, challenges and limitations do exist.

<b>Elements of Strength within the current process</b>	<b>Shortcomings with current process</b>
Overarching City Vision exists	Services and level of service is not clearly defined
Annually Council and Corporate Strategy is developed	Costing of services is not comprehensive
AirdrieONE acts as a guiding document to reach community sustainability	Limited amounts of data substantiate requests
Master Plans are in place for major components of the City operations; strategies from these plans feed into the planning cycle	Data analytics are limited within current system
City departments develop departmental business plans including necessary actions related to goals	Long-term effects of potential decisions are not determined and made available
Resources are assigned to maintain current services and fund new initiatives and increases/new services levels	Business case evaluation is not used for major initiatives
	No formalized method exists to compare the priority of different recommendations/ requests
	Little to no checks and balances exist to ensure valid data is included in justifications

Although no formal system exists for ranking and prioritizing, informal criteria is used to evaluate various alternatives and request. The criteria is described as follows:

- Public Health and Safety: this criteria would warrant high ranking for situations that could result in real and imminent risk to the community
- Legislative requirements
- Managing existing assets that are essential to the delivery of services
- Additional assets to sustain current service levels
- Alignment to council or corporate strategies and masterplans
- Development related projects
- Cost savings and efficiencies

## **EVOLUTION OF THE DECISION MAKING PROCESS**

In order to achieve the overall goal of the Asset Management Program, success must be found within making better-informed decisions.

Progressive establishment of the major elements of the Asset Management Framework will bring systematic improvements to the planning process.

Decision-making will be linked to the achievement of organizational objectives and will be supported by asset management information.

The objective is to develop and implement an improved planning process that includes prioritization methods to evaluate proposed projects and programs. Prioritization methods will consider Council, corporate and citizen priorities, service delivery obligations and commitments, risk tolerance and management, as well as asset life cycle information. The following diagram illustrates the formal Capital Investment Planning Process.

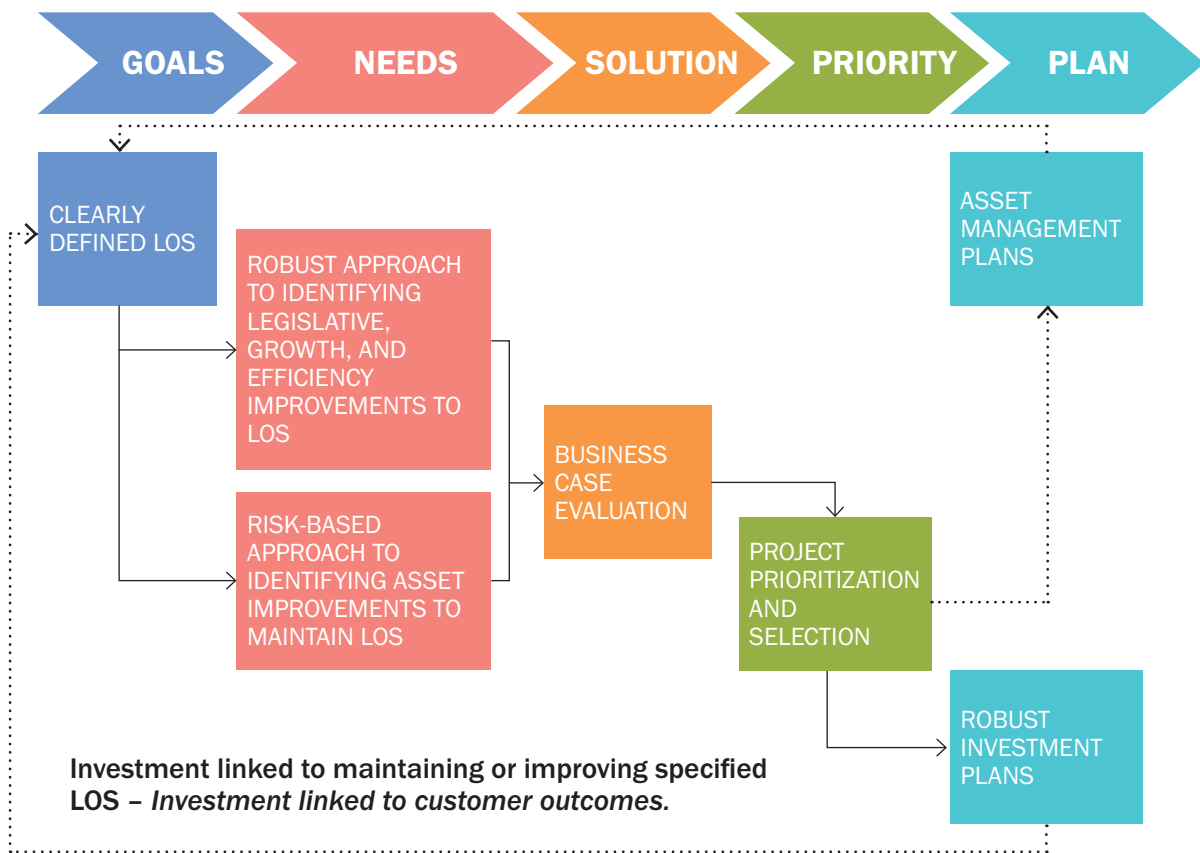


Figure 8-2. Investment Planning Process

This planning process will support the City’s ability to provide agreed upon levels of service and will implement robust, transparent defensible plans. This process focuses on linking investment decisions to customer-orientated service delivery. Goals will be identified, needs will be determined, a variety of feasible solutions will be formulated and prioritization will facilitate setting plans.

## DOCUMENTS TO SUPPORT DECISION-MAKING

Asset Management Plans will play a key role in assisting the decision-making process. These plans will tie existing data, strategies, plans and goals into one cohesive document. See Appendix A for information related to standardized information required within the plans.

It is important to understand that various other key organizational documents will be considered during the preparation of Asset Management Plans. These include the following:

- AirdrieONE Community Sustainability Plan
- Council and Corporate Strategy documents
- City Plan
- Fiscal Sustainability Framework
- Endorsed master plans

Any changes to existing key documents, as well as the development of a new document, will drive an update to Asset Management Plans. The Asset Management Plans will inform the planning cycle and vice versa.

