



Acknowledgements

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Canada

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GoToWebinar Housekeeping

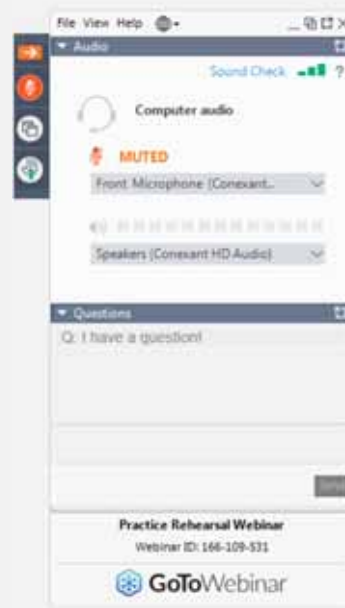
General

- Attendees will be muted for the duration of the webinar.
- This webinar is being recorded and will be posted on the CIP website at a later date.
- The moderator will be launching polls throughout the webinar. Click directly on your screen to participate.

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Ask a Question

- The presenter will provide opportunities to ask questions throughout the webinar. Wait for the cue.
- Type your question in the "I have a question!" box.



What's your discipline?



What's your level of
understanding?

Learning Objectives

- Describe what asset management is and why it is important.
- Understand the importance of planners (and land use planning) in the AM process.
- Appreciate how planners can advance sustainable, resilient community objectives through the AM lens.
- Describe basic AM components / concepts.
- Awareness about the MAMP Readiness scale and funding.

Outline

- 1 What is AM & Why is it Relevant to Planners
- 2 Case Study & Quiz
- 3 AM Planning Basics
- 4 Ontario Context & Expert Q&A
- 5 Taking the plunge

WHAT IS AM & WHY IS IT RELEVANT TO PLANNERS

What are assets?

Physical "stuff" needed to deliver services

Service Delivered	Physical Asset	How
Shelter	Houses	
Transportation	Roads & transit	
Recreation	Skating rinks, sport fields, parks	
Safety	Firehalls, trucks, police station	
Clean water	Treatment plant , distribution network	
Collect and dispose liquid waste	Treatment plant, collection network	
Collect and dispose solid waste	Landfill, recycling centre, trucks	
Manage stormwater	Collection network, ditches, wetlands	
Manage air quality /GHG	Trees	

What is asset management?

The ongoing process by which we manage our communal assets to ensure sustainable service delivery.

Think of your own home

...cleaning the floors

...servicing the furnace

...replacing the roof



AM Defined

ISO 55000: A coordinated activity of an organization to realize value from assets. Realization of value will normally involve a balancing of costs, risks, opportunities and performance benefits.

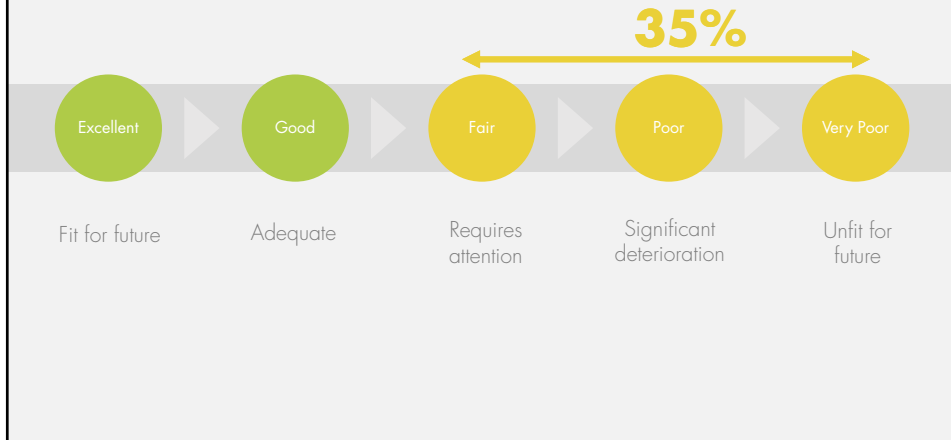
National Roundtable for Sustainable Infrastructure: Asset management is an integrated business approach involving planning, finance, engineering and operations to effectively manage existing and new infrastructure to maximize benefits, reduce risk and provide satisfactory levels of service to community users in a socially, environmentally and economically sustainable manner.

International Infrastructure Management Manual: The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.

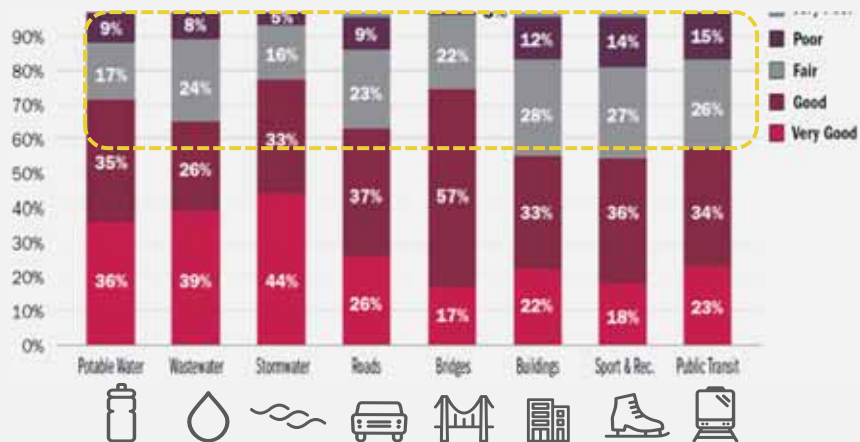
Sustainable Service Delivery
=
Asset Management

