

St. Catharines Public Library

Asset Management Plan

2024



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1.0 Introduction

1 Corporate Asset Management Plan Overview

St. Catharines Public Library (SCPL) owns and operates 4 branches within the City of St. Catharines (City), located within the Niagara Region, which services a population of 136,803 as per the 2021 census within a geographic area of 96.1 square kilometres. This Asset Management Plan (AMP) covers all library assets managed by SCPL, which excludes the buildings, that are owned and operated by the City of St. Catharines and have been covered by the City's 2023 AMP for Remaining Assets.

This AMP is a standalone strategic document outlining Ontario Regulation 588/17– Asset Management Planning for Municipal Infrastructure (see Section 1.1.1 Corporate Asset Management Plan Overview) to cover all library assets. This plan can be appended to the City's 2023 AMP, pertaining to remaining assets. This AMP addresses the needs associated with sustaining the library assets.

1.1 Purpose and Regulation

1.1.1 Asset Management Plan Purpose

The Federation of Canadian Municipalities (FCM) has defined an Asset Management Plan as, “a plan for the management of one or more infrastructure assets that combines multi-disciplinary management techniques (including technical and financial) over the lifecycle of the asset in the most cost-effective manner to provide a specified level of service.” The goals of this Asset Management Plan are to:

- Create comprehensive inventory documentation in consultation with SCPL stakeholders addressing data gaps.
- Establish current levels of service and performance indicators that enable SCPL to support the decision making around library services and communicate these services to residents, both through the evaluation of current effectiveness.
- Design asset lifecycle strategies to predict Level of Service (LOS) informed, condition-based, cost-based, and/or risk-based asset interventions.
- Develop the funding framework that supports levels of service and the lifecycle management strategy.
- Recommend enhancements for data management, resources, and technology.

This plan will help support SCPL's development of skills and practices in the following competency areas:

- Foster connections across teams through effective people and leadership strategies.
- Ensure access to necessary data and information about assets.
- Guide planning and decision-making processes to consistently align with organizational policies and objectives.
- Contribute to Asset Management practices to support continuous improvement and ensure well-informed internal stakeholders, particularly when engaging in external knowledge sharing.

1.1.2 O.Reg. 588/17 Overview

In 2012, the Province of Ontario (Province) released the 'Building Together: Guide for Municipal Asset Management Plans' to promote and assist municipalities in the Province in developing consistent Asset Management Plans (AMPs). This guide outlines a standard approach for structuring AMPs and offers guidance on the content that should be included in sections covering the State of Local Infrastructure, Levels of Service, Asset Lifecycle Management Strategies, and Financing Strategies. 'Building Together' outlines the information and analysis that municipal AMPs are to include and was designed to provide consistency across the province for Asset Management. To encourage the development of AMPs, the Provincial and Federal governments also made an AMP a prerequisite to accessing capital funding grants.

In 2015, the Province enacted the "Infrastructure for Jobs and Prosperity Act", recognizing the importance of municipal infrastructure systems in bolstering local economies. Following a year-long industry review, the Province introduced "Ontario Regulation (O.Reg) 588/17 – Asset Management Planning for Municipal Infrastructure" as the initial regulation under the Infrastructure for Jobs and Prosperity Act. O.Reg. 588/17 builds upon the Building Together guide by stipulating specific requirements for municipal Asset Management Policies and Asset Management Plans, to be implemented gradually over a five-year period. Figure 1-1 summarizes the general requirements and timelines of O.Reg. 588/17, as well as the status of these requirements for the SCPL.

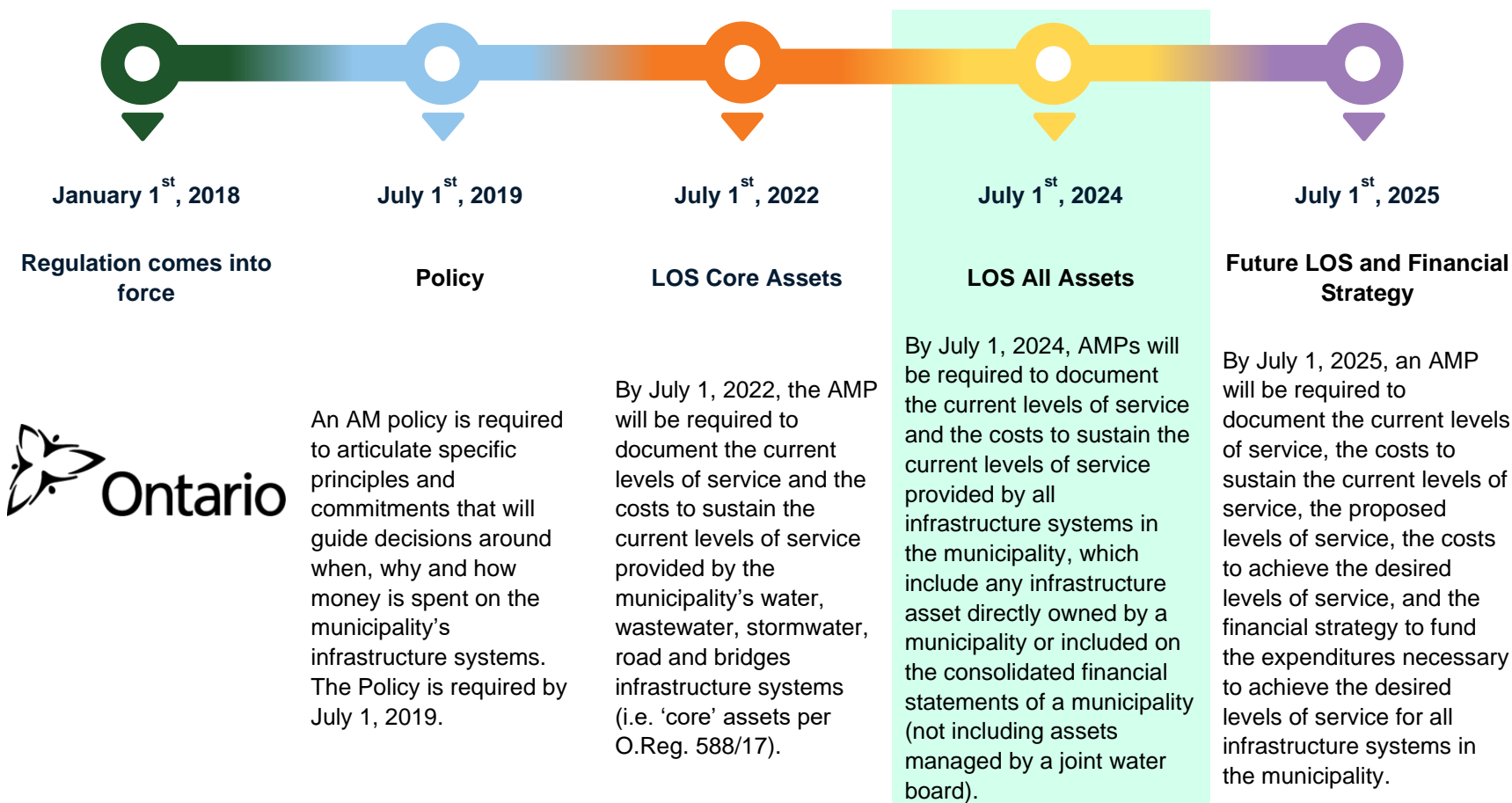


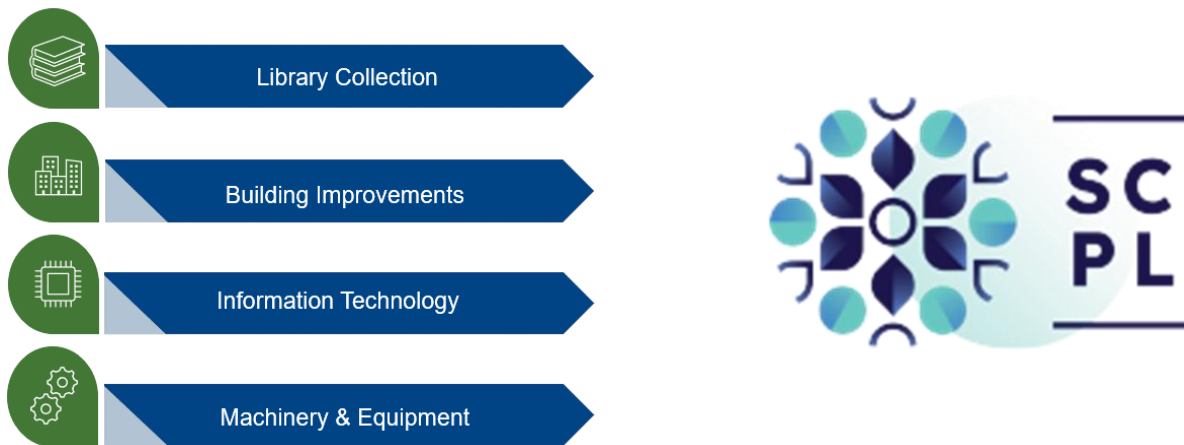
Figure 1-1. Regulatory Requirements and Timeline for Asset Management Planning based on O.Reg. 588/17

1.2 Development & Methodology of the Asset Management Plan

This AMP has been developed to meet O.Reg. 588/17, and in accordance with best practices. The assets within the scope of this AMP can be found in the sections below, along with an explanation of the plan structure and methodology.

