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ALASKA MUNICIPAL LEAGUE

INTRODUCTION TO ASSET MANAGEMENT

Alaska Infrastructure Development Symposium

Half Day Workshop
April 2024

Rowan Holyer

- Originally from the UK, move to Canada in 2013
  - Graduated from UBCO with an Economics degree
- Worked with several Canadian municipalities to develop Asset Management Strategies
- Supported 400 + participants through the Michigan Infrastructure Council's Asset Management Champions Program

Consultant and Program Coordinator

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- Principal, FIT Local Government Consulting
- Chartered Professional Accountant
- 15+years experience working as Chief Financial Officer for several municipalities
- Professional Certificate in Infrastructure Financial Management
- Several Institutional clients including Asset Management British Columbian, Federation of Canadian Municipalities and Government Finance Officers Association

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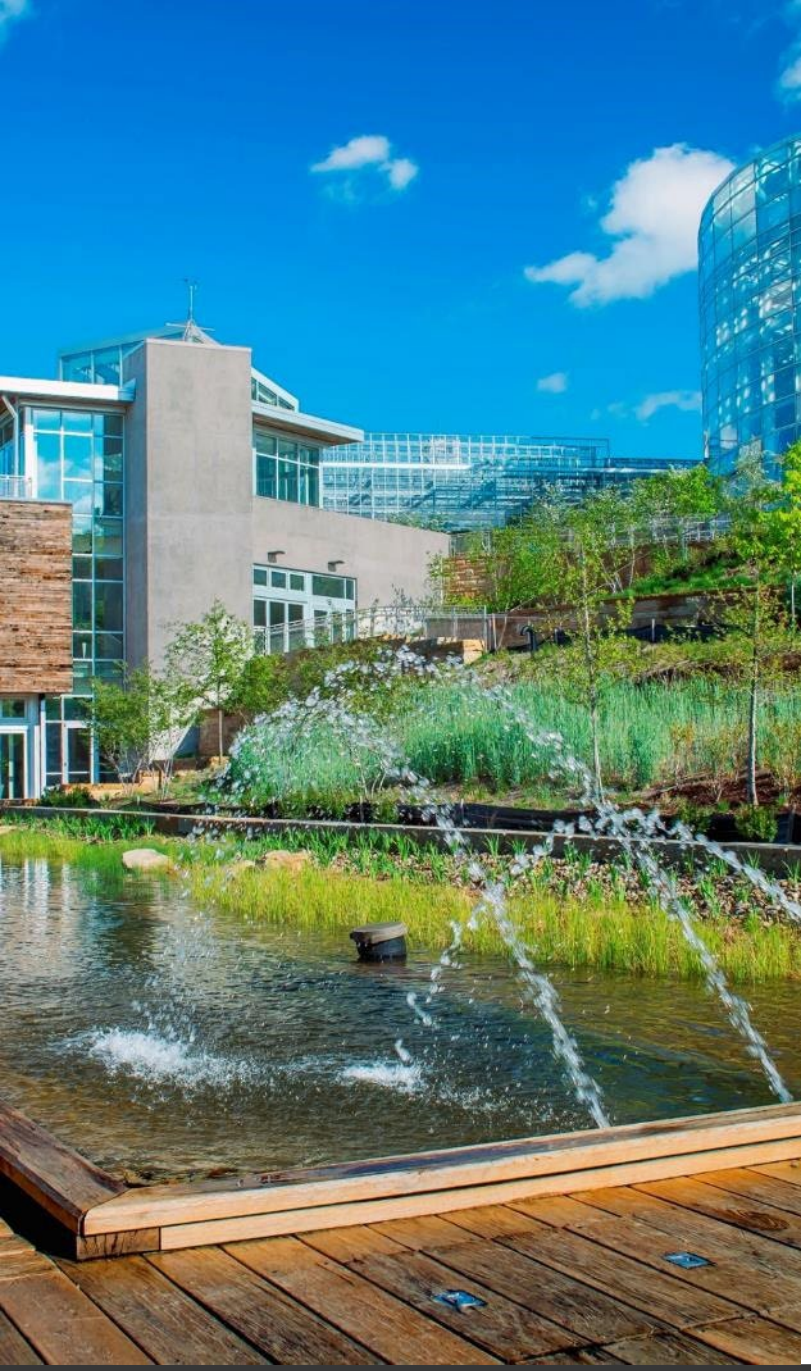


Our Agenda

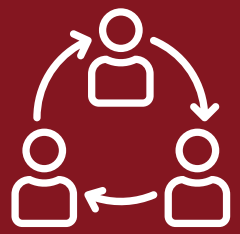
- Introductions
- The What and the Why of Asset Management
  - Poll and Feedback: Infrastructure Challenges
- Benefits of Asset Management
  - Breakout Discussion: Internal Challenges
- The 'How' of Asset Management
  - Poll: Planned vs. Reactive Maintenance
- Financial Planning
  - Poll: Revenue Sustainability
  - Financial Sustainability Analysis
  - Group exercise
- Wrap – Up
  - Key Takeaways and Future Plans
  - Q&A

Intro and Context

- icInfrastructure has partnered up with the Alaska Municipal League to provide Asset Management support for Alaska's communities

- Phase 1, 2024:
  - AM Awareness Workshop and Alaska Community Research
  - Customized Asset Management 101 eLearning course
  - Webinar Series

- Potential for more support in future, using the outcomes from Phase 1

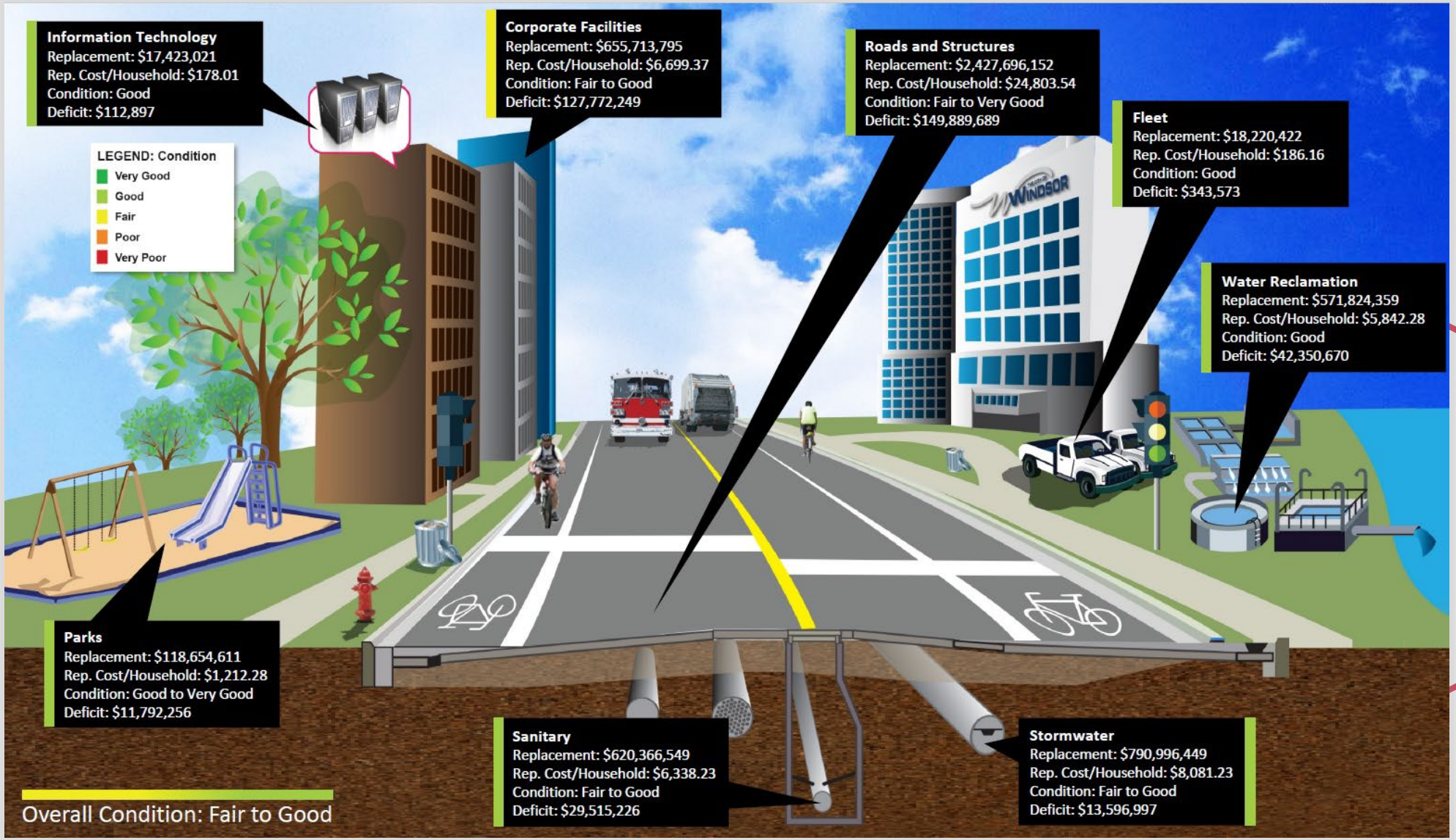


WHAT IS ASSET MANAGEMENT?

And why do we need it?

Our Value

Community Services and Our Assets



Infrastructure assets exist to deliver **services** to our *communities.*

To provide **value**.

Source: City of Windsor ON, Asset Management Plan (2013)

What is an “asset”?

An “asset” is an item, thing or entity that has potential or actual value to an organization.

Source: ISO 55000

Linear Assets — **Geographically Spread**

- Roadways
- Transit lines
- Rail networks

Vertical Assets — **Fixed Point Locations**

- Buildings
- Treatment Plants
- Fire Halls

ISO International Organization for Standardization

Community Services and Our Assets

- Infrastructure related expenses make up the majority of budget
- City of Fairbanks example (Distinguished Budget Award)
  - Total expenditures delivering, operating, or maintaining infrastructure: 33.0M (62%)
  - Total expenditures delivering non-infrastructure services: 20.0M (38%)

Infrastructure assets exist to deliver **services** to our *communities.*

Delivering, operating or maintaining infrastructure is the majority of what we do

Source: City of Fairbanks Alaska 2024 Annual Budget

North American Infrastructure Outlook

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2021 REPORT CARD
FOR AMERICA'S INFRASTRUCTURE
ASCE

US Infrastructure Report Card

By 2039, America's overdue infrastructure bill will cost the average American household $3,300 a year, or $63 a week.

$10 trillion in GDP

More than 3 million jobs in 2039

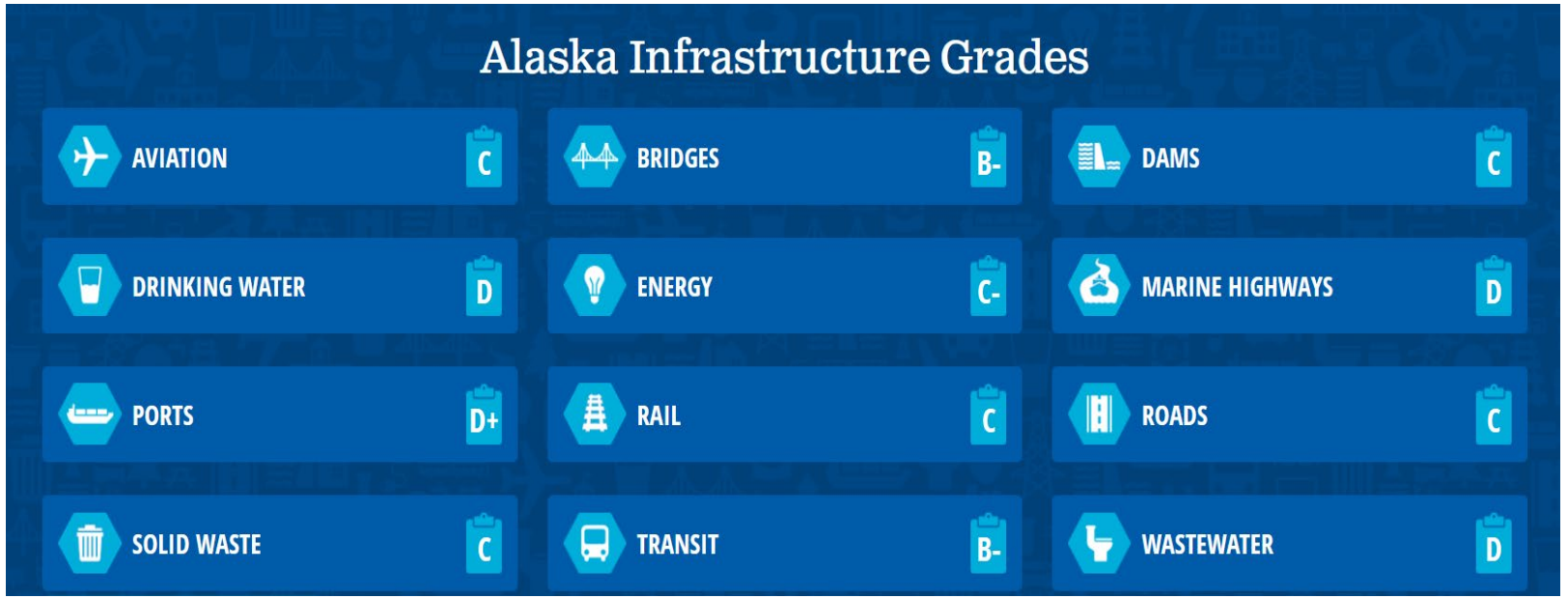
$2.4 trillion in exports over the next 20 years

Source: https://infrastructurereportcard.org/

What about Alaska's Infrastructure?