The Challenge

Almost **60%** of Canada's core public infrastructure owned and maintained by local governments



2016 CIRC – Key Findings



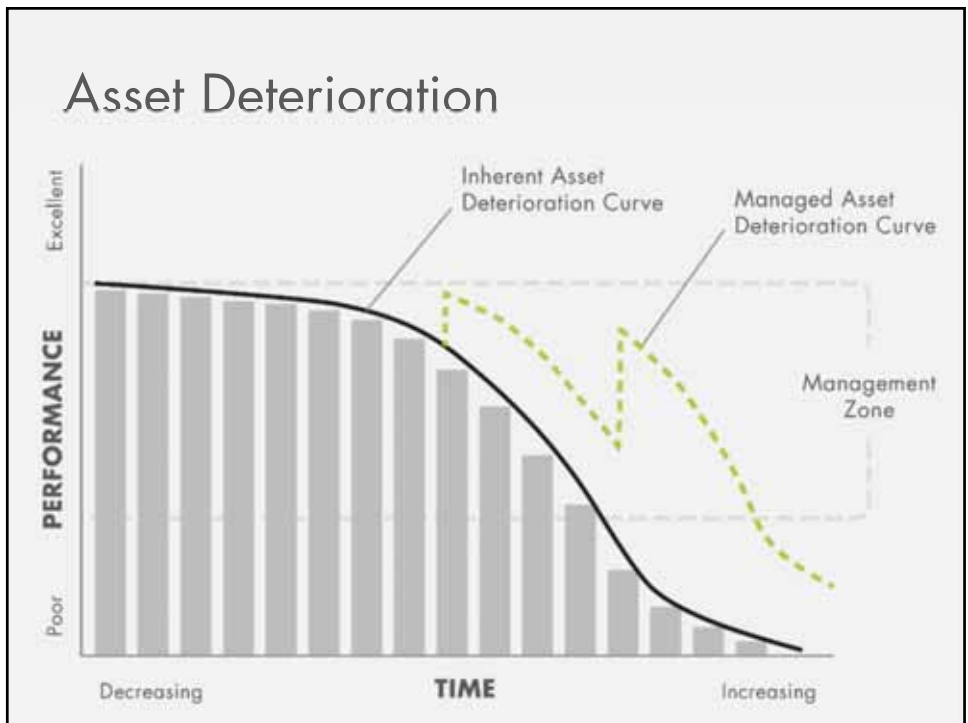
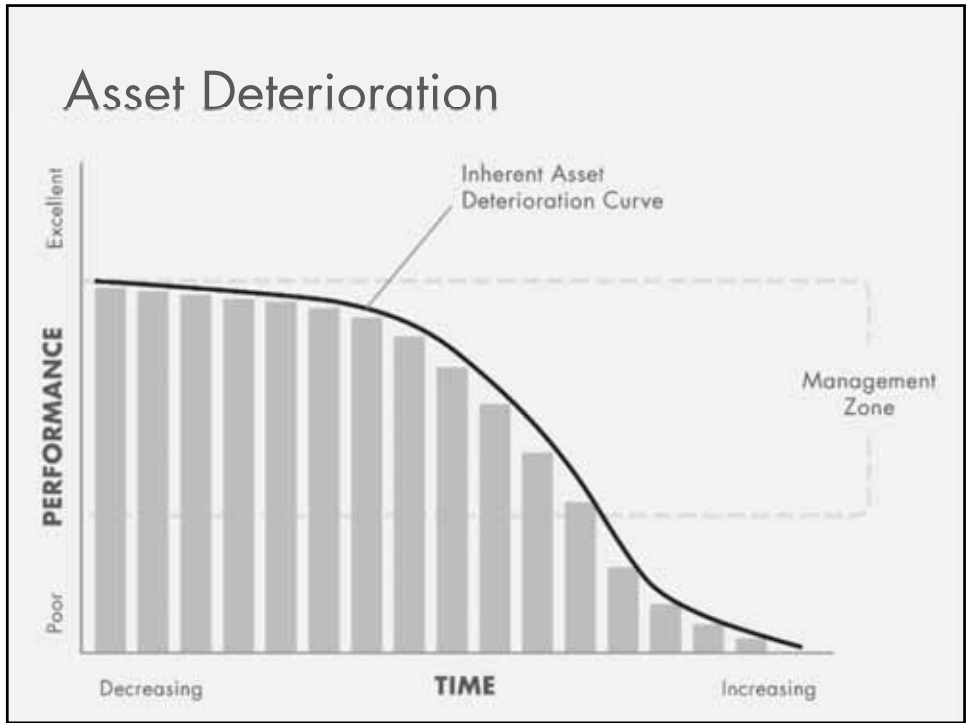
2016 CIRC – Key Findings

