CITY OF BRANTFORD

2024 Asset Management Plan

IT Services
Non-Core Assets
City of Brantford, Ontario

Prepared by: Infrastructure Planning Asset Management, Public Works
Corporation of the City of Brantford, June 2024

RECORD SHEET

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Asset Management Plan, Non-Core Assets	IT Services	This Document
Asset Management Plan, Non-Core Assets	Airport Cemetery Clerks Services Economic Development & Tourism Facilities Fire Fleet & Transit Forestry & Horticulture Golf Human Resources Library Parking Parks & Recreation Police Solid Waste	June 2024
Asset Management Plan, Non-Core Assets	Housing JNH	TBD

ASSET MANAGEMENT PLAN
IT SERVICES

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IT SERVICES INTRODUCTION

Per O.Reg. 588/17 all municipal infrastructure assets which fall outside of the core asset categories (water, wastewater and stormwater) and their respective subcategories, shall be non-core or “other” infrastructure assets. These assets shall have qualitative descriptions and technical metrics established by the municipality.

Table 1 below outlines which Asset Types are included under each Asset Class, and will be reported on in this AMP document. In addition, it is important to note that the AMP only includes assets owned by the City or Local Boards and does not include assets that are owned privately or by other organizations.

Table 1: Asset Type Breakdown

	Asset Class	
	Infrastructure Services & Support	**Corporate Information & Business Solutions**
Asset Type:	IT Infrastructure	Application Software
	IT Devices and Peripherals	

1.INFRASTRUCTURE SERVICES AND SUPPORT

1.1. INTRODUCTION

The City of Brantford owns and maintains several assets under the Infrastructure Services and Support asset class. The purpose of this section is to present specific information about the Infrastructure Services and Support asset class to answer the questions posed in **Section 2** of the **Asset Management Plan (AMP) Overview Document**, and includes the following:

- Infrastructure Services and Support Assets' Data Inventory and Condition Approach;
- Summary of Infrastructure Services and Support Assets;
- Lifecycle Activities and Cost of Infrastructure Services and Support Assets;
- Current Infrastructure Services and Support Assets' Levels of Service;
- Current Infrastructure Services and Support Assets' Performance; and
- Conclusion.

1.2. INFRASTRUCTURE SERVICES AND SUPPORT ASSETS' DATA INVENTORY AND CONDITION APPROACH

Information related to the City's data collection methodologies as well as data confidence level definitions are defined in the **Asset Management Plan Overview Document**.

The City of Brantford currently has one (1) approach to establishing the condition for Infrastructure Services and Support assets due to available resources, technologies, and budget restrictions:

- Estimated condition based on asset specific information.

A list of all condition assessments for all assets can be found in **Table 7** in the **Asset Management Plan Overview Document**.

The origin of the Infrastructure Services and Support asset data for inventory, replacement cost, and condition, as well as data confidence in each are provided in **Table 2** below.

Table 2: Infrastructure Services and Support Assets' Data Origin and Confidence Level

	Inventory			Replacement Cost			Condition		
Asset Type	**Inventory (incl. Quantity and Age) From**	**Data Confidence Level**	**Data Confidence Description**	**Replacement Cost From**	**Data Confidence Level**	**Data Confidence Description**	**Condition From**	**Data Confidence Level**	**Data Confidence Description**
IT Infrastructure	Inventory from Snipe IT Software	Medium	Formal inventory with few unknowns	Inventory from Snipe IT Software	High	Formal inventory with few unknowns.	Determined based on age.	High	Informal condition assessment based on assumptions from age of assets.
IT Devices and Peripherals	Inventory from within Snipe IT Software	Medium	Formal inventory with few unknowns	Inventory from Snipe IT Software	Medium	Formal inventory with few unknowns.	Determined based on age recorded in Snipe IT Software and informal internal assessment at time of repairs.	Medium	Informal condition assessment based on assumptions from age of assets and performance at the time of repairs.

Per **Table 2** above, Infrastructure Services and Support assets' inventory and condition data are typically at a High or Medium confidence level with an overall average confidence level of Medium. Inventory and condition data related to IT Infrastructure such as the infrastructure within the server room at City Hall are generally at a High confidence level as all of these assets were recently purchased when the newly renovated City Hall opened in 2021.

IT Infrastructure assets' inventory and condition data related to IT Devices and Peripherals are typically at a Medium level. These assets are tracked through the IT Services asset management software Snipe IT. Each time an asset is purchased, updated, repaired or disposed, the information is recorded within Snipe IT. The condition and the need for replacement schedule is based on staff review and knowledge of the assets.

A Medium level has been indicated for IT Devices and Peripherals as the Snipe IT software tracking these assets has not been fully utilized by staff until recently so some assumptions have been made regarding asset condition. A large number of these assets are used by staff at home offices and in the field so the true condition of the asset is not always known. Condition has been informally assessed for most assets in this category based on a combination of staff expertise and age.

Improvements to the inventories will be ongoing as the department works to utilize their asset management software and expand their internal asset management practices.

1.2.1 SERVICE LIFE

Formal condition assessments are not typically completed on Infrastructure Services and Support assets. Where condition assessments have not been completed, the condition has been estimated based on the estimated service life of the asset shown below in **Table 3**. The average overall estimated service life for assets can be found in **Table 5**.

Table 3: Infrastructure Services and Support Assets' Estimated Service Life

Asset	Estimated Service Life
IT Infrastructure	Assets that fall into the IT Infrastructure asset class are replaced on a five to ten (5-10) year cycle.
IT Devices and Peripherals	Assets that fall into the IT Devices and Peripherals assets class are generally replaced on a five to fifteen (5-15) year cycle. Printers are leased on four (4) year contracts and are replaced every four (4) years.

1.2.2 CONDITION SCORING

For the purpose of this report and standardizing condition scores across all assets in the Asset Management Plan, the Condition Rating is defined by three (3) Condition Scores as defined in the table below. For assets with formal consultant condition assessments, the conditions have been modified to fit into this model.

Table 4: Condition Score Description

Condition Score	Condition Rating	Description
1 - 1.4	Good	Assets in the system or network are in working order, have no or minor deficiencies. Where condition data is not available, this category applies to assets which are within the first 40% of their estimated service life.
1.5 - 2.4	Fair	Assets in the system or network show general signs of deterioration, some elements may have significant deficiencies, and asset will likely require repairs in the next 10 years. Where condition data is not available, this category applies to assets which are within 41% - 80% of their estimated service life.
2.5 - 3	Poor	Asset is below standard showing signs of significant deterioration, is in danger of imminent failure, and will require repair or replacement within the next year. Where condition data is not available, this category applies to assets which have exceeded 80% of their estimated service life.

1.3. SUMMARY OF INFRASTRUCTURE SERVICES AND SUPPORT ASSETS

The summary of assets for the Infrastructure Services and Support Asset Class can be found below. The summary of assets includes: Quantity, Replacement Cost, Average Age, and Average Condition Score for each asset type in accordance with O. Reg 588/17.

1.3.1 TOTAL SUMMARY OF ASSETS

A table summarizing all Infrastructure Services and Support assets is included in **Table 5** below. Detailed information about each asset is included in individual sections. Calculations of averages have been weighted by the overall replacement value of assets. This means that assets of higher estimated replacement value will have a stronger influence on the average then if the average was calculated based on the number of assets.

The total replacement cost for all Infrastructure Services and Support assets is approximately $14.3M and they are a weighted average of 3.13 years old which is 34% of the overall weighted average estimated service life of 9.1 years. Overall Infrastructure Services and Support assets are in Good condition with a weighted average condition score of 1.09.

Table 5: Total Summary of Infrastructure Services and Support Assets

Asset	Quantity	Unit	Replacement Cost	Weighted Average Age (years)	Weighted Average Estimated Service Life (years)	% of Estimated Service Life Expended	Weighted Average Condition Score	Weighted Average Condition Description
Infrastructure Services and Support Assets Total			**$14.3M**	**3.13**	**9.10**	**34%**	**1.09**	**GOOD**
IT Infrastructure	2	Ea	$10.3M	3.0	10.0	30%	1.00	GOOD
IT Devices and Peripherals	5215	Ea	$4.0M	3.5	6.78	52%	1.33	GOOD

1.3.2 IT INFRASTRUCTURE

Assets within the IT Infrastructure group are related to the City's server room at City Hall and support the City's main IT network.

It can be seen in **Figure 1** that the IT Infrastructure contains two (2) assets with a total replacement cost of $10.3M. Assets are typically in Good condition with a weighted average condition score of 1.00.

The weighted average age for the City Hall Server Room Infrastructure is 3 years and was based on the year of reconstruction for the City's new City Hall (2021) and is 30% of the weighted average estimated service life of 10 years for all components. The values are weighted based on estimated replacement value.

It is important to note that the condition presented below was creating using a combination of information provided from the City's Snipe IT software and staff input.

NO. OF ASSETS	REPLACEMENT COST	WEIGHTED AVG AGE (YEARS)	WEIGHTED AVG ESTIMATED SERVICE LIFE	WEIGHTED AVG CONDITION RATING	WEIGHTED AVG CONDITION DESCRIPTION
2	$10.3M	3	10	1.00	GOOD