Alaska's Overall Infrastructure Grade

C-

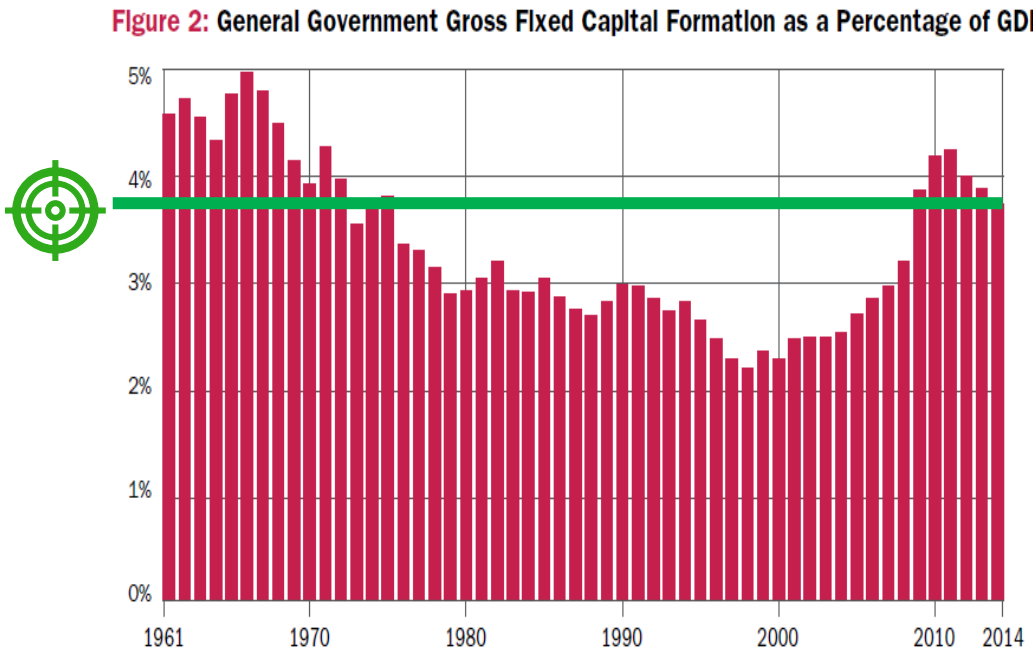


Unique challenges in Alaska

- Unique transportation system – 75% of communities are inaccessible by road
- Many communities are still in need of safe and efficient water and wastewater systems
- Many communities at risk from natural disasters like flooding, severe storms and wildfires
- Rural vs. Urban communities experience different challenges

https://infrastructurereportcard.org/

Decades in the making…



Source: http://canadianinfrastructure.ca/

CANADIAN INFRASTRUCTURE REPORT CARD

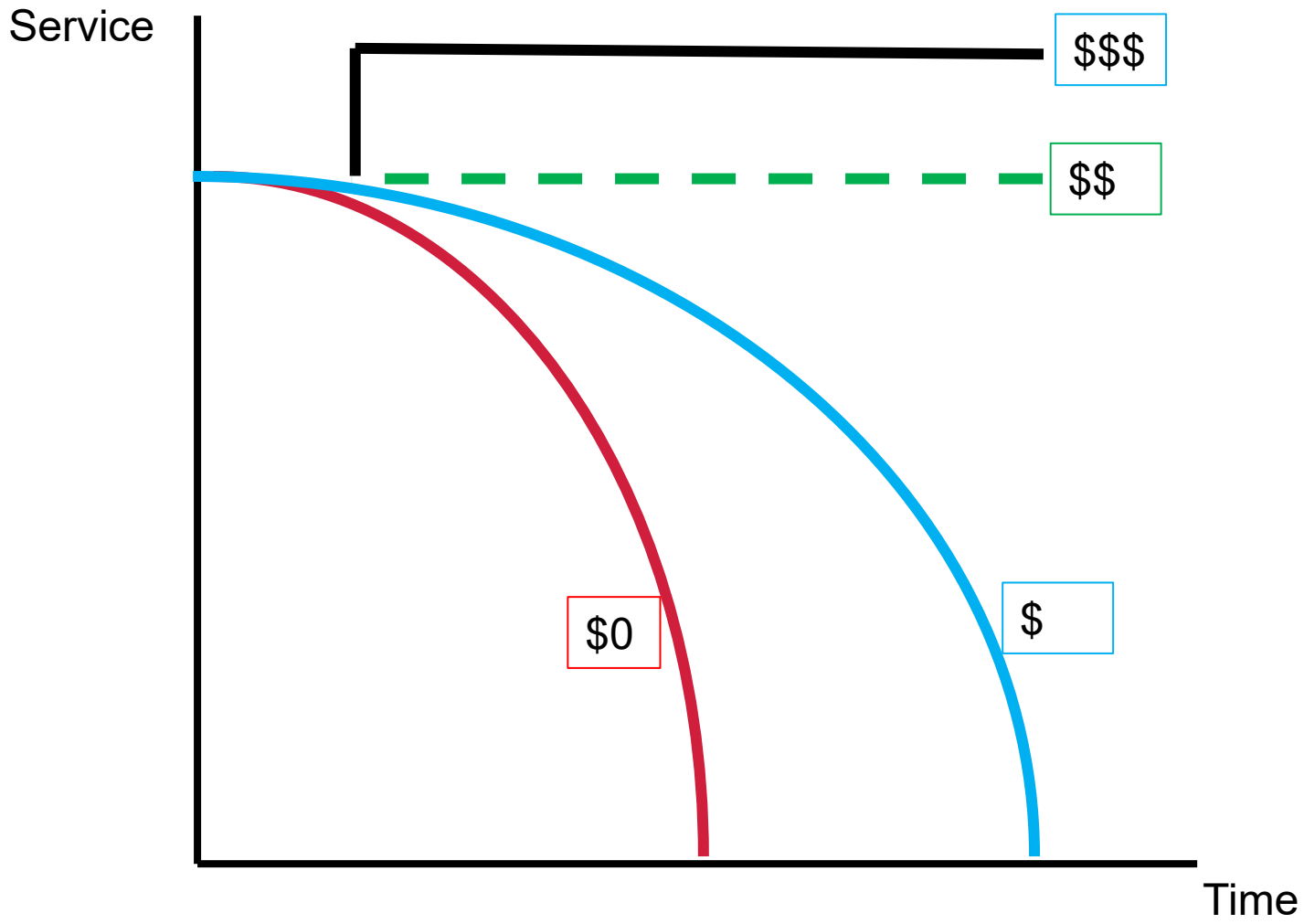
"The United States has been underinvesting in infrastructure for decades, and American families and businesses will reap the economic consequences unless the federal government **undertakes a major course correction**."

Chairman John Yarmuth,
hearing September 25, 2019

House Committee on the BUDGET Chairman John Yarmuth

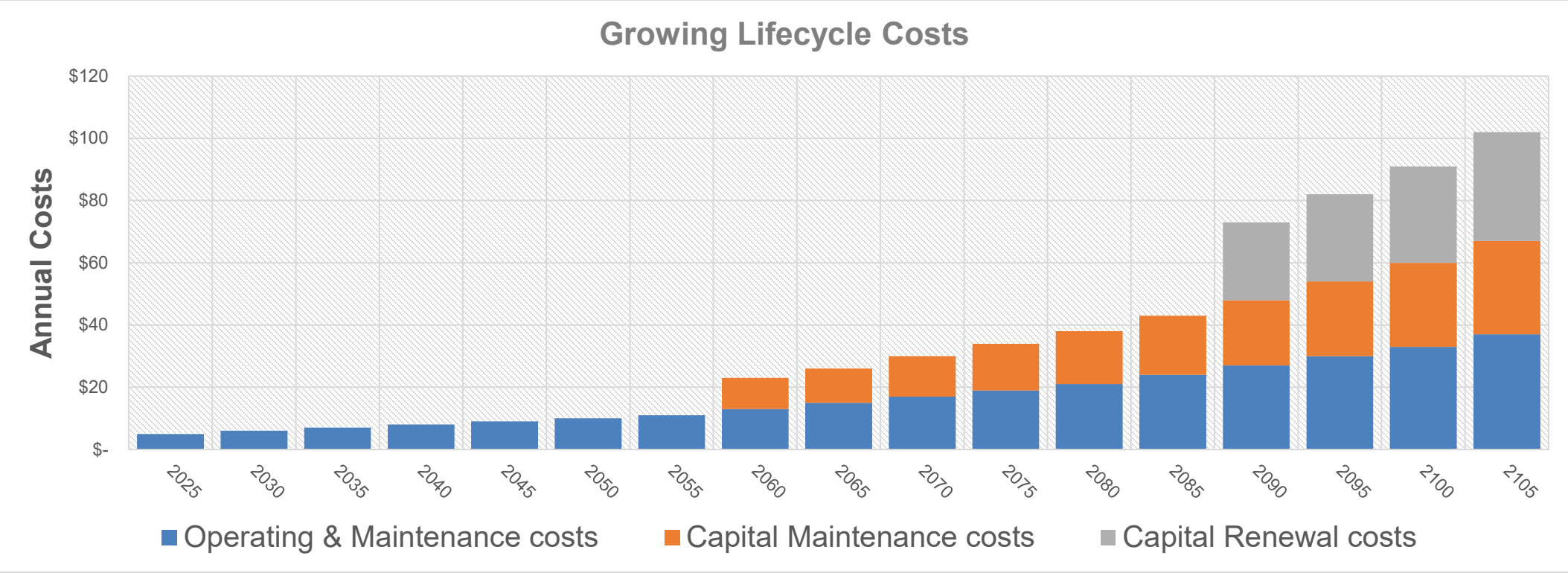
Source: https://budget.house.gov/publications/report/strong-infrastructure-and-healthy-economy-require-federal-investment
Photo: NBC Montana

Infrastructure – Spending Money to Stand Still



Meanwhile, Life Cycle Costs Pile UP

- As assets age, not only do service levels get strained – so do life cycle costs
- Then the public is unhappy about paying more – for less



What is our biggest infrastructure challenge?

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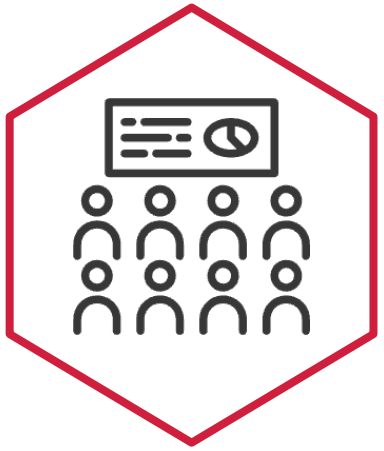
Population Increase/ Decrease

Climate Issues

Funding



Community Expectations

Staffing Challenges

Aging Infrastructure

Mentimeter

What's impacting you and your community??

What's impacting you and your community?

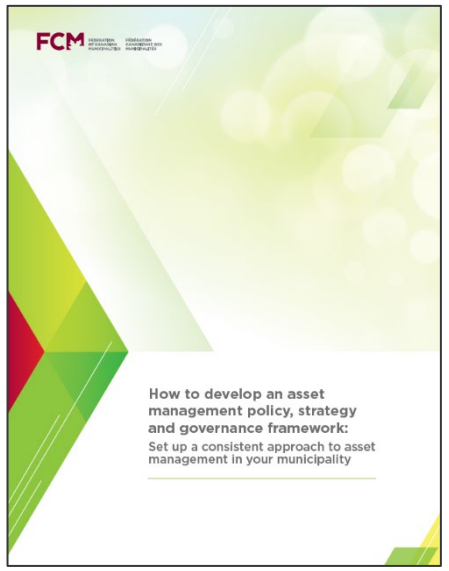
Go to menti.com

Use the code:
6590 4786

Mentimeter

Or scan the QR code

So what is “Asset Management”



Source: FCM Leadership in Asset Management Program (LAMP)

This is not something “new” – it’s better connecting what we are already doing and filling in some gaps

“Asset Management is an integrated approach, involving all organization departments, to effectively manage existing and new assets to deliver services to customers.

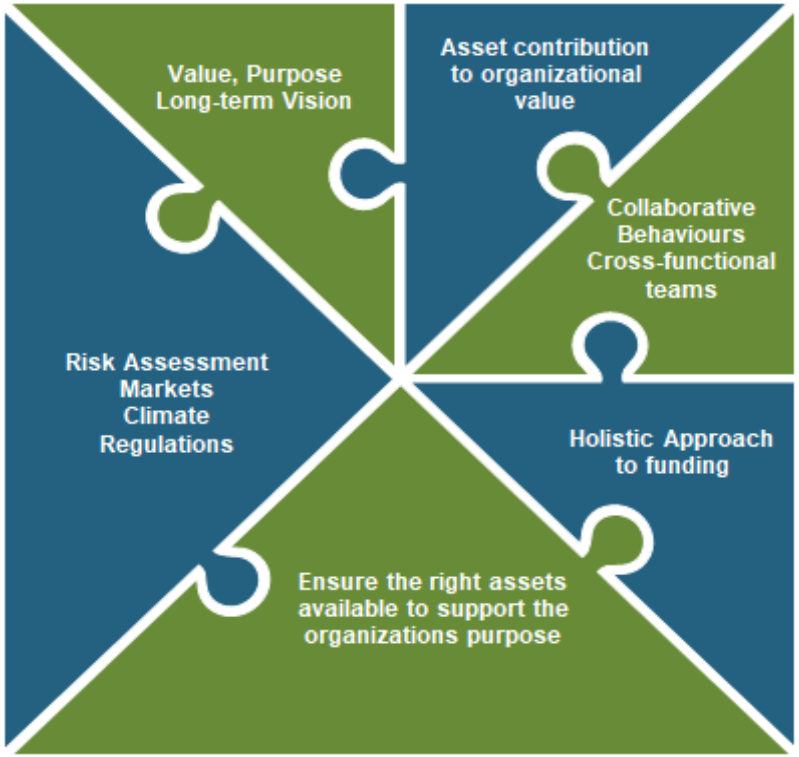
The intent is to maximize benefits, reduce risks and provide satisfactory levels of service to the community in a sustainable manner – providing an optimum balance.

Good asset management practices are fundamental to achieving sustainable communities.”