1.2.1 Asset Management Plan Scope

This Asset Management Plan (AMP) includes the following asset categories:



1.2.2 Asset Management Plan Structure & Methodology

The AMP is divided to outline the State of the Infrastructure, Levels of Service, and Lifecycle Management Strategy and Financial Strategy to answer key questions about the SCPL library assets and its asset management practices. The assets are grouped into the categories as defined in 1.2.1 Asset Management Plan Scope.

1.2.2.1 State of the Infrastructure

The State of the Infrastructure (SOTI) section provides a quantitative assessment of the infrastructure owned by SCPL. The primary objective is to provide a high-level inventory and insights on the overall age, condition, replacement value, and key metrics of the assets owned by SCPL, as per O.Reg. 288/17. The information is developed based on provided datasets and documents that were assessed for data confidence and discussed with Subject Matter Experts (SMEs). This section summarizes the inventory of assets and their replacement values and provides the age and condition provides for each asset category and segment.

1.2.2.1.1 Asset Register

The asset register was developed by SCPL staff based on the Tangible Capital Asset (TCA) Registry to provide required information for asset management planning. Required information includes:

- Asset Identifier
- Install Date
- Current Replacement Value
- Estimated Service Life
- Condition

- Asset type specific information

The resulting register, or inventory, provides the basis for the analysis completed for the asset management plan, including State of the Infrastructure, Levels of Service, and Lifecycle Management Strategies.

1.2.2.1.2 Current Replacement Value

Current Replacement Value (CRV) of an asset refers to the cost that would be incurred to replace the asset with a similar one. It represents the current market value of the asset, taking into account factors such as inflation and changes in market conditions. Determining the current replacement value is important for asset management purposes, as it helps the SCPL assess the financial implications of asset replacement, and plan for future capital expenditures.

The following should be noted:

- All replacement costs are based on the cost to replace the asset with the same, or similar asset and;
- There is no growth, technology change, or enhancement assumptions included in those costs (unless identified).

For this AMP, current replacement values were established by inflating historical costs to today's (2024) dollars. Staff then reviewed these values to assess if they were appropriate for forecasting purposes and reflective of current market costs for similar assets based on recent purchases.

1.2.2.1.3 Estimated Service Life

Estimated Service Life in asset management planning refers to the anticipated duration over which an asset is expected to remain operational and provide its intended function. This estimate may be based on various factors such as design specifications, historical performance data, maintenance practices, environmental condition, and technological advancements. The purpose of estimating service life for asset management planning is to enable organizations to allocate resources for maintenance, repairs, replacements, and new acquisitions over the asset's lifecycle. It allows for budgeting long-term capital expenditures through replacement planning, risk management, optimizing maintenance and performance evaluation.

For the purposes of this AMP, the estimated service lives that were used for PSAB 3150 Tangible Capital Asset Reporting were used as a starting point. Service lives were reviewed and updated to be consistent with values used by the City of St. Catharines, where possible and appropriate, to ensure accurate forecasting for infrastructure spending needs.

1.2.2.1.4 Asset Condition

Asset management involves strategically managing physical assets to achieve specific objectives, such as minimizing costs, maximizing efficiency, or ensuring safety and reliability. Assessing the condition of assets is crucial for making informed decisions regarding maintenance, repair, replacement, and investment.

The condition of an asset for this AMP is being assessed based on its remaining life compared to its age and estimated service life. This assessment involves categorizing the percentage of remaining life into different condition categories, as outlined in Table 1-1. This is in line with how condition was categorized for the City's 2023 Remaining Assets AMP.

Table 1-1. Condition Rating Scale Description and Estimated Service Life (ESL) Distribution

Category	Remaining Life	Description
Very Good	100% - 76%	Asset is typically new or recently rehabilitated.
Good	75%- 51%	Condition is acceptable, generally in mid stage of service life. Asset may show signs of deterioration requiring attention or minor maintenance.
Fair	50% - 26%	Assets show general signs of deterioration that require attention and may require immediate maintenance.
Poor	25%- End of Life	Asset is below standard condition and approaching the end of its service life. Ongoing monitoring and significant maintenance may be required.
Very Poor	Beyond Service Life	Asset is at or beyond service life and shows signs of advanced deterioration. Asset may exhibit signs of imminent failure that can affect service or increase risk. Condition may be critical. Extensive monitoring, rehabilitation and/or replacement may be required.

1.2.2.2 Levels of Service

The Levels of Service (LOS) section provides key performance indicators that support the provision of the Library’s services. O.Reg. 588/17 has prescribed LOS for core assets, only. LOS for this AMP were developed with SCPL staff and align with the LOS metrics developed for the City’s Remaining Assets. In general, LOS provide the following information:

- **Level of Service Statement:** A brief description presented in plain language for public understanding of the service provided to residents.
- **Key Service Attribute:** Categorizes the LOS metrics to specific areas of customer interest which are recognizable to the customer/public. These attributes are tied to the strategic objects of SCPL. See Table 1-2 for the Key Service Attributes.

Table 1-2. Key Service Attributes

Service Attribute	Description
Financial Sustainability	Services are affordable, provided at lowest cost for both current and future customers; Funds are adequately funded in both the short and long term
Quality and Reliability	Services are reliable and responsive to customers; Assets are in adequate condition, are maintained and respond to customer needs
Capacity & Use	Services have enough capacity and are accessible to everyone; Assets of sufficient capacity are available, convenient and accessible.
Function	Services meet customer needs, while limiting risks to health and safety environmental and other impacts; Assets comply with regulations, perform their intended function and are safe, secure and sustainable

- **Levels of Service Indicator:** A statement that describes quantifiable metrics of the service delivery outcomes from the perspective of the customer and service provider, expressed in terms that can be easily understood by customer.

This AMP assesses the current performance of SCPL using these levels of service metrics. The 2025 AMP will provide proposed (target) performance of these same metrics and evaluate SCPL's ability to afford the proposed levels of service.

1.2.2.3 Lifecycle Management

The Lifecycle Management Strategy defines the set of planned actions that will enable the assets to provide their desired level of service in a sustainable way while mitigating risks and reducing costs throughout their life. The goal of this assessment is to capture the activities that are required to sustain the assets within each asset category. For the purposes of this plan, the lifecycle activity categories are as follows:

- **Non-Infrastructure Solution:** Actions or policies that can lower costs and contribute to the management of assets.
- **Operations & Maintenance Activities:** Includes all operating expenses to provide library services, inspections and maintenance, repairs and activities associated with unexpected events.
- **Renewal/Replacement Activities:** Renewal activities designed to extend the life of the asset, and replacement activities that are expected to occur once an asset has reached the end of its service life and renewal/rehab is no longer an option.
- **Disposal Activities:** Associated with disposing of an asset once it has reached the end of its service life or is otherwise no longer needed by the municipality.
- **Service Improvement:** Planned activities required to extend services to previously unserved areas or expand services to meet growth demands to maintain LOS.
- **Growth Activities:** Planned activities to improve LOS. Example, an asset's capacity, quality, or system reliability. Not driven by growth needs.

The lifecycle activities for the asset sub-categories are detailed in Section 184 Lifecycle Management Strategy. These activities are aligned with the asset hierarchy and includes the frequency at which they are performed throughout the asset's life. Each asset type is unique in the needs for the activities that are completed within the asset's lifecycle. For the purposes of this AMP, the financial strategy has only assessed the costs attributed to Operations & Maintenance, and Renewal and Replacement Activities.

1.2.2.4 Funding the Lifecycle Activities

O.Reg 588/17 requires a 10 year plan that selects the lowest cost life cycle activity that will maintain service levels over the plan period. For the purposes of this AMP, the analysis is completed using the assumption that maintaining the current performance (condition) of assets, will ensure that SCPL continues to provide service levels moving forward. As part of the Lifecycle Management Strategy, an assessment is also completed to understand not only the costs associated with the lifecycle activities, but to also forecast the performance (condition) of SCPL's assets over the next 10 years. Three forecasting scenarios are run to analyze SCPL's assets, which provide insight on SCPL's ability to continue to provide services into the future. This is achieved by comparing the performance of assets based on needs and various budgetary or condition-based targets. The following three scenarios are run:

Scenario 1: Anticipated Funding – Evaluates asset performance under the current funding level that SCPL anticipates allocating towards the assets. The current budgets were obtained from SCPL’s budget. This is used to illustrate the change in performance (condition) under anticipated funding levels. It is also used as a baseline scenario, which can be used to assess the other scenarios analyzed (detailed below).

Scenario 2: Cost to Maintain Current Performance – This scenario determines the cost that would be required to maintain SCPL’s assets in approximately the same condition they are currently assessed in over a 10-year forecast period. Understanding the cost to maintain current performance levels is a requirement of the July 1, 2024 milestone of O.Reg. 588/17.