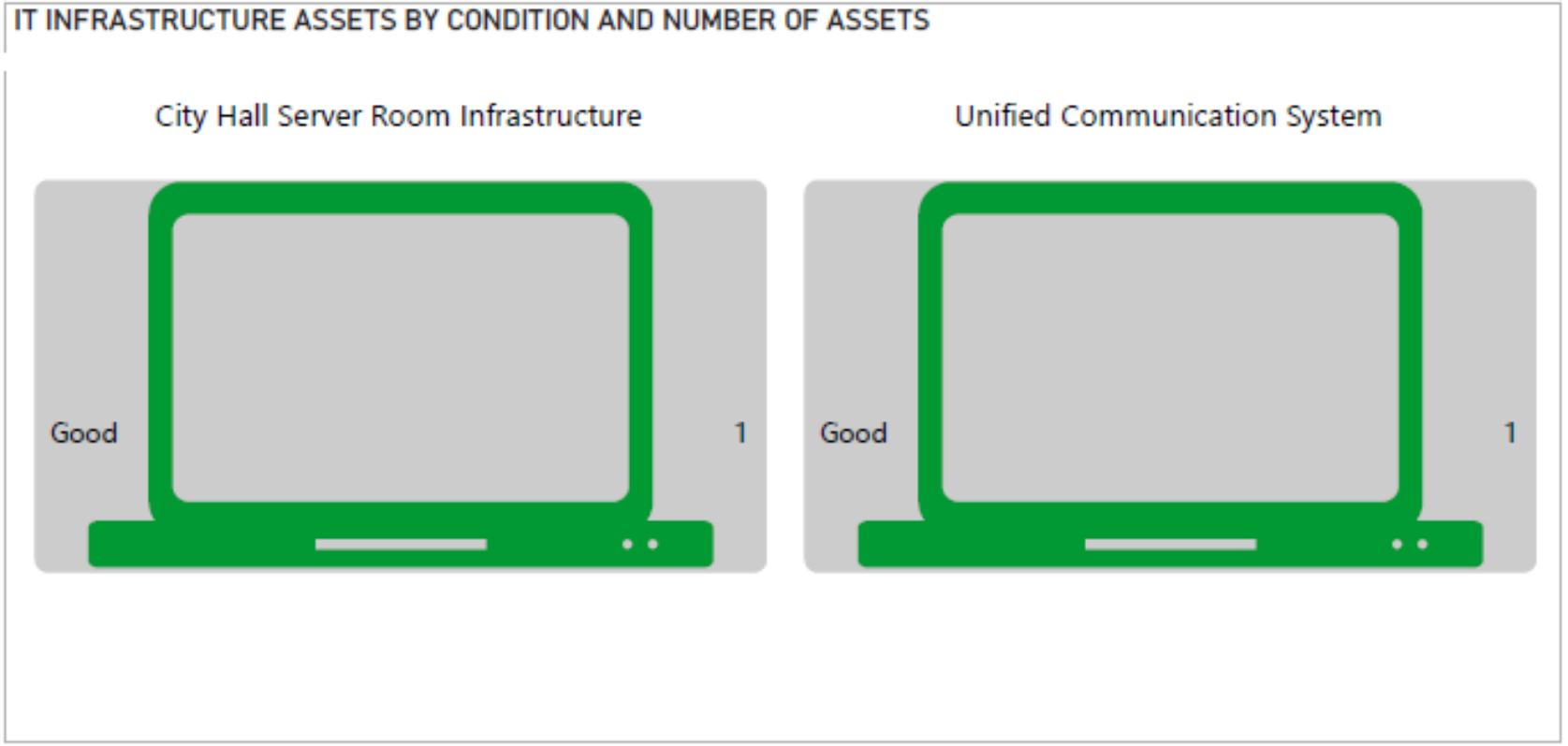

Figure 1: IT Infrastructure Asset Summary

1.3.3 IT DEVICES AND PERIPHERALS

IT Devices and Peripherals encompass a wide variety of assets that are imperative for staff to complete daily tasks.

Per **Figure 2** below, the City owns and maintains five thousand two hundred and eleven (5211) IT devices and four (4) assets within the peripherals asset class.

The weighted average age of the City's IT Devices and Peripherals is 3.5 years which is 52% of its weighted average estimated service life of 6.78 years. The weighted average condition of assets, based on a combination of age and informal assessment, is Good with a score of 1.33 based on the most recent condition assessment information from Snipe IT. The values are weighted based on estimated replacement value.

As noted previously, a large number of these assets are used by staff at home offices and in the field so the true condition of an asset is not always known. IT Services staff are working to develop new methodologies, including updating to a new asset tracking software, as a way to better track and maintain the condition of IT Devices and Peripherals.

NO. OF ASSETS	REPLACEMENT COST	WEIGHTED AVG AGE (YEARS)	WEIGHTED AVG ESTIMATED SERVICE LIFE	WEIGHTED AVG CONDITION RATING	WEIGHTED AVG CONDITION DESCRIPTION
5215	4.0M	3.5	6.78	1.33	GOOD

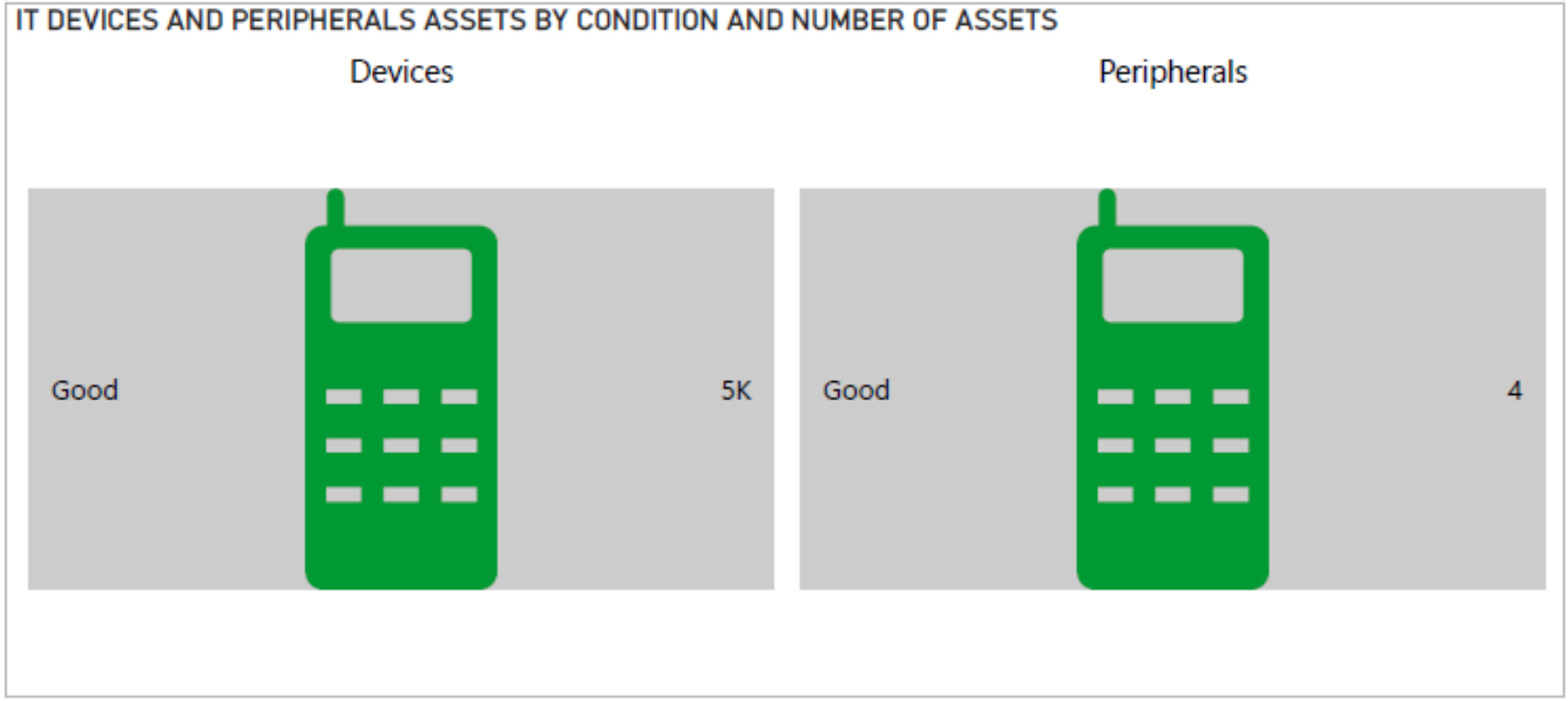

Figure 2: IT Devices and Peripherals Asset Summary

1.4. LIFECYCLE OF INFRASTRUCTURE SERVICES AND SUPPORT ASSETS

The lifecycle of Infrastructure Services and Support assets is described under four (4) categories which are described in this section:

- Key Lifecycle Stages of Infrastructure Services and Support Assets;
- Lifecycle Activities;
- Risks of Lifecycle Activities; and
- 10 Year Lifecycle Costs of Infrastructure Services and Support Assets.

1.4.1 KEY LIFECYCLE STAGES OF INFRASTRUCTURE SERVICES AND SUPPORT ASSETS

The lifecycle of an asset refers to the following stages: Planning, Creation/Acquisition, Operations and Maintenance, Renewal/Disposal which are defined in the Main Body of the report. For Infrastructure Services and Support assets specifically our general process is as follows:

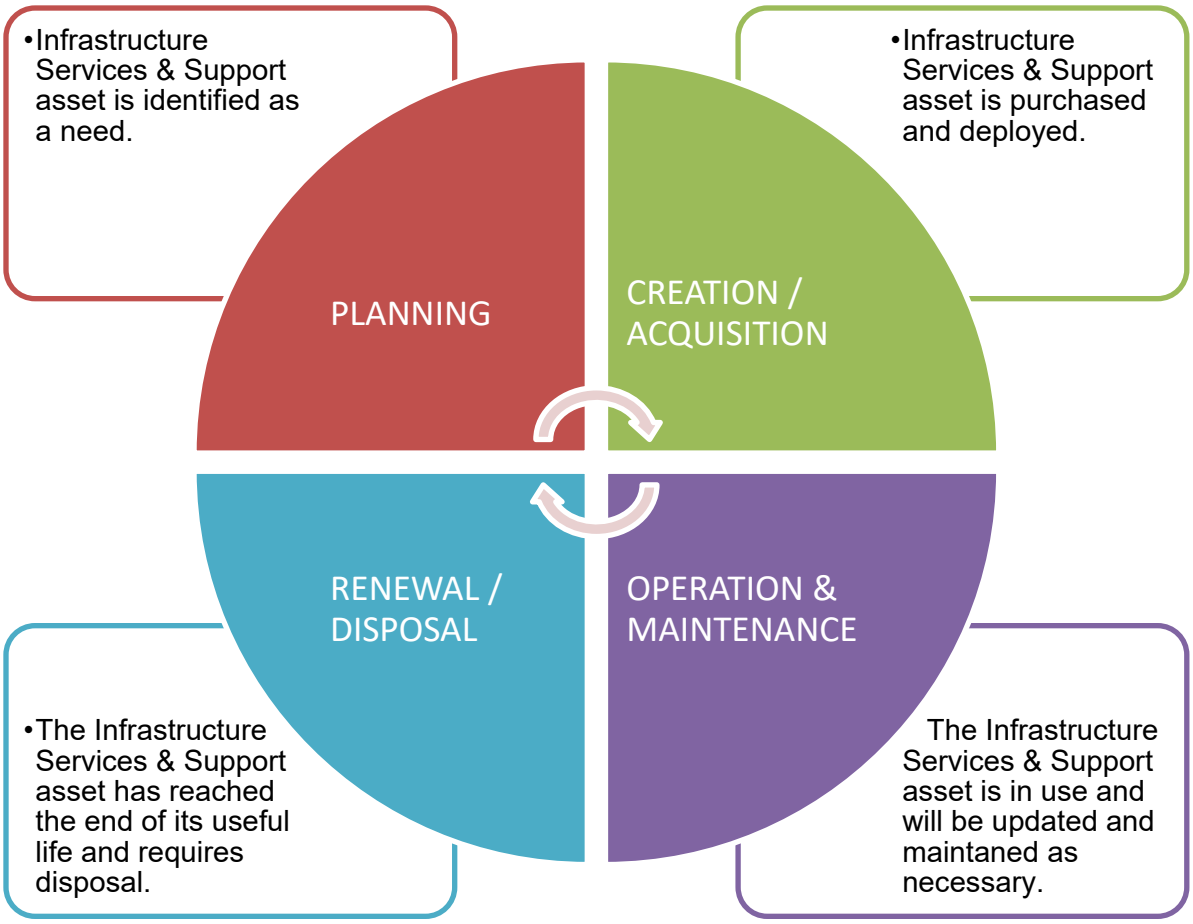

Figure 3: Lifecycle Stages of IT Assets

1. **Planning** –The Infrastructure Services and Support asset has been identified as a need. The asset is purchased considering all needs and City policies.
2. **Creation / Acquisition / Replacement** – The cost and requirements for the new asset are defined considering all City needs and policies. The asset is purchased and deployed for use by staff.
3. **Operation and Maintenance** – The Infrastructure Services and Support asset is operating and delivering services to customers. Maintenance (Lifecycle) Activities are completed on the asset at specific time intervals as shown in **Table 6** to prevent

premature failures of the asset. Additional monitoring and potential improvements are evaluated during this process.

