



2022 Asset Management Plan

Town of Penetanguishene



Presenter

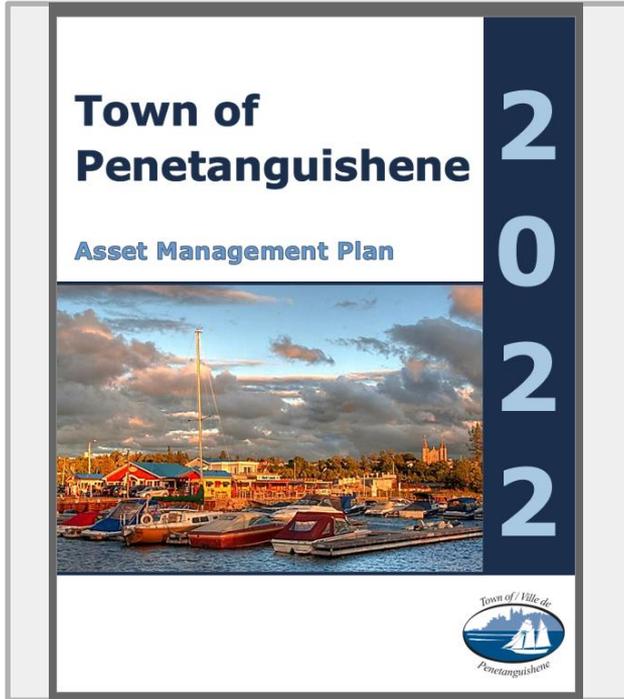


Imad Alvi

Asset Management Advisor



Project Background



Primary Deliverable

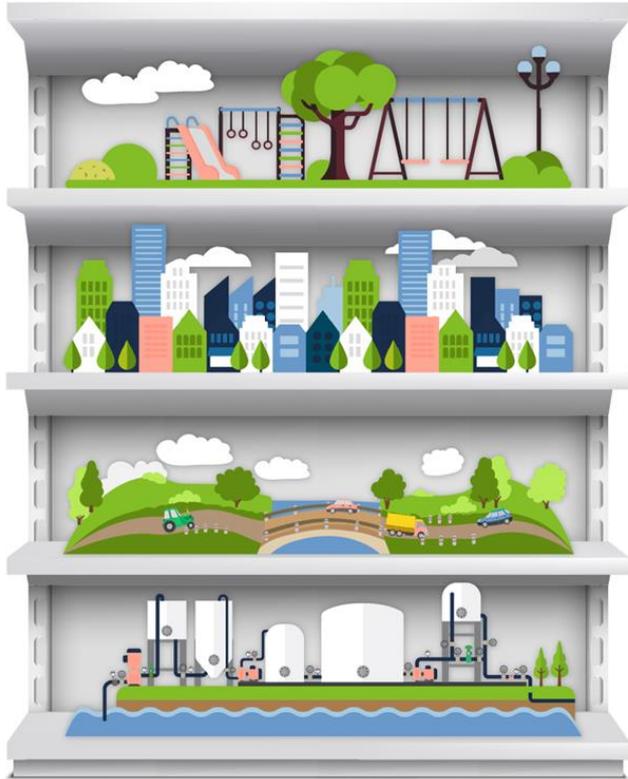
AMP (2022 O. Reg. 588/177 Compliant)

Infrastructure Asset Data Refinement and Consolidation

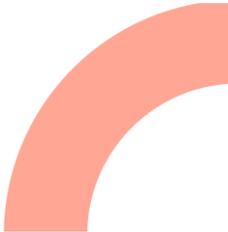
Supporting Workshops

- ✓ Risk & Criticality Analysis
- ✓ Lifecycle Strategies
- ✓ Levels of Service

Infrastructure assets are vital for communities



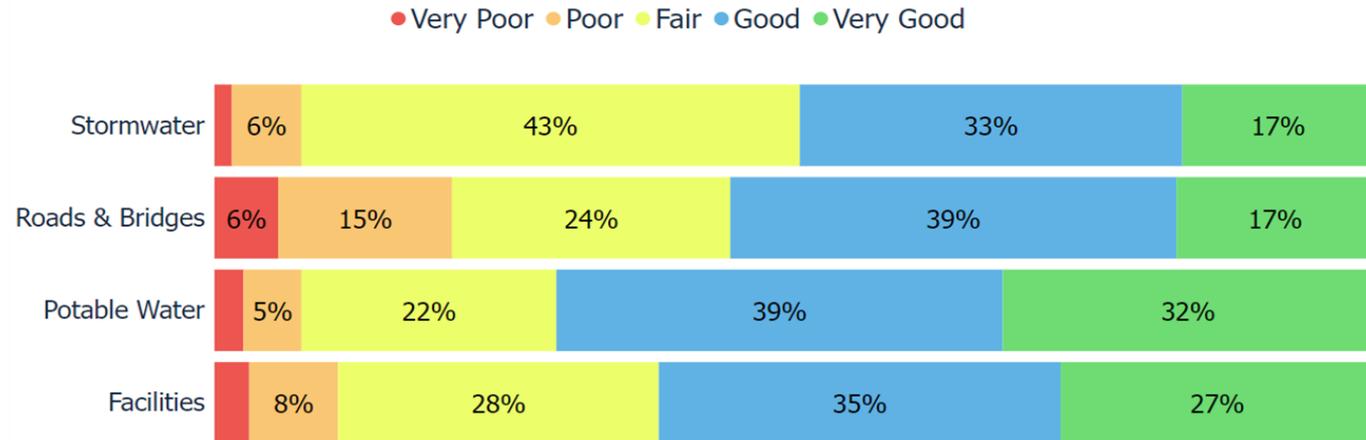
- We need a meaningful way to organize what we own
- We need a way to understand what services we provide
- We need a way to ensure accountability to our residents and stakeholders for the services they use