The City's Asset Management Plans will be based on acceptable business practices and methodologies, which will call for the use of verifiable data, established decision-making criteria, risk considerations and robust analysis. Support for decisions will be unbiased and clearly understood by all users.



9

# ASSET MANAGEMENT OBJECTIVES & PERFORMANCE TARGETS

One of the fundamental components of asset management is to “translate the organizational objectives into technical and financial decisions, plans and activities” (ISO 55000). Thus, the City’s asset management objectives are aligned with and support organizational objectives and priorities. Asset management objectives direct the development of the Asset Management System, align with the strategies and plans for each service area and guide the allocation of asset management resources.

## ORGANIZATIONAL OBJECTIVES

The City aligns strategic and organizational objectives to the AirdrieONE Sustainability Plan, which guides decision-making practices throughout the City. The AirdrieONE Sustainability Plan objectives are as follows:



**ECONOMIC PROSPERITY** – Modern, innovative and welcoming, Airdrie is an emerging city of opportunity for entrepreneurs and businesses of all sizes.



**BUILT ENVIRONMENT** – Our built environment is vibrant, diverse, inviting, and contributes to people’s health, safety and well-being.



**SOCIALLY SUSTAINABLE COMMUNITIES** – Our community is healthy and provides ample opportunity for social interactions and meeting people’s needs.



**ARTS, CULTURE, AND RECREATION** – The unique arts, cultural and recreational aspects of Airdrie contribute to its overall identity, sense of place and quality of life.



**SUSTAINABLE NATURAL ENVIRONMENT**  
Environmentally sensitive areas are protected and the Nose Creek natural areas are set aside for conservation and outdoor recreational purposes.





**WATER** – The Community recognizes that water is a scarce and valued resource in this region and takes the appropriate steps to steward it.

.....



**WASTE MANAGEMENT** – The amount of solid waste that is generated in the community is greatly reduced as Airdrie citizens participate in waste reduction, waste diversion and recycling efforts.

.....



**ENERGY** – Our community’s energy use is sustainable and energy consumption is reduced in the community and in the City’s operations.

.....



**SUSTAINABLE TRANSPORTATION** – Our City has an integrated, efficient and affordable transportation system that provides a range of mobility options for people of all ages and abilities.

.....



**GOVERNANCE** – Sustainability principles and approaches are integrated into the municipality’s formal and day-to-day decision making processes.

All aspects of the Asset Management System including the framework and operational processes, are developed in consideration of AirdrieONE and the organizational objectives.

## ASSET MANAGEMENT PROGRAM OBJECTIVES

To support the Program, Council has incorporated foundational principles into the Asset Management Policy. The principles from the Asset Management Policy are described below and align with the Asset Management Program objectives.

1. **Strategic and Forward Looking**
2. **Customer Service Focused**
3. **Balanced Decision-Making**
4. **Long-Term Sustainability**
5. **Risk-based**
6. **Holistic**
7. **Systematic**
8. **Innovation and Continuous Improvement**
9. **Document and Knowledge Sharing**

The following table outlines the Asset Management Objectives:

### Asset Management Objectives

Link infrastructure investment decisions to service outcomes
Make stakeholders aware of the true cost of managing the City's assets to meet agreed level of service
Strive to deliver services at approved level of service while minimizing life cycle costs
Allocate limited resources based on life cycle modelling, multi criteria prioritization (TBL concept) and risk management
Capture relevant asset information and manage this information to enable decision-making
Provide staff with the necessary knowledge and skills to manage assets effectively

Table 9-1. Asset Management Objectives

## LEVELS OF SERVICE

A key objective of the organization and the Asset Management Program is to align service delivery or service provision with asset life cycle decisions. Asset management translates the organization's objectives into asset-related decisions, plans and activities.

The City has completed preliminary work on Levels of Service in the form of a pilot study that involved two customer-facing departments. Senior Leadership considered the results of the pilot; the results provided a good basis to begin discussions and formulate plans. Future work within the scope of the Asset Management Program will see departments work with consultants to determine current services, service levels and identify customer and technical metrics. Alignment to corporate objectives is essential and attention will be maintained to maintain good line of sight.

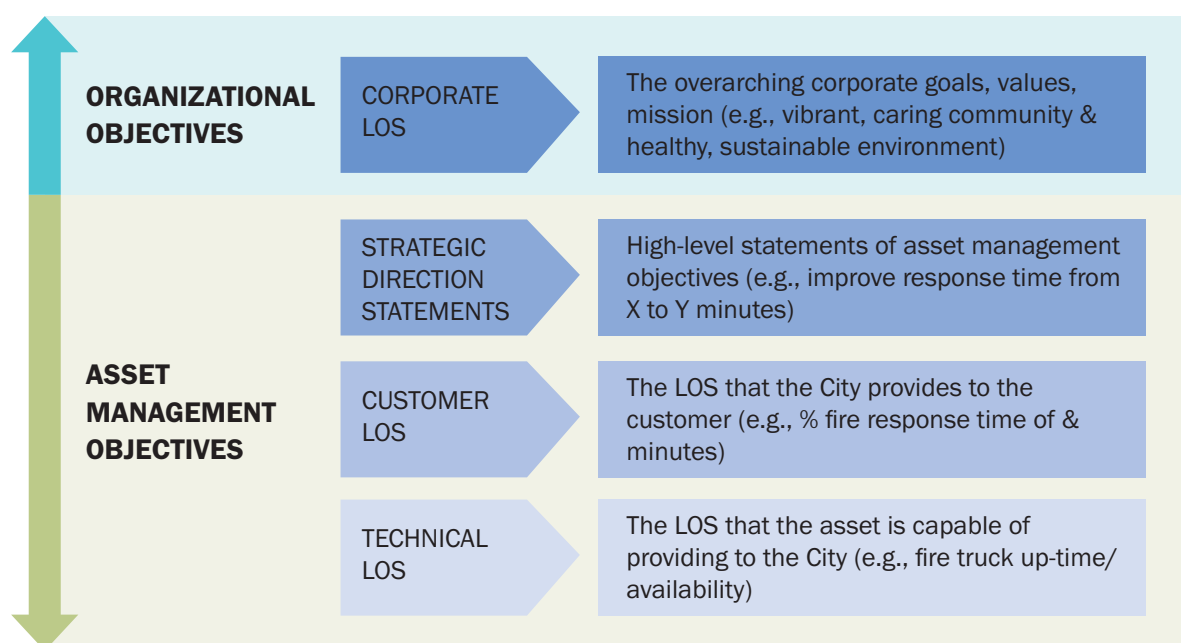


Figure 9-2.