Scenario 3: Identified Infrastructure Needs Investment Requirements – This scenario is run to determine the required spending to address infrastructure needs based on expected/planned rehabilitation, renewals and replacements of assets as per their defined lifecycle strategy. This scenario also identifies rehabilitation and replacement requirements backlog, which is work that should have already been completed by the time of this assessment. Typically, these are assets that are beyond their identified service life.

Using the results of these scenarios, the Financial Strategy was developed.

1.2.2.5 Financing Strategy

The financial strategy is one of the key components within the AMP, as it puts the AMP into action. The financial plan provides a way for municipalities to integrate asset management planning with financial budgeting.

The financial strategy forecasts the required annual expenditures for SCPL to perform the lifecycle activities in alignment with the lifecycle management strategies.

Each category includes SCPL’s forecasted expenditures from its capital and operating budget, to understand the full cost of maintaining service levels over the 10-year forecast period. Forecasts for lifecycle activities will be compared to the capital budget forecasts to determine if an infrastructure gap is present. Strategies to address this gap will also be discussed.

Note that forecasts for major capital works including renewal/rehabilitation and replacement activities are derived from an asset management analysis of SCPL’s data. The logic used to complete this asset management analysis was developed through SCPL’s Levels of Service Strategy and Lifecycle Management Strategy. For other costs, such as maintenance, and non-infrastructure and service improvements, the assumption was made the funding levels for these activities is enough to meet customer’s expectations, unless there are documents or strategies that suggest otherwise.

1.2.2.6 Data Confidence and Improvement Plan

A summary of the data sources used in the analyses of this AMP are included for reference under each asset category section. For the development of this AMP, the available data was assessed and a data quality rating was assigned based on availability and quality of relevant data. Table 1-3. Data Quality Rating Scale for all Assets Within Scope Outlines how data quality is rated.

Table 1-3. Data Quality Rating Scale for all Assets Within Scope

Value	Category	Definition
A	Very Good	No assumptions, with available condition data from a reliable data source, and age and value are known.

Value	Category	Definition
B	Good	Minor assumptions are made for condition, age, or replacement values (e.g., most of condition, age, and replacement values are known).
C	Fair	Minor assumptions are made for condition, age, or replacement values from moderately reliable sources.
D	Poor	Data comes from significantly out of date documents or two of either condition, age, or replacement values come from a moderately reliable source and the third item is unknown or unreliable.

SCPL's Asset Management program is founded on the principles of continuous improvement, transparency, and accountability. Moving forward, the AMP is intended to be a living document that reflects and supports implementation of the SCPL AM program. As a living document, continuous improvement will be driven by:

- Implementing, revising, refining, and reporting Asset Management based on SCPL's strategic priorities.
- Continual cross-functional collaboration towards identifying AM improvements in processes, systems, data, AMPs, and AMP implementation strategies.
- Monitoring progress on the AMP implementation while quantifying and reporting benefits from AM Program activities.
- Improve with ongoing evaluation of best practices, innovations, and regulatory requirements. Best practices to achieve continuous improvement include the development of an improvement plan and delivering the improvement plan with defined annual targets, appropriate benchmarks, and responsibilities for internal resources with their associated funding levels, as approved by SCPL's annual budgeting process.

1.3 Asset Management Plan Assumptions and Limitations

The Library's Asset Management Plan was developed based on the best available information at the time and by employing professional judgement and assumptions to address gaps where necessary. Current replacement values are reflective of current market value for assets. With the completion of the Library's and the City's Asset Management Plans, both entities are compliant with the requirements of the O.Reg 588/17 July 1st deadline.

With respect to the facilities data in the Asset Management Plans (the Central Library, the Port Dalhousie Branch, and the Dr. Huq Branch), to streamline the collection, analysis and interpretation of these respective building condition assessment data, the interior and exterior maintenance data were included in the City's Asset Management Plan. This differs from the lease agreements in which the responsibilities vary based on the facility.

City and Library Staff will continue to review and refine building data to ensure assets are reflected in the most appropriate plans. Going forward, the City and the Library have collectively agreed to make adjustments in the future to integrate each of the leases' separation of responsibilities into the respective Asset Management Plans.

Recognizing the need for ongoing improvement, the City has several initiatives underway to enhance condition data and anticipate future demand needs. This refined data will be progressively integrated to enhance the reliability of our planning processes moving forward.

1.4 Asset Management Pressures

The management of public assets faces various pressures that can impact its operations, strategies, and overall success. Some of these pressures include:

Market Volatility: Asset managers must navigate constantly changing market conditions, including fluctuations in asset prices, and interest rates. Market volatility can make it challenging to appropriately plan for future asset needs.

Regulatory Changes: Municipalities are often subject to a wide range of regulations that can vary by jurisdiction. Changes in regulations, such as those related to reporting requirements, can require asset managers to adapt their processes and systems.

Budget Constraints: Municipalities often operate within tight budget constraints, limiting their ability to invest in infrastructure maintenance, upgrades, and new projects. Balancing competing priorities within limited budgets.

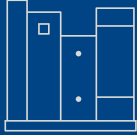
Aging Infrastructure: Many municipalities face aging infrastructure. Maintaining and upgrading this infrastructure requires significant investment, but funding may be insufficient to address all needs.

Limited Human Resources: Municipalities may face challenges in recruiting and retaining qualified staff with expertise.

Political and Public Pressure: Asset management decisions are often subject to political and public scrutiny. Balancing the needs and preferences of various stakeholders, including elected officials, residents, and businesses can be complex and contentious.

Data Management and Technology Adoption: Effective asset management relies on accurate data collection, analysis, and decision-making. This requires reliable asset data, and implementing systems and processes that leverage technology to optimize asset performance.

Overall, municipal asset management requires navigating a complex landscape of financial, regulatory, environmental, and social pressures to effectively manage infrastructure and deliver services to residents.



Library Asset Overview



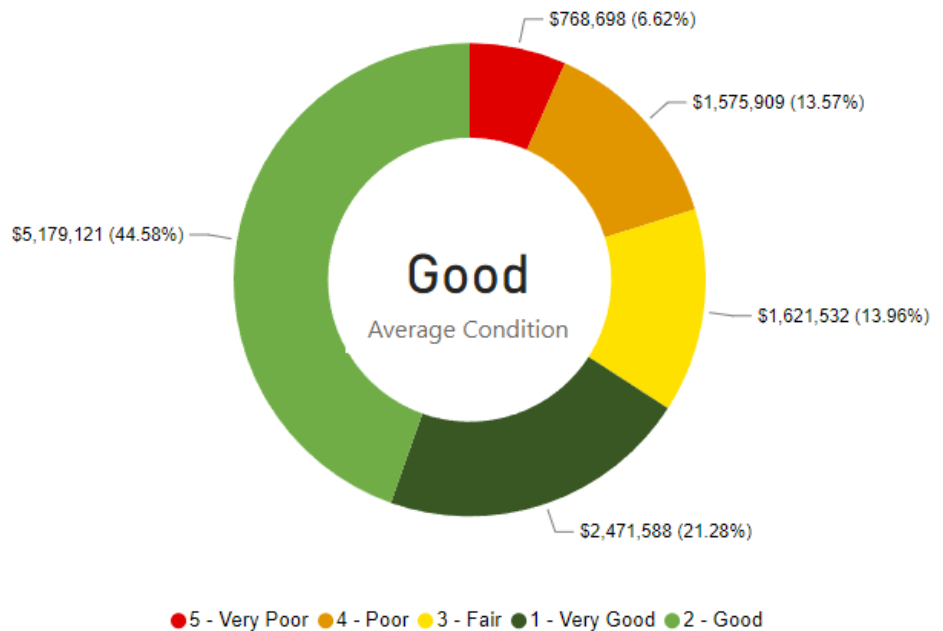
St. Catharines Public Library is committed to providing spaces, resources, and experiences for all citizens to learn, grow, and connect.

Replacement Value

Total Replacement Value: \$11.617 M



Overall Average Asset Condition by Replacement Value



Average Annual Funding Gap to Maintain Current Performance

Average Annual Funding Gap as Per Infrastructure Needs Investment Requirements

No Gap Identified

\$358,479

2 State of the Infrastructure

Libraries are important to provide spaces, resources, and experiences for all citizens to learn, grow, and connect. This includes a wide range of assets such as building components, information technology appliances, and the vast library collection, all of which are collectively valued at \$11.6M.

2.1 Asset Valuation

The following sections summarize the portfolio associated with SCPL assets. Table 2-1 provides the inventory and current replacement value of Library assets. SCPL’s assets have been grouped into the following segments:

Building improvements: This category covers assets for the building that are not managed by the City.

Information Technology: Assets for IT include computers, servers, printers, general office equipment, security cameras and equipment, tablets, televisions, and various technology equipment offered for public use.

Library Collection: Includes the collections offered by SCPL, including books, sound recordings, and visual materials.

Machinery and Equipment: This asset category includes items integral to the Library facilities, including maintenance equipment, furniture, and shelving.