“Managing Assets” vs “Asset Management”

Managing Assets *(things you do to assets)* can be done with or without strategy and organizational context

Asset Management has a broader focus and encompasses many organizational levels. Applies to all functions or departments



Source: ISO 55000 TC251 Committee & Asset Management Saskatchewan

BENEFITS

To Communities and Organization

Benefits of AM to *your organization*

- Clear alignment across organization with strategic goals
- Long-term budgets and rates are set so that services can be delivered sustainably
- Departments work together more effectively
- Clear list and business cases for ‘shovel **worthy**’ projects
- Greater confidence from Council and Community in data-based decision making

Benefits of AM to *Your Community*

BETTER UNDERSTANDING OF CHALLENGES THAT ARE FACED

BETTER UNDERSTANDING OF WHERE THE MONEY GOES

BETTER APPRECIATION FOR COMMUNITY SERVICES

IMPROVED CONFIDENCE IN COMMUNITY MANAGEMENT

Town of Tecumseh, Ontario Pop. 24k.

*"**Asset management helped us improve our capital planning process, it now takes significantly less time** and we have a far more effective and targeted capital investment plan.*

***Capital budgets are now set for 5-20 years** and our annual review and revisions ensure our budget forecast is current.*

*Through **working with council and public consultations** we **secured a significant capital investment plan and redirected ~10% of our budget** to what we learned was a priority to our community."*

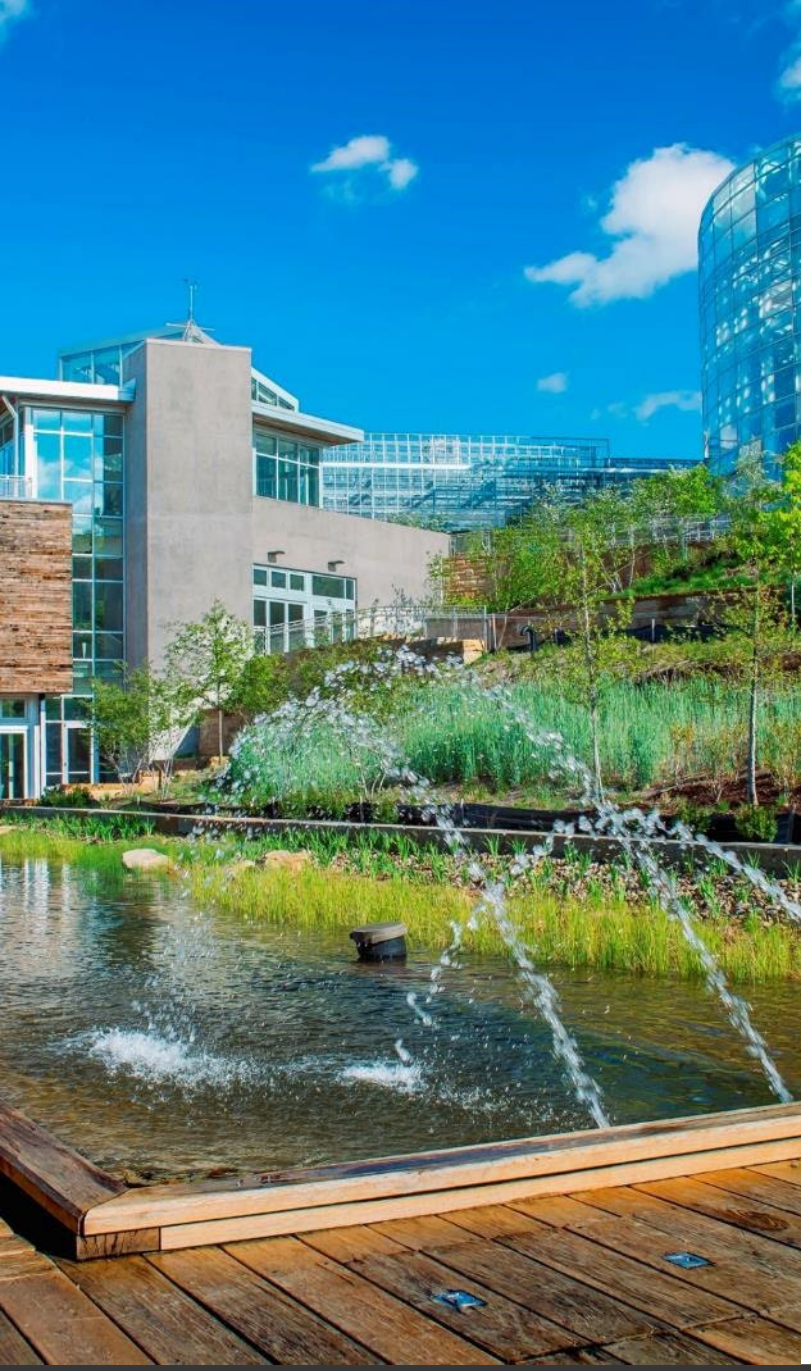
Tony Haddad, Chief Administrative Officer,
Town of Tecumseh, Ont. Pop 24k.

THE HOW OF ASSET MANAGEMENT

Discussion Question

Which areas do you want to improve in your organization when it comes to managing your infrastructure?

Source: MIC Asset Management Readiness Scale



Agenda

- Introductions
- What is Asset Management
- Benefits of Asset Management
- Key Asset Management Elements
  - Data and Information
  - Life Cycle Analysis
  - Risk
  - Asset Management Plans
  - External Knowledge Sharing
- Financial Planning
- Wrap – Up

Data and Information

Lots of different data sets needed from across your organization

Asset Data

- Inventory, location, condition etc.

Service Data

- How are our assets performing? What are our customers expecting?

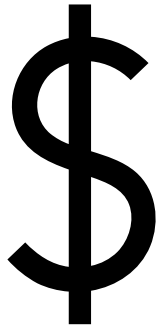
Financial Data

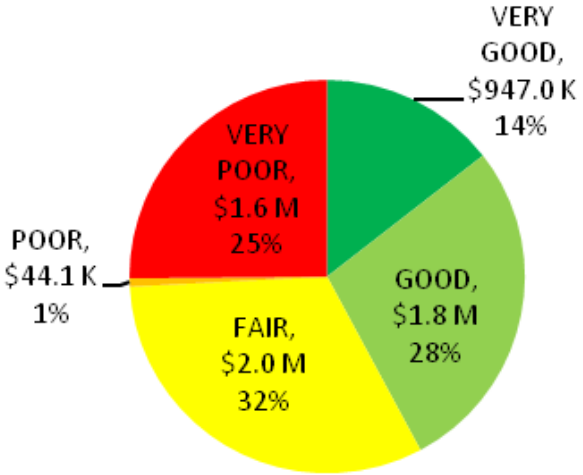
- Do we understand the full life cycle costs of our asset base?

Value	External Customer	
	Current Trend	Future Trend
Accessibility	↑	↑
Availability/ Reliability	↔	↔
Quality	↑	↓

Asset Data

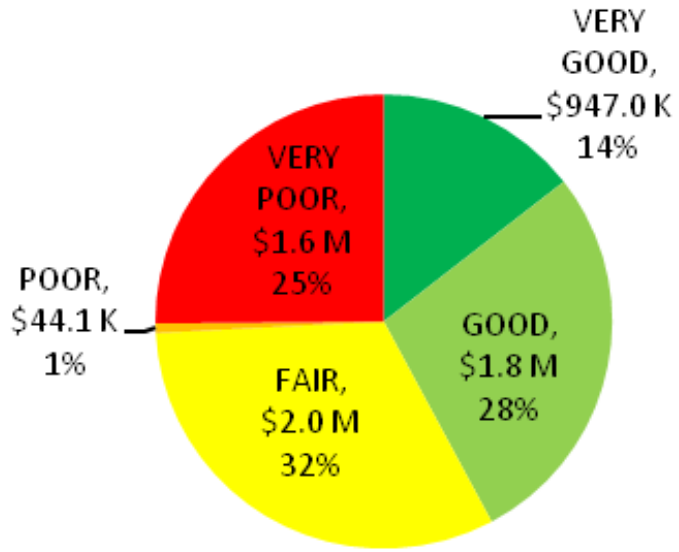
- It’s important to understand the basics of your asset base





Condition Data

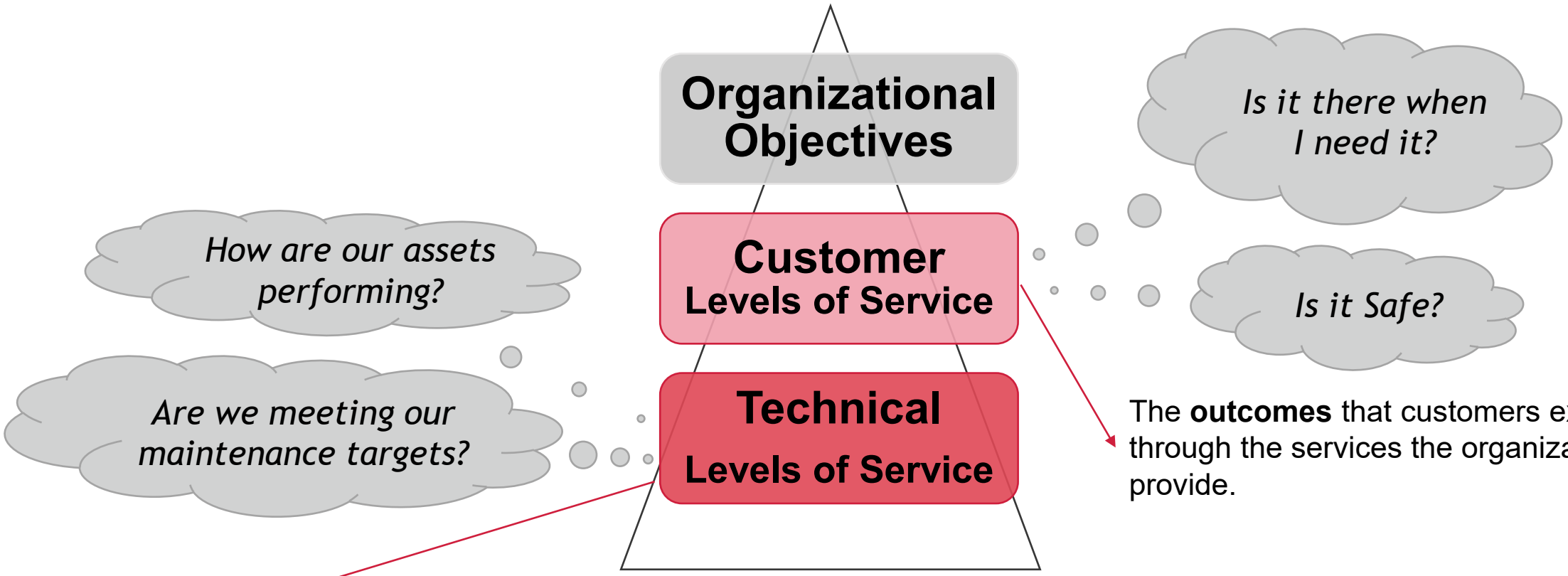
- Fine to start with estimates
  - Using age as a proxy
  - Observations from staff
- Eventually, want a repeatable condition assessment program in place
- Asset specific industry grading scales very useful
- But present the data using a common grading system



Tips

1. Don’t let a lack of data stop you from making progress – **get started with what you have**, and over time it will improve.
2. There is a **cost-benefit** to consider before collecting data beyond the basics
3. Track **Data Sources** and capture **Data Confidence**

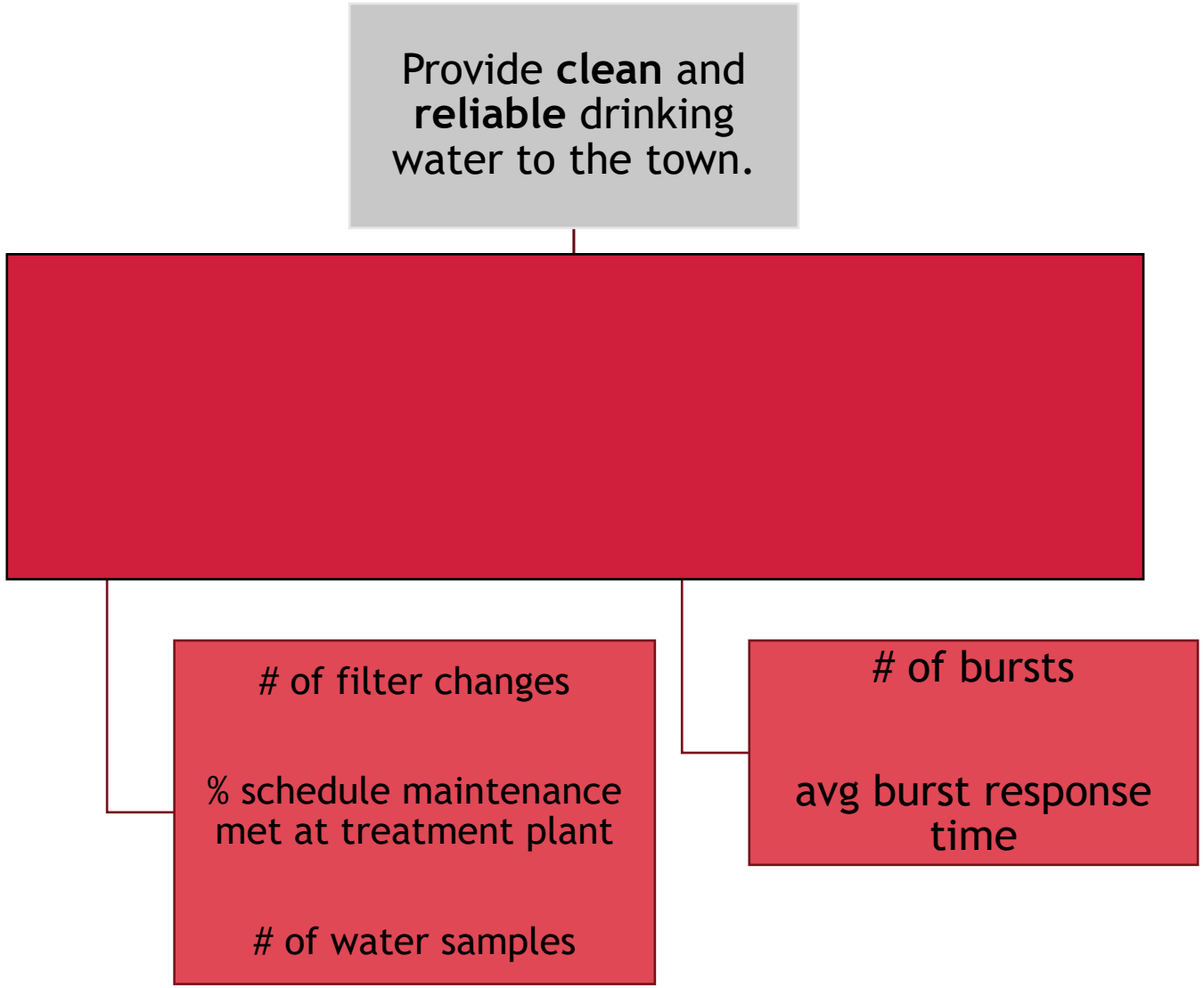
Levels of Service – Customer vs Technical



The **outcomes** that customers experience through the services the organizations assets provide.