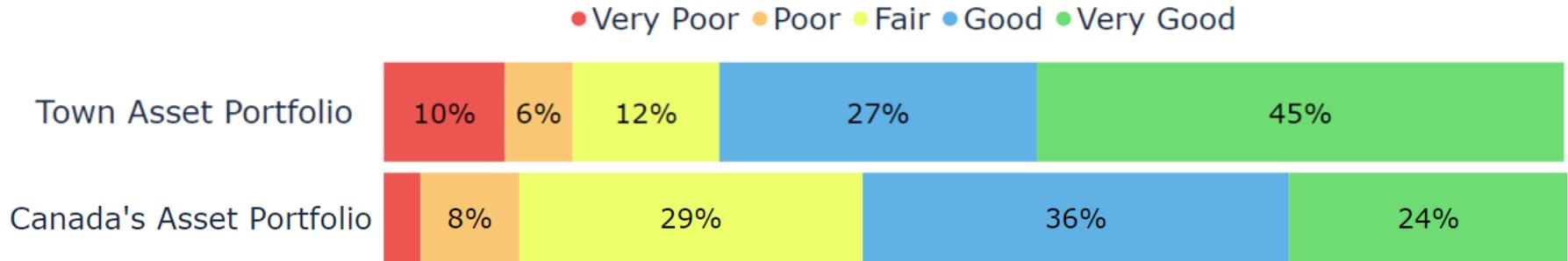
The context and need for Asset Management

The 2019 Canada Infrastructure Report Card found that across Canada:

- A large proportion of municipal infrastructure is in fair condition
- The majority of municipal infrastructure is more than 20 years old
- Stormwater infrastructure is the most 'unknown'



The context and need for Asset Management

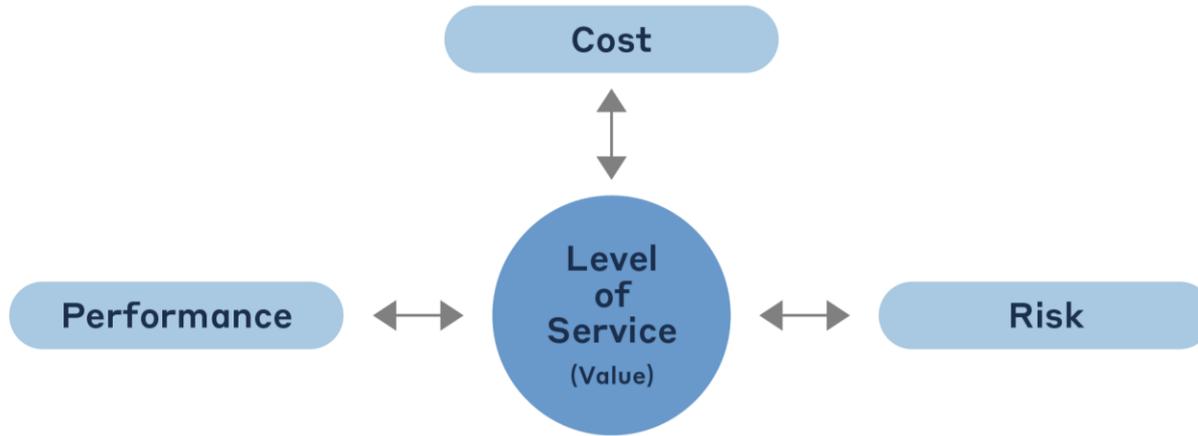


The Township faces the same issues as other municipalities across the country:

- Aging infrastructure
- Climate change and extreme weather
- General market trends

What does Asset Management involve?

ISO 55000: “Coordinated activity of an organization to realize value from assets”



Typical Asset Management Framework

Assess

A.M. Policy

- A.M. objectives
- Endorsement

Governance & Structure

- Roles & responsibilities
- Internal structure

AM Strategy

- Current assessment
- Framework for the future

Plan

Key Data Initiatives

- Data gaps
- Collection & enrichment

Condition Assessments

- Industry standard techniques

Key A.M. Processes

- Risk assessment
- Lifecycle management
- Level of service

Implement

Execute

- AM plans
- Short / long term budgets

Monitor and Review

- Benchmarks & KPIs
- Levels of service

Communication

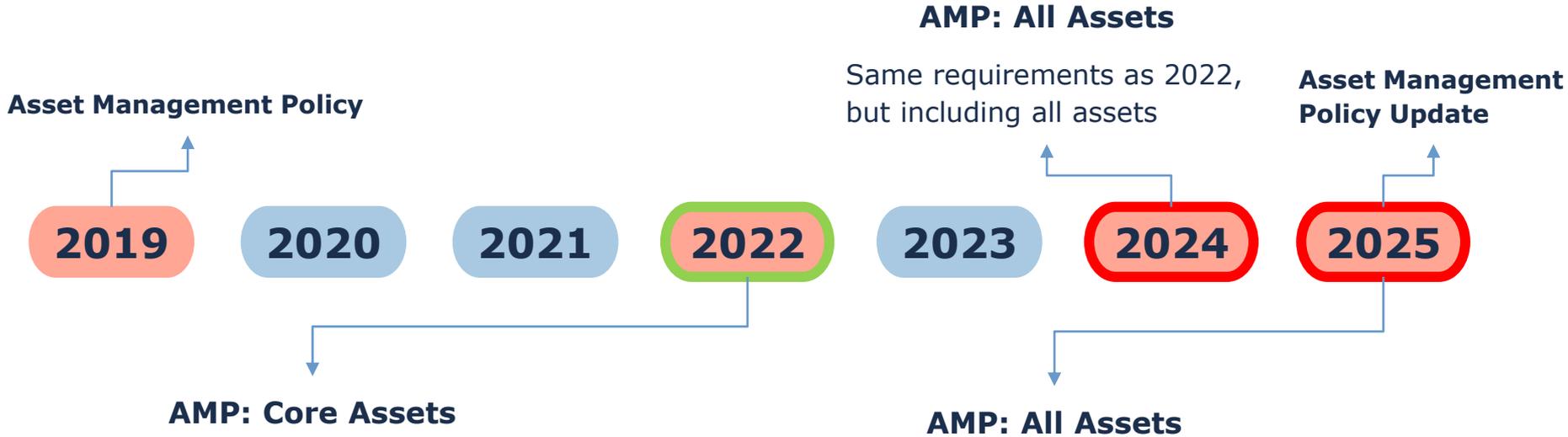
- Continual



Developing a centralized asset inventory



Ontario Regulation 588/17



1. Current levels of service
2. Inventory analysis
3. Lifecycle activities to sustain LOS
4. Cost of lifecycle activities
5. Population and employment forecasts
6. Discussion of growth impacts

1. Proposed levels of service for the next 10 years
2. Updated inventory analysis
3. Lifecycle management strategy
4. Financial strategy and addressing shortfalls
5. Discussion of how growth assumptions impacted lifecycle and financial strategy