Value that is realized from the assets will be measured against the expectations of stakeholders and will include both leading and lagging measures.

10

# ASSET MANAGEMENT SYSTEM

An Asset Management System (as defined in ISO 55000) is a “management system for asset management”. Therefore, the City’s Asset Management System is not necessarily a technological system, but a business model or standard management approach outlining the linkages between the key elements, practices and processes of an effective asset management approach.

## FRAMEWORK

Understanding and applying core practices and processes within the City’s Asset Management System will assist staff in the efficient and effective management of assets and delivery of services. Several process and practice models exist which offer an excellent foundation for the City’s Asset Management System. The development, implementation and improvement of asset management practices and the documentation of associated processes are ongoing activities.

The City has adopted the Institute of Asset Management conceptual asset management model as the basis for its Asset Management System, as shown on the following page in Figure 10-1.

The graphic illustrates how external forces feed into the development of Corporate Strategic Plans. Within the dotted-lined box, components of the Asset Management System are being built. The Asset Management System is a means to direct, coordinate and control asset management activities and ensure alignment with corporate functions.

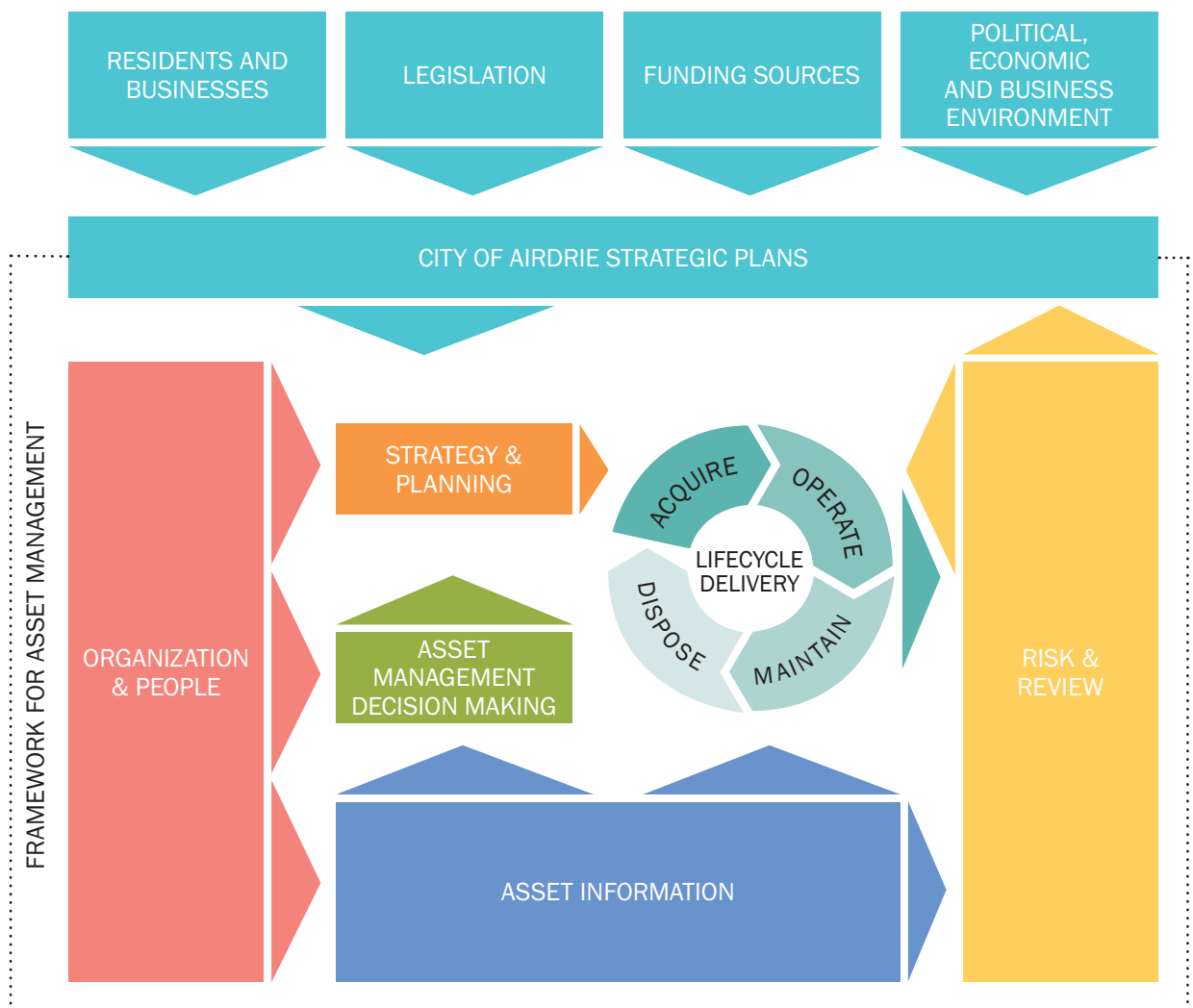


Figure 10-1. The City's Asset Management Framework

## DOCUMENTS

There are a variety of City documents that are relevant to the Asset Management System, as outlined in Table 10-1.