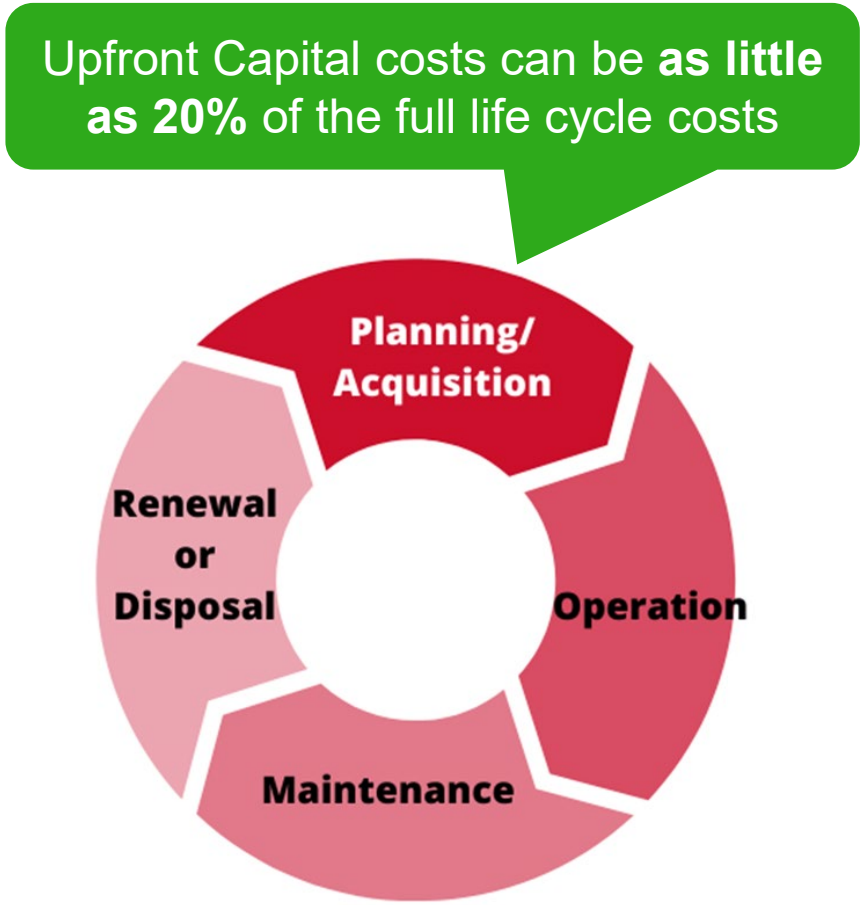
Internal measures tracked by the organization to monitor performance and compliance.

Levels of Service – Example



Life Cycle Analysis

- Managing the asset through all stages of the life cycle
- Must consider **life cycle cost**
- Often need to make tradeoffs between CAPEX and OPEX in asset management decisions



Don’t forget…it’s more than Capital $

Alaska City Splash Pad: Option A Financial Analysis	
Upfront Capital Costs including equipment, installation, hook-up to water and sewer	$300,000
Annual Operating Costs:	
Loan Payments	$36,000
Maintenance, Water, etc	$50,000
Total Annual Operating Costs…every year	$86,000

City 6k population generates ~$5.5M in tax revenue annually.

Annual upkeep of the splash pad requires **over 1.5%** of the this revenue!

Be Careful!

Developer contributed infrastructure…but is it really ‘free’?

Donors and Gifts
‘The Sam Smith Centre’

Don’t forget…it’s more than Capital $

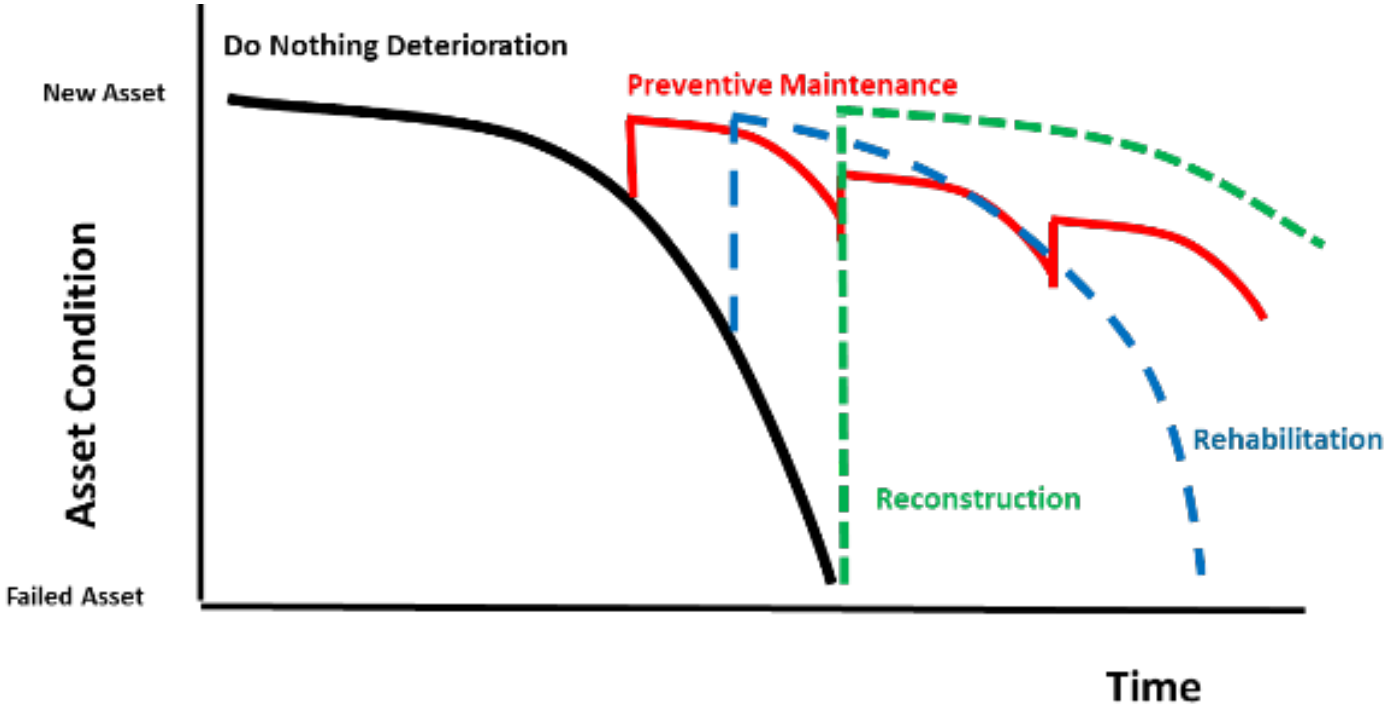
Alaska City Splash Pad: Option B Financial Analysis	
Upfront Capital Costs including equipment, installation, hook-up to water and sewer	$300,000
Water recirculation capital costs	$100,000
Annual Operating Costs:	
Loan Payments	$48,000
Maintenance, Water, etc	$10,000
Total Annual Operating Costs…every year	$58,000

Don’t forget…it’s more than Capital $

		Option A	Option B
A	Upfront Capital Costs	$300,000	$400,000
B	Annual Operating Costs / year	$86,000	$58,000
C	Life Span	50 years	50 Years
D	Life Cycle costs (A + (B x C))	$4,600,000	$3,300,000

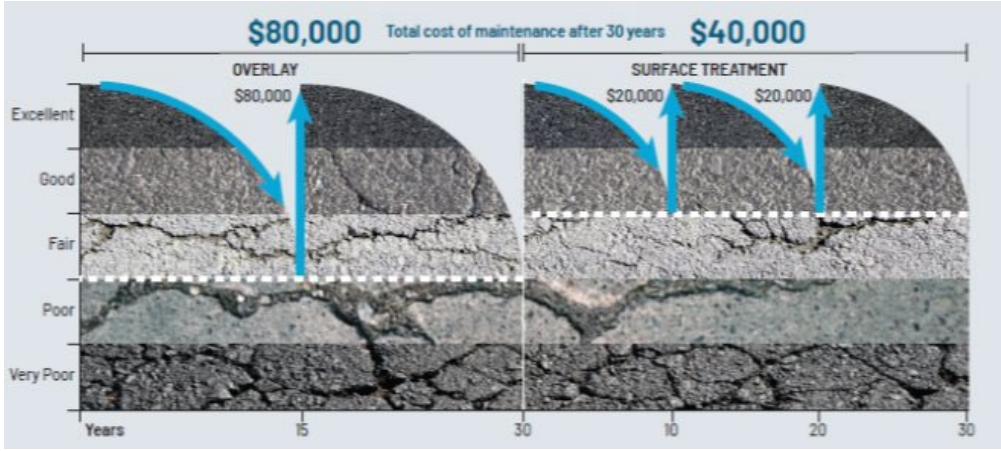
- Notice Option B cost more initially but there are substantial life cycle savings due reduced water costs from the recirculation
- Caution: donated capital (developers or grants) carries future costs

Planned vs. Reactive Maintenance



Rehabilitation

Preventative maintenance



Planned vs Reactive Maintenance

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- What % of your maintenance is planned vs reactive?

Go to menti.com

Mentimeter

Use the code:
1364 1901

Or scan the QR code

Surprising results…

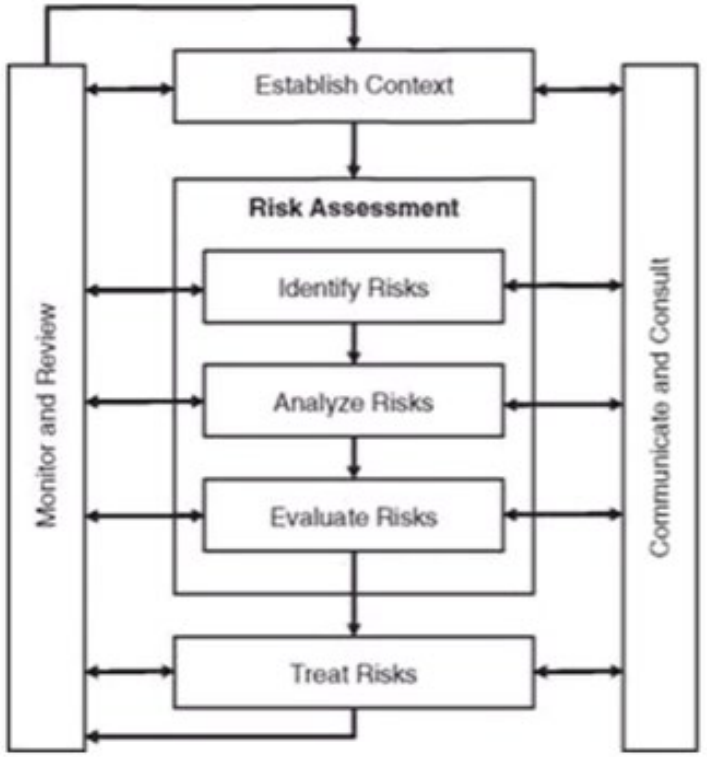
"We are purchasing our first brand new snow plow ($225K) because we can plan out that far and we know purchasing new has ***lower life cycle cost than previous strategy of buying old plows and spending a lot of time and money on repairs,*** *and reducing risk of snow plows not working when we need them.*

Plus we reduced the number of plows from three to two to better reflect our real needs, thus reducing operating costs and eventually capital costs."

Rick Charlebois, Director Corporate Services/Treasurer,
Town of Petrolia, Ont. Pop. 6k.

PETROLIA
You'll be surprised!

Using Risk to support prioritization



Source: ISO 31000

Risk Management: a coordinated set of activities and methods used to monitor and control unplanned events that can affect an organization.

