



Council Education
Asset Management in Niagara Region
Understanding Your Role as a Regional Councillor

November 2024

Council Strategic Priorities

Effective Region

Remaining an employer of choice by transforming service delivery in a way that is innovative, collaborative and fiscally-responsible.

Green and Resilient Region

Focusing on reducing our collective carbon footprint and preparing to adapt to climate change impacts by ensuring current and future infrastructure is resilient.

Equitable Region

Providing opportunities for a safe and inclusive Niagara by listening and responding to our current community needs and planning for future growth.

Prosperous Region

Advocating with senior governments for future growth and enhancing Niagara's transportation network to help support a diverse economy by creating a Region where new and existing businesses can thrive and grow locally, nationally and internationally.

Asset Management Legislation



Infrastructure for Jobs and Prosperity Act, 2015

Ontario Regulation 558/17: Asset Management Planning for Municipal Infrastructure



Safe Drinking Water Act



Clean Water Act



Environmental Protection Act



Development Charges Act, 1997



Keeping Canada's Economy and Jobs Growing Act, S.C. 2011, c. 24



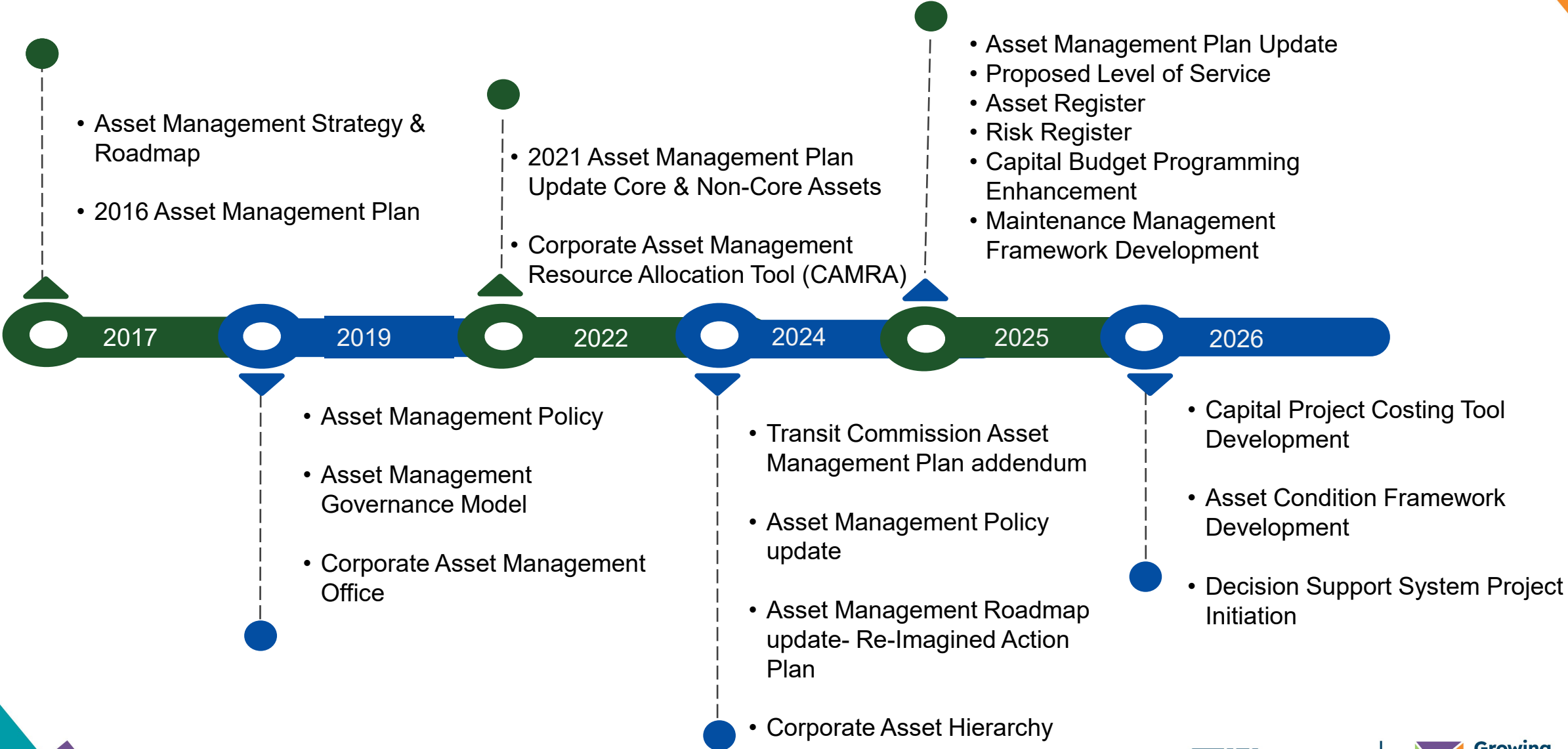
Provincial Planning Statement, 2024



Other legislative requirements

Canada Community Building Fund (aka Federal Gas Tax Fund)

Niagara Region's Asset Management



Value of Asset Management

Did you know?

- 60% of Canada's core public infrastructure is owned and maintained by municipal governments.
- One-third of municipal infrastructure is in fair, poor, or very poor condition.
- The Canadian Infrastructure Report Card found that "All communities, particularly smaller municipalities, would benefit from increased asset management capacity."