4. **Renewal / Disposal** – The Infrastructure Services and Support asset has reached the end of its useful life, has been replaced and requires disposal. The disposal considers the effect on customers such as required transition periods or service disruptions which are taken into account in the Planning stage thereby restarting the cycle. The City follows industry standards when disposing of these assets.

1.4.2 LIFECYCLE ACTIVITIES

A list of the planned Lifecycle Activities, annual cost, and frequency for each Infrastructure Services and Support Asset Class can be found in **Table 6** below. These activities are currently being undertaken to maintain these IT Services assets and therefore maintain the current levels of service.

Table 6: Lifecycle Activities for IT Infrastructure

Asset Type	Lifecycle Activity	2024 Annual Cost*	Frequency	Completed by
IT Infrastructure	A/C Inspection	$9,500.00	Once ever six (6) months	Contracted Service – IT Services
	Fire System Maintenance	See Facilities AMP	As Required	Contracted Service – IT Services
	Preventative Maintenance	$118,360.00	Periodic	IT Services
	Replacement	$500,000.00	Varies depending on Component. Every five (5) years used for the purpose of calculations.	IT Services
IT Devices and Peripherals	Preventative Maintenance	$50,000.00	Periodic	IT Services
	Lease of Printers	Based on usage.	Every four (4) years	IT Services
	Replacement of other IT Devices and Peripherals	$150,000.00	Every five (5) years	IT Services

*2024 Annual Cost is typically based on estimates presented in the 2024 Operating Budget under 2024 Budget Gross Expenditures.

Lifecycle activities occur on each of our Infrastructure Services and Support assets. IT Infrastructure assets are maintained by IT Services staff and activities are currently tracked through the Snipe IT Asset Management software. The lifecycle of each asset is managed through this software and hardware upgrades are completed in accordance with IT asset upgrade guidelines at the City of Brantford.

1.4.3 RISKS OF LIFECYCLE ACTIVITIES

The identified lifecycle activities in **Table 6** above are historical activities taken on by IT Services staff or hired contractors. Some risks associated with these activities include:

- **Equipment Failure -** Equipment failure can occur during maintenance activities and this is mitigated by ensuring preventative maintenance is completed during off hours to regular business

If these activities were not completed, the risks would include:

- **Service Disruptions** due to premature failures that could have been mitigated with preventative maintenance;
- **Increased Cost** due to reactive repairs which could have been prevented with preventative maintenance.

1.4.4 10 YEAR LIFECYCLE COSTS OF INFRASTRUCTURE SERVICES AND SUPPORT ASSETS

Figure 4 below outlines the 10 year lifecycle costs of Infrastructure Services and Support assets based primarily on the City's current O&M budget and the forecasted replacement dates for capital costs.

Although there is not a large number of assets needing to be replaced in the first year, the cost for Operation and Maintenance of Infrastructure Services and Support Assets outweighs the capital cost for this infrastructure each year until 2031. The spike in capital needs in 2031 can be attributed to the significant purchase of assets for the new City Hall that was opened in 2021. Specifically, the new Server Room Infrastructure has a significant replacement cost of $10M and is currently anticipated to have a ten (10) year lifecycle.

Based on the information presented in the figure below, the total annual average capital cost for the next 10 years to maintain the state of good repair spent on these IT assets is $1.9M, and the average annual Operation and Maintenance cost to maintain the state of good repair is $3.4M. Therefore, $5.3M is the amount recommended that the City invest in Infrastructure Services and Support assets annually to maintain the state of good repair.

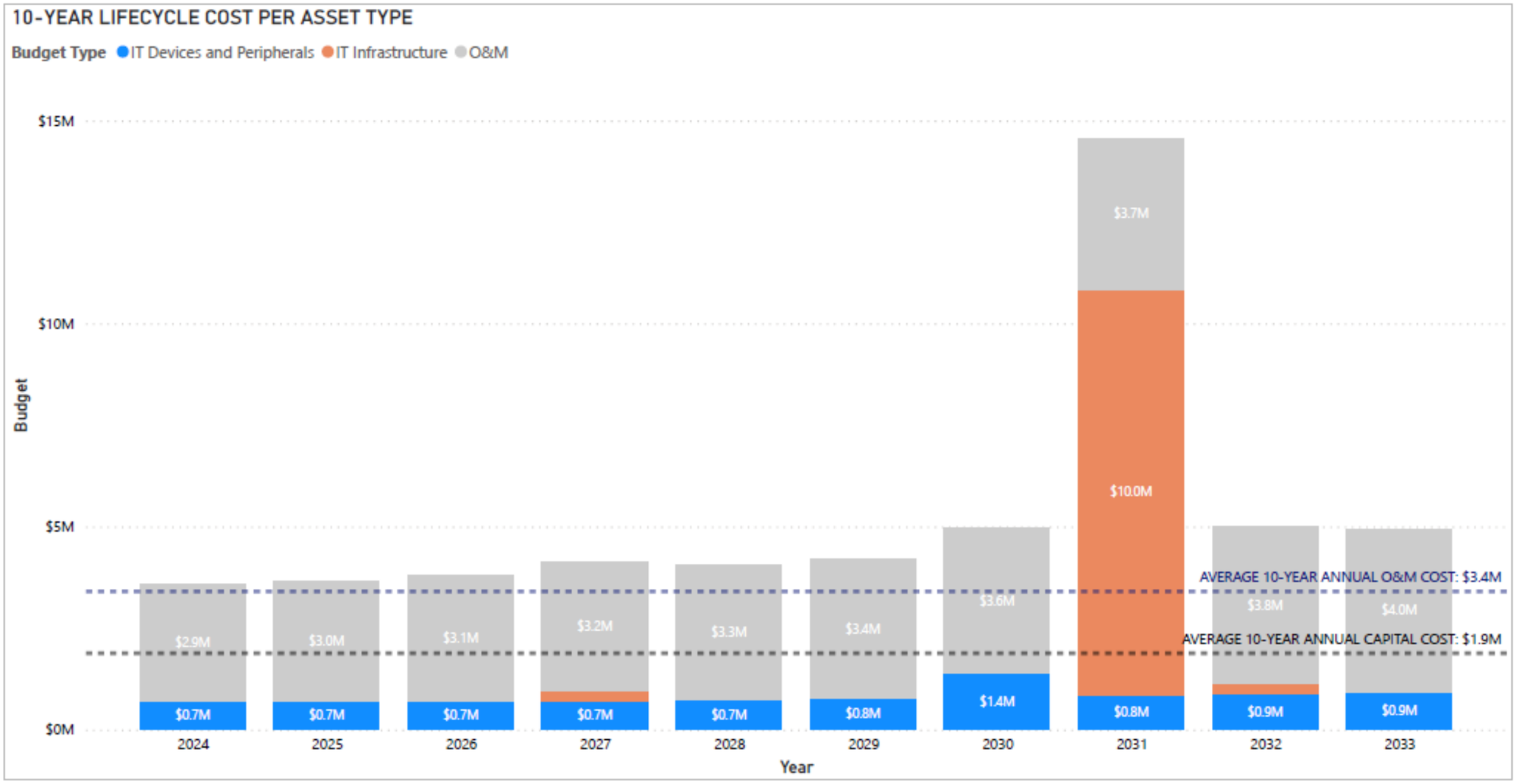

Figure 4: 10-Year Lifecycle Cost Per Infrastructure Services and Support Asset Type

Notes:

1. Operation and Maintenance Costs are estimated based on the 2024 Final Operating Budget and are inflated by 3.8% each year starting in 2028. These Operation and Maintenance Costs are associated with both IT Devices and Peripherals and IT Infrastructure.
2. For asset categories which consist of multiple individual items of similar replacement value and life expectancy, where no formal forecast was available, the amount required each year has been averaged over the life expectancy of the asset category.
3. For all other assets where no formal forecast was available, the replacement year is based on the estimated remaining service life of each asset
4. Reimbursements and revenues are ignored in order to capture total cost/expenses.