Using Risk to support Prioritization

- Asset Condition
- Environmental Factors

- Safety
  - Minor injury
  - Fatality
- Financial
- Disruption to residents

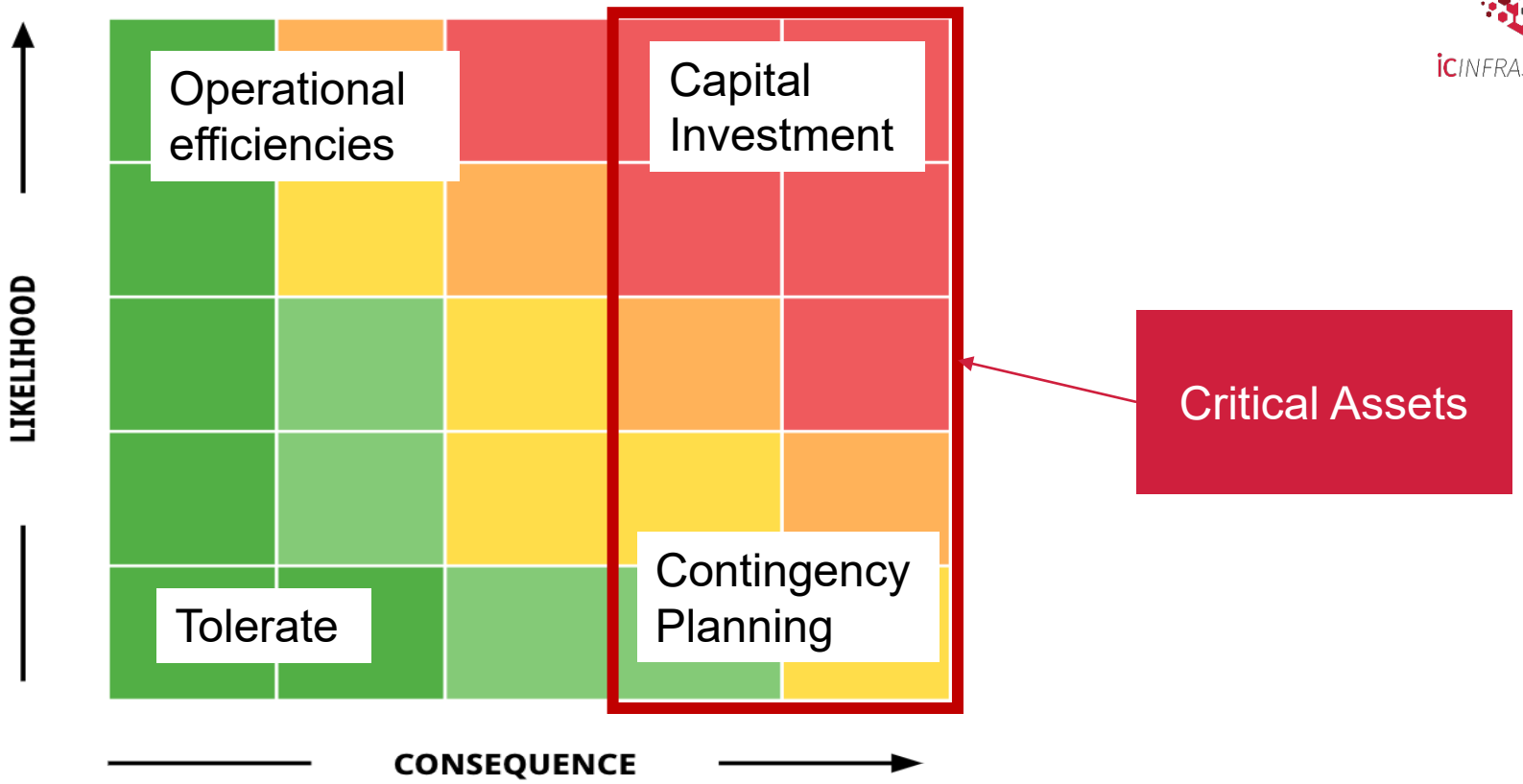
Criticality

Not all Assets / Services are equal

Focuses on <u>Consequences</u>, irrespective of *Likelihood*

High criticality Assets should be given care first

Risk

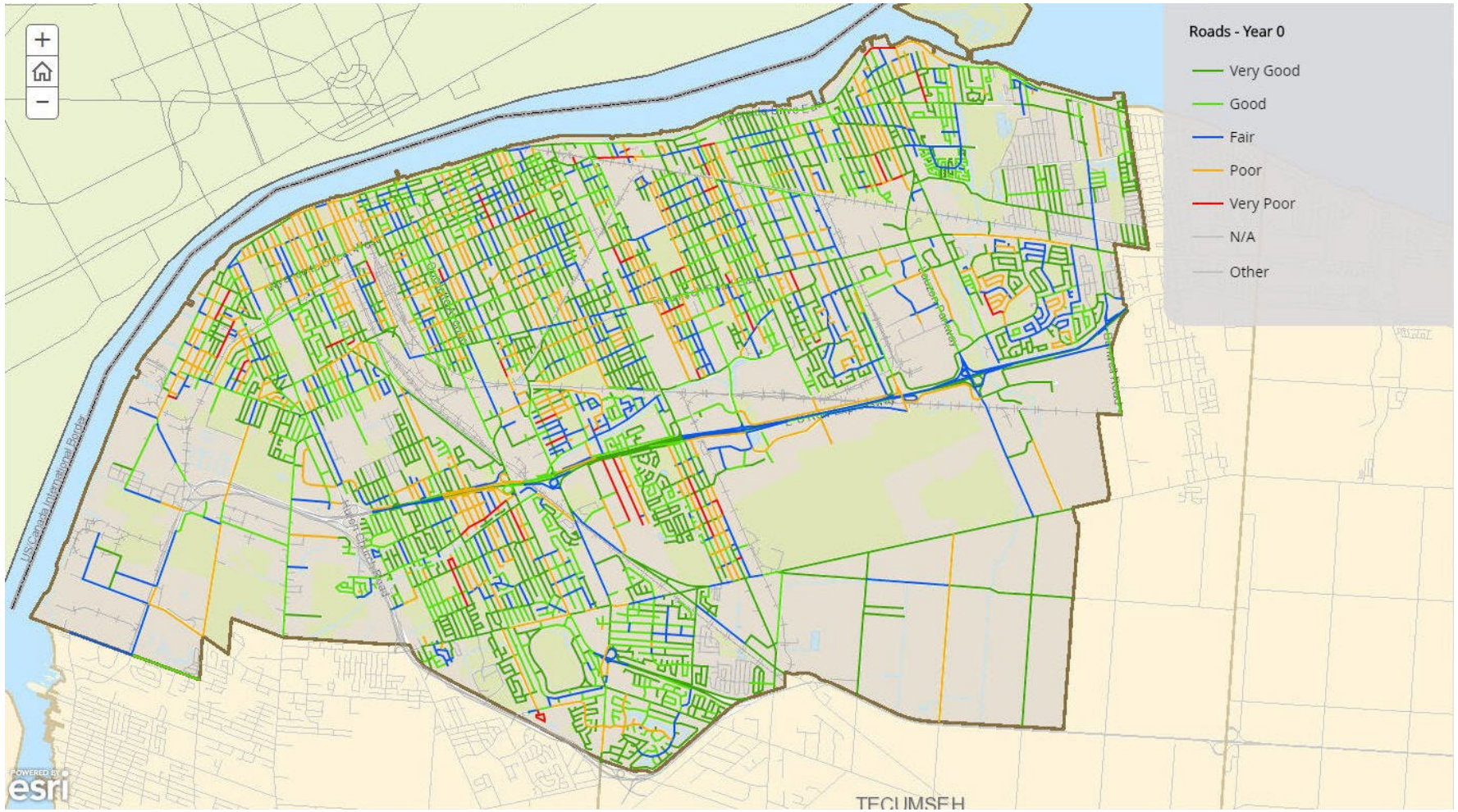


‘4 T’s’ of Risk Treatment:

- Tolerate
- Transfer
- Terminate
- Treat

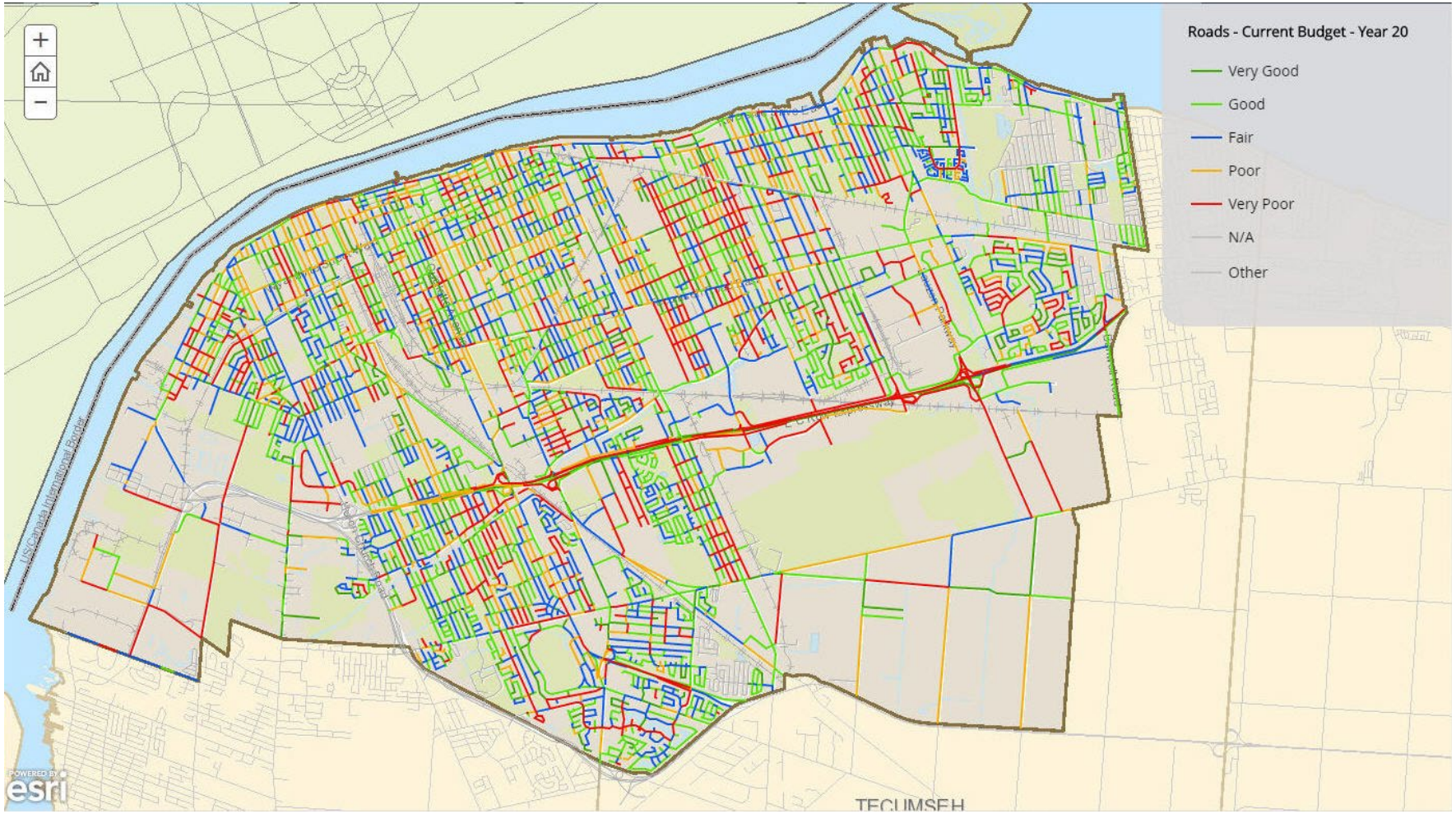
Better Decisions.

Windsor-Year 0



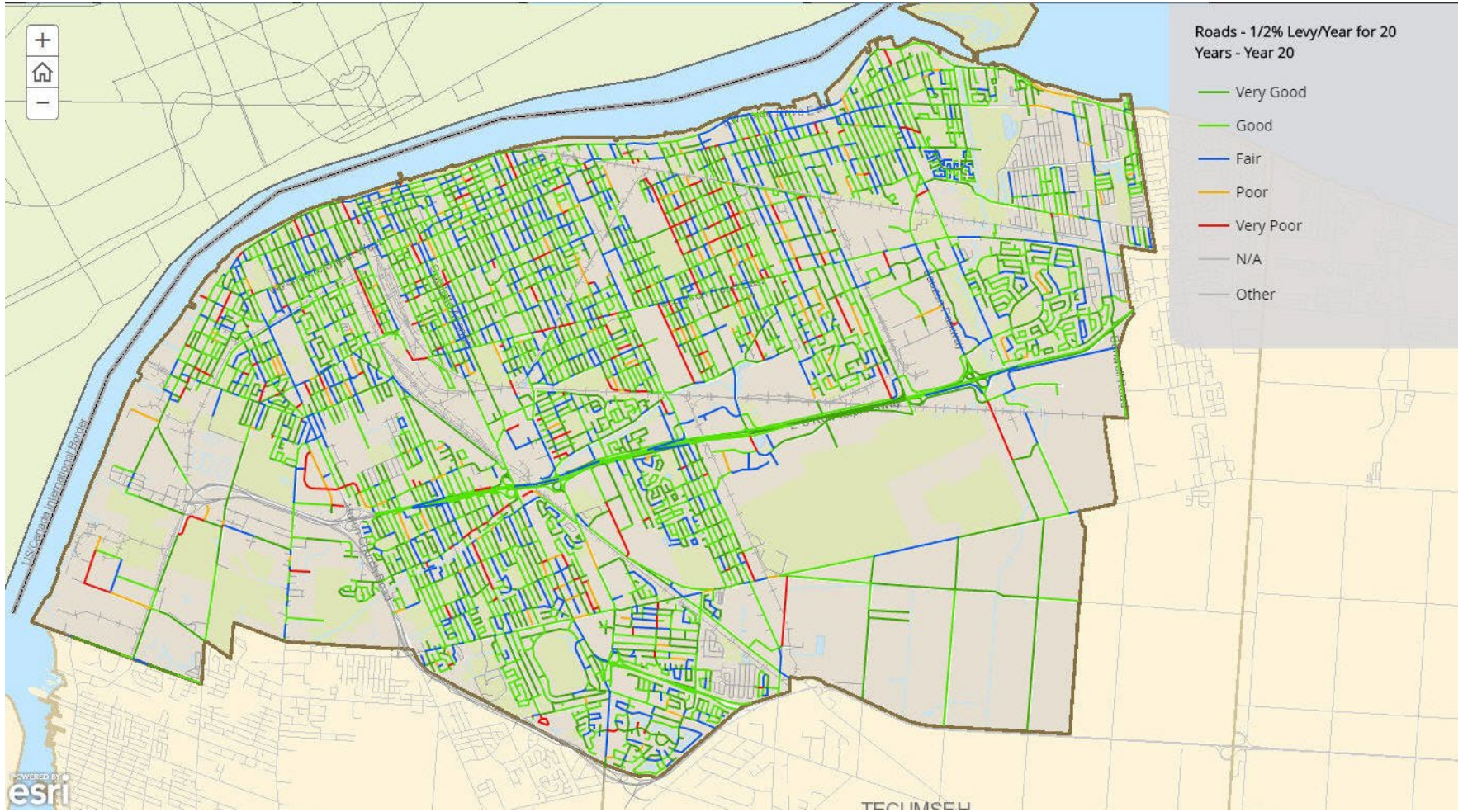
Source: City of Windsor ON

Windsor-Year 20, current spend



Source: City of Windsor ON

Windsor-Year 20, 0.5% levy



Source: City of Windsor ON

Planning and Decision-Making

Asset Management Plans (AMP)