AMPs - Updating, Reviewing & Public Posting

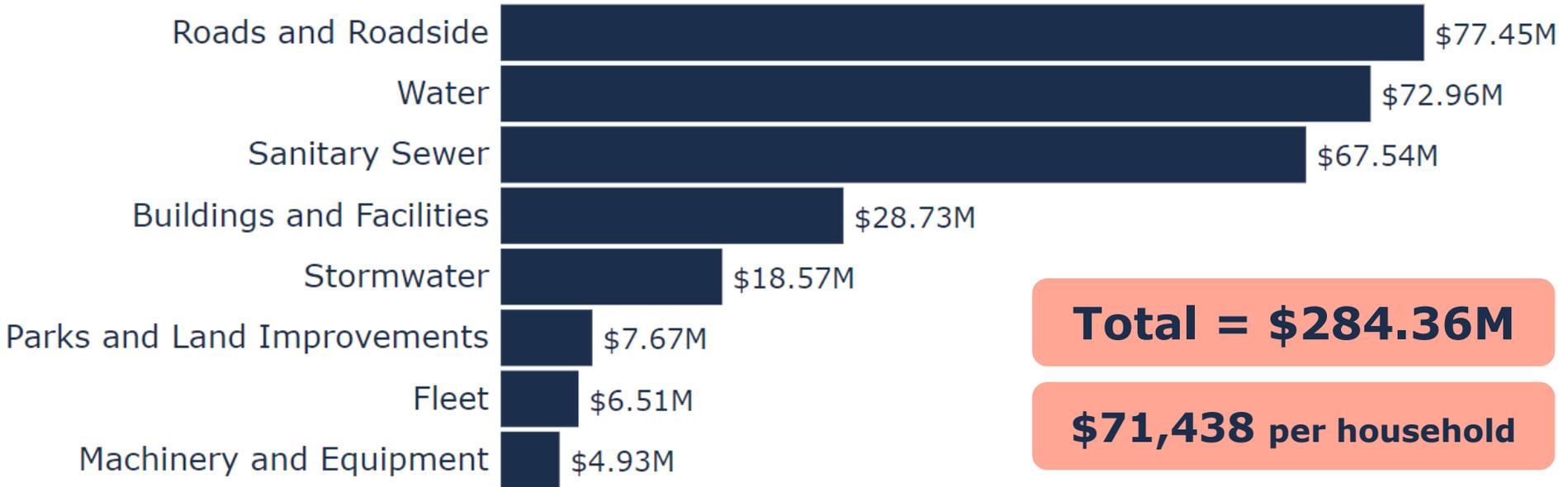


- After 2025, asset management plans must be updated at least once every 5 years
- After 2025, every municipal council shall conduct an annual review of its asset management progress on or before July 1st
- The asset management policy and plans should be posted to the municipal website

Asset Management Plan (2021 year-end)

- 1** What is the current state of municipal infrastructure?
- 2** What process improvements can increase confidence in analysis and decision-making?
- 3** What is the Town's financial capacity to meet long-term capital requirements?

Replacement Cost of the Asset Portfolio



Replacement Cost Method of Asset Portfolio

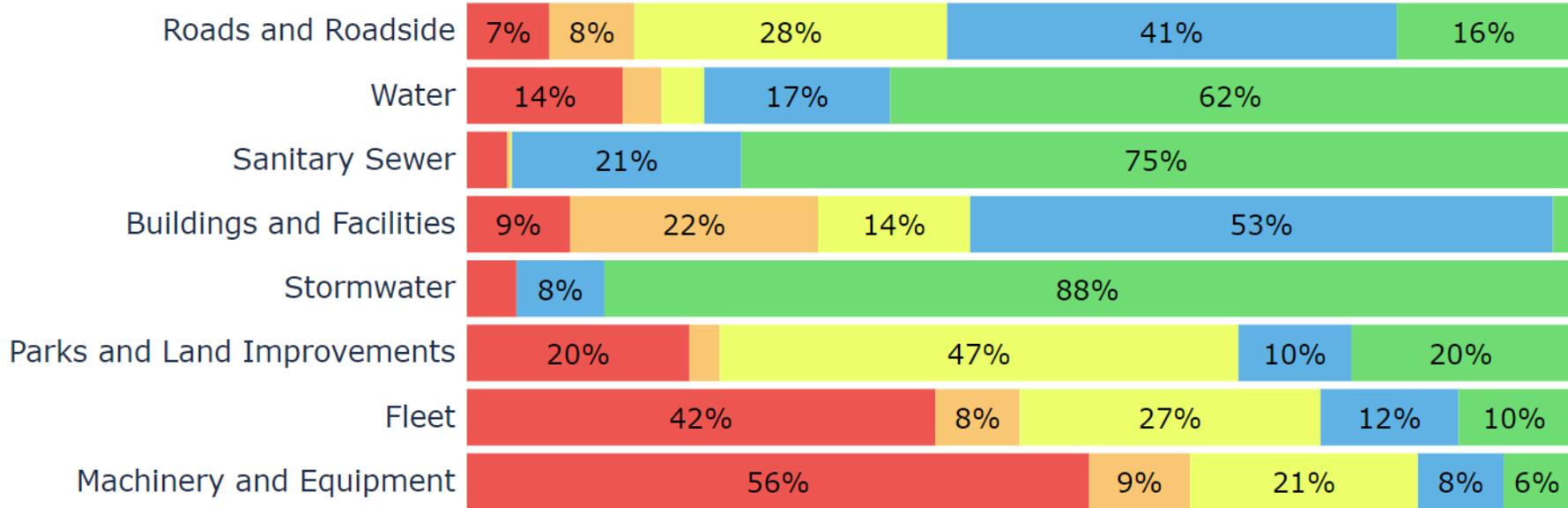
Category	Replacement Cost Method	
	Defined Replacement Cost	Historical Cost Indexing
Roads and Roadside	92%	8%
Water	85%	15%
Sanitary Sewer	82%	18%
Buildings and Facilities	72%	28%
Stormwater	100%	0%
Parks and Land Improvements	7%	93%
Fleet	0%	100%
Machinery and Equipment	31%	69%
Overall	81%	19%

The accuracy and reliability of lifecycle costs is critical for asset management.



Overall Condition of the Asset Portfolio

● Very Poor ● Poor ● Fair ● Good ● Very Good



84% assets are in fair or better condition



Condition Assessments in the Asset Portfolio

Asset Category	Asset Condition Breakdown		
	% of Assets with Age-based Condition	% of Assets with Assessed Condition	Source of Condition Data
Roads and Roadside	11%	89%	2018 Road Asset Management Plan
Water	97%	3%	2021 Municipal Staff
Sanitary Sewer	100%	0%	Age-based
Buildings and Facilities	50%	50%	2019 GHD Building Condition Assessment
Parks and Land Improvements	79%	21%	
Stormwater	100%	0%	Age-based
Fleet	100%	0%	
Machinery and Equipment	100%	0%	
Overall	72%	28%	

Age-based condition data typically overstates needs and overall deficit.
Assessed condition data builds confidence in decision making.