Table 2-1. Inventory and Current Replacement Value

Category	2024 Estimated Total Replacement Value
Building Improvements	\$2,384,901
Information Technology	\$930,144
Library Collection	\$6,134,874
Machinery and Equipment	\$2,166,927
TOTAL	\$11,616,847

2.2 Asset Condition

Figure 2-1 illustrates the Condition distribution of SCPL assets. The average the portfolio to be in good condition with approximately 66% of the assets are in very good to good condition, and approximately 20% of the assets are in poor to very poor condition. The bulk of the library assets are made up of the library collection, which is renewed on an annual basis, which has contributed to the good performance of this asset.

2.2.1 Condition Overview

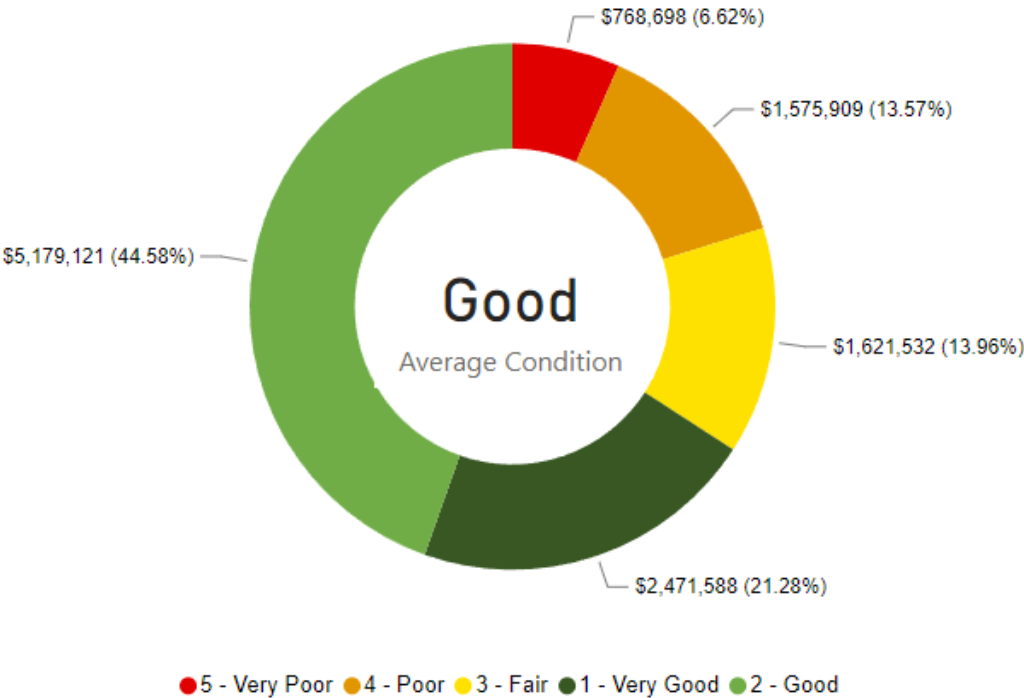


Figure 2-1. Asset Category Asset Condition by Replacement Value

2.2.2 Category Condition Overview

The library assets are made up of Building Improvements, Information Technology, Library Collection and Machinery and Equipment. The condition profiles of these asset categories can be see in Figure 2-2.

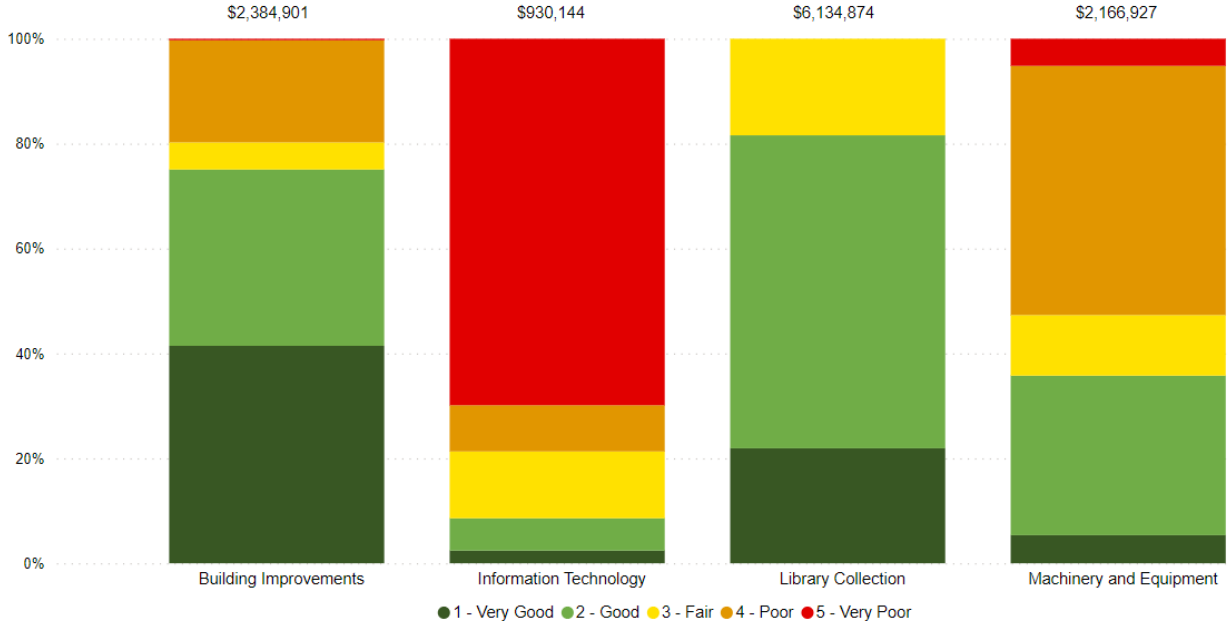


Figure 2-2. Asset Segment Condition by Replacement Value

Building Improvements and Machinery and Equipment assets have a small percentage of assets in very poor condition, while Information Technology assets have approximately 70% of assets in very poor condition, respectively. All assets in Very Poor condition are a result of assets being beyond their service life. As noted in Figure 2-2, Information Technology show a significant portion of asset costs in very poor condition. All library servers are noted to be in very poor condition.

As noted in Figure 2-2, Machinery and Equipment assets show very few of the portfolio in very poor condition. General office and shelving assets contribute the majority of the valuation for these assets and contribute to the sway in distribution of assets to be in poor condition, however, all signage and piano assets are in very good condition.

The Library Collection is valued as the highest asset category, with the majority of the collection in good to very good condition. The Library Collection is a unique asset to assess, and this asset is continually renewed by SCPL to ensure this important asset remains in good condition and provides value to residents.

2.3 Average Age

Comparing the average age of the assets with the average estimated service life (ESL) provides a representation of the average overall portfolio remaining life. Figure 2-3 below summarizes the average age of each asset category in Library services.

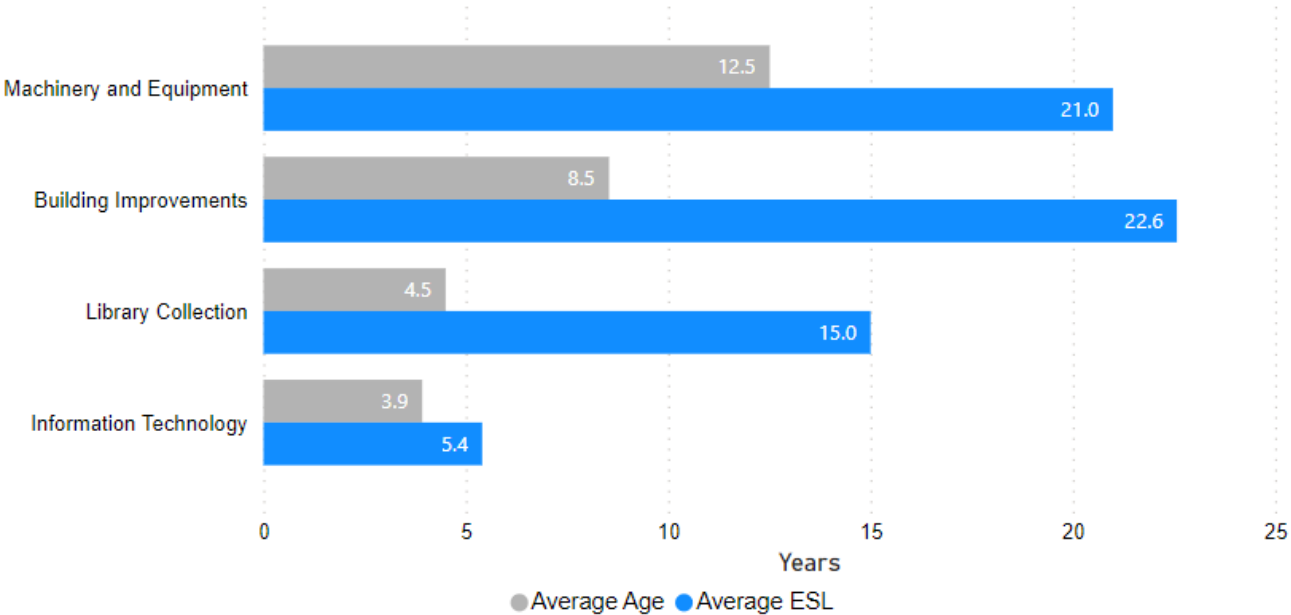


Figure 2-3. Library Asset Average Age

Based on the assessment of age and condition, the Machinery and Equipment and Building Improvement assets are performing as expected. Information Technology assets are on average nearing their estimated service life, with many passing their service life which is also reflected in the condition profile of the assets in Figure 2-2.