- Documented information that specifies the activities, resources and timescales required to achieve the organization's asset management objectives

- Understand your Assets
  - Get a basic understand of services, challenges and funding

- Can be written at different levels
  - Organizational/ Department/Asset Class

- Your AMP is a living document
  - Improve quality over time

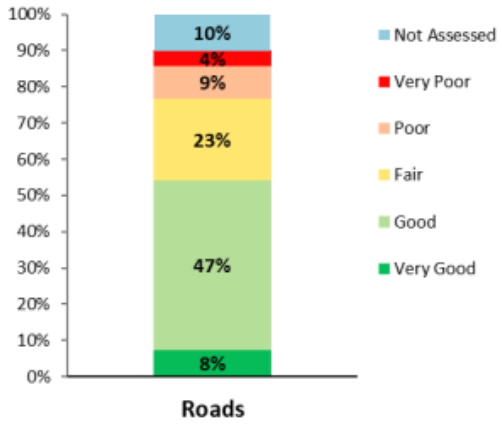


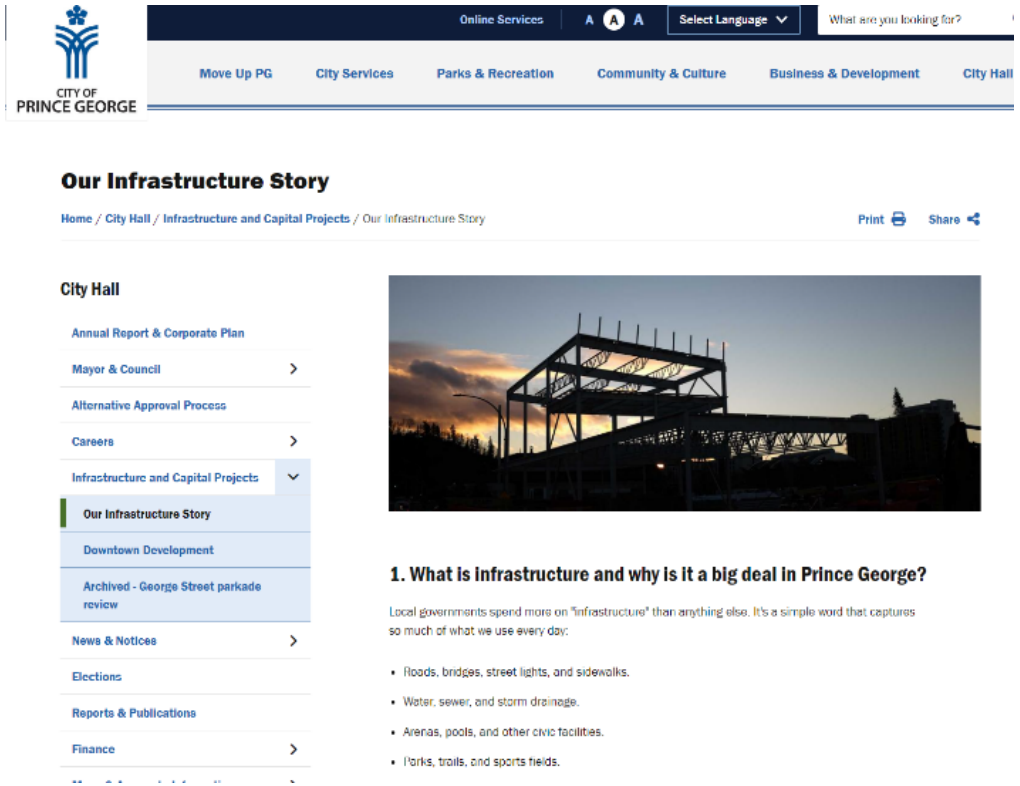
Figure 3.1-1. Roads - Condition

Sources:
Ministry of Ontario, Guide to Asset Management Plans
City of Winnipeg, 2018 Asset Management Plan

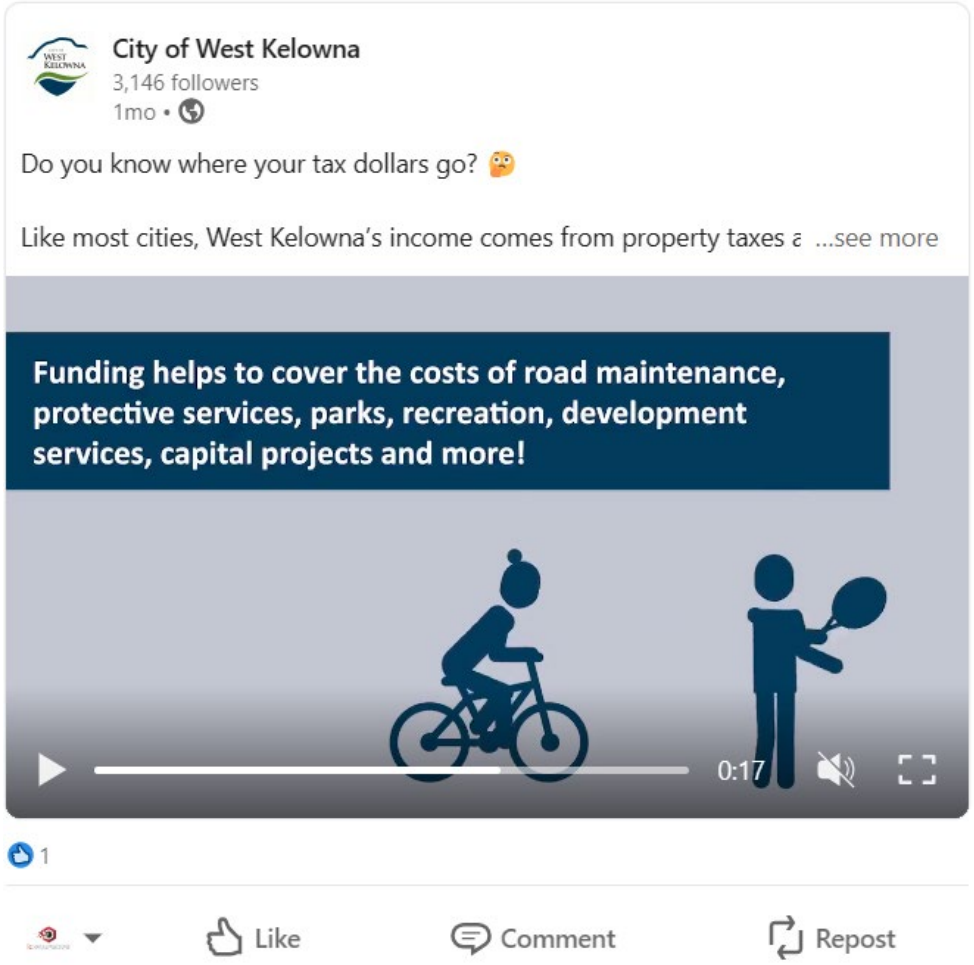
Engaging with the Public

- Customer expectations are a challenge – people expect better services for the same or less taxes
- We must help the public better understand the costs of maintaining and delivering services
- Lots of ways to do this…

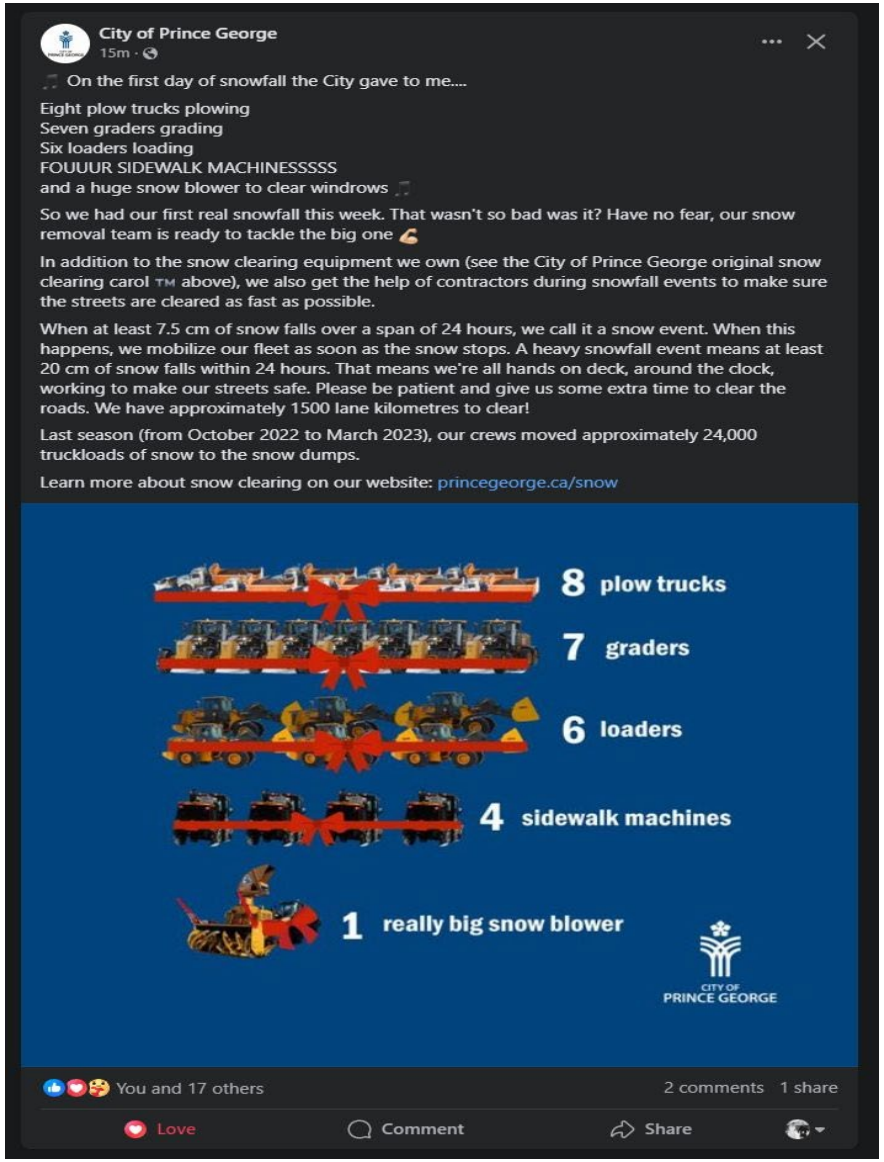
City of Selkirk, MB



City of Prince George, BC



City of West Kelowna, BC



City of Prince George, BC

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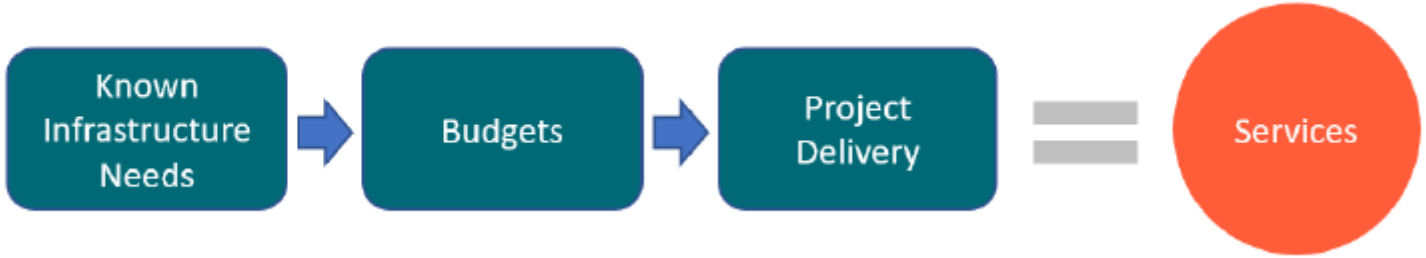
Make it fun if you can!

FINANCIAL PLANNING FOR ASSET MANAGEMENT

Asset Management Decision-Making Process



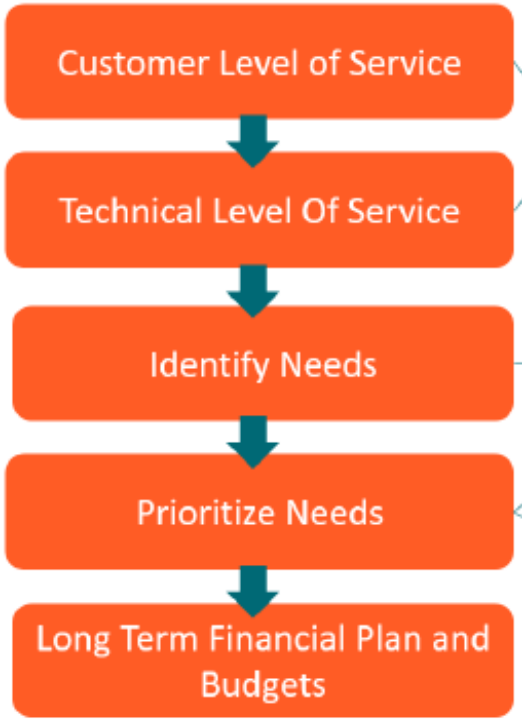


Figure 9 - Desired Future State Decision Making Process

Source: City of Salmon Arm, British Columbia
Asset Management Strategy

Poll

Do you have the right rates/tax revenue/user fees coming in for your community services to be delivered sustainably?