Assessed Condition Data in AM Decision Making



Mitigation of risks associated with asset failure



Identifying the most economic intervention

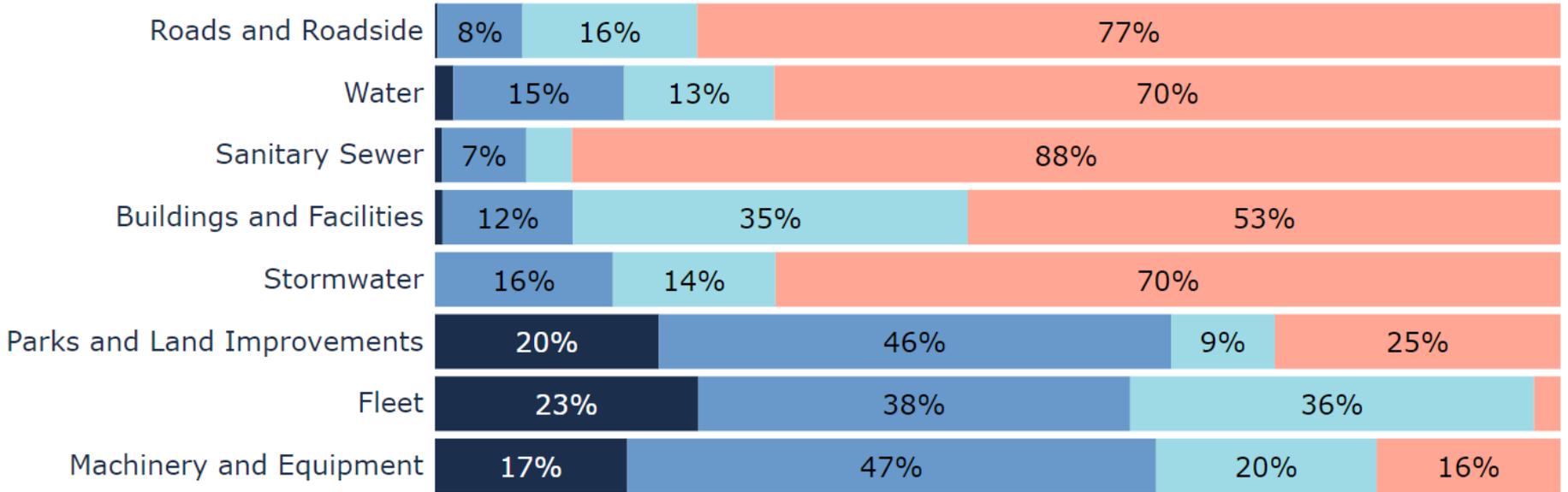


Accurate predication of future expenditure requirements



Asset Age

● 0-5 Years ● 5-15 Years ● 15-25 Years ● Over 25 Years

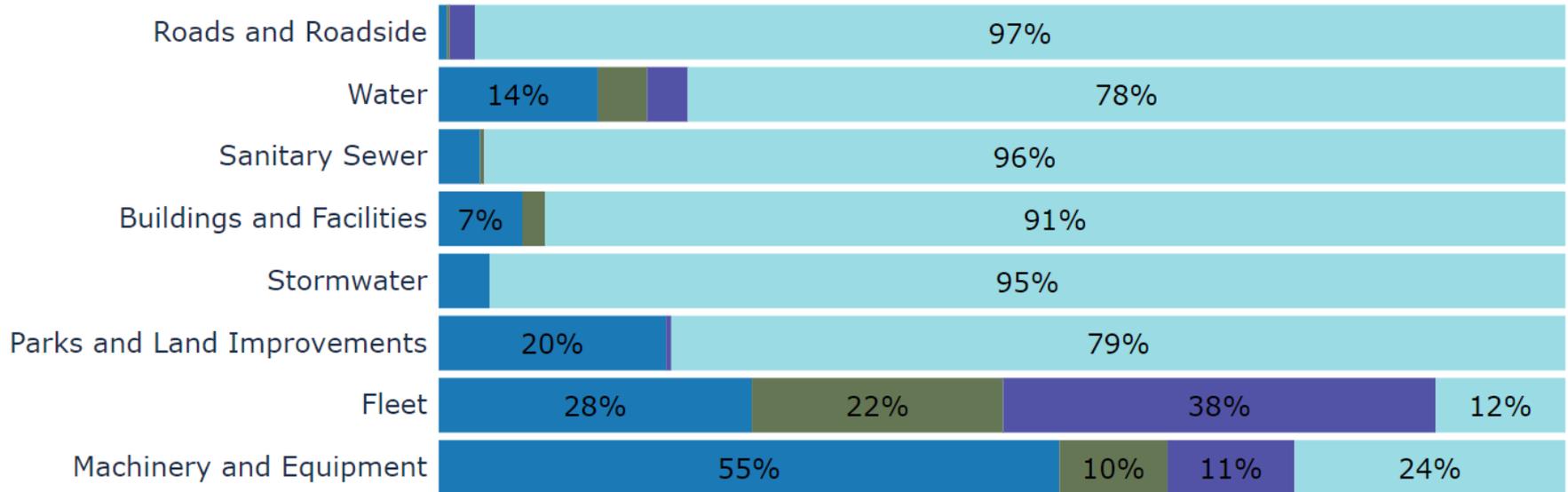


71% of assets are over 25 years old