Asset monitoring and replacement of aging assets will continue to be a priority for SCPL to continue to provide this service to the public.

3 Levels of Service

3.1.1 Service Statement

SCPL is committed to providing spaces, resources, and experiences for all citizens to learn, grow, and connect.

3.1.2 Levels of Service

The purpose of asset management is to tie assets to what services are provided to the community. Public libraries are important for several reasons, and they play a significant role in communities. Some of the valuable services that SCPL provide to St. Catharines residents include:

Access to Information: SCPL offers free access to a wide range of information resources, including books, magazines, newspapers, digital collection and the internet.

Promote Literacy, Education and Lifelong Learning: SCPL supports literacy initiatives by offering reading programs, tutoring, and resources for all ages. The services provided compliment formal education by offering resources and support for students of all ages, as well as teachers. Libraries encourage lifelong learning by offering a wide range of educational and recreational materials for people of all ages and interests.

Community Spaces: The libraries serve as community hubs where people can gather, interact, and engage in various activities. They offer spaces for meetings, workshops, lectures, book clubs, cultural events, and other programs.

Digital Inclusion: SCPL provides free access to computers, Wi-Fi, and digital resources. This an integral resource to those to not have access to these technologies in their homes, and promotes digital literacy, allows access to online services, like job searches and participation in the digital economy.

Equal Access: Public libraries are open to everyone, regardless of age, income, background, or education level. They promote equity and inclusivity by providing free and equal access to information, resources, and services for all members of the community.

Table 3-1 and Table 3-2 provide the LOS metrics that have been developed by SCPL staff. These metrics outline the LOS that are currently driving decision-making/spending on assets and can be linked to financing consequences/demand. SCPL’s LOS metrics document the current asset performance from a service provider’s perspective and service user’s perspective. Future iterations of this AMP will require SCPL to set a proposed, or target, performance for each of these metrics.



Table 3-1. Customer/Council Focused Level of Service Requirements

Customer Focused			
AMP Segment and/or Sub Segment	Key Service Attribute	Performance Measure	Current Performance
All	Financial Sustainability	Total Operating Support per Capita	\$44.15 per capita
All	Financial Sustainability	Total Operating Expenditures per Capita	\$45.72 per capita
Facilities	Financial Sustainability	Repairs and Maintenance Costs per Square Footage	\$1.72 per sq. ft.
Facilities	Financial Sustainability	Utilities Costs per Square Footage	\$2.75 per sq. ft.
Library Collection	Capacity & Use	Titles Held per Capita	\$1.51 per capita
Library Collection	Financial Sustainability	Materials as % of Operating Budget	13.42%

Table 3-2. Technical Focused Level of Service Requirements

Technical Focused			
AMP Segment and/or Sub Segment	Key Service Attribute	Performance Measure	Current Performance
All	Quality and Reliability	% of assets in fair or better condition	79.82%
Library Collection	Capacity & Use	Turnover Rate (Print Volumes)	3.77
Facilities	Function, Capacity & Use	In Person Library Visits per Capita	1.63 visits per capita

4 Lifecycle Management Strategy

The objective of our Lifecycle Management Strategy is to outline and establish a set of planned actions, based on best practice that will enable our assets to provide a sustainable level of service to the citizens of St. Catharines, while managing risk at the lowest lifecycle cost.

SCPL continues to improve its approach to the management of its assets and will continue to put in place processes, procedures and tools to enable a more consistent approach. Detailed below is a brief overview of some of the current asset management practices in place across SCPL.

4.1 Lifecycle Activities

By implementing lifecycle activities, SCPL can effectively manage and enhance their libraries, ensuring they continue to provide the valuable services and benefits to residents and visitors while promoting community well-being. Detailed below is a brief overview of some of the current lifecycle activities in place for SCPL:

Non-infrastructure Activities: Includes the planning of assets, including accessibility plans, condition assessments, space planning, asset monitoring, other technical studies and assessments.

Operations & Maintenance: Included regularly scheduled preventative maintenance activities, as well as reactive maintenance activities to address unexpected asset failures. SCPL staff must also respond to service requests from the public, software licensing, purchase of small equipment and materials.

Renewal, Rehabilitation & Replacement: These activities address ensuring assets reach their expected service life by renew and rehabilitating them as required, as well as the replacement of assets at the end of their service life and any unexpected failures.

Disposals: SCPL are responsible for removing assets at the end of their service life by determining appropriate disposal methods in an environmentally responsible manner.

Service Improvements & Growth Activities: Service improvement includes any new assets or technology to improve the customer experience, the inclusion of new technologies, improved accessibility and safety. Growth activities would include new assets to reach larger populations.

The levels of service presented in the previous section are supported by the achievement of a variety of lifecycle activities for these assets in accordance with the activity types presented in Table 4-1 with specific asset management practices or planned actions. These activities also include activities that the City performs for the facilities in coordination with SCPL staff.

Table 4-1. Asset Management Practices and Associated Frequency – Library

Asset Management Practices/ Planned Actions	Frequency Associated with Practices / Planned Actions
Non-Infrastructure	
<ul style="list-style-type: none"> • Accessibility Plan 	<ul style="list-style-type: none"> • As required
<ul style="list-style-type: none"> • Annual Inspection programs (for example): Asbestos Condition Assessment, Crane/Hoist/Lifting device, HVAC Systems, Elevator Maintenance, Chemical Treatment Systems, TSSA - Elevators, TSSA - Refrigeration Systems, Gas Detection Systems, UPS Systems, Security System Monitoring, Fire Alarm System Monitoring, Electrical Inspections, BAS, Security Cameras/Doors Software Systems, Overhead Door Inspection 	<ul style="list-style-type: none"> • Annually
<ul style="list-style-type: none"> • Building Condition Assessments 	<ul style="list-style-type: none"> • As required
<ul style="list-style-type: none"> • Condition Assessments 	<ul style="list-style-type: none"> • As required
<ul style="list-style-type: none"> • Contingency and Redundancy Planning 	<ul style="list-style-type: none"> • As required
<ul style="list-style-type: none"> • Energy Conservation and Demand Management 	<ul style="list-style-type: none"> • Every 5 years
<ul style="list-style-type: none"> • Monitor recalls on assets to ensure proper functionality 	<ul style="list-style-type: none"> • Auto updates monthly
<ul style="list-style-type: none"> • Other technical studies and assessments 	<ul style="list-style-type: none"> • As required
<ul style="list-style-type: none"> • Paths and Walkway Assessment 	<ul style="list-style-type: none"> • Annual
<ul style="list-style-type: none"> • Roofing System Inspections 	<ul style="list-style-type: none"> • Every 3-5 years
<ul style="list-style-type: none"> • Space Planning 	<ul style="list-style-type: none"> • As required
<ul style="list-style-type: none"> • Visual inspections of sidewalks (Condition ratings for physical defects such as cracking, weathering, uneven panels, presence of previous maintenance – i.e., grinding/patching) 	<ul style="list-style-type: none"> • Annual, (MMS)
Operations & Maintenance Activities	
<ul style="list-style-type: none"> • Alerts for software updates and defective equipment 	<ul style="list-style-type: none"> • Monthly
<ul style="list-style-type: none"> • Lighting maintenance 	<ul style="list-style-type: none"> • As required
<ul style="list-style-type: none"> • Planned Maintenance (PM) - updates on firmware and software 	<ul style="list-style-type: none"> • Annually • As required

Asset Management Practices/ Planned Actions	Frequency Associated with Practices / Planned Actions
<ul style="list-style-type: none"> Planned maintenance: Sidewalk grinding and minor cold patch repairs (marking, salting and snow removal, pothole repair) 	<ul style="list-style-type: none"> As required
<ul style="list-style-type: none"> Purchase of small equipment and materials 	<ul style="list-style-type: none"> As required
<ul style="list-style-type: none"> Reactive maintenance: Sidewalk grinding and minor cold patch repairs (marking, salting and snow removal, pothole repair) 	<ul style="list-style-type: none"> As needed
<ul style="list-style-type: none"> Service Requested maintenance: Sidewalk grinding and minor cold patch repairs (marking, salting and snow removal, pothole repair) 	<ul style="list-style-type: none"> As requested
<ul style="list-style-type: none"> Software licensing 	<ul style="list-style-type: none"> Annually
Renewal/Replacement Activities	
<ul style="list-style-type: none"> Rehabilitation 	<ul style="list-style-type: none"> For Facility assets, varies depending on asset type and potential risk - based on feedback from maintenance services and detailed condition assessments. May involve mid-life or near end-of-life intervention to extend service life and includes Accessibility upgrades.
<ul style="list-style-type: none"> Replacement 	<ul style="list-style-type: none"> As required - when assets reach end of service life or are no longer fit for purpose (no longer supported, increase risk)
Disposal Activities	
<ul style="list-style-type: none"> Disposal Of Assets 	<ul style="list-style-type: none"> As Identified

Asset Management Practices/ Planned Actions	Frequency Associated with Practices / Planned Actions
<p>Service Improvement & Growth Activities Planned</p>	
<ul style="list-style-type: none"> • Expansion or major renovation of existing Facilities 	<ul style="list-style-type: none"> • Driven by growth to maintain LOS. As identified through planning and studies • To improve LOS and not supported by growth. As identified through planning and studies
<ul style="list-style-type: none"> • New Assets 	<ul style="list-style-type: none"> • Driven by growth in the City. As identified through planning and studies. • To improve LOS and not supported by growth. As identified through planning and studies
<ul style="list-style-type: none"> • Accessibility improvements • Interior Facility Renovations 	<ul style="list-style-type: none"> • As required • As required

4.1.1 Funding the Lifecycle Activities

To provide library services, SCPL must balance the costs of providing appropriate staffing for the operation and maintenance of the facilities and infrastructure, capital replacements, new assets and technology, increasing operating and maintenance costs, and planning for future spending requirements to address aging infrastructure. SCPL staff work closely with other departments to plan upgrades and construction with the building assets to ensure efficiency and minimize disruptions to the public.