- CIRC 2019

Asset Management Focuses On

- The vision of Niagara Region and how assets support community goals
- Value, purpose, and long-term outcomes of assets
- Managing risks and understanding the context of risks
- Holistic approaches to budgeting
- Collaboration across municipal service areas and with service partners

Niagara Region Assets Overview

Corporate Asset Management

Core Municipal Infrastructure

Water/Wastewater/
Stormwater

Roads / Bridges and
Culverts

Non-core Assets

IT, Facilities, Equipment, Fleet, Police, Emergency Medical Services, Children, & Court, Senior Services, Public Health, Community Housing, Transit, Transportation, Waste Management, and Social Assistance & Employment Opportunities

Niagara Region Assets Value

What are our assets worth

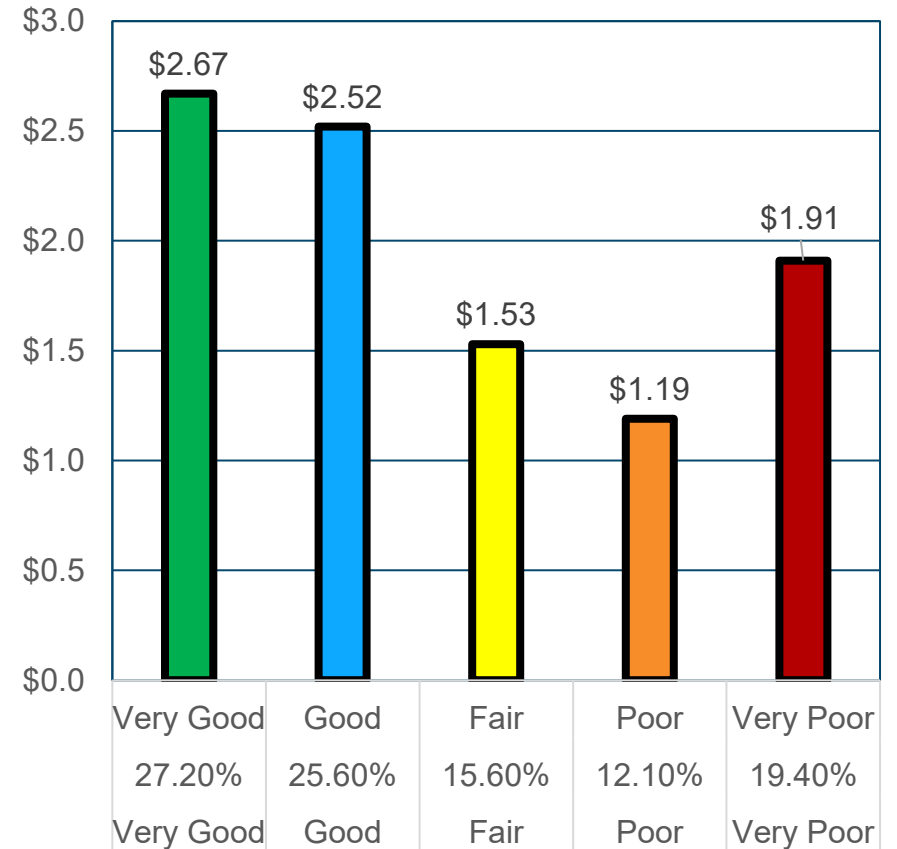
\$9.8B

As of Dec 31st, 2021

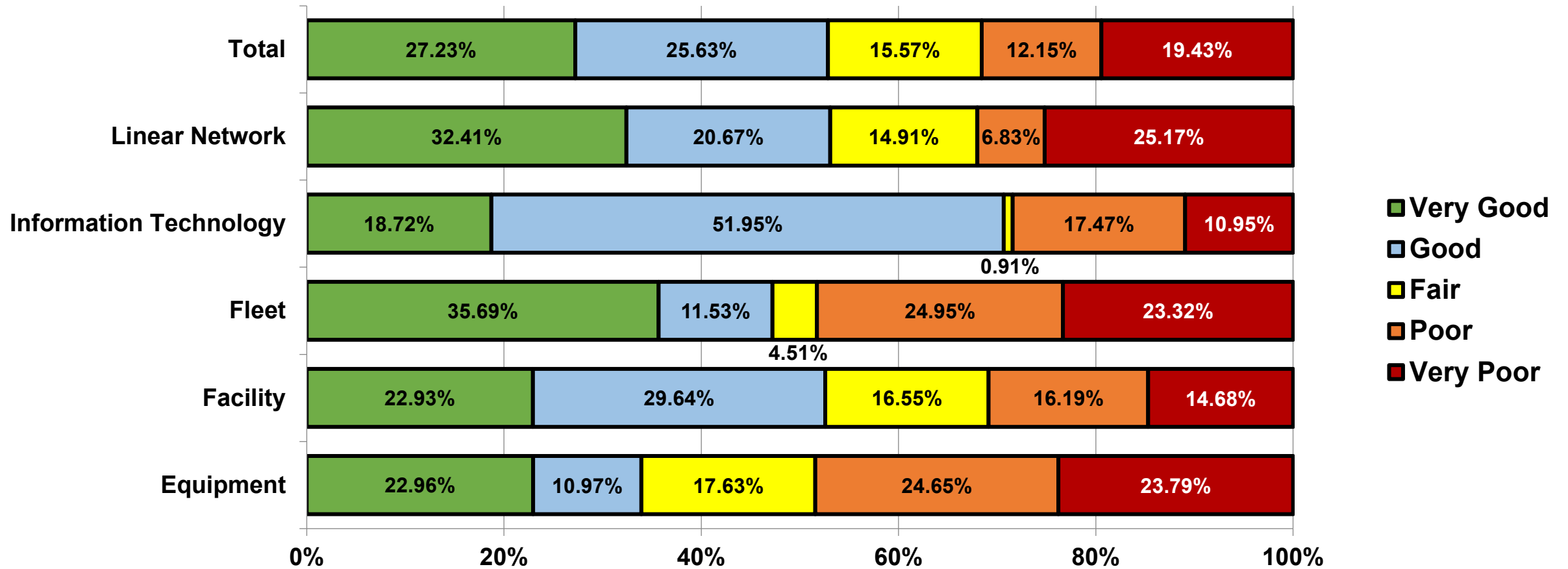
The Region owns and maintains a significant amount of assets. As of December 31, 2021, The 2021 Corporate Asset Management Plan (2021 CAMP) provides details of maintaining and managing the \$9.8 billion in assets replacement value that support the Region's services.