Per

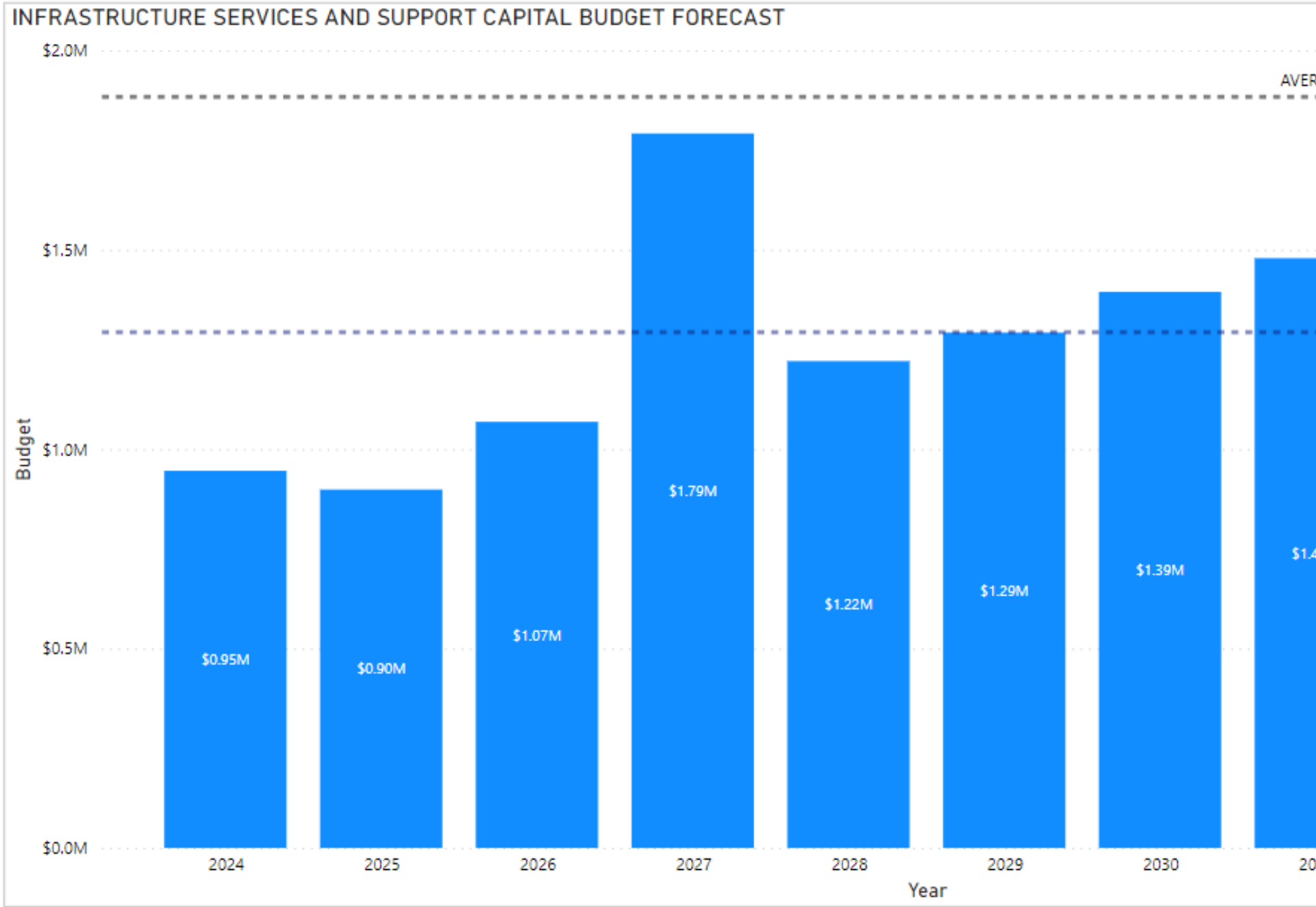
INFRASTRUCTURE SERVICES AND SUPPORT CAPITAL BUDGET FORECAST
$2.0M
$1.5M
$1.0M
$0.5M
$0.0M
Budget
AVER
$0.95M
$0.90M
$1.07M
$1.79M
$1.22M
$1.29M
$1.39M
2024
2025
2026
2027
2028
2029
2030
Year

Figure 5 below, the existing 10-year forecast from 2024 – 2033, further explained in **Section 8.3** of the **Asset Management Plan Overview Document**, indicates that the City is currently planning to spend an average of $1.3M on Infrastructure Services and Support assets capital annually, and as noted above, the required 10-year average yearly amount is estimated at $1.9M for these assets, which indicates there is an annual 10-year funding gap of $0.6M for Infrastructure Services and Support assets. The impacts resulting from the funding gap will be monitored and reported as appropriate.

The City of Brantford has moved to a four (4) year budget cycle and departments will complete long term planning as opposed to annual planning for projects within this time period. The Prioritization Matrix explained in **Section 9** of the **Asset Management Plan Overview Document** has also been implemented which will help departments confirm priority projects. It is anticipated that the new process for the City's 2024 budget cycle will help departments prepare and request funding in advance of significant replacement costs for assets reaching the end of their useful life.

It is important to note that currently the City does not have access to detailed data on Operation and Maintenance costs for IT assets, but with the implementation of new asset tracking software and department initiatives, it is anticipated this information will improve in the next iteration of the AMP.

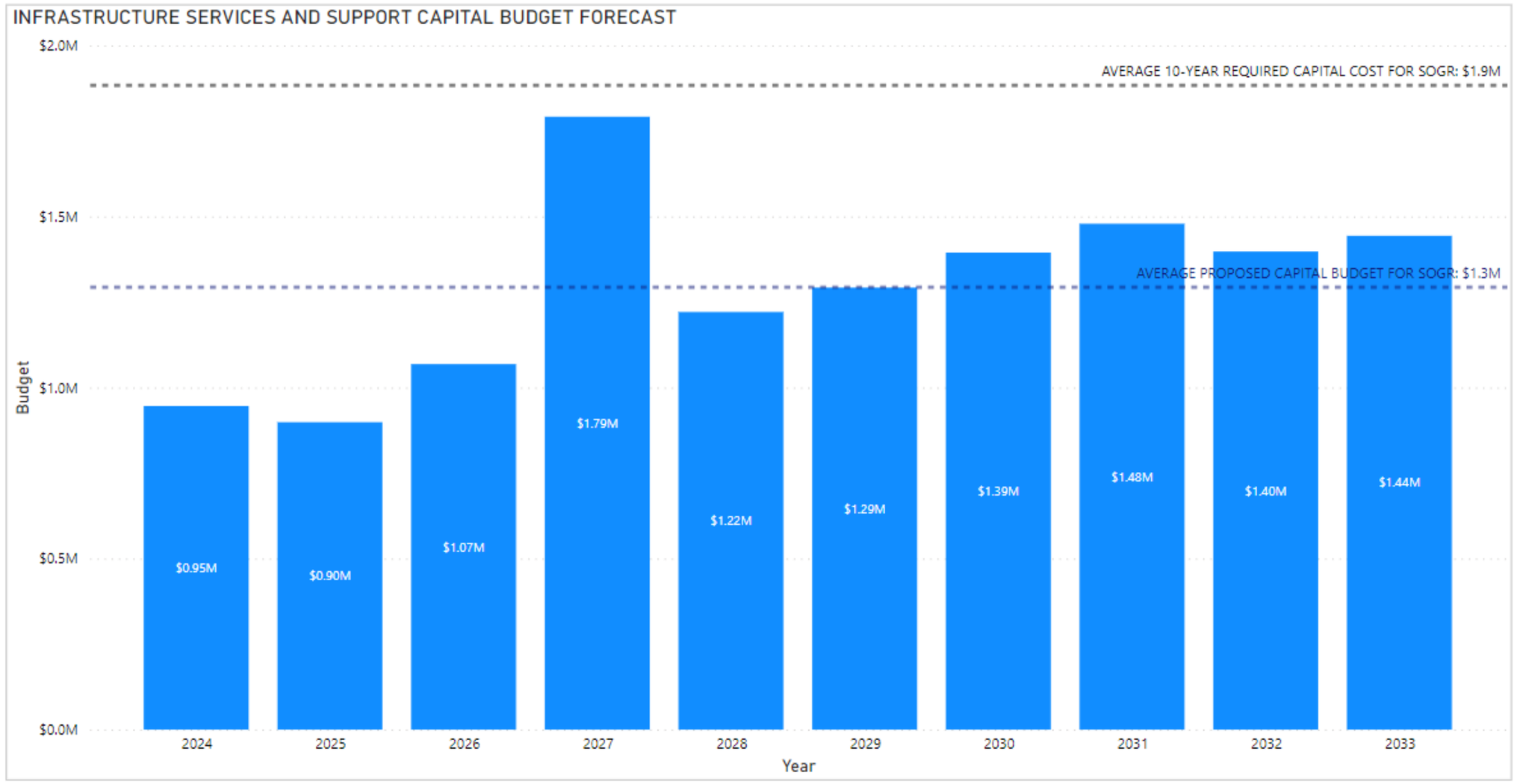

Figure 5: Existing Capital Budget Forecast from 2024 – 2033 for IT Assets

1.5. CURRENT LEVELS OF SERVICE

1.5.1 O. REG 588/17 CUSTOMER LEVELS OF SERVICE

O. Reg 588/17 does not currently have defined customer levels of service for this asset class that must be reported within this plan. This section will be kept for future plan iterations should O. Reg 588/17 be updated and require defined customer levels of service be reported.

1.5.2 O. REG 588/17 TECHNICAL LEVELS OF SERVICE

O. Reg 588/17 does not currently have defined technical levels of service for this asset class that must be reported within this plan. This section will be kept for future plan iterations should O. Reg 588/17 be updated and require defined technical levels of service be reported.

1.5.3 MUNICIPALLY DEFINED CUSTOMER LEVELS OF SERVICE

The customer levels of service are defined in **Section 6.2** of the **Asset Management Plan Overview**. For Infrastructure Services and Support assets, the asset specific interpretation of these levels of service is defined below in **Table 7.**

Table 7: Municipally Defined Customer Levels of Service

Customer Level of Service	Definition
Accessibility	Infrastructure Services and Support assets should be accessible without barriers to staff and customers.
Quality	Infrastructure Services and Support assets should deliver their intended services at a certain quality.
Cost Efficiency	Infrastructure Services and Support assets should meet the needs of the user at an affordable cost to the City.
Safety	Infrastructure Services and Support assets should ensure the safety of users by protecting personal and confidential information.
Environmental Sustainability	Infrastructure Services and Support assets purchased shall consider energy efficiency.
Reliability	Infrastructure Services and Support assets and services should be available as needed and consideration should be taken when scheduling periods of downtime for maintenance.
Responsiveness	Infrastructure Services and Support assets should be repaired promptly when unavoidable service disruptions occur. Responsiveness should account for the relative risk to the public, the asset itself and to the staff completing the response

1.5.4. MUNICIPALLY DEFINED TECHNICAL LEVELS OF SERVICE

The technical levels of service for Infrastructure Services and Support have been developed based on the customer levels of service defined in **Table 7**. The currently available customer levels of service with the corresponding technical levels of service and KPI metrics are defined in **Table 8**.

The need for additional KPIs and KPI targets has been identified and future iterations of this AMP will look for opportunities to gather and include this information.

Table 8 Levels of Service KPIs

Customer Level of Service	Technical LOS	2024 KPI	Units
Accessibility	Not Available	Not Available	Not Available
Quality	Not Available	Not Available	Not Available
Cost Efficiency*	Percentage of Employees whose needs are met or exceeded by devices & peripherals	73%	% of Employees
	Percentage of Employees whose needs are met or exceeded by infrastructure assets	65%	% of Employees
Safety	Not Available	Not Available	Not Available
Environmental Sustainability	Not Available	Not Available	Not Available
Reliability	Not Available	Not Available	Not Available
Responsiveness	Not Available	Not Available	Not Available

*Information obtained from staff surveys conducted in 2024, more details available in Overview Document.

1.6. CURRENT ASSET PERFORMANCE

The current asset performance for Infrastructure Services and Support assets have been separated into two (2) categories for this section of the report:

- Energy Performance; and
- Operating Performance

1.6.1 INFRASTRUCTURE SERVICES AND SUPPORT ASSETS CURRENT ENERGY PERFORMANCE

The City of Brantford has a Corporate Energy Management Plan (CEMP) which emphasizes energy efficiency within the City. The goals of the CEMP are to reduce energy use, energy intensity, and greenhouse gas (GHG) emissions in our Facilities. In addition, through the City's Climate Change Action Plan and Climate Lens Tool explained in Section 10 of the Asset Management Plan Overview Document, the City has been working to improve our facilities' energy efficiency and reduce the associated carbon footprint.