SCPL uses the lifecycle strategies described in Section 4.1 to plan work and determine future expenditure needs. The following scenarios considers the asset renewal (replacement) needs with further details of the funding required for the remaining lifecycle activities shown in Section 4.1.1.4 Scenario Comparison.

4.1.1.1 Scenario 1: Anticipated Funding

Scenario 1 analyses the impact to asset performance (condition) based on the current average anticipated renewal (replacements) investment allocated for SCPL, which is \$443.7K annually.

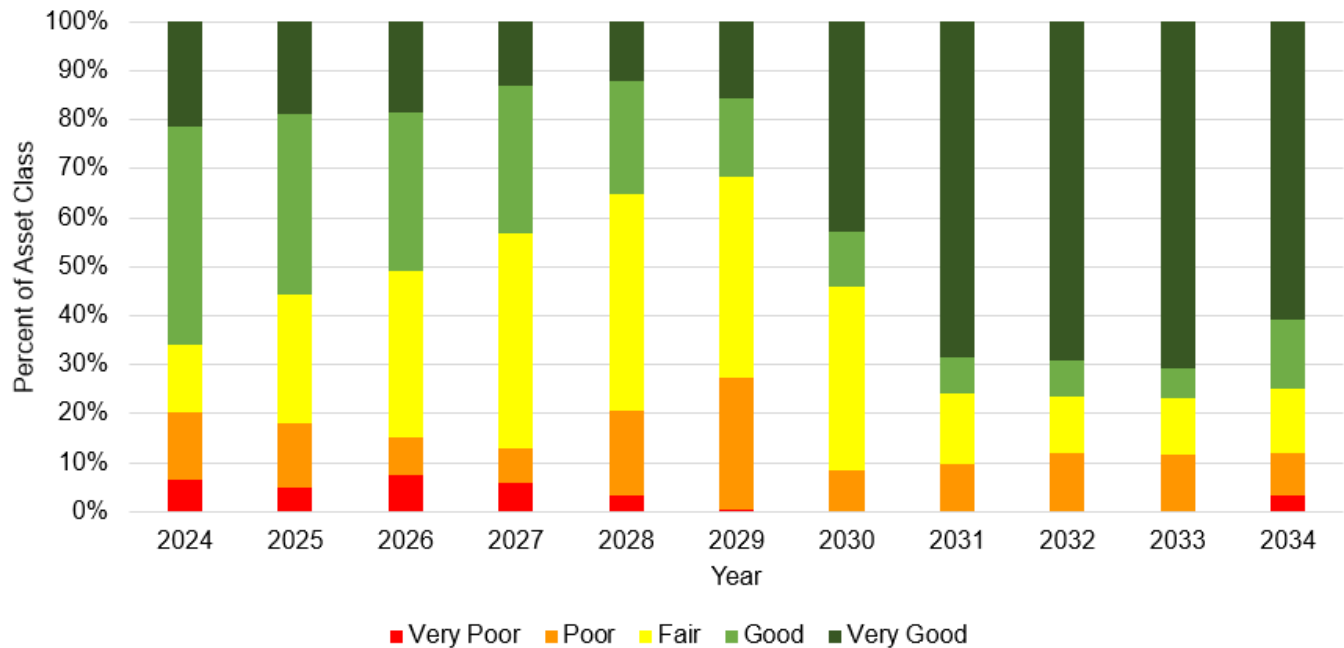


Figure 4-1. Performance (Condition) Forecast with Anticipated Budget

Under this scenario, the percentage of assets that are in poor or worse condition is approximately the same at the beginning of the scenario as at the end of the 10-year forecast period. As the Library Collection is the biggest asset for SCPL, which is renewed on an annual basis using much of the anticipated budget, the overall performance of the assets under this scenario is mostly attributed to this asset category.

4.1.1.2 Scenario 2: Cost to Maintain Current Performance

This scenario evaluates the condition profile in year 1 and determines the cost to ensure assets are maintained in approximately the same condition at the end of the 10 year cycle. As per the O.Reg. 588/17 requirements, this AMP considers only the current performance (condition) of SCPL’s assets, and assumes that SCPL will, at a minimum, want to continue to provide their services and assets at the approximately the same performance (condition) they are currently in. Future iterations of the O.Reg. 588/17 mandated AMP, will require SCPL set targets to their Levels of Service, and identify at what performance they would like their assets maintained.

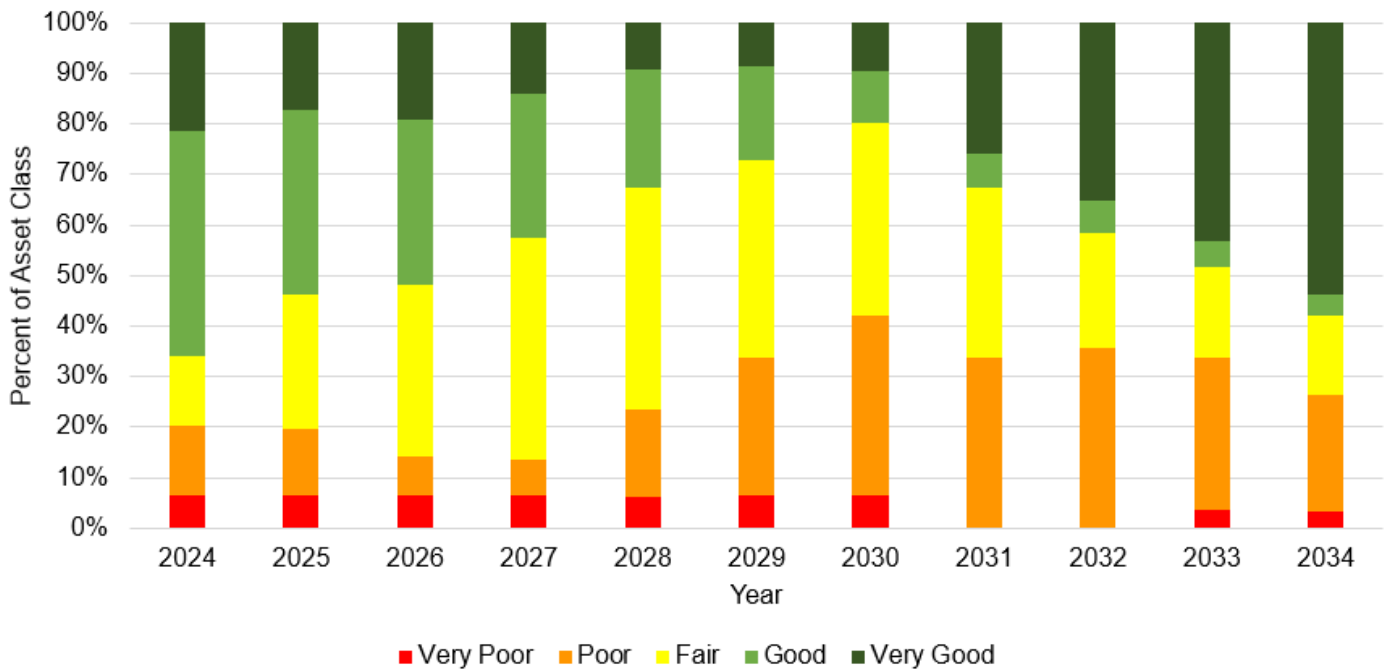


Figure 4-2. Performance (Condition) Forecast with Cost to Maintain Current Performance

The renewal cost required to maintain existing service levels was determined to be approximately the same as the current budget annually over the 10-year period. Currently, there is no infrastructure gap to continue to provide assets in approximately the same performance, which can be further seen in section 4.2 Financial Strategy.

4.1.1.3 Scenario 3: Identified Infrastructure Needs Investment Requirements

Based on the lifecycle strategies identified previously for library assets, and assuming end-of-life replacement of all library assets, the following figures forecasts long-term capital requirements. The annual requirement represents the average amount per year that SCPL should allocate towards funding asset replacement needs. This scenario represents the unconstrained investment need to address the required lifecycle activities as identified in the Section 4.1 Lifecycle Activities. The following figures identify capital requirements over the next 10 years.