Service Life Remaining

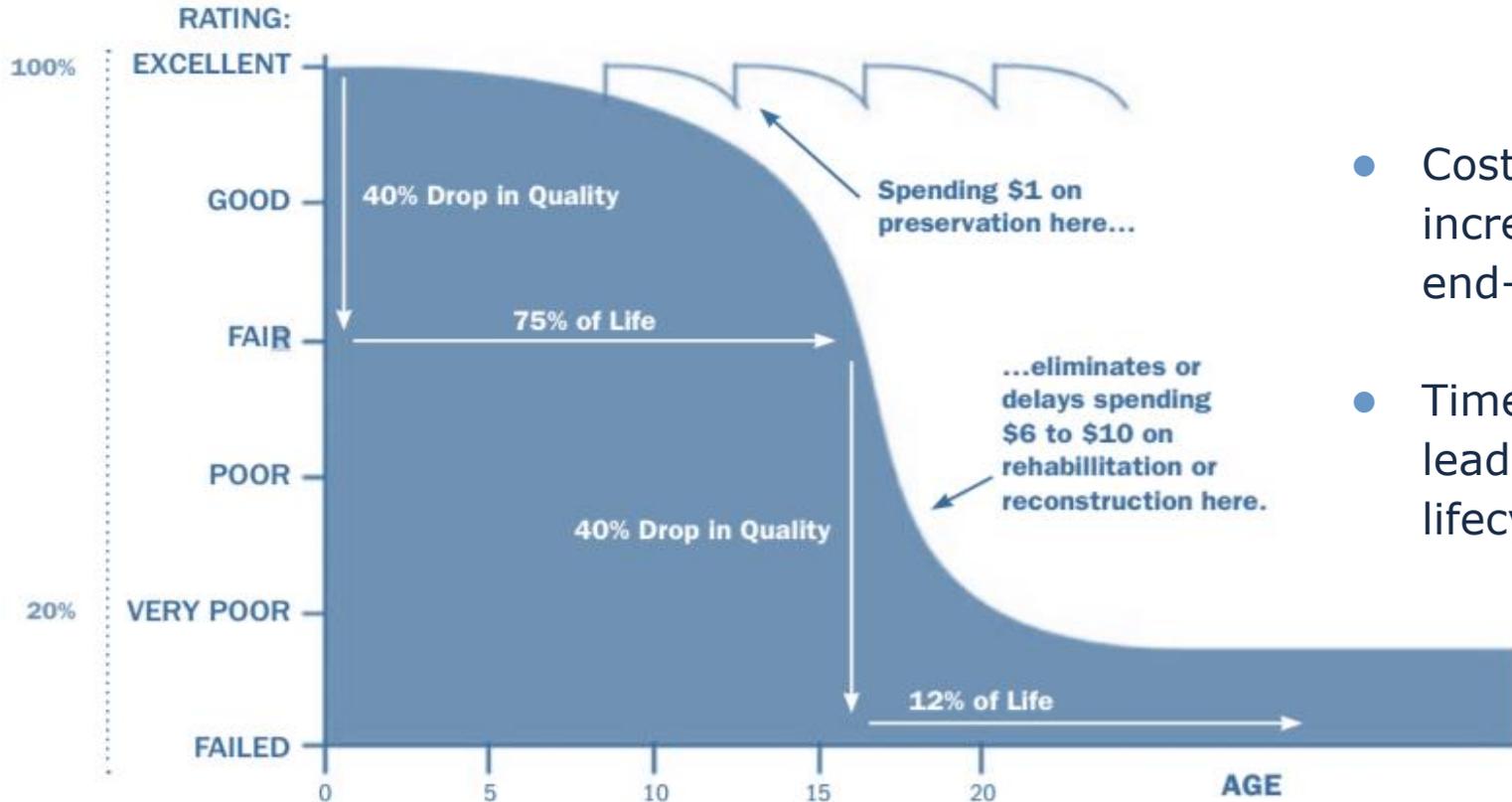
● No Service Life Remaining ● 0-5 Years Remaining ● 6-10 Years Remaining ● Over 10 Years Remaining



13% assets may require replacement in the next 10 years



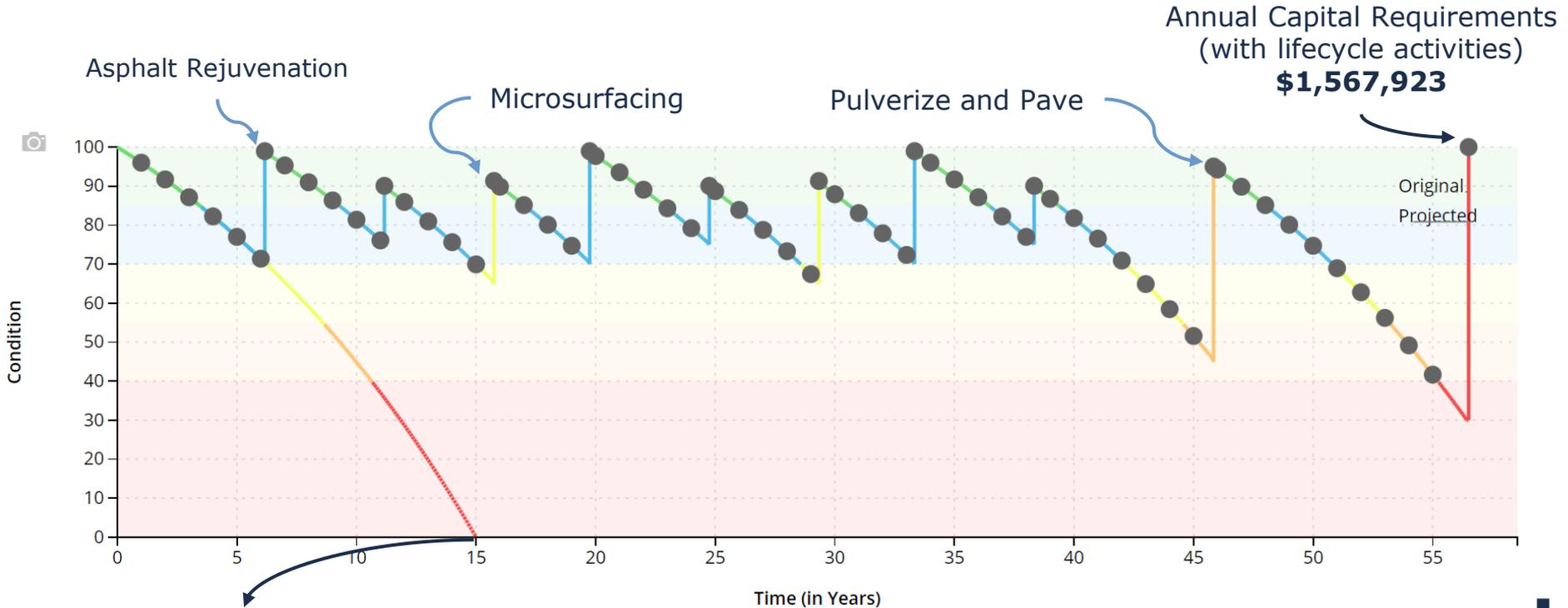
Lifecycle Deterioration



- Cost to rehabilitate increases towards end-of-life
- Timely intervention leads to lower total lifecycle costs