The **Replacement Value** of an asset (also Asset Replacement Cost & Current Replacement Cost) is the cost of replacing an existing asset with a substantially identical new asset or a modern equivalent.

Replacement Value \$ Billions



What condition are our assets in?



- Asset condition as % of value by asset category

Niagara Region Core Assets



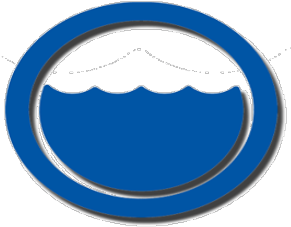
Niagara Region is responsible for the planning, delivering, maintaining and operating of the Region's core infrastructure, such as Water, Wastewater and Roads Assets.

These activities include:

- Maintaining and operating
- Monitoring asset conditions
- Developing and implementing infrastructure renewal plans through the Asset Management program
- Long Term Planning for growth
- Preparing capital budget by applying Asset Management principles, including CAMRA prioritization, level of service, risk, consequence of failure and optimized decision-making

Water & Wastewater Infrastructure

Public Works operates and maintains:



2 “Water Wagons” for the provision of potable water at community events.

Approximately **313+** km of Trunk mains

6 water treatment plants and associated facility assets.

31 outstations, including pump stations, treated water storage facilities, rechlorination facilities, sampling stations, and other facilities, and associated assets.



10 wastewater treatment plants

126 outstations and associated facility assets; outstations include sewage pumping stations, odour control facilities, combined sewer overflow tanks, and a stormwater pumping station.

Approximately **145** kilometres of sanitary gravity collection mains.

Approximately **161** kilometres of sanitary force mains.



5 wastewater treatment lagoons

1 biosolids treatment facility and associated facility assets.

Niagara Region Environmental Laboratory equipment.

Numbers represent quantities

Transportation and Fleet Assets

Public Works operates and maintains:



1,733 lane kilometres of arterial roads



89,085 square meters of bridges

1,785 cross culverts
6,720 driveway culverts



20,146 trees
1 Fleet Service Centre
585 vehicles



110 kilometres of storm-water sewers



241 km of on-road cycling facilities



288 traffic signals
18,655 signs
6,295 luminaries



1,276 guide rails
713 retaining walls
13 barriers

Numbers represent quantities

Niagara's Region Non-Core Assets



Information Technology

- **7,515** IT devices, including computers, monitors and mobile devices.
- **579** IT Infrastructure devices and equipment.
- **333** software and applications.



Owned Corporate Facilities

- Niagara Region Headquarter
- The Environmental Centre
- Niagara Falls Public Health Satellite Office



Court Services

- **1** provincial offences court.

Public Health

- **1** Public Health Satellite Office

Emergency Medical Services

- **13** ambulance bases
- **82** vehicles
- **368** emergency medical equipment



Community Housing

- **9** high-rise residential buildings.
- **20** low-rise residential buildings.
- **12** townhouses.
- **20** single/semi houses.

Police Services

- **98** pieces of equipment for patrol.
- **103** IT-related devices.
- **340** vehicles
- **1** Headquarter.
 - ✓ **6** divisional districts.
 - ✓ **1** tactical unit
 - ✓ **1** training centre.
 - ✓ **1** fleet service centre



Senior Services

- **9** Long-Term Care Facilities
- **2,043** equipment, including beds, resident care equipment and medical equipment.