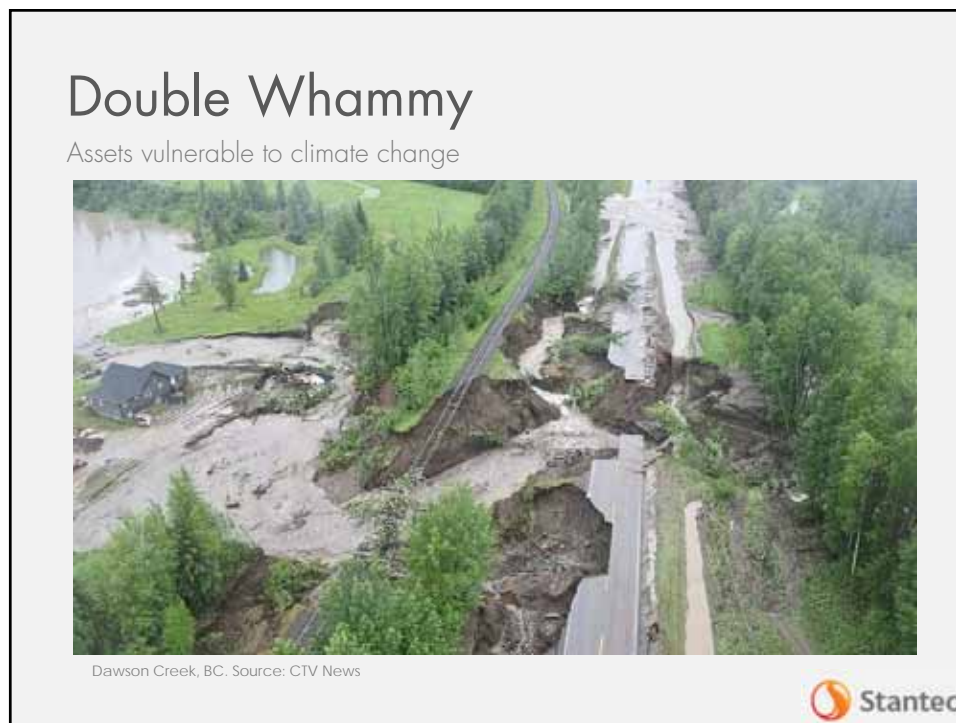
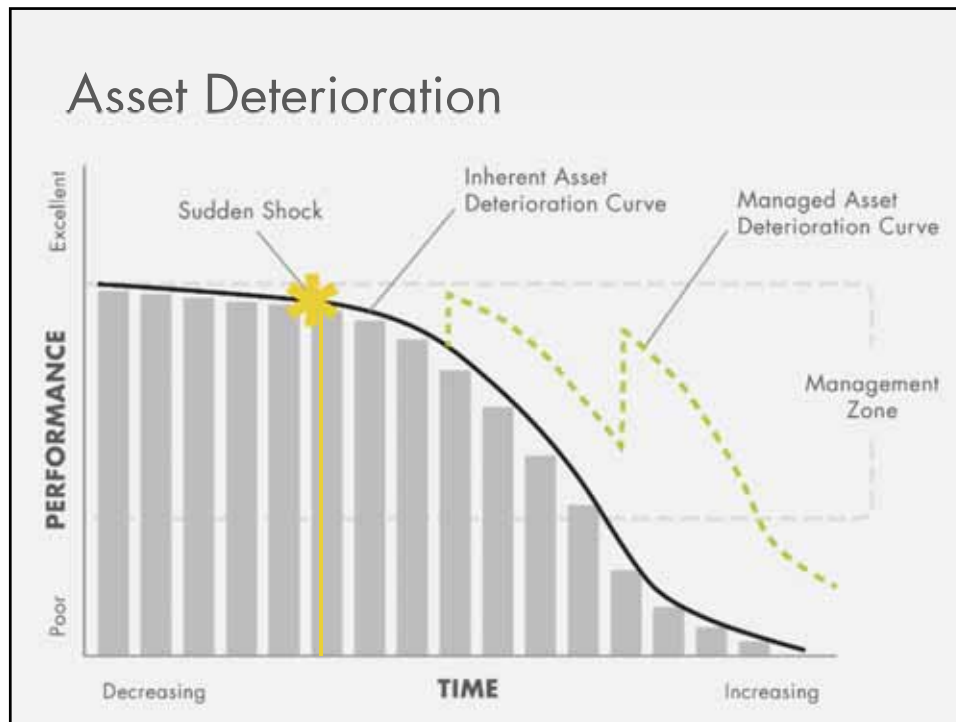
Infrastructure	Extrapolated Replacement Value of All Assets	Assets in Very Poor and Poor Condition	Assets in Fair Physical Condition	Anticipated Condition Based on Reported Reinvestment Levels (Improving, Stable, Declining)
		Replacement Value	Replacement Value	
Potable Water	\$207 billion	\$25 billion (12%)	\$35 billion (17%)	Declining
Wastewater	\$234 billion	\$26 billion (11%)	\$56 billion (24%)	Declining
Stormwater	\$134 billion	\$10 billion (7%)	\$21 billion (16%)	Declining
Roads	\$330 billion	\$48 billion (15%)	\$75 billion (23%)	Declining
Bridges	\$50 billion	\$2 billion (4%)	\$11 billion (22%)	Declining
Buildings	\$70 billion	\$12 billion (17%)	\$20 billion (28%)	Declining
Sport and Recreation Facilities	\$51 billion	\$9 billion (18%)	\$14 billion (27%)	Declining
Transit	\$57 billion	\$9 billion (16%)	\$15 billion (27%)	Unavailable
Total	\$1.1 trillion	\$141 billion (12%)	\$247 billion (22%)	
Replacement Value per Household	\$80,000	\$10,000	\$18,000	