Lifecycle Strategies (HCB Roads)



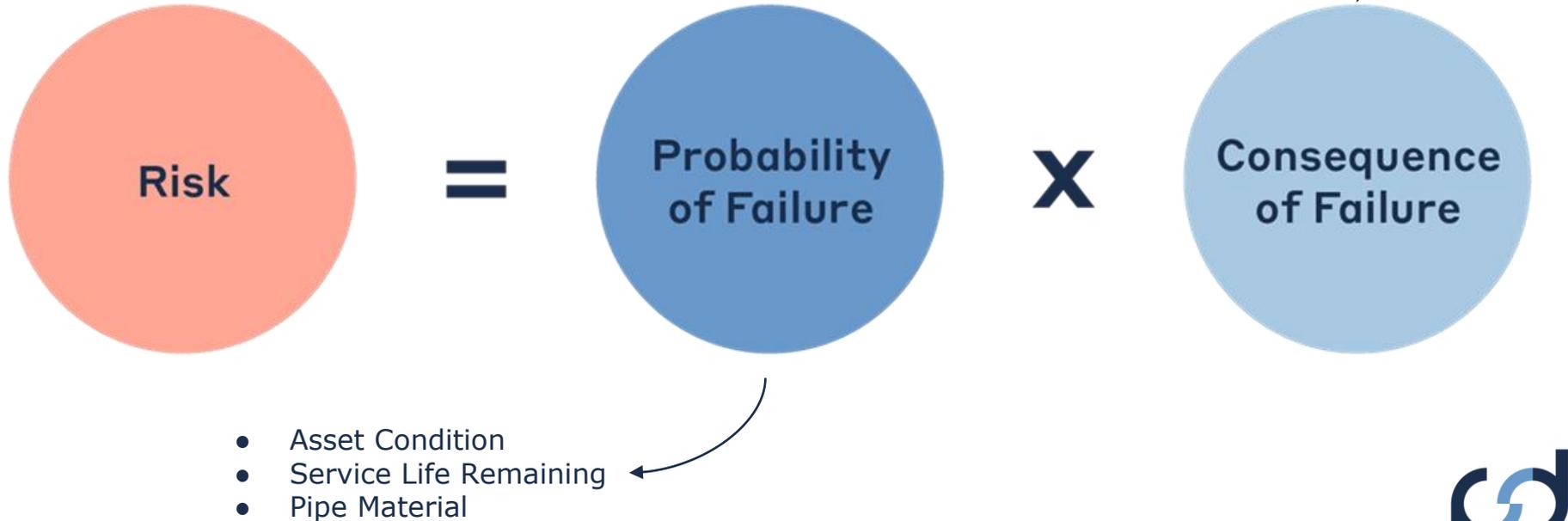
Annual Capital Requirements
(with lifecycle activities)
\$1,567,923

Annual Capital Requirements
(end of life replacement only)
\$4,390,262

Cost Benefit = \$2,822,339



Risk Framework



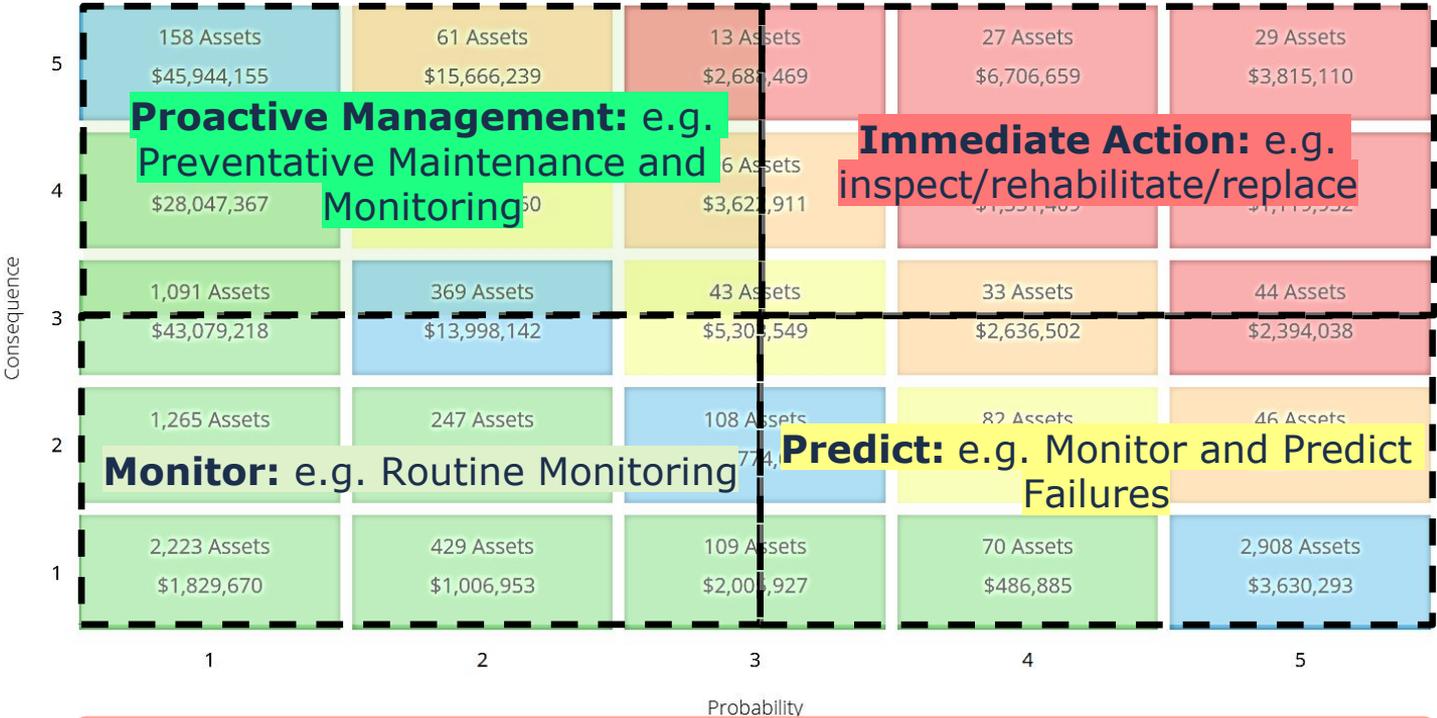
Risk & Criticality



A good risk model will assist in prioritizing resources and applying them to the right asset at the right time