Go to menti.com

Mentimeter

Use the code:
1376 8043

Or scan the QR code

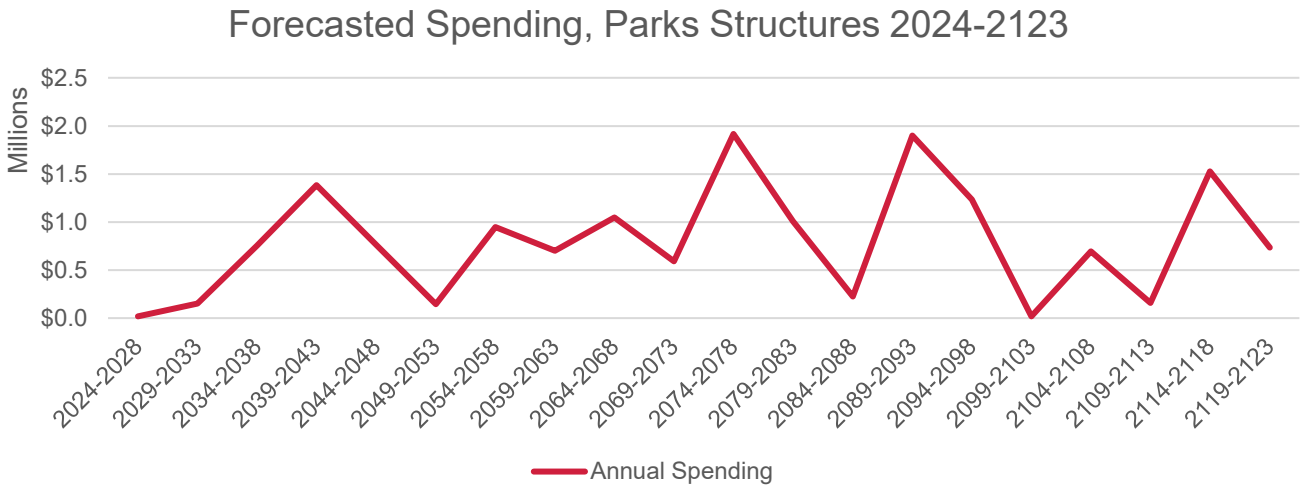
Key Information for a Financial Sustainability Assessment

Questions

- What costs is your organization facing over the long term?
- Are annual and long-term funding levels sufficient to sustain service?
- If not, how much of a financial gap will grow over time?

Key Financial Sustainability Measures

- Replacement spending is volatile



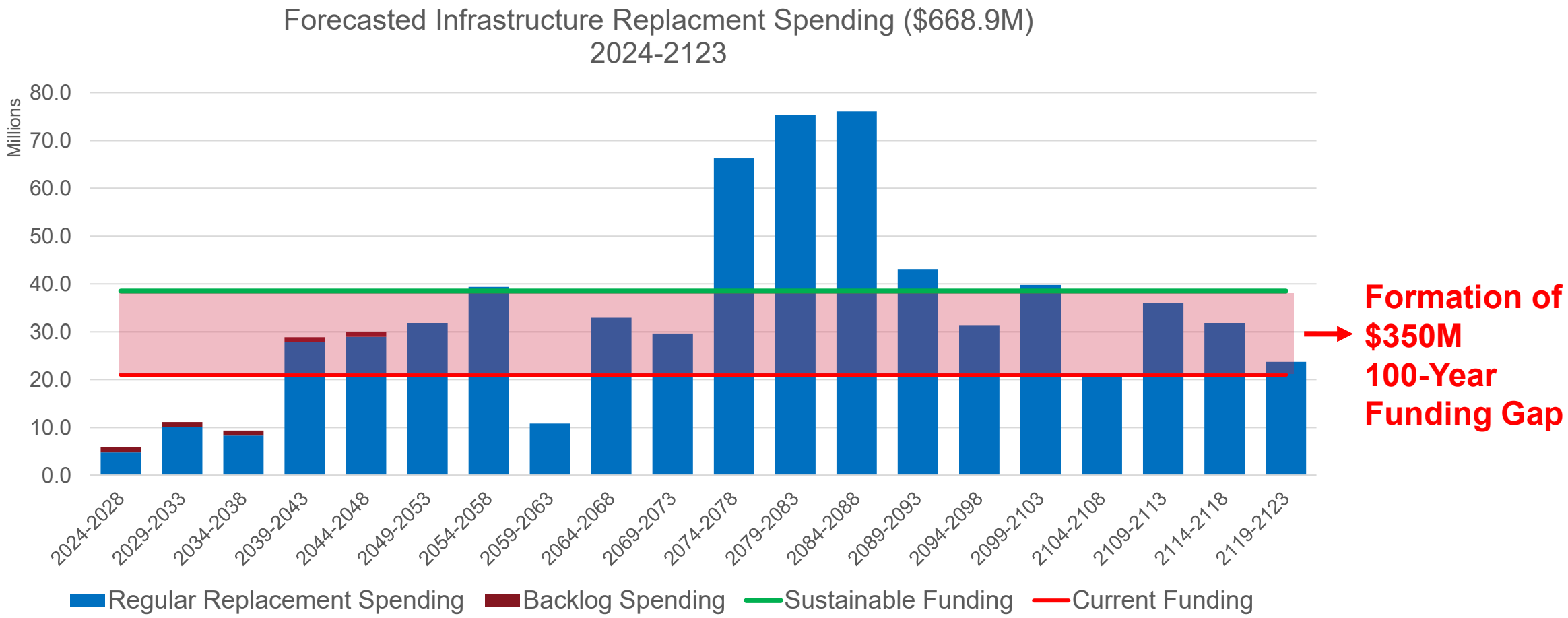

Infrastructu

Sunday, August 30, 2032

Residents face 38% tax incre

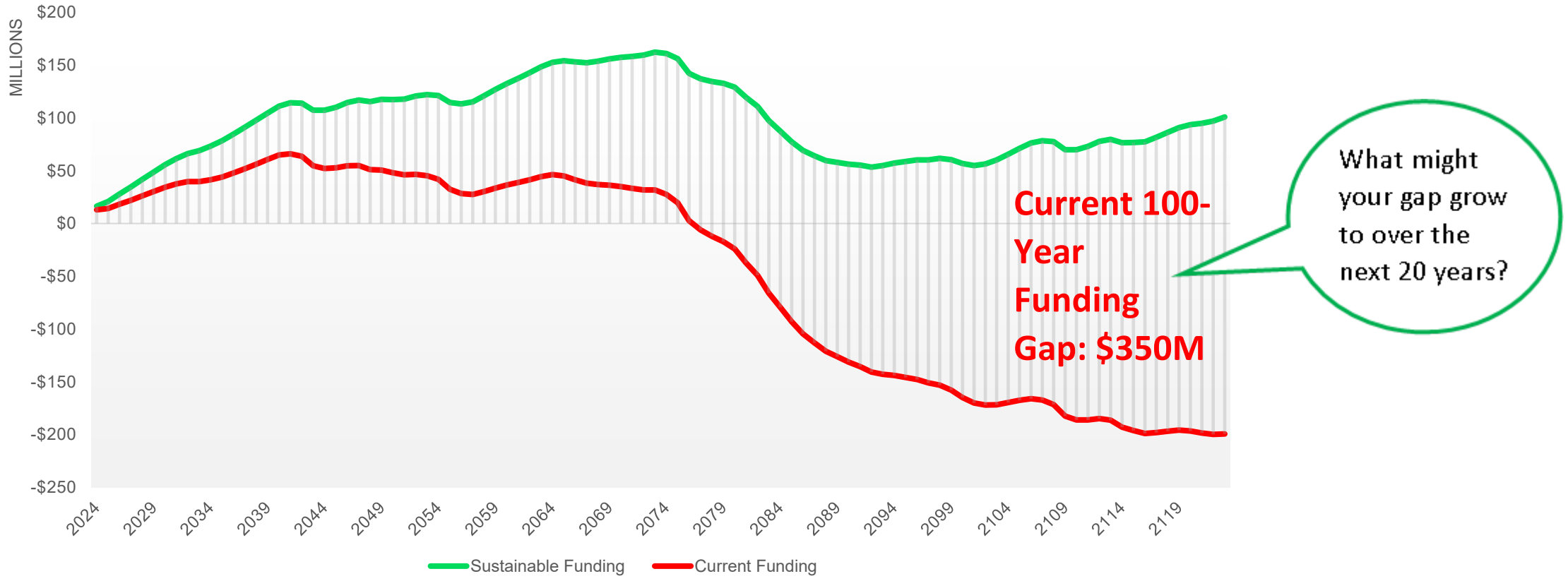
- Long term planning can smooth out funding
- Replacement costs will always eventually catch up – plan in advance

Key Financial Sustainability Measures

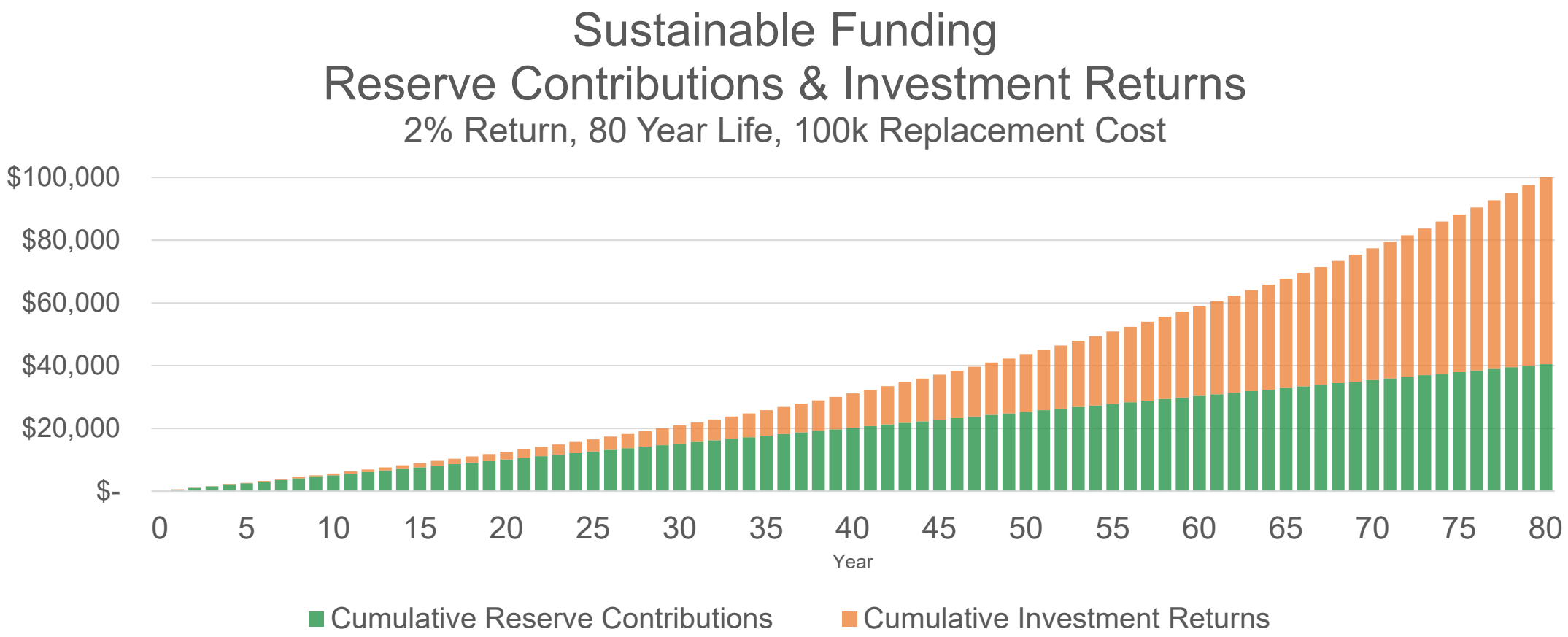


Key Financial Sustainability Measures

Reserve Forecasts
Current Funding vs Sustainable Funding



Key Financial Sustainability Measures



GROUP EXERCISE

Financial Sustainability Assessment Example

	Stormwater Assets	
A	Estimated Replacement Costs of Assets	$150,000,000
B	Estimated useful lives of assets	75 Years
C	Annualized cost of asset replacement (A/B)	$2,000,000
D	Current annual funding for asset replacement	$1,100,000
E	Annual Funding Gap (D-E)	$900,000
F	% Sustainability (D/C)	55%
G	100-Year Funding Gap (E X 100)	$90,000,000

Group Exercise

Asset ID	Material	Length (feet)	Unit Rate (per feet)	Replacement Cost	Useful Life	Annualized Cost
SS001	PVC	5,280	$1,100	5,808,000	100 Years	58,080
SW002	HDPE	7,340	$1,100	8,074,000	80 Years	100,925
SW003	PVC	10,000	$1,100	11,000,00	80 Years	137,500
TOTAL				24,882,000		296,505

Group Exercise

Using the information in the handout, please calculate the following:

- Replacement cost per asset (highlighted in yellow)
- Annualized cost per asset (highlighted in yellow)
- Replacement cost per asset class (highlighted in blue)
- Annualized cost per asset class (highlighted in blue)
- Total replacement cost for all asset classes (highlighted in purple)
- Total annualized cost for all asset classes (highlighted in purple)
- Annual Funding Gap
- % Sustainability
- 100-year Funding Gap

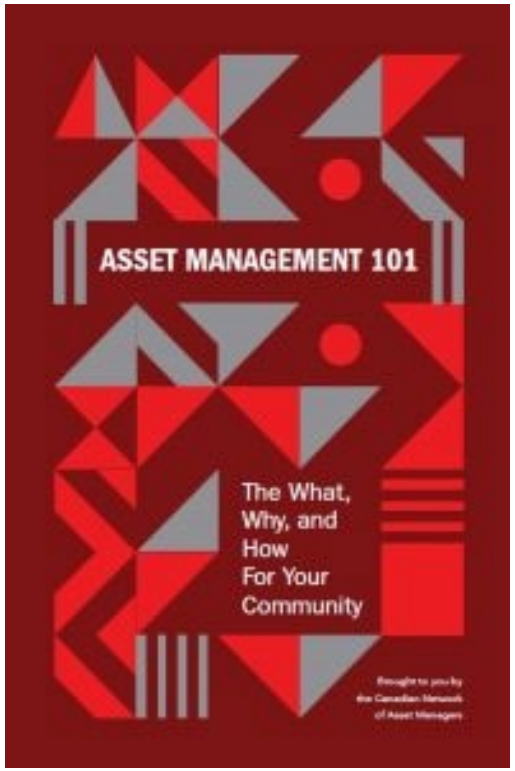
Group Exercise: Questions

1. What do these numbers tell us?
2. How does this impact our decision making in financial planning/funding/investing?
3. What insights did your table/groups gain about financial sustainability through completing this exercise?
4. Were there any surprises or unexpected findings?
5. In what ways can you apply the insights from this exercise to make changes in your community or decision making?