Table 10-1. City Documents Relevant to the Asset Management System

Document Title	Scope/Intended Outcome	References/ Relationships	Status (2017)
Asset Management Policy	Provide leadership and commitment to asset management and provide a set of principles to guide development and implementation across the organization.	Parallel document to support and guide the delivery of asset management throughout the organization.	In progress
Asset Management Strategy	Document corporate level asset management objectives and how they are linked to corporate priorities, inform the approach for developing Asset Management Plans and how asset management will be carried out throughout the organization.	Parallel document to support and guide the delivery of asset management throughout the organization.	In progress
Asset Management Plans	Overall organizational plan for managing assets and services. The Asset Management Plans contain LOS, Demand Management Strategies, Life Cycle Management Strategies, Capital Investment and Renewal Plans, Resource Requirements and Resource/ Training Plans. More information on Asset Management Plans is provided in Appendix A.	These documents provide a link (through LOS) between higher level corporate objectives and more detailed operational objectives. They allow the relationship between cost, performance and risk to be determined.	Pending
Service Area Master Plans	Long range plans that contain planning, development, and operating strategies for each asset class. Contains major demand and risk forecasts and capital programs, as well as any legislated management plans (e.g., Water and Sewer Master Plans).	These documents provide a link (through LOS) between higher level corporate objectives, and more detailed operational objectives including specific legislative requirements.	Completed

## ASSET MANAGEMENT PROCESSES

Core practices and processes within the Asset Management System assist staff in the efficient and effective management of assets and the delivery of services. The development, implementation and improvement of asset management practices (as well as the documentation of associated processes) is an ongoing activity. The Corporate Asset Management Office will be responsible for developing guidance that facilitates a consistent approach for these processes and practices across the organization. Core practices and processes within the Asset Management System include, but are not limited to, those identified in Table 10-3. The processes are grouped into the facets of Assess, Plan and Implement.

Table 10-3. Asset Management Processes

Facet	Process or Practice	Scope/Intended Outcome	Status (2017)
Assess	Asset Management Maturity Assessment	Assess the Asset Management System and improvement areas.	Completed
	State of Infrastructure (Asset Criticality and Risk)	Document the inventory, asset condition, performance and value of assets. This assessment is the foundation for the development of Asset Management Plans.	In progress
	Information Management	Define which data on assets and asset management practices need be recorded, the process for recording it and where it is recorded. This includes asset condition, utilization and performance.	In progress

<b>Facet</b>	<b>Process or Practice</b>	<b>Scope/Intended Outcome</b>	<b>Status (2017)</b>
<b>Plan</b>	LOS	Define LOS measures at the corporate level, at the customer level and at the asset level. Set targets and track performance against targets.	Pending
	Long Term Financial Planning	Develop plan for meeting future demand and infrastructure needs.	Pending
	Asset-Group Life Cycle Planning	Develop life cycle strategies and models to forecast long term investment needs.	Pending
	Risk Management	Use risk to develop short term (1 to 3 year) investment needs to maintain and deliver target LOS; empower service areas to plan actions to prevent or reduce undesired effects.	Pending
	Demand Forecasting and Management	Forecast and plan for meeting future growth and demand, including capital, operating and non asset solutions.	Pending
	Asset Management Plans	Plan for meeting future demand and infrastructure needs that apply the LOS, risk and demand forecasting processes to develop capital and operating plans. More information on Asset Management Plans is provided in Appendix A.	Pending
<b>Implement</b>	Management and Business Reviews	Continuous improvement in the effectiveness and efficiency of the Asset Management System.	Pending
	Performance Review and Reporting	Continuous improvement in the effectiveness and efficiency of service delivery.	Pending
	New Asset Introduction and Legacy Asset Removal	Process of determining whether new assets are required and old assets are to be decommissioned.	Pending
	Change Management	The processes of change management – including the ‘gateways’ that are required for decision making.	In progress
	Safe and Effective Operation of Assets	The multiple procedures that O&M use to plan to operate assets (e.g., electricity isolation procedures).	In progress



<b>Facet</b>	<b>Process or Practice</b>	<b>Scope/Intended Outcome</b>	<b>Status (2017)</b>
<b>Implement</b> cont'd	Asset Management Resources	Management of people and equipment to ensure assets and asset systems meets LOS.	Pending
	Asset Management Plan Delivery	The multiple procedures that the project delivery team and O&M use for the delivery of the Asset Management Plan.	Pending
	Asset Management Dashboards	The procedures, methods and tools used for reporting to City departments on a day to day basis.	Pending
	Asset Manager Level Performance Review	The procedures, methods and tools used for reporting to management on a monthly, quarterly and/or annual basis.	Pending
	Management of Compromised Assets	The procedures for the management of assets that have failed to operate (non conformities).	Pending
	Asset Information Management	Day to day processes for the management of asset data and information (e.g., as built into GIS and asset data into the CMMS).	In progress
	Management of Permits to Work	The multiple procedures that O&M use to deliver the plan for operating assets safely.	In progress
	Management of the Asset Renewal/ Replacement Strategy and Prioritization	Process of determining whether assets are required to be replaced or renewed, including prioritization.	Pending

## **INFORMATION MANAGEMENT**

Good information is necessary when making good decisions. Asset information is a combination of data on physical assets used to inform decision makers. An asset information management strategy includes a systematic approach to managing asset information. It needs to define how an organization intends to assure collection, organization, maintenance, use and analysis of asset information in order to effectively support processes of both strategic and operational execution.

The Asset Management System not only includes people and processes, but also includes all software applications, templates and analysis tools used by the City to support asset planning, delivery, monitoring and improvement. Tools will vary according to need and may be updated and changed as new technology becomes available or the City’s needs change over time.

A high level description of the core asset management tools used by the City, including their purpose/application is provided in Table 10-4. The Information Governance Management Program will provide the necessary standards to effectively manage valuable data.