Asset Lifecycle



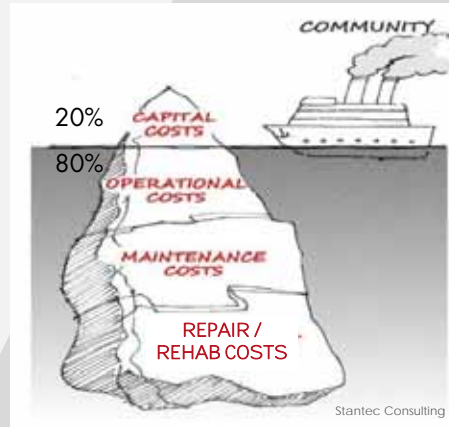




Upfront Cost vs Lifecycle Cost

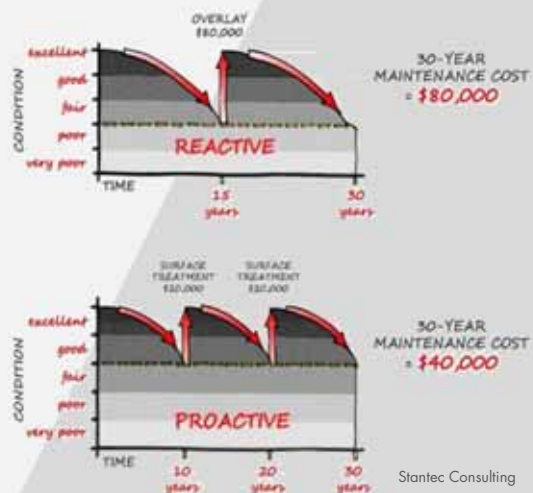
- Focus on initial capital cost
- Failing to fully recover costs and fees
- Keeping taxes low

**Not enough money!
No funding reserves!**



Reactive vs. Proactive Management

Deferring costs until
asset fails costs more
...and has service
implications!



Sustainability...

More Immediate & Personal

Asset Rich, Cash Poor!