WRAP-UP

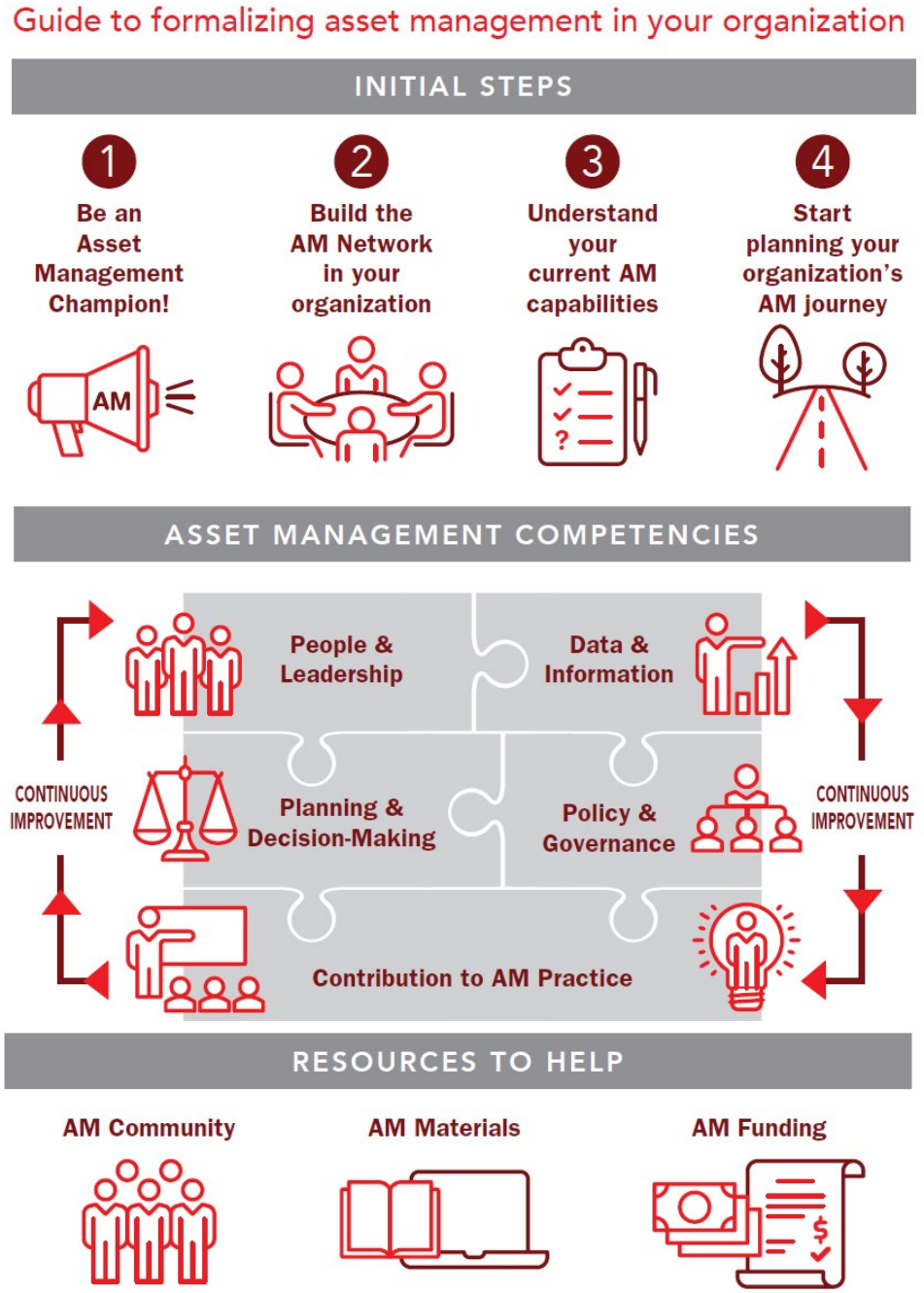
Getting Started – Key Takeaways – Future Plans

Guide to Formalizing AM



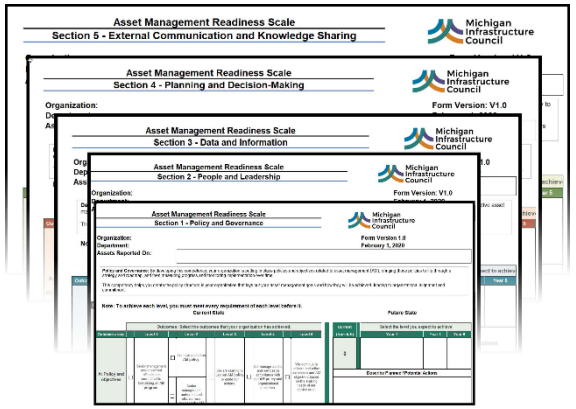
CNAM Canadian Network of Asset Managers

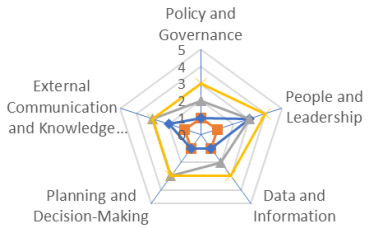
Free download from
cnam.ca/New-to-AM



Source: CNAM's AM101 Booklet

Where are we now?





Michigan Infrastructure Council

- **Gap Assessment Tool for organization AM practices**
  - **Identify good/bad with your 'Steering Committee'**
- Federation of Canadian Municipalities' AMRS
  - AMRS = Asset Management Readiness Scale
  - Foundation of "MAMP" program
- Michigan Infrastructure Council's AM Readiness Scale
  - Already American'ized
  - Free Excel tool www.michigan.gov./mic
- Use for Future Goals, Priorities, Roadmap

Planning and Decision-Making

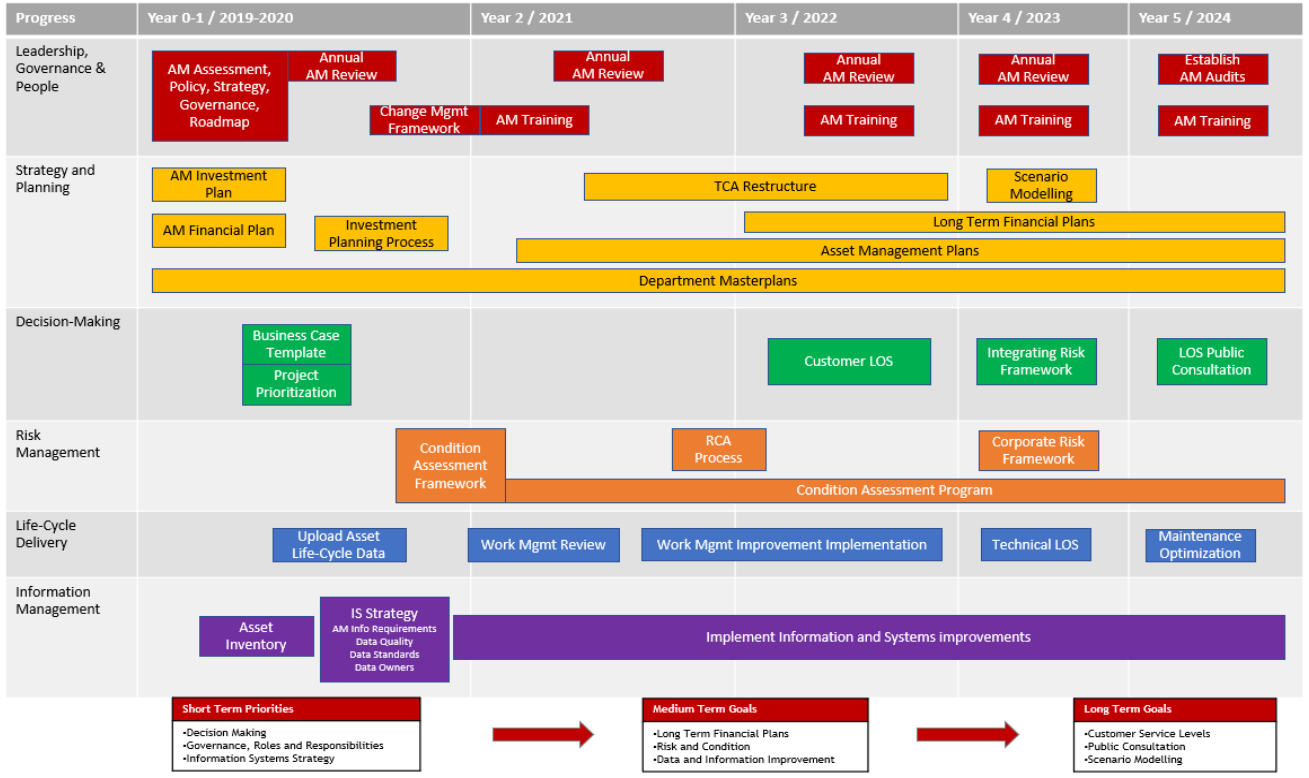
	Outcomes: Select the outcomes that your organization has achieved.									
Outcome areas		**Level 1**		**Level 2**		**Level 3**		**Level 4**		**Level 5**
A: Planning and Prioritization*	☑	Our asset planning approaches sometimes vary on how we identify needs, design projects, and decide on priorities.	☑	We follow a similar but at times informal asset planning approach.	☐	We have a structured asset planning approach (e.g. business cases and prioritization processes), but application is not fully consistent across the organization.	☐	We employ a consistent structured asset planning approach for each of our critical / core services that aligns with evolving organizational goals and objectives.	☐	We employ a consistent structured asset planning approach for all services that aligns with evolving organizational goals and objectives.
			☑	We evaluate investment needs and priorities based on a mix of structured and ad-hoc practices and criteria.	☐	We set priorities using criteria based on organizational goals and objectives.	☐	We set priorities using criteria that are fully aligned with our organizational goals and objectives.	☐	We adapt our planning approach and criteria to align with evolving organizational goals and objectives.
Describe Current Actions										

Current (from left)	**Select the level you expect to achieve**		
	Year 1	**Year 3**	**Year 5**
2	3	4	5
Describe Planned / Potential Actions			

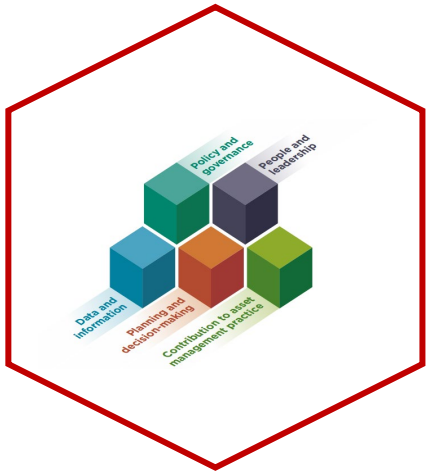
***If you are an organization responsible for multiple asset types (roads, drinking/wastewater, etc.) consider how you approach planning and prioritization across these assets. If you are an organization responsible for a single asset, consider how you approach planning and prioritization between teams/departments (e.g. engineering, planning, construction, etc.).**

AM Roadmap/ Implementation Plan

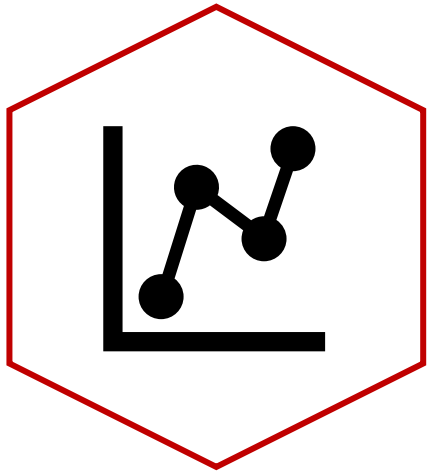
- This does not happen overnight!
- Develop a 3 – 5 year AM Roadmap for your AM journey
- Path (and pace) yours to decide



Suggestions For Getting Started



Conduct an Asset Management Maturity Assessment



Prepare an Asset Inventory for one Asset Class

Add Risk Scores for critical assets

Conduct a Financial Sustainability Assessment.

Define Levels of Service for one Asset Class

Future Plans

- Customized Asset Management 101 eLearning course
- Webinar Series
  - First one happening soon!
  - Sitka's AM Journey - Watch out for details from AML
- Office Hours
  - April 30- 9-10AM
  - July 30 -9-10AM
  - October 29- 9-10AM
- More support in the future, using the outcomes from Phase 1
- Would appreciate Alaska Case Studies to showcase local infrastructure operators

We're looking for speakers/case studies!

Get in touch if you or someone you know has a story to tell!

Thanks for your time! Any Questions?

Copy of slides available, email us

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