Children Services

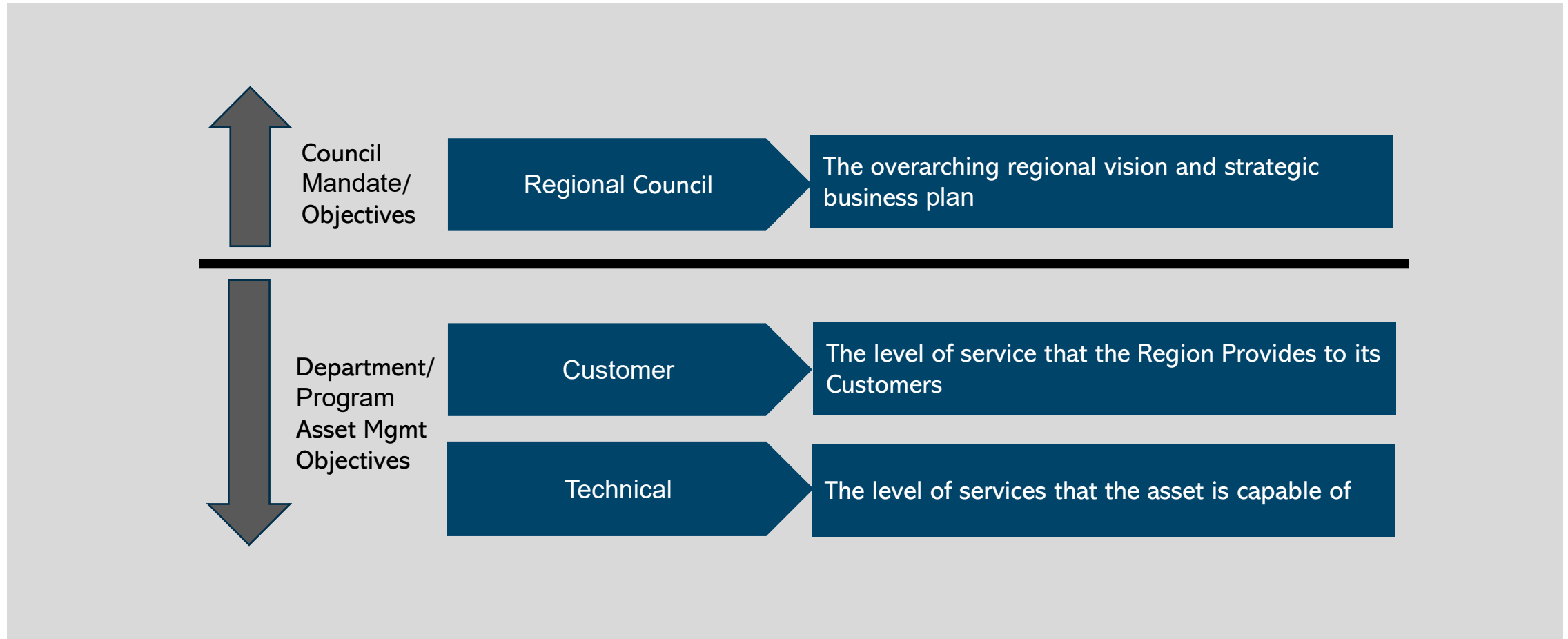
- **4** Region-owned daycare facilities.

Social Assistance and Employment Opportunities (SAEO)

- **2** Social Assistance and Employment offices.