Currently, the City does not have a method to track Energy Performance for the Infrastructure Services and Support asset class. This section will be kept for future iterations as ways to track Energy Performance for this asset class are explored.

1.6.2 INFRASTRUCTURE SERVICES AND SUPPORT ASSETS CURRENT OPERATING PERFORMANCE

Currently, the City does not have a method to track Operating Performance for the Infrastructure Services and Support asset class. This section will be kept for future iterations as ways to track Operating Performance for this asset class are explored.

1.7. DISCUSSION AND CONCLUSIONS

In conclusion, the City of Brantford operates and maintains approximately 5,200 Infrastructure Services and Support assets. These assets are in Good condition with a total estimated replacement cost of approximately $14.3M.

The inventory and condition data confidence for IT Infrastructure is typically at a High level as assets are generally less than 5 years old and City staff track and maintain these assets, including data, at regular intervals. The IT Devices and Peripherals asset inventory and condition data confidence is typically Medium. These assets are given to staff to complete daily tasks and a large portion of the City of Brantford workforce primarily works from home or outside of the office. This makes the exact condition of assets hard to track. However, assets are replaced on a regular schedule, typically every two (2) to five (5) years, which means that assets rarely receive a poor condition rating before they are replaced. Assumptions regarding assets are continuously being improved as new data is added into the current asset tracking software and is anticipated to improve for the next iteration of this plan.

The lifecycle stages for Infrastructure Services and Support assets include: Planning, Creation, Operation and Maintenance, and Disposal. During the Planning stage, the City identifies the need for the asset; during the Creation stage, the asset is purchased and installed or deployed; during the Operation and Maintenance stage, the asset is operating and lifecycle activities (i.e. maintenance) occur on each of our assets to maintain the state of good repair; and the Disposal stage is when the asset has reached the end of its useful life or is underperforming and requires disposal.

Lifecycle activities are currently typically tracked through Snipe IT, although City staff have recently begun using more features of this program to track asset lifecycle details. Therefore, some data presented is relatively new. For more information on key database applications and work order management, please refer to **Section 4.2** respectively, in the **AMP Overview** document. As staff continue to track data and review opportunities to improve tracking, the frequency and costs associated with specific activities will be better represented.

It is estimated based on the average annual cost in the 10 Year Life Cycle Costing that the City should be spending an average $1.9M annually for capital Infrastructure Services and Support assets and will be spending an average of $3.4M on Operating and Maintenance on these assets, however, the City is currently proposing to spend an average of $1.3M annually on capital for Infrastructure Services and Support assets' state of good repair.

Current Levels of Service have been identified as a need for Infrastructure Services and Support assets. Currently, these levels of service will be either tracked based on

reported information within Snipe IT or the City's IT Services service request system. Brantford is working to continue to develop the process to track these metrics which will assist in tracking these and any further identified KPIs for future iterations.

Finally, asset performance is separated into operating and energy performance in the City's AMPs. However, due to limited tracking for assets, the City's IT Services Department is not able to provide information for Infrastructure Services and Support asset performance in this iteration of the AMP. The IT Services Department is currently reviewing best practices and will be looking to provide updated information in future iterations of this plan.

2. CORPORATE INFORMATION AND BUSINESS SOLUTIONS ASSETS

2.1. INTRODUCTION

The City of Brantford owns and maintains assets under the Corporate Information and Business Solutions asset class. The purpose of this section is to present specific information about the Corporate Information and Business Solutions Asset class so that we can answer the questions posed in **Section 2** of the **Asset Management Plan (AMP) Overview Document**, and includes the following:

- Corporate Information and Business Solutions Assets' Data Inventory and Condition Approach;
- Summary of Corporate Information and Business Solutions;
- Lifecycle Activities and Cost of Corporate Information and Business Solutions Assets;
- Current Corporate Information and Business Solutions Assets' Levels of Service;
- Corporate Information and Business Solutions Asset Performance; and
- Conclusion.

2.2. CORPORATE INFORMATION and BUSINESS SOLUTIONS ASSETS' DATA INVENTORY AND CONDITION APPROACH

The City of Brantford has different approaches to establishing the condition for each Corporate Information and Business Solutions asset due to available resources, technologies, and budget restrictions.

There is currently one approach we use to assess the condition of our corporate information and business solutions assets:

- Estimated condition based on asset specific information.

A list of all condition assessments for all assets can be found in **Table 7** in the **Asset Management Plan Overview Document**.

The origin of the Corporate Information and Business Solutions asset data for inventory, replacement cost, condition as well as data confidence are provided in **Table 9** below.

Table 9: Corporate Information and Business Solutions Assets' Data Origin and Confidence Levels

	Inventory			Replacement Cost			Condition		
Asset Type	**Inventory (incl. Quantity and Age) From**	**Data Confidence Level**	**Data Confidence Description**	**Replacement Cost From**	**Data Confidence Level**	**Data Confidence Description**	**Condition From**	**Data Confidence Level**	**Data Confidence Description**
Application Software	Application Inventory from the Sharepoint System	Medium	Informal inventory prepared by staff with data incomplete	Financial Statements where possible	Low	Assumptions made by staff if data unavailable.	Staff knowledge	Low	Condition not currently tracked in a formal way.

Per **Table 9** above, Corporate Information and Business Solutions assets' inventory and condition data are typically at a Low or Medium confidence level with an overall average confidence level of Low.

IT Services has developed a basis model to assist staff in assessing software condition (see **Table 11**) but this model has not yet been used regularly to categorize our software. IT Services is working to assess software condition in conjunction with the development of an organizational Enterprise Architecture for the Corporate Information and Business Solutions assets.

Improvements to the inventories and assessment programs will be ongoing as a result of department priorities to close these data gaps.

2.2.1. SERVICE LIFE

Condition assessments are not typically completed on Corporate Information and Business Solutions assets. Therefore, the condition has been estimated based on the estimated service life of the asset presented in **Table 10** below. Many factors may affect service life including, but not limited to, whether or not a company supports the software, the overall shift to SAAS applications, a shift towards digitization, functionality of the software package or the changing business requirements at the City of Brantford.

The average overall estimated service life for assets can be found in **Table 12**.

Table 10: Corporate Information and Business Solutions Assets' Estimated Service Life

Asset	Estimated Service Life
Application Software	The service life of Application Software assets differs between individual software packages and is based on whether or not the software is still meeting the needs of the business and the user(s). An assumption has been made that software is replaced or receives a major upgrade every ten (10) years. However, this assumption is under review and values used may change for future Asset Management Plan iterations.

2.2.2. CONDITION SCORING

For the purpose of this report and standardizing condition scores across all assets in the Asset Management Plan, the Condition Rating is defined by three (3) Condition Scores as defined in **Table 11** below. For assets with formal consultant condition assessments, the conditions have been modified to fit into this model.

Table 11: Condition Score Description

Condition Score	Condition Rating	Description
1 – 1.4	Good	Software has recently been replaced or purchased and is operationally sound. No timelines for replacement exist and the software is functioning as expected and meeting the needs of the business and the user.
1.5 – 2.4	Fair	Software is functioning with some issues. Technical platform may be nearing obsolescence or support will soon become unavailable. Software may be supportable, but is satisfying fewer emerging needs of its business customers.
2.5 - 3	Poor	Software is no longer meeting the needs of the business and / or user(s) and requires replacement. Software may no longer be updatable, software vendor may no longer exist, or software requires old, unsupported versions of operating systems to function.

2.3. SUMMARY OF CORPORATE INFORMATION AND BUSINESS SOLUTIONS ASSETS

The summary of assets for the Corporate Information and Business Solutions Asset Class can be found below. The summary of assets includes: Quantity, Replacement Cost, Average Age, and Average Condition Score for each asset type in accordance with O.Reg 588/17.

2.3.1. TOTAL SUMMARY OF ASSETS

A table summarizing all Corporate Information and Business Solutions assets is included in **Table 12** below. Detailed information about each asset is included in individual sections. The total replacement cost for Corporate Information and Business Solutions assets is approximately $25.4M with an average age of 5.7 years which is 57% of the total average overall estimated service life for the asset class. Overall, Corporate Information and Business Solutions assets are in Good condition with a weighted average condition score of 1.0.

Corporate Information and Business Solutions is currently in the process of developing a system for tracking software packages utilized across the City including those that are unique to certain departments. As a result, the information provided in this section is based on staff knowledge and understanding of the assets. It is anticipated that as efforts to closely track this asset class continue, the data in future iterations will become more accurate.

Table 12: Total Summary of Corporate Information and Business Solutions Assets

Asset	Quantity	Unit	Replacement Cost	Weighted Average Age (years)	Weighted Average Estimated Service Life	Percentage of Estimated Service Life	Weighted Average Condition Score	Weighted Average Condition Description
Corporate Information and Business Solutions Total			**$25.4M**	**5.7**	**10**	**57%**	**1.0**	**GOOD**
Application Software	116	ea	$25.4M	5.7	10	57%	1.0	GOOD

2.3.2. APPLICATION SOFTWARE

Application Software at the City of Brantford encompasses all software packages that the City uses for day to day activities.

Per **Figure 6** below, Application Software can be broken down into four sub asset groups which have a total replacement cost of $25.4M.The average software age is 5.7 years and is just over half the estimated service life of 10 years. The condition data below is based on available information provided by IT Services staff, based on their knowledge and experience, and a weighted average condition score of 1 or Good was calculated. The values are weighted based on estimated replacement value.