Operationalizing Risk



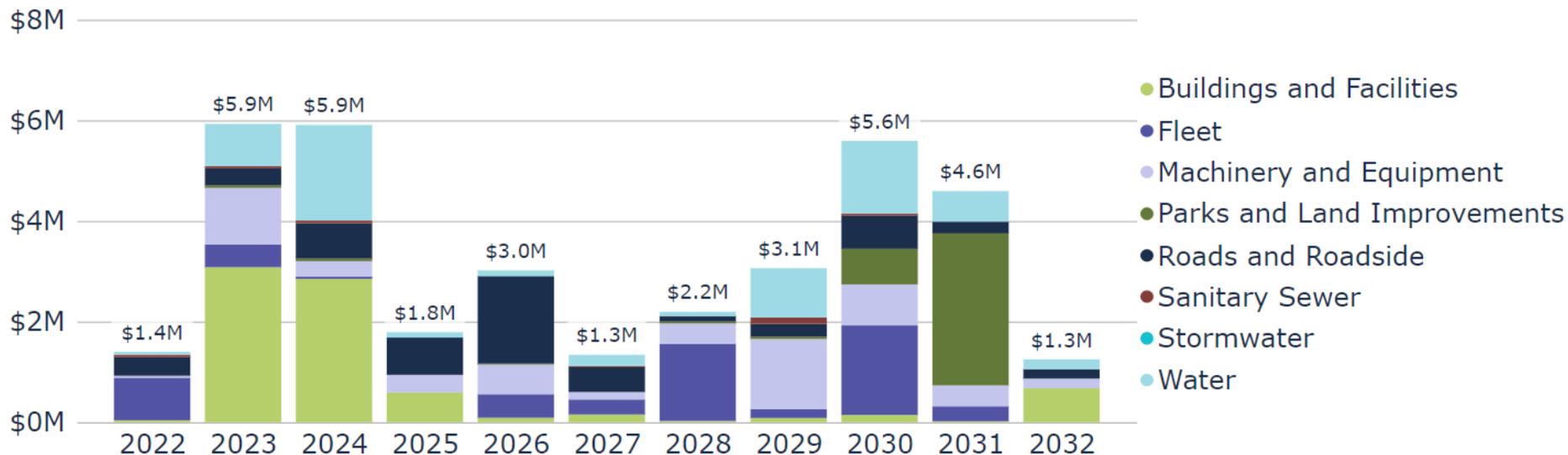
Identify which assets pose the highest risk to delivering your objectives and use this data to drive the capital planning process



Forecasted Capital Requirements – 10 Years

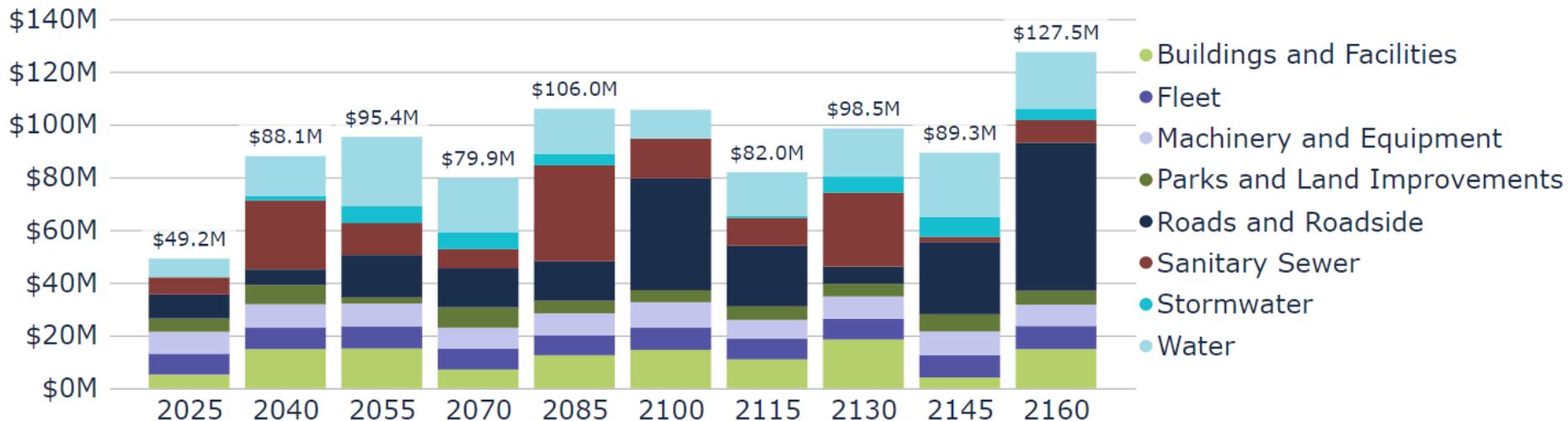
Average Annual Capital Requirements

\$6.15M



Forecasted Capital Requirements – 148 Years

Average Annual Capital Requirements
\$6.15M



Annual Capital Requirement & Infrastructure Deficit

	Annual Capital Requirement	Funding Available	Annual Capital Deficit
Tax-Funded Assets	\$3,905,722	\$1,786,000	\$2,119,722
Rate-Funded Assets	\$2,240,522	\$524,000	\$1,716,522
	\$6,146,244	\$2,310,000	\$3,836,244