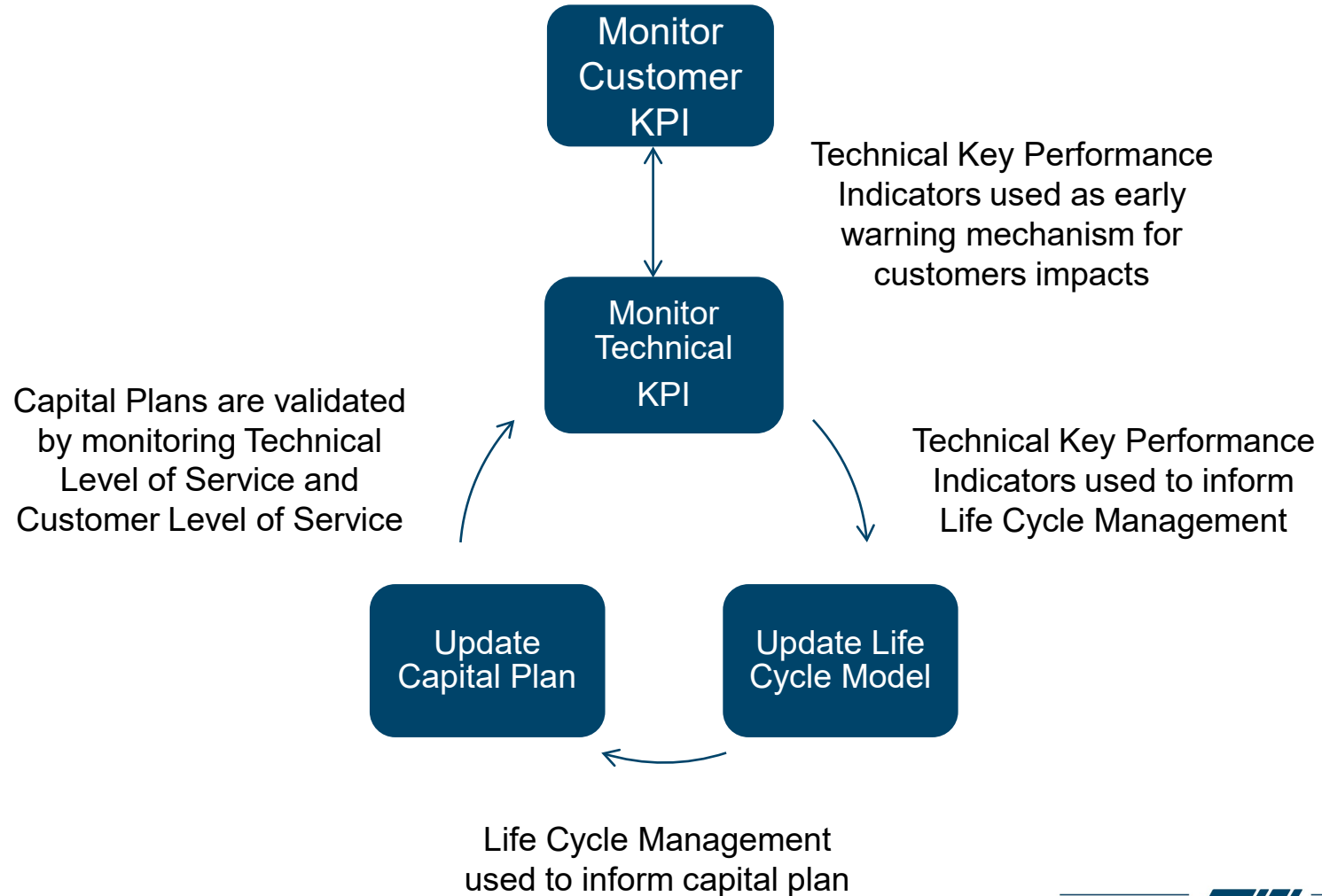


Customer Level of Service



Technical Level of Service

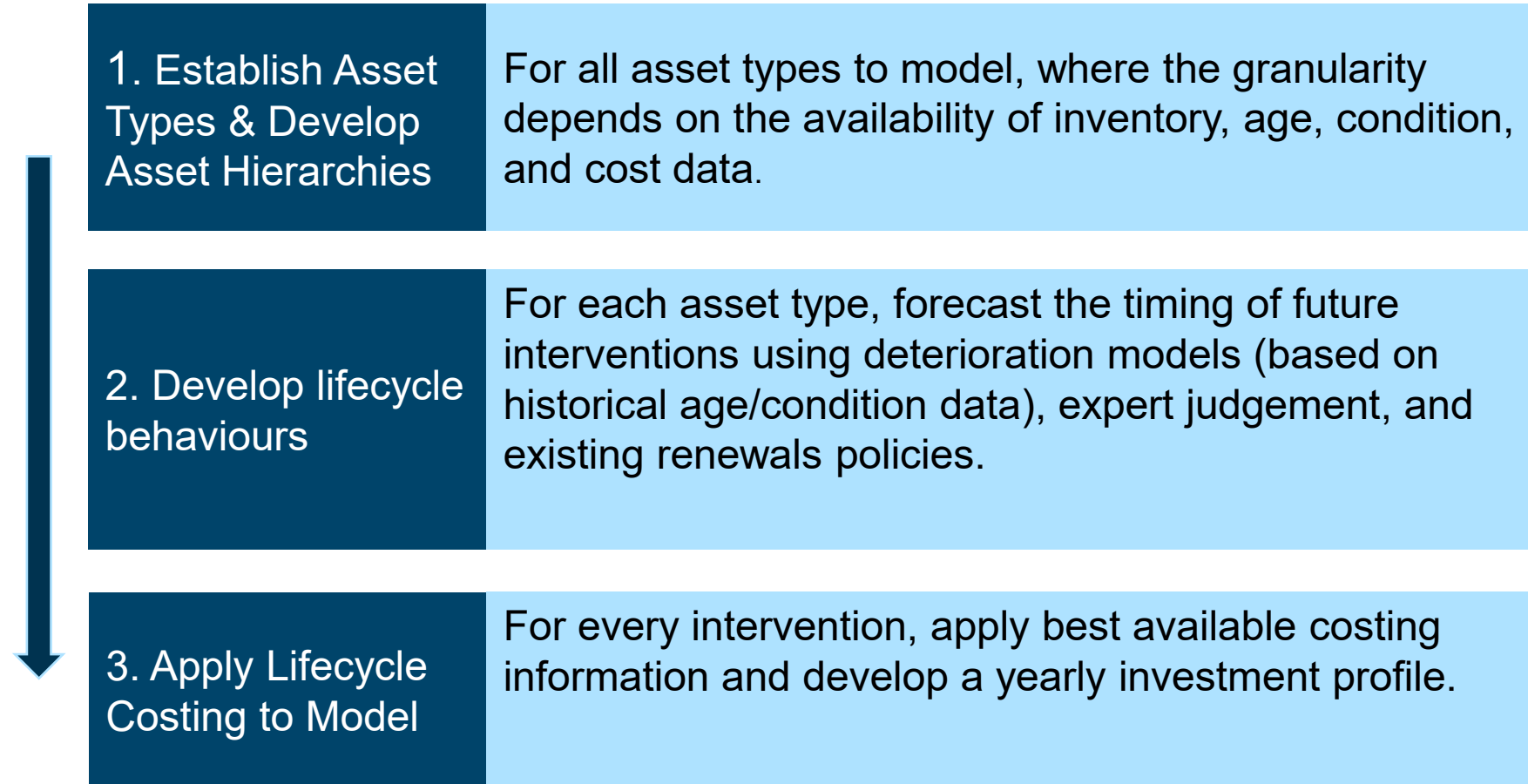
Key Performance Indicators



Typical Levels of Service and Key Performance Indicators Transportation Example

Customer Level of Service	Program Customer Objective	Asset Class	Technical Level of Service	Key Performance Indicator
Safety & Reliability	Safe and efficient movement of people and goods into and within the Region and neighbouring municipalities	Road Network	For paved roads, average pavement condition index value	Average pavement condition index =68
Safety & Reliability	All traffic is supported by regional bridges and culverts	Bridges/Culverts	The average bridge condition index	Average bridge condition index = 69 Average culvert condition index = 70