NO. OF APPLICATION SOFTWARE	REPLACEMENT COST	WEIGHTED AVG AGE (YEARS)	WEIGHTED ESTIMATED SERVICE LIFE	WEIGHTED AVG CONDITION SCORE	WEIGHTED AVG CONDITION DESCRIPTION
116	$25.4M	5.73	10	1	GOOD

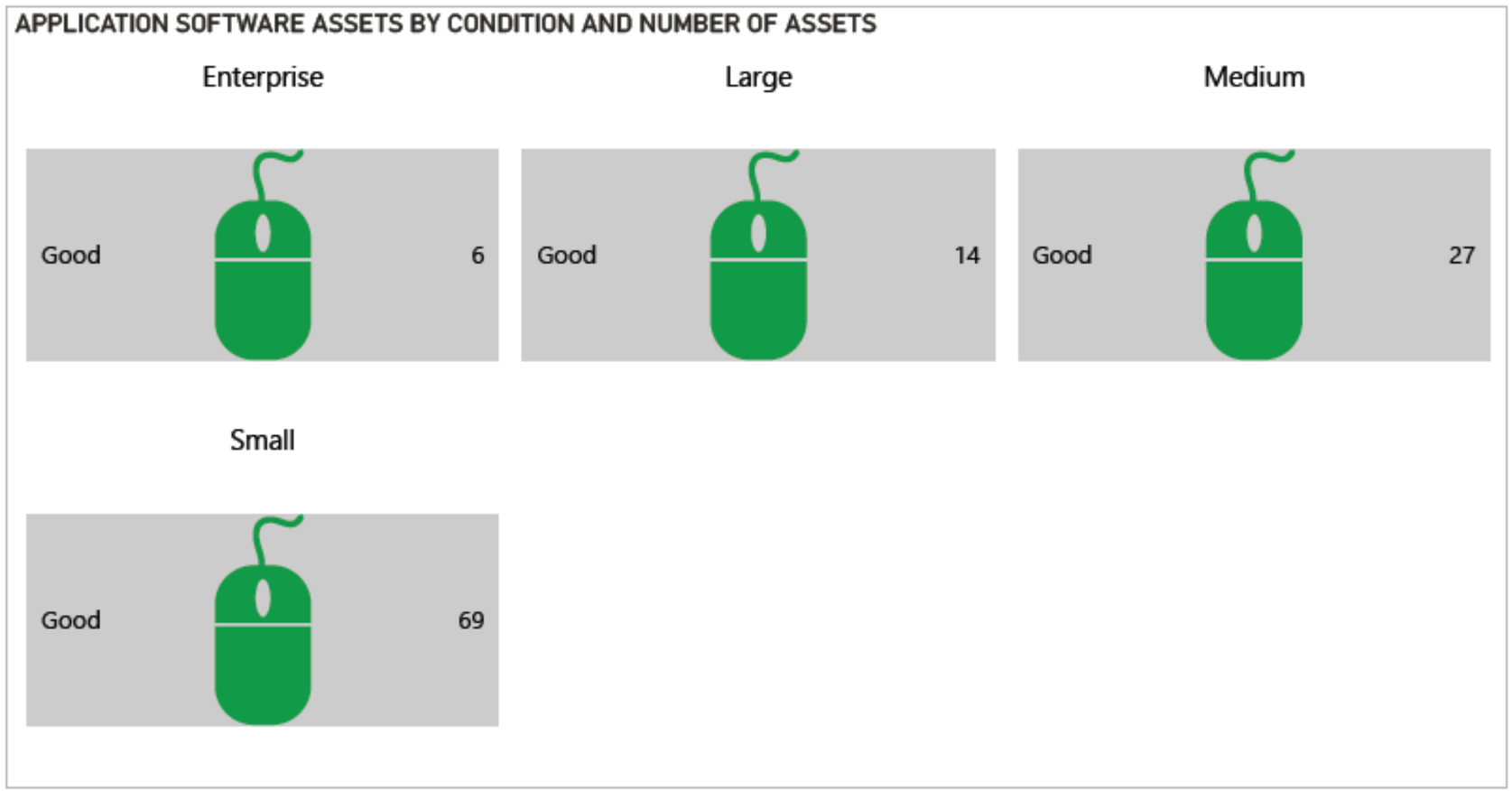

Figure 6: Application Software Asset Summary

2.4. LIFECYCLE OF CORPORATE INFORMATION AND BUSINESS SOLUTIONS ASSETS

The lifecycle of Corporate Information and Business Solutions assets consists of four (4) categories which are described in this section:

- Key Lifecycle Stages of Corporate Information and Business Solutions Assets;
- Lifecycle Activities;
- Risks of Lifecycle Activities; and
- 10 Year Lifecycle Costs of Corporate Information and Business Solutions Assets.

2.4.1. KEY LIFECYCLE STAGES OF CORPORATE INFORMATION AND BUSINESS SOLUTIONS ASSETS

The lifecycle of an asset refers to the following stages: Planning, Creation/Acquisition, Operations and Maintenance, Renewal/Disposal which are further defined in the Asset Management Plan Overview Document. For Corporate Information and Business Solutions assets specifically our general process is as follows:

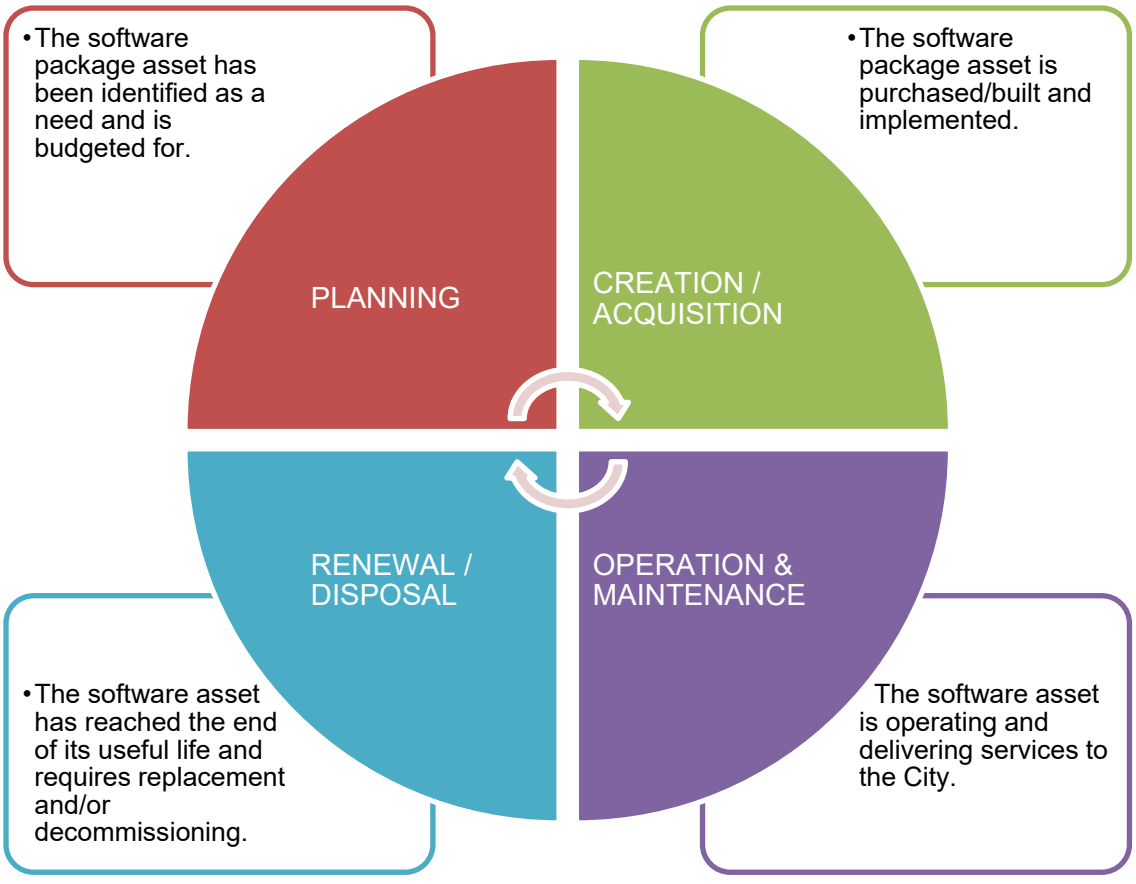

Figure 7: Lifecycle Stages of Corporate Information and Business Solutions Assets

1. **Planning** – A new Corporate Information and Business Solutions software package has been identified as a need by a department due to a vendor no longer supporting the software, a need to shift to SAAS applications or the functionality of the software package no longer meets the business requirements at the City of Brantford. The replacement asset is typically purchased from an outside vendor and considers all applicable regulations, acts and standards. Occasionally, the application is custom designed by the City's IT department. Typically this phase also involves planning on how to optimize the value of the assets which may include: consulting additional City departments to replace other software packages at the same time or improving operating and maintenance efficiencies.
2. **Creation / Acquisition / Replacement** – The cost and requirements for the Corporate Information and Business Solutions asset are defined. The asset is purchased or built and implemented. Extra care is taken at this stage to ensure the asset is designed and built properly and considers all applicable regulations, acts and standards that the City is required to follow to avoid any disruptions to service during implementation.
3. **Operation and Maintenance** – The Corporate Information and Business Solutions asset is operating and assisting the City with day to day activities and delivering services. Maintenance (Lifecycle) Activities are completed on the asset as required as indicated in **Table 13** to prevent premature failures of the asset. Additional monitoring and potential improvements are evaluated during this process.
4. **Renewal / Disposal** – The Corporate Information and Business Solutions asset has reached the end of its useful life, is underperforming and requires disposal. The disposal considers the effect on customers such as delays in services or service disruptions which are taken into account in the Planning stage thereby restarting the cycle. The City follows industry standard when disposing of these assets.

2.4.2. LIFECYCLE ACTIVITIES

A list of the planned Lifecycle Activities, annual cost, and frequency for each Corporate Information and Business Solutions Asset Class can be found in **Table 13** below. These activities are currently being undertaken to maintain our Corporate Information and Business Solutions assets and therefore maintain the current levels of service.

Table 13: Lifecycle Activities for Corporate Information and Business Solutions Assets

Asset Type	Lifecycle Activity	2024 Annual Cost*	Frequency	Completed by
Software Applications	Software Updates	$2,300,000	As needed	Vendor or Corporate Information and Business Solutions
	Module Additions or Replacements	$0.00	As needed	Vendor or Corporate Information and Business Solutions

*2024 Annual Cost is typically based on estimates presented in the 2024 Operating Budget under 2024 Budget Gross Expenditures averaged over the 4 years of the budget.

Lifecycle activities occur on software application assets to ensure that software operates at high efficiency. Activities related to software updates are not formally tracked. IT Services is currently in the process of developing a formal system to manage and track updates and decommissioning of software assets.

When these activities are integrated into a tracking system the frequency and cost associated with these activities will be better represented. At this time, the costs associated with the Operating and Maintenance activities on these assets are estimated based on 2024 Operating Budget and are not formally recorded, but future updates of the AMP should include actual costs, frequency, and time associated with these activities.

2.4.3. RISKS OF LIFECYCLE ACTIVITIES

The identified lifecycle activities in **Table 13** above are historical activities taken on by Corporate Information and Business Solutions. However, some risks with these activities include:

- **Vendor Error** – When a vendor puts out a software update this change to the software may accidently impair the functionality of the software to partially or completely render it unusable for users.
- **Security Breach** – accidently exposing personal information of staff, customers and residents.

However, if these activities were not completed, the risks would include:

- **Service Disruptions** due to failures that could have been mitigated with preventative maintenance (e.g. regular software updates);
- **Security Risks** due to hackers being able to access City software that could have been mitigated with preventative maintenance (e.g. regular software updates).
- **Increased Cost** due to reactive repairs which could have been mitigated with preventative maintenance (e.g. reactive repairs are often more expensive than planned repairs).