**Table 10-4.** Description of Different Asset Management Software and Tools Used by the City

<b>Category</b>	<b>Software/Tool</b>	<b>Purpose</b>
Information Management	ArcGIS	Used to track spatial information for assets to create maps both for display and reporting.
	AutoCAD	Capture the drawings of infrastructure. Predominantly used in the Engineering Department.
CMMS (Computerized Maintenance Management System)	Cityworks MTC CFAWin CityMap	The City uses multiple CMMS, including: Cityworks (Parks and Public Works), Maintenance Connection (Facilities – Genesis Place, Arenas, Building Operations), and CFAWin (Fleet).  These tools are used to schedule and implement work that is to be conducted by staff and outsourced organizations. Data, including financial data, is recorded within the CMMS and associated with assets, facilities and geographical locations.
Budgeting and Financial Management	Manual Process	TCA inventory for PSAB 3150 reporting.
	FMW	Budgeting tool for salary, capital and operating budgets
	Microsoft Dynamics GP / Diamond	General Ledger, Purchase Orders, Accounts Payable, Accounts Receivable, Utility Billing,
	Municipal Software	Property Taxation

<b>Category</b>	<b>Software/Tool</b>	<b>Purpose</b>
Permitting and Planning	CityView	Facilitates Building Inspections and Permitting Management of animal and business licensing Subdivision development workflow and processes facilitated through CityView
Project Planning and Delivery	Microsoft Project	Project scheduling
Infrastructure Delivery	Excel/Word	To track and report on project execution. Outputs are MS Project documents and reports (e.g., MS Project schedule, status reports, change requests, etc.).
O&M	SCADA	Water Services currently uses a tool for this.
	Call centre (customer complaints and emergency services)	No central intake point or process for calls into the City. Parks and Public Works have a separate phone line. No centralized call management tool is used.
	ATL (Accelerated Technology Laboratories) Sample Master	Regulatory reporting for Water Services

Information is evaluated using internal and external expertise to create annual and long term work plans. Collectively, this information is used to develop the annual budget and other public documents (such as the department master plans) and will inform the Asset Management Plans once they are developed. More information on Asset Management Plans is provided in Appendix A.

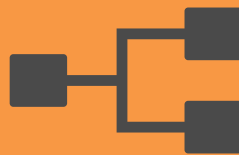
11

# GOVERNANCE, ROLES AND RESPONSIBILITIES

## ORGANIZATIONAL GOVERNANCE FRAMEWORK

A suitable governance structure is a key element for the successful implementation, improvement and sustainment of an Asset Management System. As related to the Asset Management Framework (see Figure 7-1) ‘Organization and People’ is one of the six significant components.

Good governance will bring clarity to accountability and responsibility, provide leadership and direction, will empower staff and manage conflict resolution, as well as foster program advocacy. An effective structure will see progress, continuous improvement and risk mitigation.



---

An effective structure will see progress, continuous improvement and risk mitigation.

---

An effective governance structure aims to support business needs and deliver the following:

- establish supports for the Asset Management System and enable city staff to excel in implementing and managing the components of the system throughout all levels of the organization.
- bring clarity to roles and responsibilities and have a consistent approach to job descriptions across the organization to establish required qualifications and competencies for specific roles.
- establish a corporate support department which will be responsible for looking horizontally across departments to ensure a consistent application of methods and process.

## **CURRENT STATE OF PROGRAM RESPONSIBILITY**

City of Airdrie is in the early stages of establishing an Asset Management System. The core asset management team is under the direction of the Directors of Community Infrastructure and Corporate Services and is responsible for the implementation of the Asset Management Program. The directors are accountable to the CAO and report regularly with regards to progress and strategic alignment.

As foundational pieces become endorsed and established (i.e. policy, strategy and procedure), a transition will occur to establish the organizational supports within a Corporate Asset Management Office.

The Asset Management Steering Committee, as established at the onset of the Program launch, has assisted in bringing coordinated messaging to member departments.

## **ORGANIZATIONAL GOVERNANCE MODEL**

The People element of the Asset Management Framework will provide the structure needed to deliver on the Council endorsed Asset Management Policy, as well as this Strategy. Overall responsibility for the delivery and continuous improvement of the Asset Management Program, rests with the Corporate Asset Management Office. Success will lie in the organization's ability to work together to make progress and achieve goals. Continuous interaction in the form of strategic direction, training, quality management, performance metrics, information flow, coaching and mentoring and dedication will be needed to find success.

The City's Asset Management Governance structure by major function and role is illustrated in Figure 11-1 on the following page.