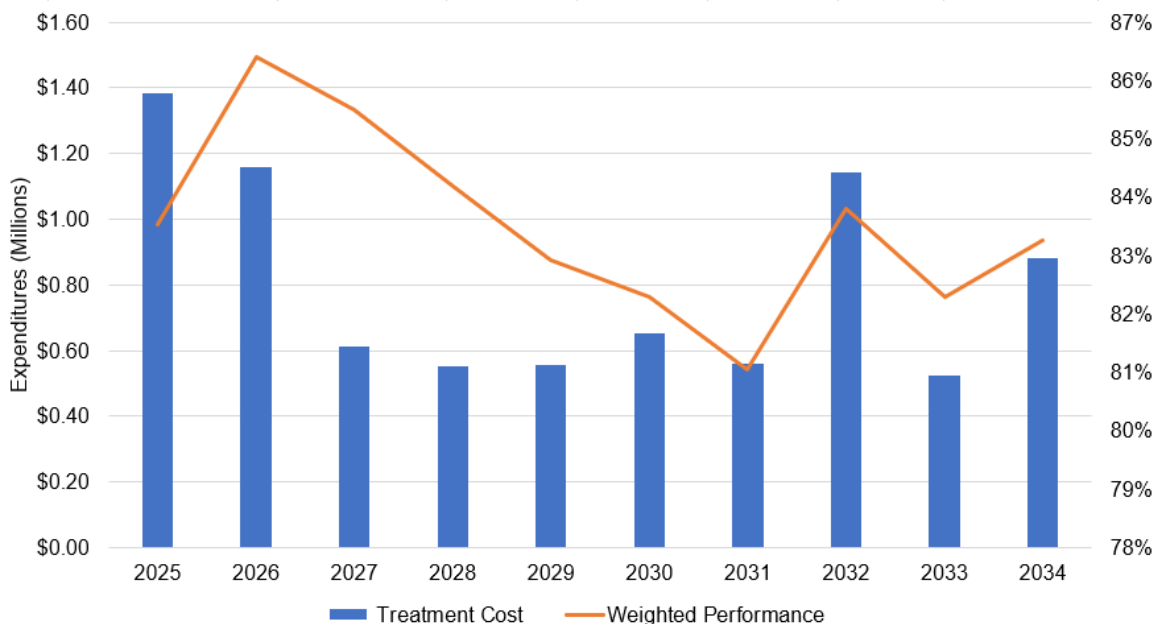


Figure 4-3. Identified Infrastructure Investment (including Backlog) Based on Lifecycle Strategies

In Figure 4-3 the year 2025 includes the ‘backlog’ of deferred work, which includes assets that have already been identified past their estimated useful life. This ‘backlog’ represents approximately \$1.4M of deferred work that have accumulated and created a backlog of necessary replacements. Another notable year in the forecast includes \$1.1M in 2032, which is a result of multiple assets that reach their service life in this year. The average investment required to maintain assets based on their required lifecycle activity is \$802K annually over the 10-year analysis period. If SCPL increases the budget available for renewals and replacements, the impact to asset performance can be seen in Figure 4-4 where after the first year, no assets fall within the Very Poor category.

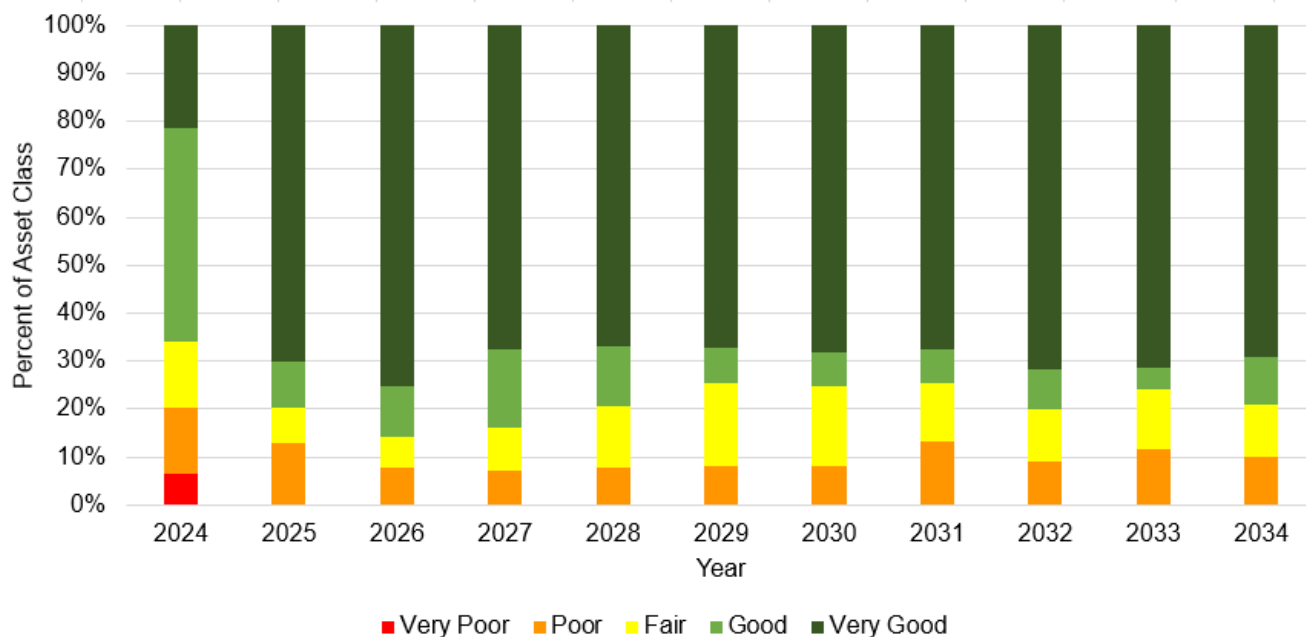


Figure 4-4. Performance (Condition) Forecast Based on Identified Infrastructure Investment Requirements

Deferring renewals and replacements create risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. Deferrals of projects will lead to higher operational and maintenance costs and will affect the availability of services in the future. Properly funded and timely replacements will ensure the assets perform as expected and it is recommended to continue to analyze asset renewals based on criticality and availability of funds for future AM Plans.

4.1.1.4 Scenario Comparison

The compiled investment needs under each of the three scenarios are presented in Figure 4-5, which includes the expected budget expenditures, including operations and maintenance. In addition to the anticipated infrastructure needs expenditure requirements, the figure illustrates the average anticipated budget, average annual costs to maintain current performance and average identified infrastructure needs spending requirements over the forecast period.