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. – *Brundtland Commission*

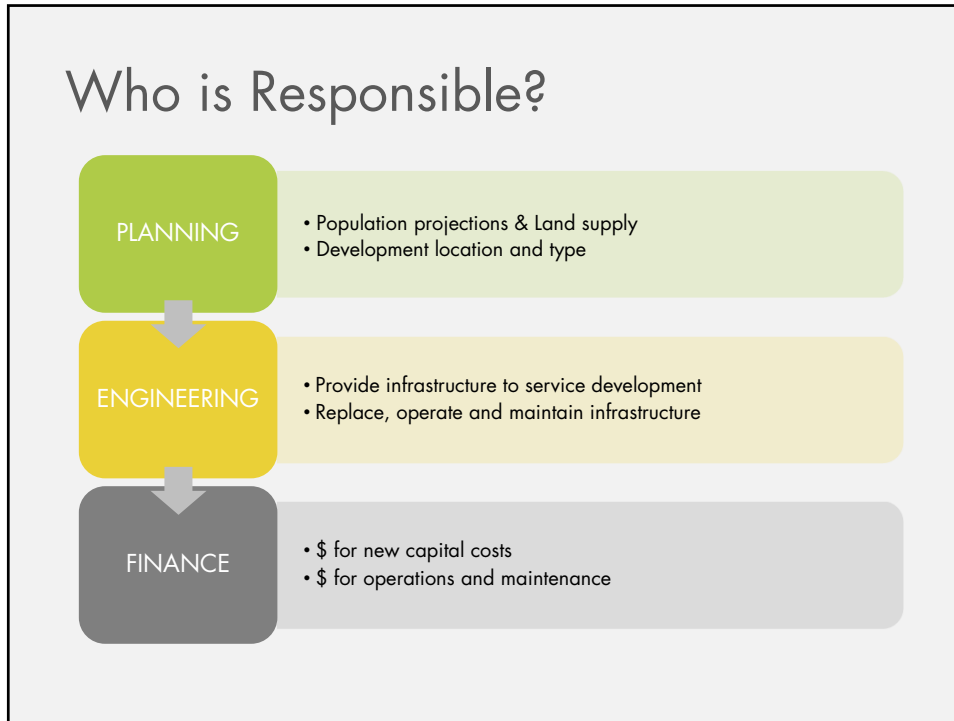


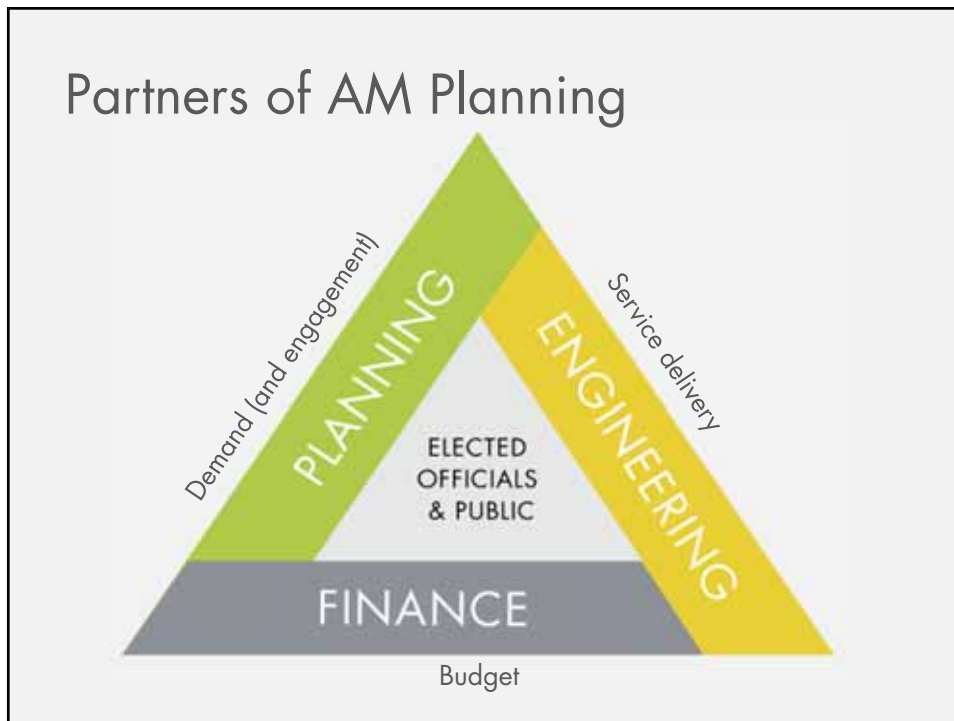
Social

Environmental

?
Economic

Nevermind your grandchildren—
your quality of life is at stake!





Addressing Underlying Drivers

'Denial' strategies

- Defer cost
- Secure funding from others

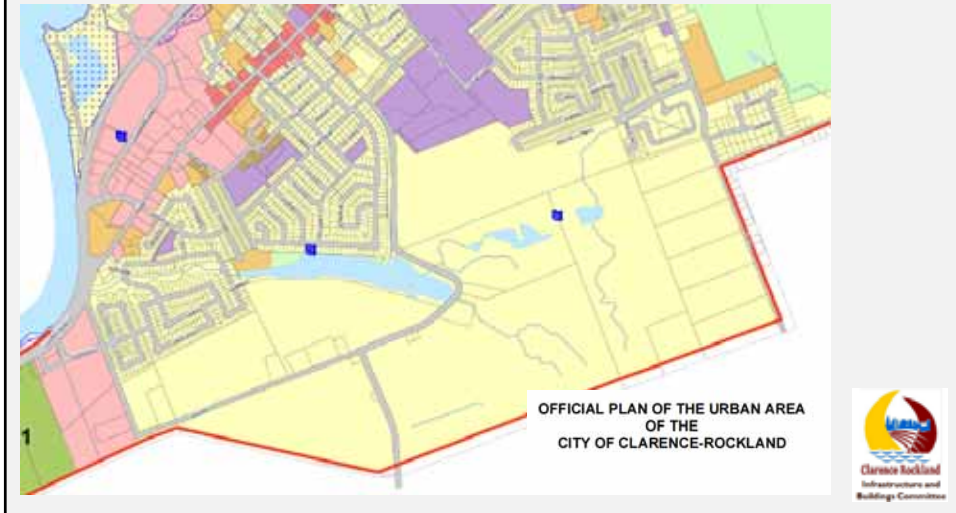
'Confront' strategies

- Increase taxes
- User fees
- Reduce service delivery (with engagement)
- Demand reduction (such as land use)



CASE STUDY

Undeveloped Lands Under Consideration – Development Industry Pressures



Council Objectives

- Mandate to Council's Infrastructure and Buildings Committee
- Evaluate financial impacts:
 - Capital cost - includes buildings, major equipment, land acquisition, etc.
 - O&M cost - includes labour, materials, contracts, etc.
 - other associated costs
- Will current practices make the development financially sustainable?