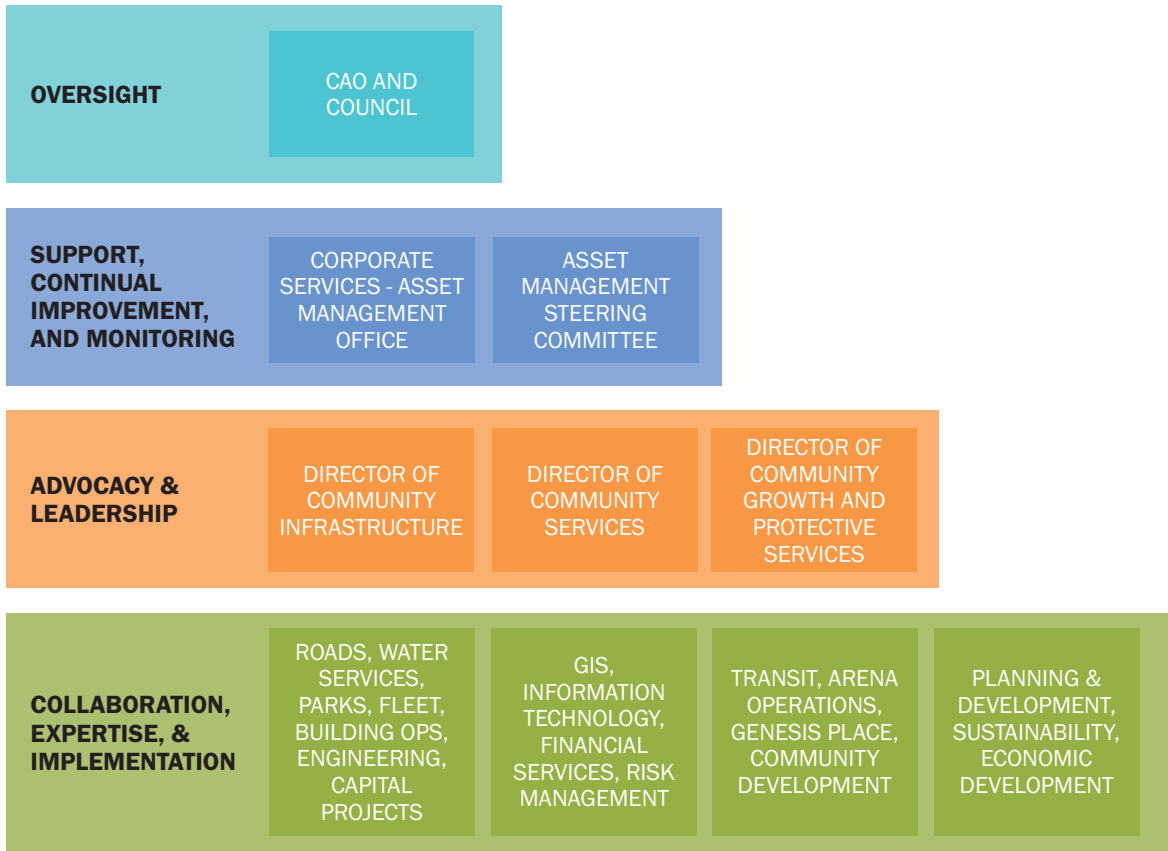


Figure 11-1. Asset Management Governance Structure

## OVERSIGHT

The office of the CAO, with inputs from Council, will provide the overarching corporate direction. The desired goals will be communicated to the organization as a whole and left with the Corporate Asset Management Office for execution.

## SUPPORT, CONTINUAL IMPROVEMENT AND MONITORING

With the direction of the Director of Corporate Services, the Corporate Asset Management Office will endeavor to coordinate, provide and/or facilitate the means necessary to reach goals. Roles within this area would include the Asset Management Coordinator as well as resources to deliver on administrative, technical and project management needs. The following describes the vision of this centralized unit:

- provide corporate wide standards and approach to the asset management discipline by promoting and adhering to industry best practice.
- promote a high commitment level to continuous improvement.
- advance the organization's asset management maturity level.
- support city staff by providing leadership, expertise and training programs.
- foster a culture and establish a process whereby all asset decisions are considered using the best information available and where decisions are in line with objectives of the organization.
- be the asset management communication hub ensuring information flows effectively both horizontally and vertically throughout the organization.

An enterprise approach will be taken with the Asset Management Program where identification and prioritizing will look to deliver successful investment that aligns with the Council Policy.

- Best practice will be established.
- The Asset Management System will be created and managed effectively.
- The corporate office will be responsible for measuring, controlling and improving the Asset Management System.
- Metrics will be measured and tracked and benefits will show progress.
- Standards will be adhered to in a collaborative manor.
- Strategic and investment specific reporting will be provided to meet the needs of senior leadership.



## ADVOCACY AND LEADERSHIP

The City’s senior leaders play the critical role of advocacy and leadership. Senior leaders are comprised of the CAO, directors responsible for City assets, as well as the Director of Corporate Services, the Director of People and Organizational Effectiveness and the Director of CAO’s Office. Managers are also a component of senior leadership as illustrated in the following diagram.

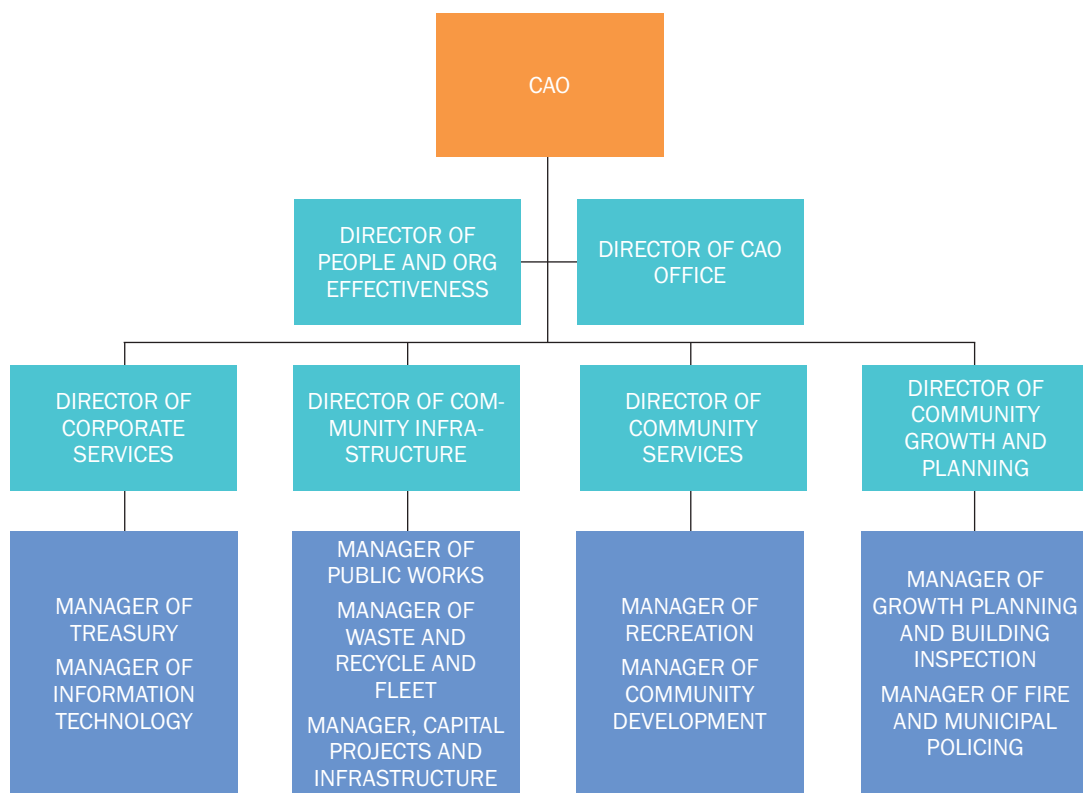


Figure 11-3-3.

The Senior Leadership Team works collectively to provide advice on strategic issues and to generate solutions to organizational challenges related to the implementation of the Asset Management Program. This team is key to gaining consistency with asset management practices and process across departments.

- The Director of People and Organizational Effectiveness and the Director of CAO Office provide support to the CAO and other directorates in areas related to strategy, human resources and legislative requirements.
- The Director of Community Infrastructure has significant span of control over the majority of the City's assets. The directorate includes functions to acquire/construct, maintain and operate assets. Capital investment decisions will be planned for and recommendations will come from this area.