2.4.4. 10 YEAR LIFECYCLE COSTS OF CORPORATE INFORMATION AND BUSINESS SOLUTIONS ASSETS

Figure 8 below outlines the 10 year lifecycle costs of Corporate Information and Business Solutions assets. Typically when the condition of an asset is estimated based on service life there are spikes in the first year to account for the backlog of assets that have exceeded their service lives. However, the majority of these assets are performing as the City of Brantford requires and, with regular updates and maintenance, are not necessarily planned for replacement. It can be difficult to predict the service life of Application Software as the lifecycle differs between individual software packages and is based on whether or not the software is still meeting the needs of the business and the user(s). It is anticipated that changes to how we evaluate the lifecycle of software packages will change with the next iteration of this plan.

Based on the information presented in the figure below, the total annual average capital cost for the next 10 years to maintain the state of good repair spent on these IT assets is $2.5M, and the average annual Operation and Maintenance cost to maintain the state of good repair is $5.3M. Therefore, $7.8M is the amount recommended that the City invest in Corporate Information and Business Solutions assets annually to maintain the state of good repair.

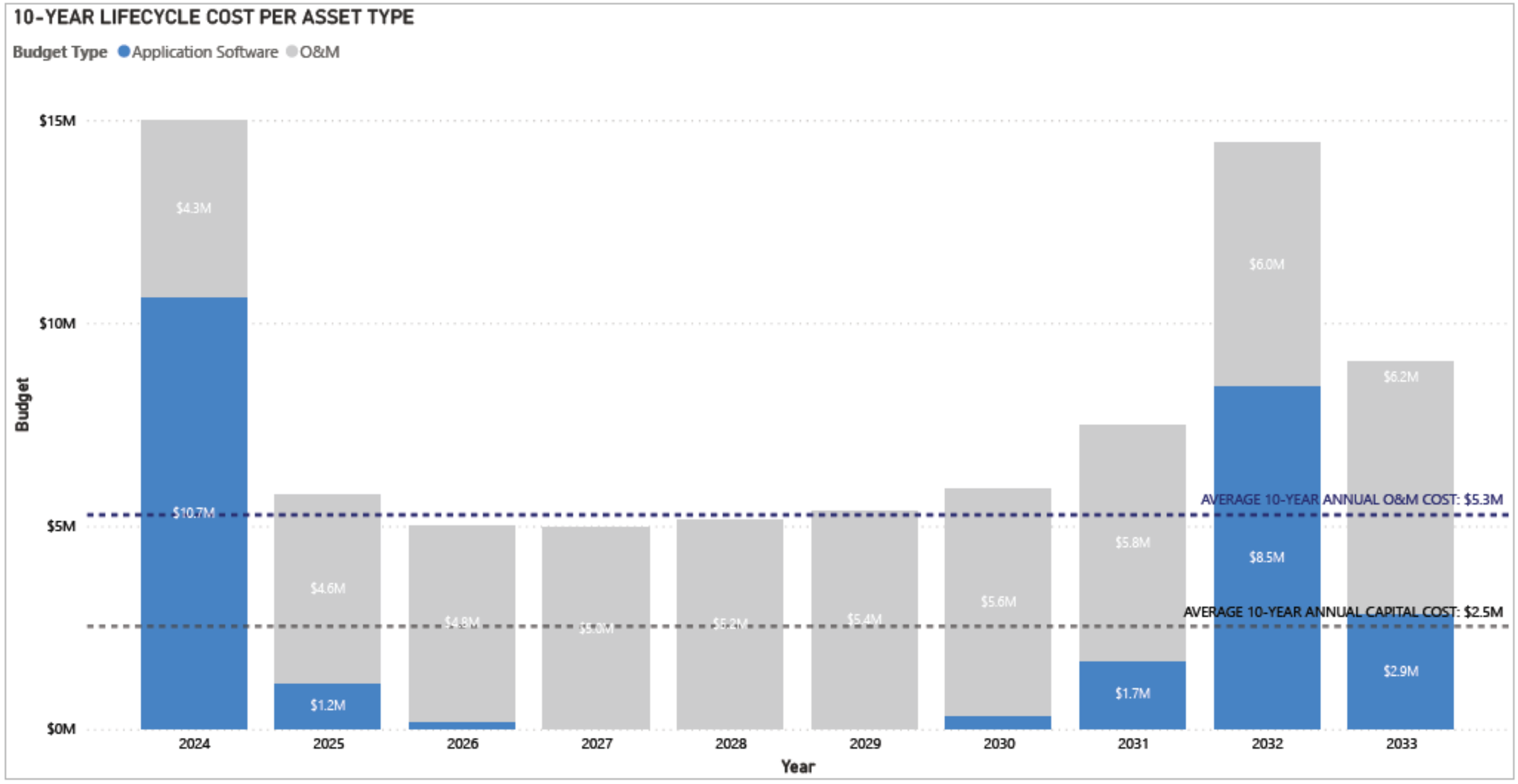

Figure 8: 10-Year Lifecycle Cost per Corporate Information and Business Solution Asset Type

Notes:

1. Operation and Maintenance Costs are estimated based on the 2024 Final Operating Budget and are inflated by 3.8% each year starting in 2028. These Operation and Maintenance Costs are associated with both IT Devices and Peripherals and IT Infrastructure.
2. For asset categories which consist of multiple individual items of similar replacement value and life expectancy, where no formal forecast was available, the amount required each year has been averaged over the life expectancy of the asset category.
3. For all other assets where no formal forecast was available, the replacement year is based on the estimated remaining service life of each asset
4. Reimbursements and revenues are ignored in order to capture total cost/expenses.

Per

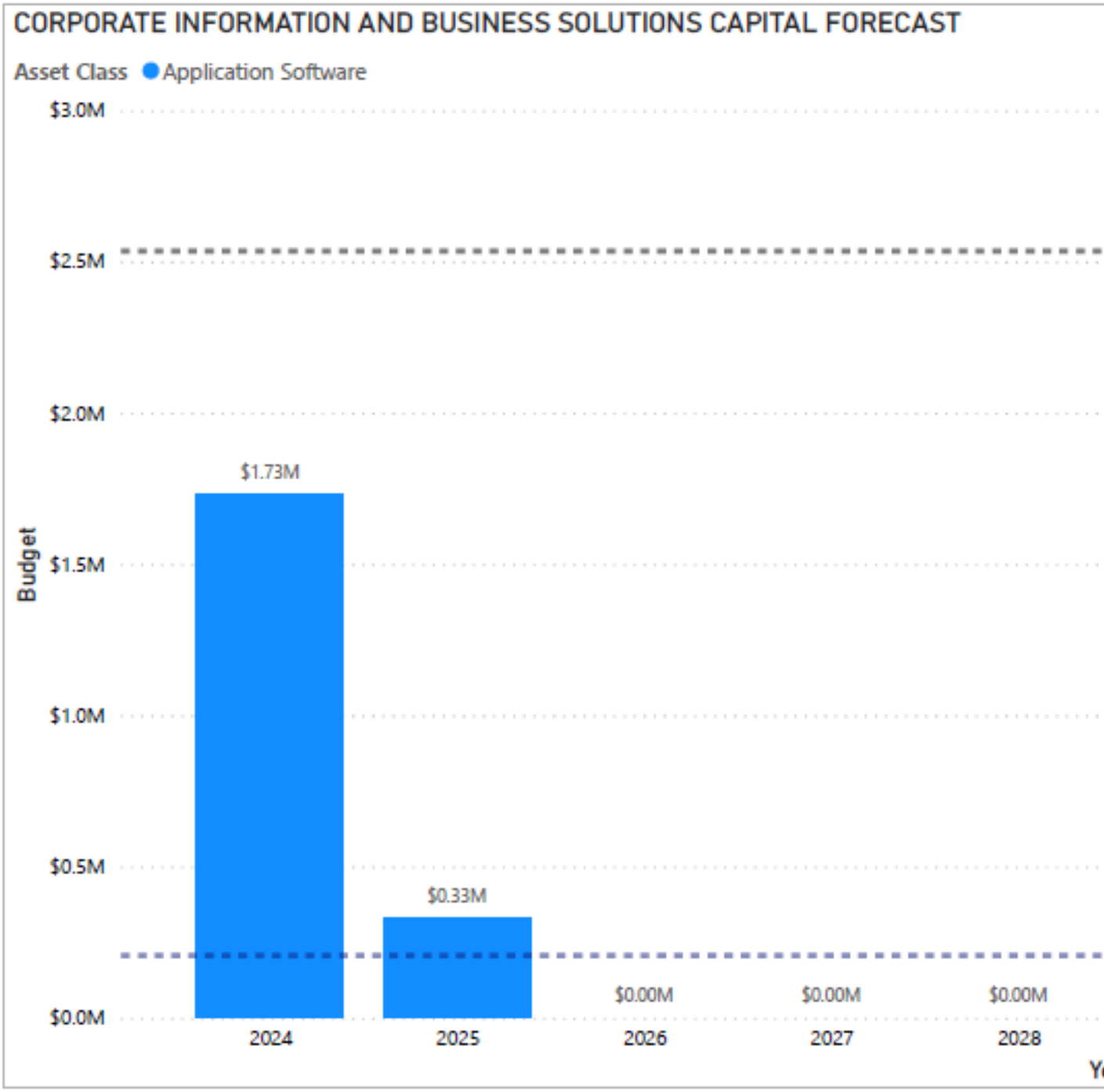

Figure 9 below, the existing 10-year forecast from 2024 – 2033, further explained in **Section 8.3** of the **Asset Management Plan Overview Document** , indicates that the City is currently planning to spend an average of $0.21M on IT assets capital annually, and as noted above, the required 10-year average amount is $2.5M for IT assets.

Therefore there is currently an average annual 10-year funding gap of $2.29M for IT assets. It is important to note that funding for Capital works frequently comes from other City departments that require improvements, updates or changes to existing application software assets. In addition the City is currently moving towards fewer capital purchases of software towards more Software as a Service (SaaS) procurements which is currently treated as an operating cost by the City.

Any impacts resulting from funding gaps noted below will be monitored and reported as appropriate. Based on the graph the City may want to adjust funding appropriately or implement new procedures to track proposed funding to attempt to reach the average costs for State of Good Repair (SOGR).

The City of Brantford is currently moving to a four (4) year budget cycle and departments will complete long term planning as opposed to annual planning for all projects. The Prioritization Matrix explained in **Section 9** of the **Asset Management Plan Overview Document** has also been implemented which will help departments confirm priority projects. It is anticipated that the new process for the City's 2024 budget cycle will help departments prepare and request funding in advance of significant replacement costs for assets reaching the end of their useful life.

Currently the City does not have access to detailed data on Operation and Maintenance costs for IT assets, but with the implementation of new asset tracking software and department initiatives, it is anticipated this information will improve in the next iteration of the AMP.