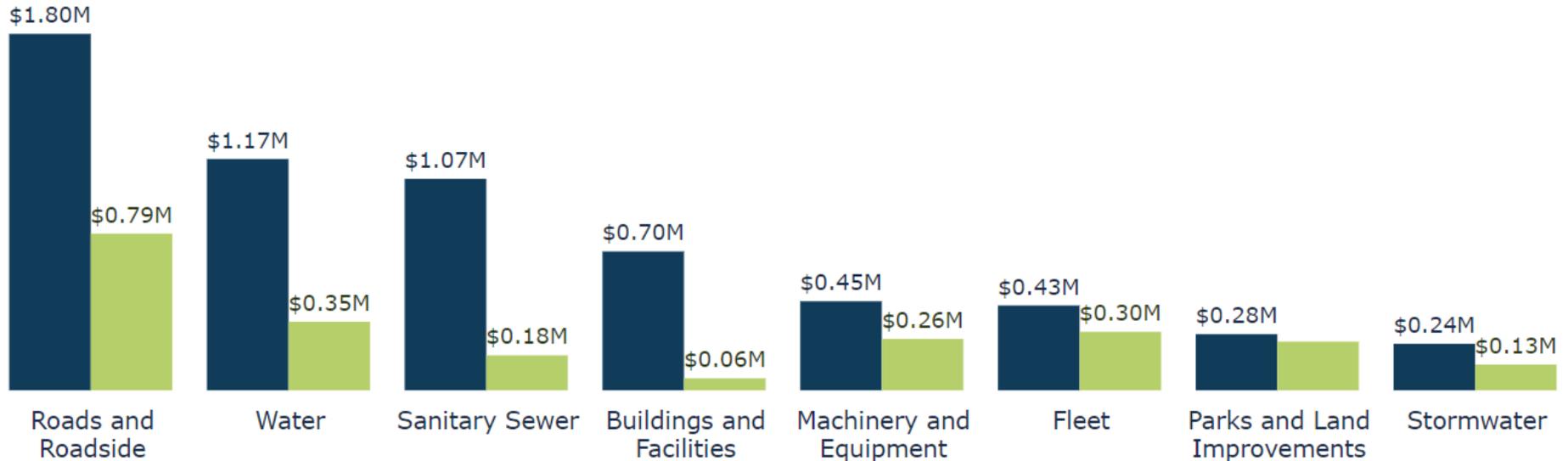
Tax Funded Assets are currently funded at 46% of their long-term capital requirements

Rate Funded Assets are currently funded at 23% of their long-term capital requirements



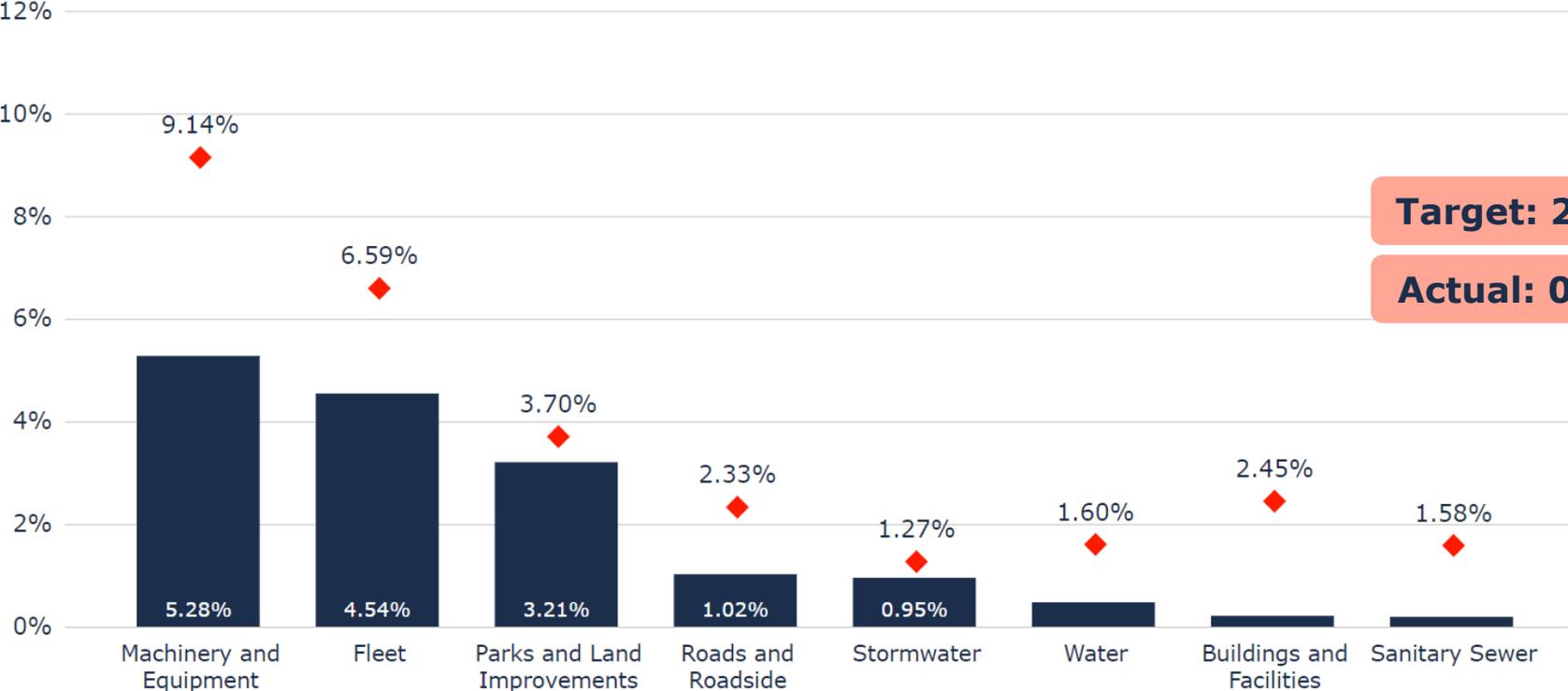
Annual Capital Requirements and Annual Capital Funding

● Annual Capital Requirements ● Annual Capital Funding Available



Average Annual Reinvestment Rates

● Actual Reinvestment Rate ◆ Target Reinvestment Rate



Target: 2.16%
Actual: 0.81%



Financial Strategy

Funding Source	Years until Full Funding	Total Tax Increase	Average Annual Tax Increase
Tax-Funded	10	19%	1.6%
Sanitary Rate-Funded	20	33%	1.4%
Water Rate-Funded	20	45%	1.9%

- Both sustainable and one-time grants/transfers will continue to be an essential source of revenue for investment in capital infrastructure
- Adjustments to taxes should be supplemented with project prioritization and evaluation of the desired levels of service



Recommendations & Next Steps

1

Continue to review and refine asset inventory in consultation with internal departments/stakeholders

- Implement a portfolio-wide **data governance strategy** to increase accuracy/confidence in data
- Conduct **asset management-needs assessment** to identify resources and investment required
- Provide Staff and/or Council training opportunities to ensure asset management principles are understood

2

Prepare for O.Reg. 588/17 2024 and 2025 Requirements

- Develop LOS statements and identify LOS metrics **for Non-Core Assets** for the 2024 requirement
- Identify **Proposed levels of service** for the 2025 requirement
- Develop a medium to long-term external communication strategy to **engage the public** on asset management and obtain feedback to inform development of proposed levels of service

3

Continuous improvement and regular review

- An asset management plan is a **living document** that should be updated regularly to inform long-term planning
- Continue to **operationalize** the asset management database through its functionality