Revenue Assumptions

Estimated average annual taxes

- Based on property values of similar units in the area
- Residential: \$1350/unit/year
- Commercial: \$700K to 1.4\$mil /year (use \$1mil/year in analysis)

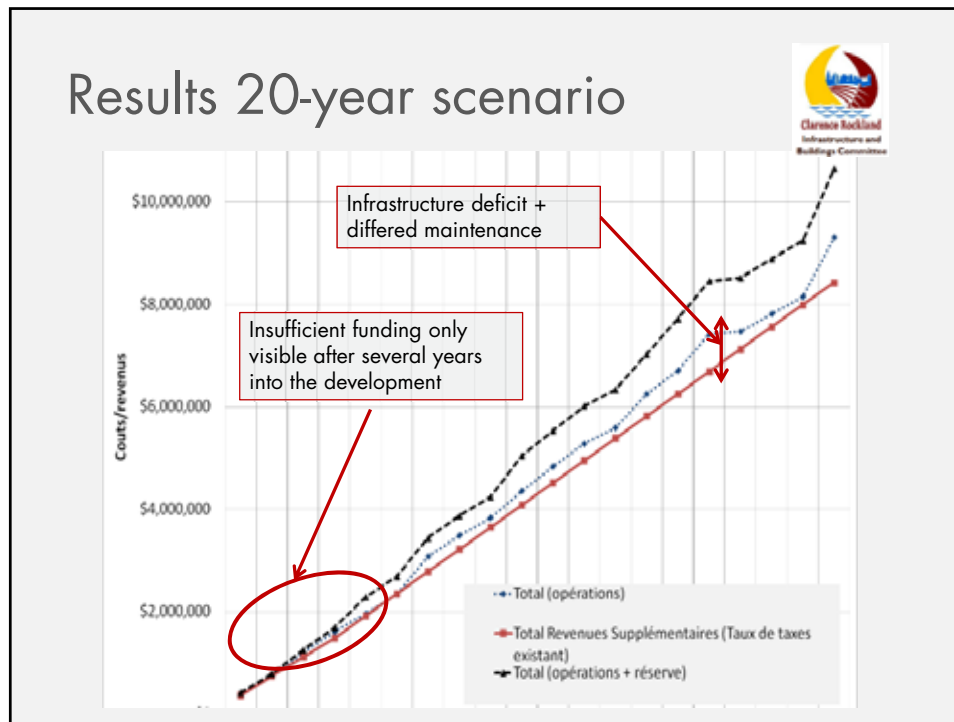
Lower Tier Municipality ...
add to property taxes
County and School
Board taxes for total tax bill
– not included



Additional Needs

- **Additional infrastructure** to operate, maintain, repair and eventually reconstruct roads, sidewalks, water pipes, sanitary sewers, storm sewers new street lights
- **Expansion of fire stations** (Rockland and Clarence Creek)
- **Expansion/new space for City Hall offices**
- **New/expansion public works facilities** (municipal garage, salt storage, water and wastewater treatment plants, landfill)
- **Additional equipment:** public works, fire trucks, vehicles, daycare
- **Additional staff** – all departments: Firefighting, Public Works, Community services, Administration, Finance, By-Law enforcement, Planning and Construction
- **Other** additional requirements: Insurance, Library, Police, Public Transit





Observations (continued)

Current practice for growth is not sustainable.

- Optimistic growth scenario may not be realistic in the present economic context → is there a need for the urban area expansion?
- Will D.C. charges collected be enough to cover \$33mil needed for new capital → D.C. study underway?
- There is no growth management plan/policy to ensure sustainability.

Some development standards are not consistent or relevant

- Can development standards / service levels be lowered?

Observations (continued)

Increasing property taxes can pay for growth:

- 30-year scenario seems to create a lesser tax burden (2.5% increase/year vs. 3%/year for the 20-year scenario)

Optimize infrastructure investments:

- Adopt and implement preventive maintenance procedures
- Create dedicated reserve funds
- Improve efficiency in City operations