### **THE ASSET MANAGEMENT STEERING COMMITTEE**

The Asset Management Steering Committee will continue to exist with its membership comprised of the directors and managers associated with the four directorates illustrated above. The committee will service to fulfill the following role:

- act as an advisory board for the direction of the Asset Management Program and asset management practices, using subject-matter expertise from departmental areas.
- provide feedback with regards to process changes.
- assist with Change Management tactics by acting or promoting the appropriate role as change agent, in accordance with the Change Management Plan.

---

## **COLLABORATION, EXPERTISE AND IMPLEMENTATION**

At a grass roots level, city staff within directorates are responsible for implementation of systems and processes. Cross collaboration will be essential to collect and keep asset information up-to-date and relevant as well as putting place essential maintenance programs. Roles within this area include Asset Management Specialist (Parks, Roads and Water operations) and Asset Management Technician (Arena and Genesis Place).

## **ROLES AND RESPONSIBILITIES**

Establishment of defined roles within the organization is in its infancy. As foundational pieces continue to be implemented and new work processes are settled in, adjustments and refinements to roles will occur. The following represents positions currently in place.

- **Asset Management Coordinator:** Responsible for the delivery of the Asset Management Program, related projects and defined work. Takes direction from the Program Sponsors.
- **Asset Management Specialist (AMS):** Acts as the liaison between the assigned Business Unit (Parks, Roads, or Water Services) and the Asset Management Program and Information Technology Team, with high interaction with the GIS Team. Key responsibilities include maintaining and collecting asset information, ensuring that Work Order and Maintenance Management practices are being performed and continual improvement exists. The near future will task the AMS with facilitating the collection of condition assessment information.
- **Asset Management Administrative Technician:** Ensures that maintenance management and work order management processes are being practiced and continually improving with the current CMMS at Genesis Place, Arenas and Building Operations.

# RISKS

---

**Risk management** is an important element to achieving the Asset Management Program goals. Early identification is key and risks are identified on a regular basis as implementation progresses. The program team and stakeholders determine the **ideal strategy** for mitigating the risk.

This section describes the high level associated with delivery of the Asset Management Strategy.

---

<b>Event</b>	<b>Impact</b>	<b>Likelihood of occurrence</b>	<b>Risk, Action and Mitigation</b>
Staff turnover, retirements, people transitioning within Asset Management Team	Medium	Medium	In terms of turnover, clearly defined roles and change management can mitigate some scenarios; however, much of this risk must be accepted.
Availability and skill set of staff resources to implement initiatives	Medium	Medium	Identify roles and skills required early and line up necessary resources. Strong and timely communication across involved departments.
Dependencies on successful and timely completion of associated project components	Medium	High	Where possible projects under the Asset Management Program can adjust schedules and align resource asks. Where outside of the Asset Management Program, accept will be the probable action.
Conflicting Corporate Priorities and overload in departments	High	Medium	Continue to obtain CAO endorsement and communicate top priorities.
Asset Management process and tools do not meet the stakeholders needs and expectations	Medium	Medium	Review process and tools and improve if needed; increases training and support. The Change Management Strategy and associated plans will assist.
Lack of Change Management resources	High	Medium	Bring awareness and dedicate corporate resource.
Lack of collaboration across organization	Medium	Low	Change Management Strategy and communication tactics will be created to espouse the benefits and ability to meet corporate vision.
Achieving organizational strategic alignment	High	Medium	Must use all of tools (Change Management, Process Alignment, Education and Training) to implement pieces for alignment. Senior-level endorsement will be key.
Necessary future funding to process on continuous improvement plans	Medium	Medium	Build components of future phases proactively and in accordance with budget timelines.
Lack of buy in by Council, Senior Leadership, and staff	Medium	Medium	Continuous communication with all three stakeholders. Best practice evidence and factors that speak to benefits and value.
Shifting Council priorities and strategies	Medium	Medium	Early communication with newly elected council and presentation of draft policy for endorsement.

# 13 | KEY IMPROVEMENT INITIATIVES

With respect to the integration of asset management principles and best practices into business processes and procedures, the City has been assessed as being in an implementation stage of the Asset Management journey. A summary of the assessment is described in Section 7.3.

The City has benefited from its involvement in the LAMP project, working with other municipalities and learning from their asset management experiences. The key outcomes of Phase I of the LAMP project for the City are:

- an Asset Management Policy
- an Asset Management Strategy
- an Asset Management Framework
- an Asset Management Governance Model

Building on the successes of the Asset Management Program to date, as well as the momentum of the LAMP project, the City has identified key initiatives in order to advance the Asset Management Program over the next three years (2018–2020), as summarized in Table 13-1 and depicted on the City’s Asset Management Roadmap in Appendix B.

**Table 13-1.** Key Initiatives for 2018-2020

<b>Key Initiative</b>	<b>Timeframe</b>
Create Asset Management Plans (by major asset classes or Business Units)	Q1 2018 to Q4 2019
Develop an Enterprise Asset Management Plan	Q1 to Q4 2019
Design a decision making model for asset life cycle decisions	Q1 2018 to Q4 2019
Design a scoring/ranking/prioritization system for capital projects	Q1 to Q4 2018
Develop customer and technical LOS	Q1 2018 to Q4 2019
Develop business cases for an AVL solution; migrating Business Units to Cityworks; an IT asset management solution; and an office furnishing management solution	Q4 2018 to Q1 2019
Analyze integrations to Cityworks	Q4 2018 to Q1 2019
Integrate procurement and inventory control into asset life cycle processes	Q1 to Q4 2019
Monitor work order management processes (organizationally)	Q1 2018 to Q4 2019
Select and implement a TCA solution	Q1 2018 to Q1 2019
Conduct Cityworks Phase II work	Q1 to Q4 2018
Implement asset tracking module for FDM (Fire Services)	Q1 to Q3 2019
Select and implement an IT asset management solution	Q3 2019 to Q2 2020
Select and implement an AVL solution	Q3 2019 to Q2 2020
Establish Condition Assessment Standards	Q1 2018 to Q4 2018
Monitor Condition Assessment Work	Q1 2018 to Q4 2020



# 13 | CONTINUAL IMPROVEMENT AND MONITORING

Continual improvement is a key component of asset management. It drives business efficiency and effectiveness and ensures that over time processes and practices are adjusted for changing circumstances. This also ensures that the Asset Management System consistently delivers required outcomes.