Lifecycle Modelling








Model Development Process

Risk Management

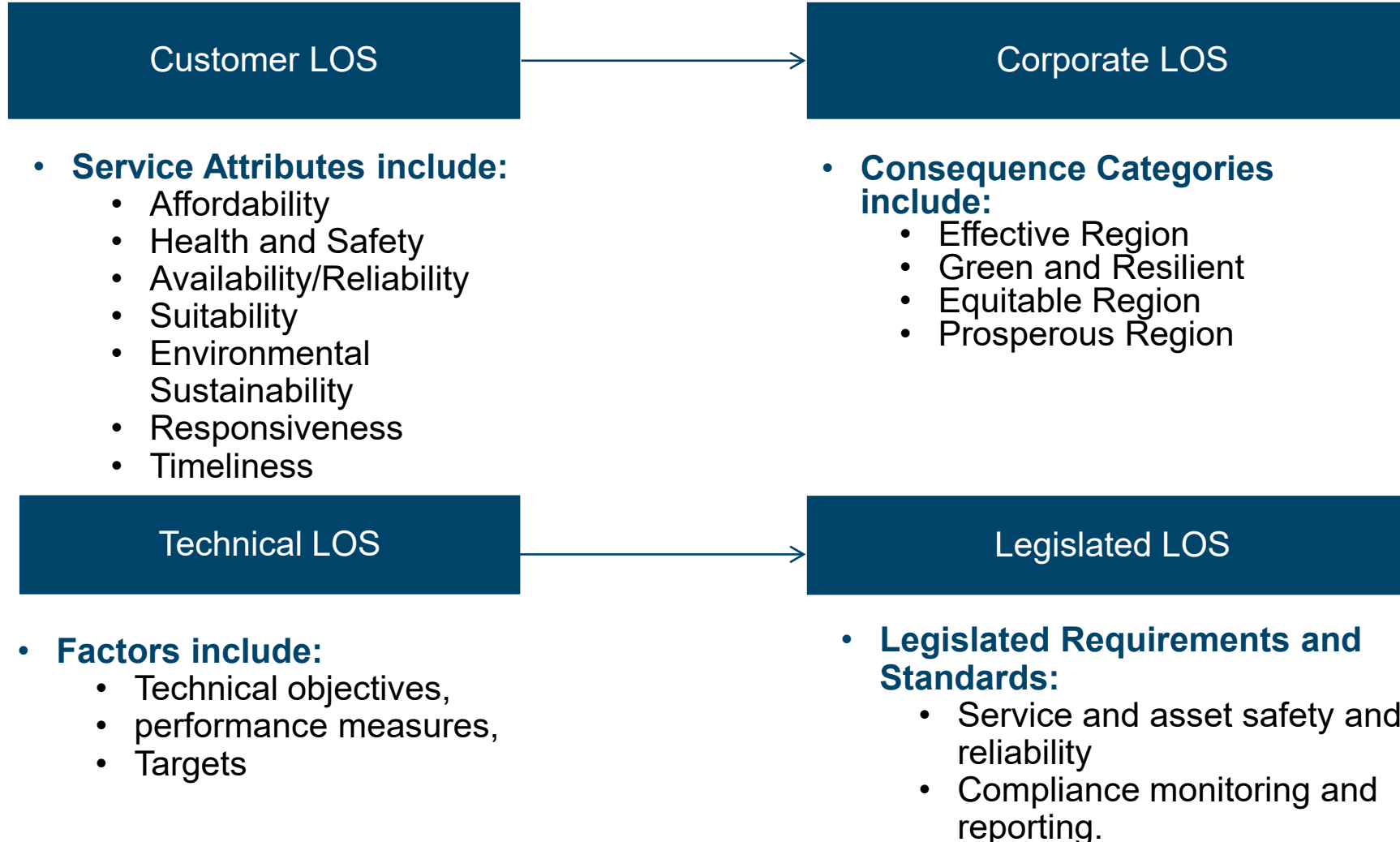
Risk Scoring Approach

Likelihood	1.00	Green	Yellow	Red	Red	Red
	0.50	Green	Yellow	Yellow	Red	Red
	0.33	Blue	Green	Yellow	Yellow	Red
	0.20	Blue	Blue	Green	Yellow	Yellow
	0.10	White	Blue	Blue	Green	Green
		10	20	40	80	160
		Consequence				