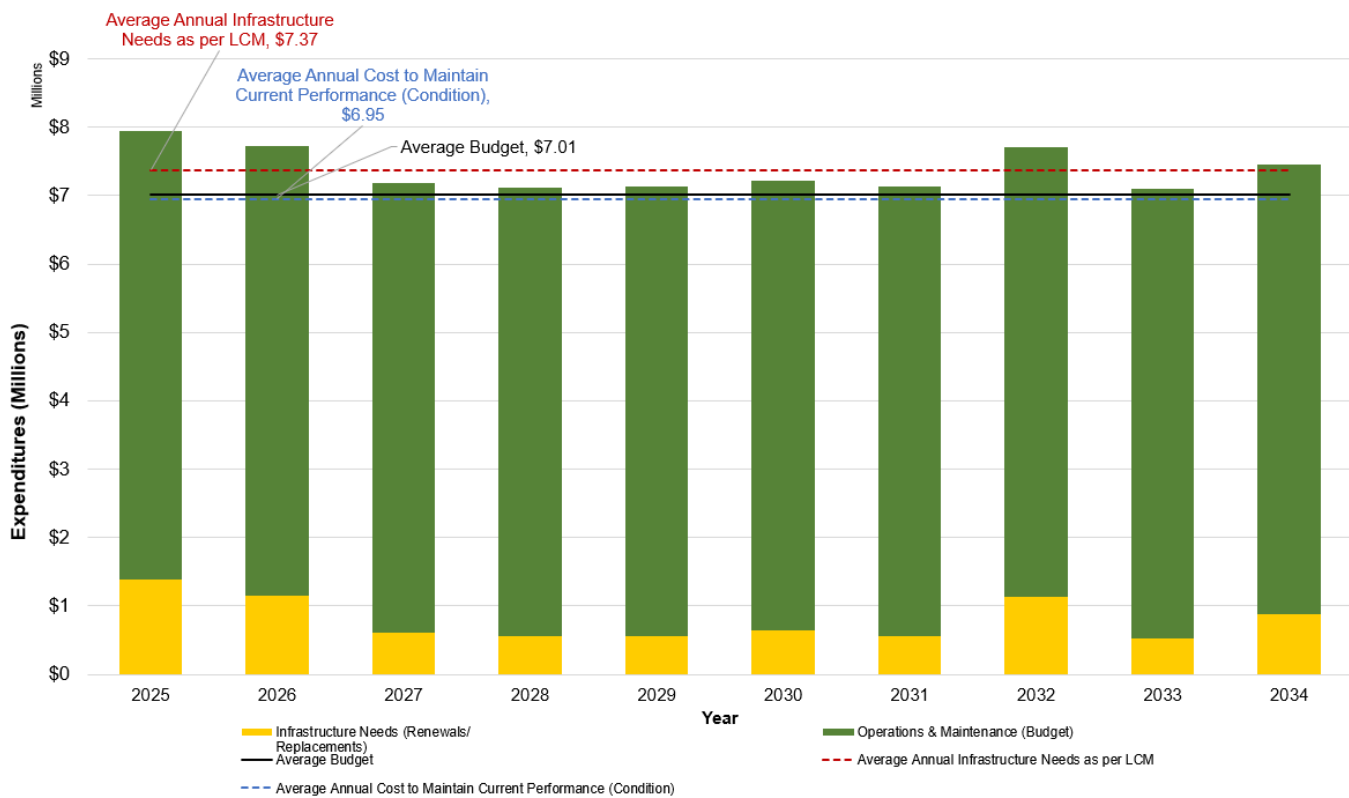


Figure 4-5. Scenario Comparison

The scenario comparison reveals SCPL is currently budgeting approximately the same as the need to maintain assets in their current performance (condition) but are facing an infrastructure gap to meet infrastructure needs based on lifecycle management activities. The gap to meet infrastructure needs is approximately \$481,000 annually, based on the identified lifecycle management strategies, which is to replace assets at the end of their service life. Lifecycle expenditures based on these scenarios and the forecasted annual infrastructure gap can be found in Table 4-2.

4.2 Financial Strategy

The financial strategy of this AMP aims to identify the appropriate funding levels required to provide the intended levels of service.

SCPL's budget is developed to allocate the necessary funding to provide services and maintain infrastructure assets. These are based on required costs (expenditures) and available funding (revenues). SCPL's budget includes operation and capital expenditures. As part of the annual budget development process, SCPL ensures continued financial sustainability of its assets.

4.2.1 Projected Financing Strategies

For the purpose of the analysis, the investment needs have been assessed against the anticipated budget for the next 10 years. The anticipated budget was based on the 2024 budget. The assumed annual expenditures are based on the lifecycle costing analysis outlined in 4.1.1.2 Scenario 2: Cost to Maintain Current Performance and 4.1.1.3 Scenario 3: Identified Infrastructure Needs Investment Requirements. The expenditure summary in Table 4-2. Is based on the investment required to maintain current performance (specifically the proportion of assets in poor or better condition), and the required expenditures based on identified infrastructure spending requirements.

Table 4-2. Lifecycle Activity Investments

Lifecycle Activity	Average Budget	Average Annual Cost to Maintain Current Performance (Condition)	Average Annual Identified Infrastructure Needs Spending Requirements
Operations & Maintenance	\$6,571,038	\$6,571,038	\$6,571,038
Renewal, Rehabilitation & Replacement	\$443,700	\$380,943	\$802,179
Total	\$7,014,738	\$6,951,981	\$7,373,217
Funding Gap		-\$62,757	\$358,479
Percentage Increase Required to Address Gap		No Gap Identified	5%

The focus of this AMP is identifying the need for infrastructure investments for asset renewal. This means that the plan is primarily concerned with assessing the condition of existing assets and determining when they need to be replaced to ensure that library services can continue to be provided effectively.

The plan highlights that SCPL is facing a minor infrastructure gap (5%, or \$358K annually) to address infrastructure needs based on identified lifecycle management activities. Currently there is not enough funding allocated to properly maintain and replace infrastructure assets within the library system, based on their identified service life.

To address this gap, it is suggested to implement lifecycle strategies, which involve replacing assets at the end of their defined estimated service life. This approach ensures that library services can continue to be provided without interruption by preventing assets from deteriorating to the point where they become unusable. By implementing this strategy, SCPL is better able to plan for future spending requirements that will limit unplanned asset failures which often result in costly repairs, or unexpected costly replacements. To implement this strategy, SCPL requires an annual increase of 5%. Based on the analysis of Scenario 2, SCPL is not facing an infrastructure gap to maintain their assets in approximately the same performance (condition) they are currently in.

5 Data Confidence and Improvement Plan

Table 5-1 outlines the main data sources and overall confidence in the data used for this AMP. Data confidence is based on how many assumptions needed to be made and the reliability of the data sources. The overall data confidence grade is **B** for library assets.

Table 5-1. Libraries – Data Confidence

Data Confidence	Data Score and Explanation	Data Source
B - Good	Minor assumptions are made for condition, age, or replacement values (e.g., most of condition, age, and replacement values are known).	Tangible Capital Assets Register

SCPL has annually maintained an inventory of infrastructure assets for the purposes of Tangible Capital Asset reporting, which was leveraged for the purposes of this AMP. For this AMP, where current replacement values were not available, historical costs were inflated to current replacement values.

5.1 Recommendations for Improvements

As part of the development of this AMP, opportunities for improvement of asset management practices and principles were identified. When establishing an improvement plan, considerations of international standards and well-known asset management guidance for advancing Asset Management capabilities including:

- ISO 55000
- International Infrastructure Management Manual (IIMM) 2015; and
- BSI PAS55: 2008

These standards were developed over several years with international collaboration and are widely regarded as best practices for the field of Asset Management. Key recommendation have been categorized by the following:

- **Asset Management Requirements:** key documentation that defines the governance, objective and direction of the AM practices.
- **Decision Making Strategies:** tools that support decision making with a full asset lifecycle perspective.
- **Asset Management Enablers:** processes and resources available to ensure Asset Management remains a well-established component of successful service delivery.

5.1.1 Asset Management Requirements

5.1.1.1 Asset Management Plan

This document will fulfill the requirements for Asset Management Plans as set out by O.Reg. 588/17 for 2024. It is recommended that through continuous improvement, work continues to verify background data and the develop processes that will streamline the development of this asset management plan in conjunction with other related asset management plans (i.e. City of St. Catharines AMP 2025) as required by O.Reg. 588/17.

5.1.1.2 Asset Condition

For the purposes of this AMP, condition was assessed based on the age estimated useful life of assets. It is recommended that SCPL staff analyze the outputs of this AMP, to ensure that conditions are accurately being assessed by using this methodology. Based on this assessment, if assets are determined to not be an accurate reflection of condition, it is recommended that SCPL develop a standardized condition assessment protocol and template to ensure condition information is collected in a defined structure for use in asset management planning.

Outcome: Increased confidence in data quality can enhance decision-making processes related to capital planning and lifecycle activity planning and provide more accurate forecasts.

5.1.1.3 Current Replacement Value & Estimated Service Life

The current replacement values that were used for this AMP were largely inflated historical values. It is recommended that staff continue to review these values, and regularly update current replacement values to be reflective of current market conditions. The impacts of high inflation rates, COVID-19, and supply chain issues have led to dramatic increases in the cost to procure various types of assets. By reviewing recent purchases and estimating current replacement values for these assets, SCPL ensures that the replacement value accurately reflects the current market conditions and the specific characteristics of its assets.

It is also recommended SCPL continue efforts to assess Estimated Service Lives used for this AMP, as these values greatly impact the infrastructure spending requirements identified through the lifecycle management strategies.

Outcome: Increased confidence in data quality can enhance decision-making processes related to capital planning and lifecycle activity planning and provide more accurate forecasts.

5.1.2 Decision Making Strategies

5.1.2.1 Decision Making Framework

It is recommended SCPL develop formal processes for decision making based on verified asset data. Overall, formal processes for decision-making based on verified asset data are essential for SCPL to ensure effective asset management, minimize risks, optimize resource allocation, and improve overall operational performance.

5.1.3 Asset Management Enablers

5.1.3.1 Asset Register and Defined Asset Hierarchy

For the purposes of this AMP, SCPL's Tangible Capital Asset Registry was used, which is updated on an annual basis for regulatory reporting requirements. Although this registry provides the recommended level of detail about the SCPL's assets, there are opportunities for improvements. The recommended actions include:

- **Develop Asset Hierarchy:** An asset hierarchy provides a clear and structured view of all assets within an organization, which helps in understanding the organization's assets by providing a consistent framework for asset management reporting, maintenance planning, and future performance monitoring. The current asset register has some inconsistencies for what categories assets fall into.
- **Develop and Maintain an Asset Register:** The current format of the Tangible Capital Asset Register may be used to meet these needs, but it is recommended to make some accommodations that will allow this register to also be more easily used for asset management purposes. The resulting register should be kept up to date with new assets as they are acquired and disposed of.

Outcome: Provides a “single source of truth”, for asset data, including condition, cost, and criticality.

5.1.3.2 Business Processes

Documenting current and optimized target business processes for asset management with clear data flow will improve the successful completion of asset management activities. Furthermore, establishing roles and responsibilities provides structure and ownership to the continued maintenance of asset information.

Outcome: Ensures that required data for asset management is kept current and allows for use of information in budgeting processes and asset management planning exercises, based on highly reliable data which further improves forecasting for the infrastructure needs for the future.