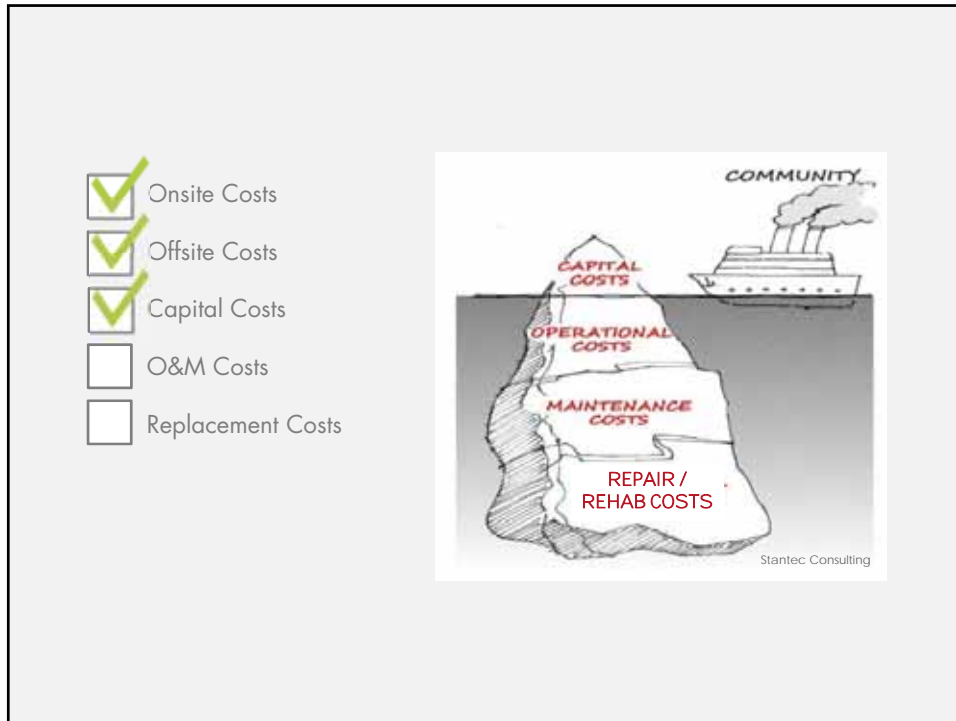
Poll

You just approved a new subdivision but knowing how concerned Council are about costs you made sure that the developer is paying for all the new on-site infrastructure needed AND he will be paying a contribution towards future capacity upgrades at the WWTP...

Helping?

OR

NOT Helping?




The Missing Link

Make the fiscal link during
land use planning

- Growth management strategies
- Land use bylaws
- Neighborhood plans, etc.

Can we afford to build it,
operate and maintain it?

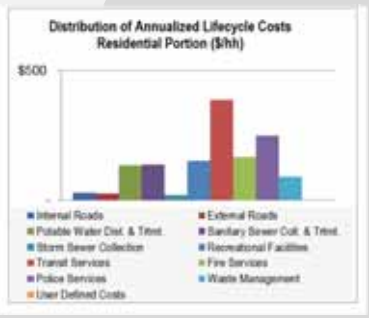
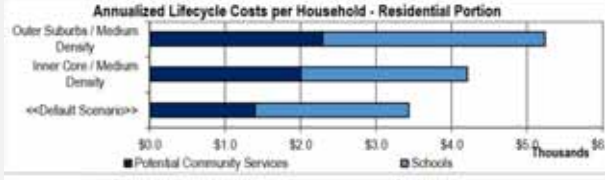




BC Municipal Affairs and Housing

www.cscd.gov.bc.ca/lgd/greencommunities/sustainable_development.htm

1. Select, Create or Delete Scenario
2. Specify Costing Variables
3. Specify Revenue Variables
4. Enter Development Scenario Characteristics
5. Specify Allocation of Costs
6. Cost Savings and Replacement
7. User Defined Costs and Revenues
8. View Results

Poll

Your community is shrinking and the four-lane Mainstreet is no longer used at full capacity. You propose narrowing the road to 3 lanes and utilizing the space for biking, community gardens, and summer restaurant patio's.

Helping?

OR

NOT Helping?

Poll

Your lakeside resort community is concerned about the environment and climate change so you are working on a bike sharing program that would allow residents and tourists the opportunity to get around town center without having to drive on the already congested Main Street.

Helping?

OR

NOT Helping?

Boom-bust communities

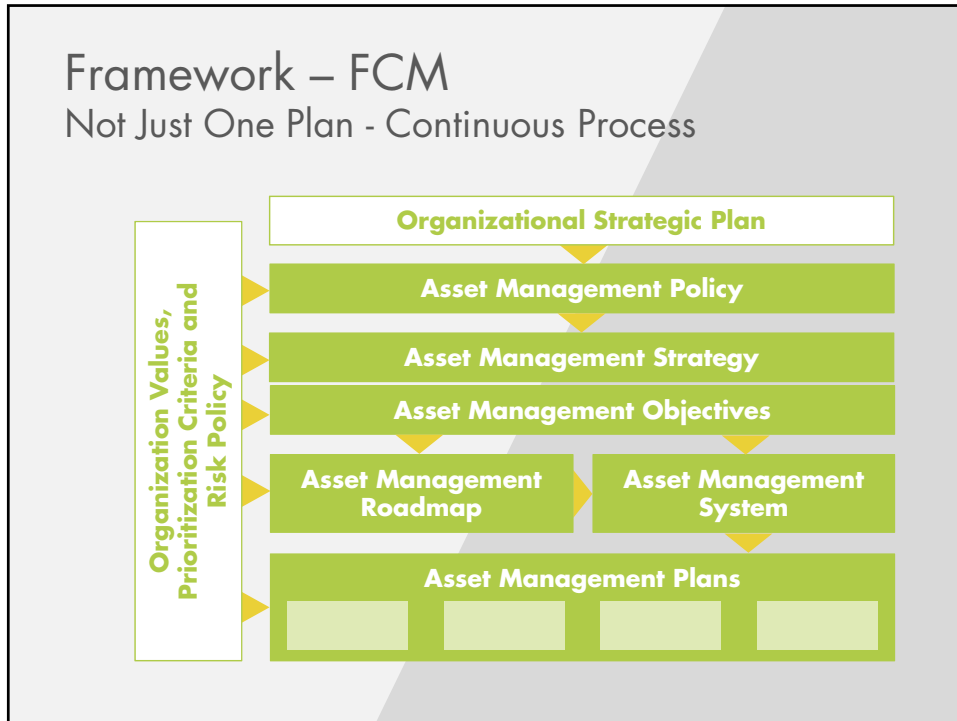
- Seasonal communities
- Shrinking communities