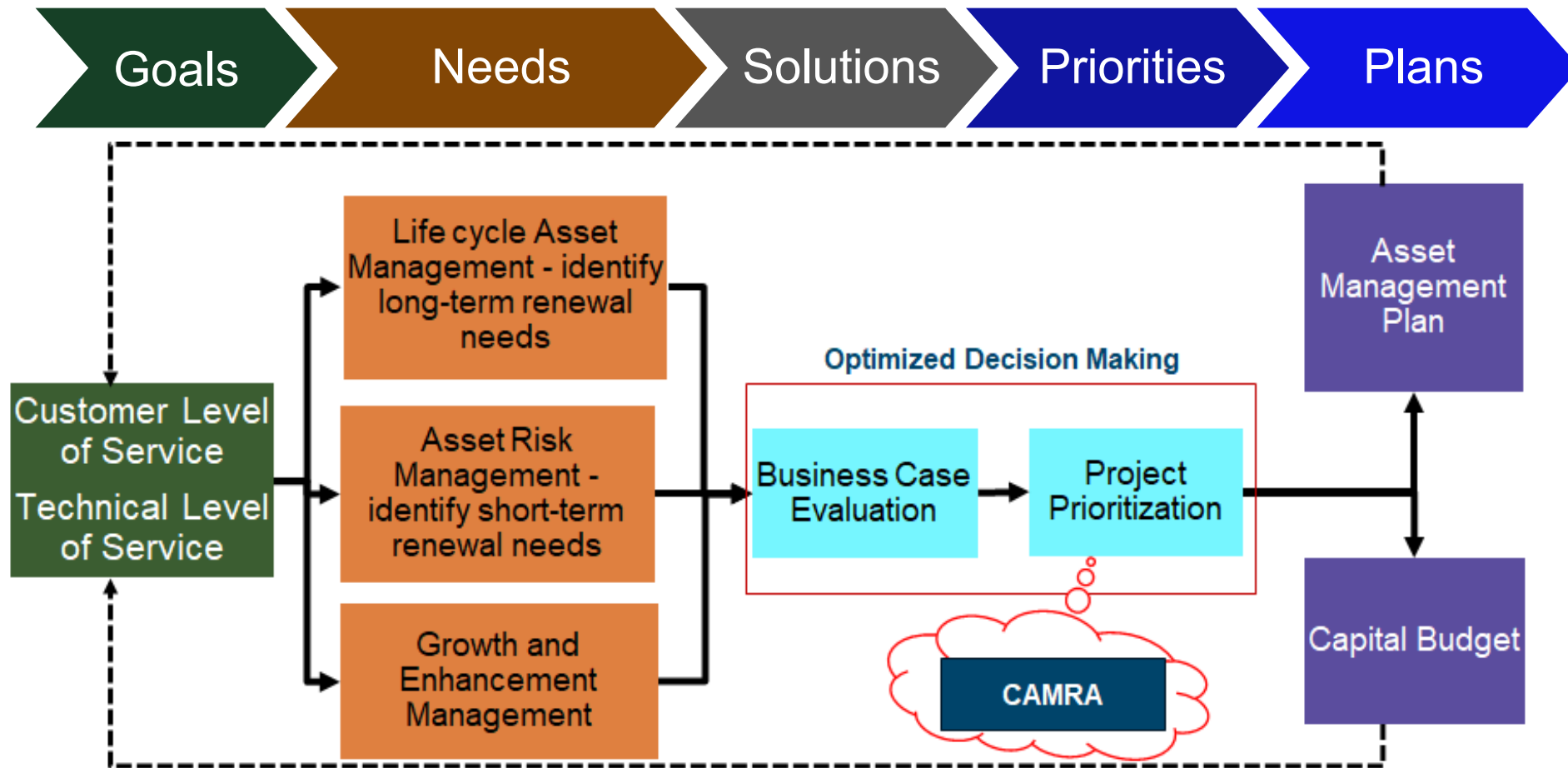
Risk Management Approach

 Extreme Risks	Significant to the Region and therefore need to be actively managed (i.e. . identify capital renewal options, confirm spares strategy & available redundancy, & review monitoring programs).
 High Risks	Will also be actively managed depending on their nature.
 Moderate Risks	
 Low Risks	Generally acceptable without significant mitigation strategies being implemented, although monitoring may still occur in some form.
 Insignificant Risks	