This Asset Management Strategy, along with the Asset Management Roadmap (Appendix B), are living documents that will continue to reflect the evolution of asset management practices within the City. In order to continually evaluate, review, and enhance its asset management practices, the City is adopting a number of continual improvement activities. It will also promote a culture of continual improvement through disciplined performance management, performance benchmarking and collection of customer feedback.

A formal management review of the Asset Management System (including the Asset Management Policy and the Asset Management Strategy) will be completed at least once every five years. If required, a review may be completed more frequently to address issues from annual management



---

reviews and performance reports. The management review will be documented and will include consideration of the following:

- The status of actions from previous management reviews.
- Changes in external and internal operating environments that are relevant to asset management.
- Asset management objectives and achievement of the asset management objectives.
- Asset Management System performance including trends and progress on improvement action plans.
- Opportunities for continual improvement.
- Changes in the profile of risks and opportunities.
- Competency, skills, resources, and support.
- Asset performance and condition.

The outputs from the reviews will include decisions and actions relating to improvements in the Asset Management System and asset management activities including: variations to the scope, policy and objectives; criteria for asset management decision making; updates to performance requirements; resources including financial, human and physical resources; and changes to controls and how their effectiveness is measured including roles, responsibilities and authorities.

The necessary changes and/or corrective actions identified from the management reviews and performance reporting will be documented. Relevant information will be communicated to specific employees and stakeholders.

## APPENDIX A

### ASSET MANAGEMENT PLANS

An Asset Management Plan is defined as *“a plan developed for the management of one or more infrastructure asset classes with a view to operating, maintaining, and renewing the assets within the class in the most cost effective manner possible, while providing a specific level of service.”*

Asset Management Plans document a framework for achieving the strategic goals within each Business Unit, and ultimately the City’s strategic goals, by focusing on LOS, life cycle asset management planning, and the resulting long-term cash flow requirements.

As of 2017, the City does not have any Asset Management Plans. It is anticipated that the City will develop one Asset Management Plan for each of its major asset classes. The asset classes were referenced in Section 2.2 (Scope of the Asset Management Strategy).

Table A-1 provides a list of the nine anticipated Asset Management Plans that will need to be developed to support the Asset Management System.

**Table A-1.** List of Anticipated Asset Management Plans

<b>Asset Class</b>	<b>Asset Types</b>
Facilities	City Buildings, Recreation Facilities, Arenas, Fire Halls
Fleet	Emergency Response Vehicles, Pick Up Trucks, Vans, Construction Vehicles, Transit Buses
Roads	Road Network, Alley, Bridge, Sidewalk
Water	Water Mains (transmission & distribution), Pump/Lift Stations, Water Meters
Storm	Storm Ponds, Mains
Sanitary	Force Mains, Sanitary Mains
Technology	Servers, Desktop Computers, Mobile Devices, Network, Storage Systems, Phone System, Power Systems, Back Up Systems, Infrastructure Appliances
Recycling	Residential Bins, Recycle Depot Equipment
Natural Assets	Trees

While the specific content and scope of each Asset Management Plan may vary depending on the asset type, the City proposes to utilize the structure outlined in Table A-2 for each of its Asset Management Plans.

Table A-2. Proposed Asset Management Plan Table of Contents

#	Section Title	Information to be Included
1	Executive Summary	Version number Financial summary Acronyms and Abbreviations Definitions
2	Introduction	Alignment with corporate documents Stakeholder interests Data confidence
3	State of Infrastructure	Asset inventory Asset valuation Asset age Asset condition
4	Desired Level of Service	Investment drivers Assumptions Trends Targets, measures and monitoring
5	Asset Life Cycle Strategies	Demand management Asset acquisition Asset operations and maintenance Asset renewal Asset recommissioning and disposal
6	Risk Management	Risk register Risk treatment plan
7	Financing Strategies	Historical capital and operating expenditures Sources of funding Project funding requirements Infrastructure gap
8	Improvement Plan	Plan monitoring

In preparing the Asset Management Plans, other longer term strategic documents will be consulted for alignment such as the Airdrie City Plan and the AirdrieONE Sustainability Plan that incorporate items such as population growth, as well as Council's strategic directions. When fully developed, the Asset Management Plans will be able to better inform future versions of the longer term plans, as they will include the desired

---

LOS for the projected population along with a more detailed assessment of the asset capabilities and associated costs for maintenance and replacement.

The shorter term plans, such as the department specific master plans, will be used to inform the growth needs in the Asset Management Plans and other longer term documents.

The process of preparing strategic documents and plans is all encompassing. The Asset Management Plans should inform, but not dictate, the strategic planning process and vice versa. Each version of the Asset Management Plans will respond to decisions made in previous strategic plans, as well as the changing service environment. This allows each service area to be proactive and agile in responding to change.

In addition to having the Asset Management Plans align with Council priorities, it is essential to consider horizontal alignment with other service areas and community partners. Therefore, initiatives and actions contained in the Asset Management Plans need to not only be coordinated, but planned in recognition of other needs and opportunities.

# APPENDIX B

## ASSET MANAGEMENT ROADMAP

2018				2019				2020			
Q1 (Jan-Mar)	Q2 (Apr-Jun)	Q3 (Jul-Oct)	Q4 (Oct-Dec)	Q1 (Jan-Mar)	Q2 (Apr-Jun)	Q3 (Jul-Oct)	Q4 (Oct-Dec)	Q1 (Jan-Mar)	Q2 (Apr-Jun)	Q3 (Jul-Oct)	Q4 (Oct-Dec)
Create Asset Management Plans (by Major Assets or Business Unit)  Design a Scoring/Ranking/Prioritization System for Capital Projects				Develop an Enterprise Asset Management Plan  Design a Decision-Making Model for Asset Life Cycle Decisions							
Monitor Work Order Management Processes (Organizationally)  Select & Implement TCA Solution				Integrate Procurement & Inventory Control into Asset Life Cycle Processes							

Asset Management Governance

Analysis

Process

Information & Technology