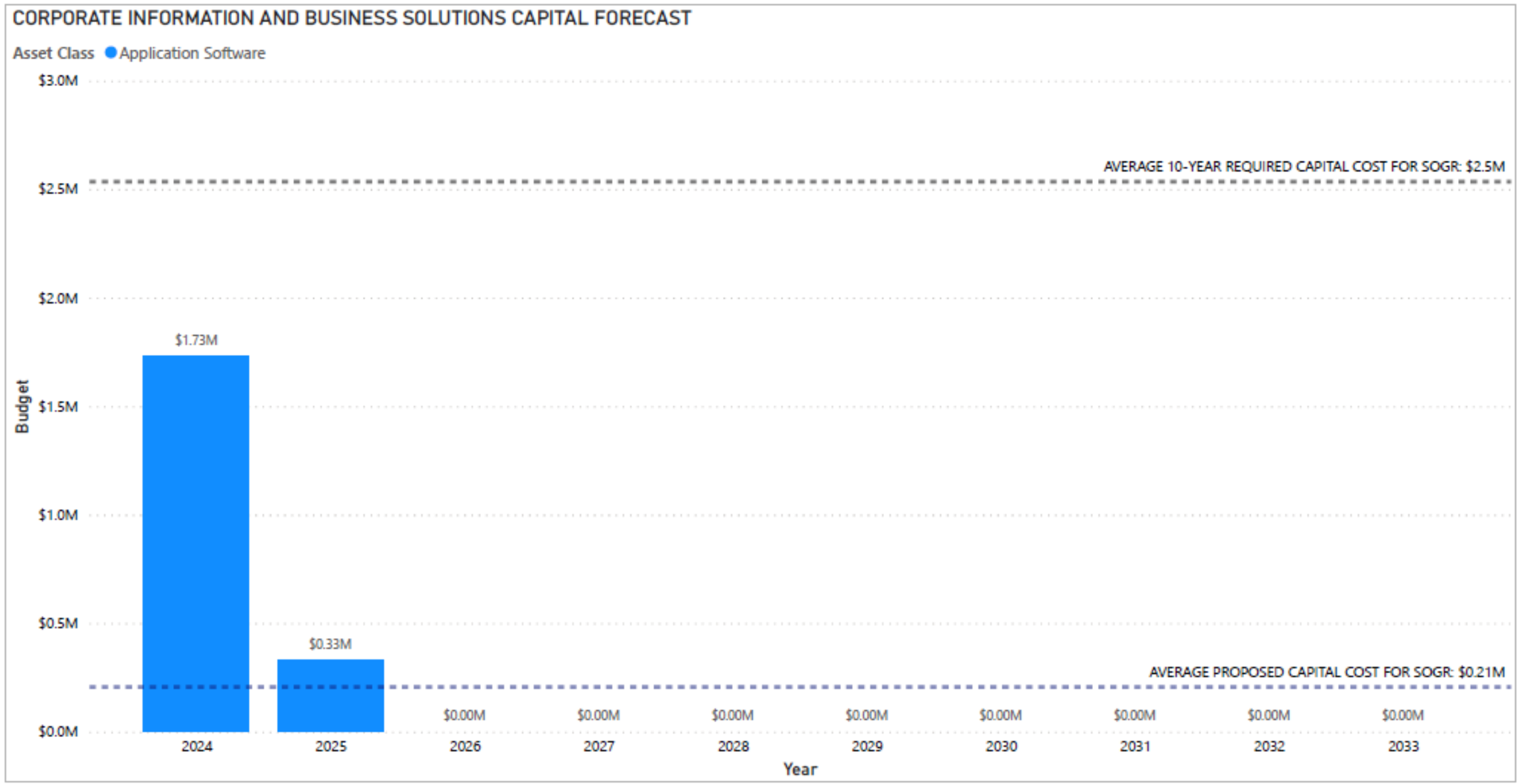

Figure 9: Existing Capital Budget Forecast from 2024– 2033 for Corporate Information and Business Solution Assets

2.5. CURRENT LEVELS OF SERVICE

2.5.1. O.REG 588/17 CUSTOMER LEVELS OF SERVICE

O. Reg 588/17 does not currently have defined customer levels of service for this asset class that must be reported in this plan. This section will be kept for future iterations in case O. Reg 588/17 requires defined customer levels of service be reported.

2.5.2. O.REG 588/17 TECHNICAL LEVELS OF SERVICE

O. Reg 588/17 does not currently have defined technical levels of service for this asset class that must be reported in this plan. This section will be kept for future iterations in case O. Reg 588/17 requires defined technical levels of service be reported.

2.5.3. MUNICIPALLY DEFINED CUSTOMER LEVELS OF SERVICE

The customer levels of service are defined in **Section 6.2** of the **Asset Management Plan Overview**. For Corporate Information and Business Solutions assets, the asset specific interpretation of these levels of service is defined below in **Table 14**.

Table 14: Municipally Defined Customer Levels of Service

Customer Level of Service	Definition
Accessibility	Corporate Information and Business Solutions assets should be accessible for all customers without disruption as much as possible.
Quality	Corporate Information and Business Solutions assets should deliver their intended purpose at a certain quality, and assets should have sufficient capacity.
Cost Efficiency	Corporate Information and Business Solutions assets should operate efficiently with extra care to minimize costs while meeting user needs.
Safety	Corporate Information and Business Solutions assets should ensure the safety of users by protecting personal and confidential information.
Environmental Sustainability	Corporate Information and Business Solutions assets should operate as environmentally as possible and promote sustainable choices including digitizing business processes.
Reliability	Corporate Information and Business Solutions assets should be available as needed and consideration should be taken when scheduling periods of downtime for maintenance.
Responsiveness	Corporate Information and Business Solutions assets should be fixed quickly when service disruptions occur. Responsiveness should account for the relative risk to the public, the asset itself and to the staff completing the response.

Currently, Corporate Information and Business Solutions does not participate in any additional benchmarking activities.

2.5.4. MUNICIPALLY DEFINED TECHNICAL LEVELS OF SERVICE

The technical levels of service for Corporate Information and Business Solutions have been adopted based on the customer levels of service defined in **Table 14**. The currently available customer levels of service with the corresponding technical levels of service and KPI metrics are defined in **Table 15**.

The need for additional KPIs has been identified and future iterations of this AMP will look for opportunities to gather and include this information.

Table 15 Customer Levels of Service KPIs

Customer Level of Service	Technical LOS	2024 KPI	Units
Accessibility	Not Available	Not Available	Not Available
Quality	Not Available	Not Available	Not Available
Cost Efficiency	Percentage of Employees whose needs are met or exceeded by software applications*	69%	% of Employees
Safety	Not Available	Not Available	Not Available
Environmental Sustainability	Not Available	Not Available	Not Available
Reliability	Not Available	Not Available	Not Available
Responsiveness	Not Available	Not Available	Not Available

*Information obtained from staff surveys conducted in 2024, more details available in Overview Document.

2.6. CURRENT ASSET PERFOMANCE

The current asset performance for Corporate Information and Business Solutions assets has been separated into two (2) categories for this section of the report:

- Energy Performance; and
- Operating Performance

2.6.1. CORPORATE INFORMATION and BUSINESS SOLUTIONS CURRENT ENERGY PERFORMANCE

The City of Brantford has a Corporate Energy Management Plan (CEMP) which emphasizes energy efficiency within the City. The goals of the CEMP are to reduce energy use, energy intensity, and greenhouse gas (GHG) emissions in our Facilities. In addition, through the City's Climate Change Action Plan and Climate Lens Tool explained in **Section 10** of the **Asset Management Plan Overview Document**, the City has been working to improve our facilities' energy efficiency and reduce the associated carbon footprint.

Currently, the City does not have a method to track Energy Performance for the Corporate Information and Business Solutions asset class. This section will be kept for future iterations as ways to track Energy Performance for this asset class are explored.

2.6.2. CORPORATE INFORMATION and BUSINESS SOLUTIONS CURRENT OPERATING PERFORMANCE

Currently, the City does not have a method to track Operating Performance for the Corporate Information and Business Solutions asset class. This section will be kept for future iterations as ways to track Operating Performance for this asset class are explored.

2.7. DISCUSSION AND CONCLUSIONS

In conclusion, the City of Brantford operates and maintains Corporate Information and Business Solutions assets. These assets are in Good condition with a total estimated replacement cost of approximately $25.4M.

The inventory and condition data confidence for Application Software is typically at a Low level as assets have only recently been tracked and information is based heavily on staff input. Assumptions regarding assets are continuously being improved as new data is added into the new, staff developed asset tracking system and is anticipated to improve for the next iteration of this plan.

Furthermore, the lifecycle stages for Corporate Information and Business Solutions assets includes: Planning, Creation, Operation and Maintenance, and Disposal. During the Planning stage, the City identifies the need for the asset; during the Creation stage, the asset is purchased and installed or designed and built by in house staff; during the Operation and Maintenance stage, the asset is operating and lifecycle activities (i.e. maintenance) occur on each of our assets to maintain the state of good repair; and the Disposal stage is when the asset has reached the end of its useful life or is underperforming and requires disposal.

Lifecycle activities are now being tracked through the new, staff developed asset tracking system. Therefore, most data presented is relatively new.

It is estimated based on the average annual cost in the 10 Year Life Cycle Costing that the City should be spending an average $2.5M annually for capital Corporate Information and Business Solutions assets and will be spending an average of $5.3M on Operating and Maintenance on these assets. The City is currently proposing to spend an average of $0.21M annually on capital for Corporate Information and Business Solutions assets' state of good repair. However, as noted within this plan, capital funding for Corporate Information and Business Solutions assets can sometimes come from other departments and in some cases is transitioning to an operating cost. Tracking these funding sources and changes will need to be investigated for future iterations of the plan.

The service life of Application Software assets within the Corporate Information and Business Solutions asset class can be difficult to predict as the lifecycle differs between individual software packages and is based on whether or not the software is still meeting the needs of the business and the user(s). Data regarding the lifecycle of these assets is anticipated to improve as staff continue to track and update data within the new, staff developed asset tracking software currently being used. Improvements to this data are anticipated with future iterations of this plan.

Current Levels of Service have been identified as a need for Corporate Information and Business Solutions assets. These levels of service will be either tracked based on the City's IT Services service request system or within the new, staff developed asset tracking system. Brantford is working to continue to develop the process to track these metrics which will assist in tracking these and any further identified KPIs for future iterations.

Finally, asset performance is separated into operating and energy performance in the City's AMPs. However, due to limited tracking for assets, the City's IT Services Department is not able to provide information for Infrastructure Services and Support asset performance in this iteration of the AMP. The IT Services Department is currently reviewing best practices and will be looking to provide updated information in future iterations of this plan.