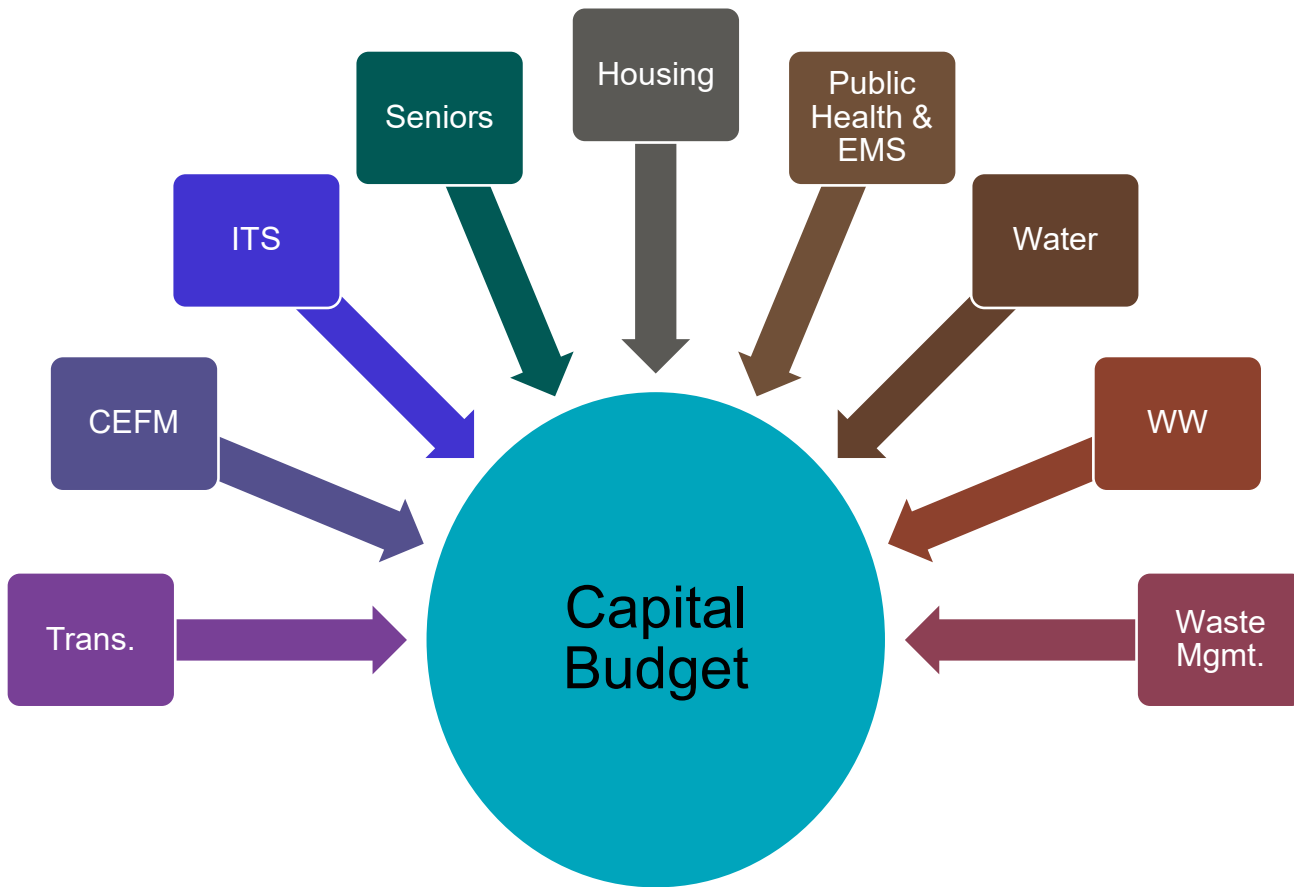
Relating Asset Risk to Level of Service



Optimized Decision Making within Asset Management Framework



Why CAMRA?



- Annual capital needs far surpass available funding
 - Funding gap (AARI shortfall) is growing
 - 2016 - \$73M
 - 2021 - \$193M
- Formalized method to prioritize spending required
- Data-supported decision making

Focus of CAMRA

CAMRA has 2 components

■ Risk

- Risk = PoF * CoF It is measured with 5 weighted criteria under the triple bottom line
- Risk ROI = Risk / Net project cost

■ Council Priority

- Projects alignment with Council Strategic Priorities
- Represents value to the Region from an opportunity (non-risk)

Applying results for prioritization

1

Risk return on investment (ROI) funded primarily through Base budget

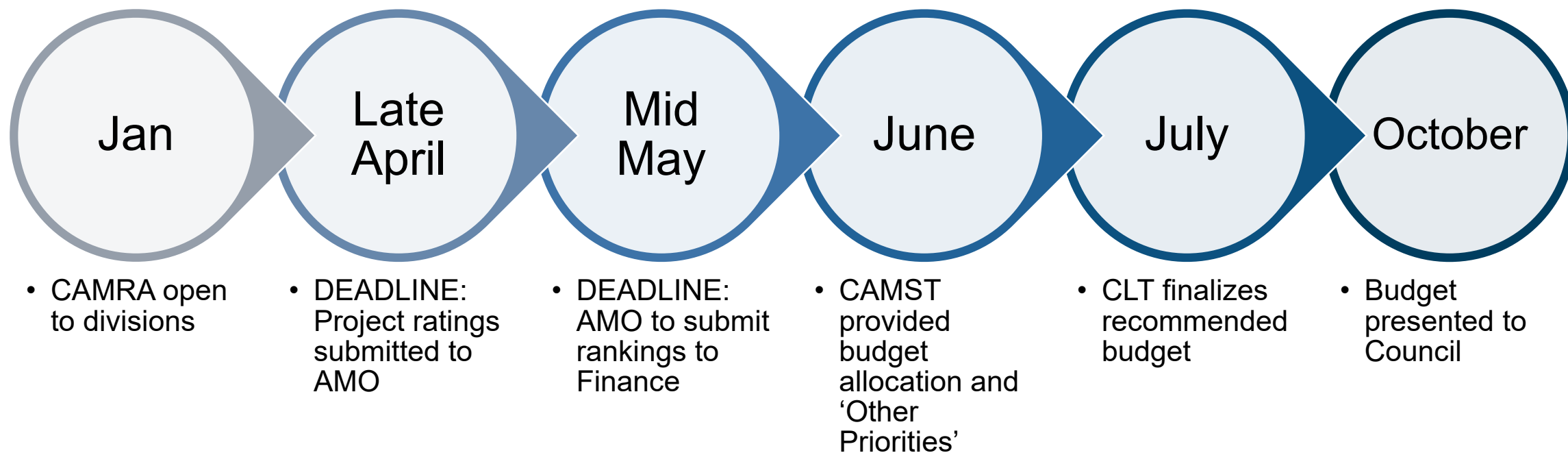
2

Council Priority, Other Priority and Risk ROI funded through Discretionary budget

3

CLT evaluates results and makes final budget recommendation to Council for approval

2025 Budget CAMRA Timelines



Finance's Capital Budget timelines direct remaining timelines

Keeping Council Informed

Type of Communication	Frequency/Timing
Budget	Annually
Asset Management Program Update	Annually
Asset Management Plan	4 years
Asset Management Policy	5 Years
Drinking Water Financial Plan	8 Years

Key Documents

Asset Management legislation, specifically Ontario Regulation 558/17, is available on the Ontario Government [e-Laws website](https://www.ontario.ca/laws) (<https://www.ontario.ca/laws>)



Asset Management Policy
C-F-024 -vine



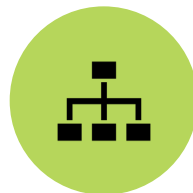
Capital Asset
Management Policy C-F-
003- vine.
CAMRA Process- vine



Capital Financing Policy -
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Asset Management Plan-
Niagara Region website



Asset Management
Governance embedded in
the Policy- vine



Asset Management
Steering Committee ToR-
embedded in the Policy-
vine

Contacts



For more information, please contact:

Pious Maposa

Director Asset Management Office

pious.maposa@niagararegion.ca