AM PLANNING BASICS


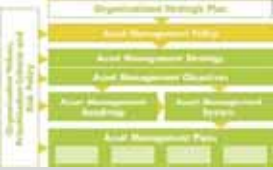
It's not new but its different

AM then	AM now
Technical exercise	Strategic exercise
Engineering responsibility	Integrated responsibility – planning, engineering, finance
Buying an AM software program	Any data (GIS, spreadsheets, field notes)
Departmental management 'silos'	Integrated asset management
Reactive management process	Proactive management process
Capital focus	Life cycle focus
Narrow risk focus	Risk assessment process with climate vulnerability / risk
Technical levels of service	Community engagement on service levels



AM Policy

- Formalize and signal corporate commitment
- Outlines the principles that guides AM across the organization
- Connection between community objectives and management of assets.
- Integration of AM within the organization.
- Key roles for managing the asset management policy



Refer to handout

AM Strategy



- Link between the policy level of the organization and the day-to-day implementation.
- Outlines current asset management practices.
- Identifies the desired state of assets and the target levels of service.
- Identifies the critical risks to be managed.
- Provides a guide to each department to effectively implement asset management.
- Identifies how other corporate plans are linked to asset management plans.
- Identifies how AM decision-making is integrated into the organization.
- Provides clarity on the roles and responsibilities of the asset management team.
- Identifies the approach to reviewing and updating the strategy.

AM Plan



Asset Management Plan
→ **for each asset type** (buildings, water, roads, etc.)

and/or

Corporate Asset Management Plan
→ **that includes all of the assets**

Asset Management Plan

Current State

- PSAB 3150- Tangible Capital Assets
- What do we own?
- Where is it?
- What is it worth?
- What condition is it in?

INVENTORY & CONDITION

Very Good

Good

Fair

Poor

Critical



Asset Management Plan

Current State

- PSAB 3150- Tangible Capital Assets
- What do we own?
- Where is it?
- What is it worth?
- What condition is it in?

INVENTORY & CONDITION

Desired State

- What are public's expectations?
- What do regulators require?
- What do we need to do and when?
- Do we need more / less?

LEVELS OF SERVICE





Tips for Drafting a Plan

- Start - Don't wait for perfect data
- Align approach and format between departments
- Keep it short & tell a story
- Utilize examples or templates



National Asset
Management Strategy –
NAMS.plus



Quick Start Tools &
Templates for Building and
AM Program

Guy Félio,
Stantec Consulting



ONTARIO CONTEXT

Ontario Context



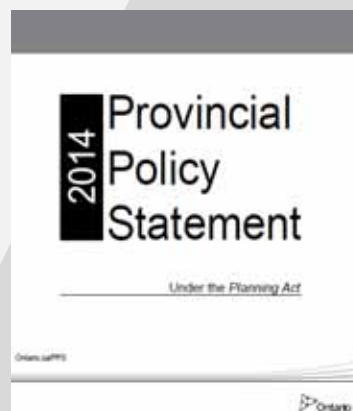
...ensure that the municipality's asset management planning is aligned with Ontario's land-use planning framework, including any relevant policy statements issued under subsection 3 (1) of the *Planning Act*, any provincial plans as defined in the *Planning Act* and the municipality's official plan.

Ontario Context

1.4.3. Planning authorities shall...

- Direct new housing towards locations where infrastructure and public service facilities are or will be available;
- Promote densities for new housing which efficiently use land, resources, infrastructure and public service facilities

1.6.1. Infrastructure and public service facilities shall...consider impacts from climate change



Ontario Resources



www.ontario.ca/page/building-together-guide-municipal-asset-management-plans



www.on-csi.ca



www.amontario.ca



TAKING THE PLUNGE

Scalable

Sound too complicated for
your community?

...it does not have to be.



Assess your Community Readiness

Download from the 'Handouts'



ASSET MANAGEMENT READINESS SCALE		Competency: POLICY AND GOVERNANCE				
<i>This competency involves putting in place policies and objectives related to those policies to life through a strategy and framework, and then measuring over time.</i>						
	1	2	3	4	5	
	Working on Level 1 <input type="checkbox"/>	Completed Level 1 <input type="checkbox"/>	Completed Level 2 <input type="checkbox"/>	Completed Level 3 <input type="checkbox"/>	Completed Level 4 <input type="checkbox"/>	Completed Level 5 <input type="checkbox"/>
Readiness Level	We have set expectations for our AM program. We have the support we need to begin work on an AM policy.	We have drafted an AM policy and strategy and have developed a framework for our AM system.	We are using our AM policy to guide our actions. We have created a roadmap and have established performance measures.	We have a fully functional AM system. We are using performance measures to track progress and outcomes.	We are continually improving the AM system. Our AM objectives and roadmap are refined based on the evolving needs of our community.	
Outcomes	You have achieved a specific readiness level when you can demonstrate the corresponding outcomes below.					
Policy and Objectives	<ul style="list-style-type: none"> • Senior management has committed to formalizing an AM program. 	<ul style="list-style-type: none"> • We have drafted an AM policy. • Senior management and council have endorsed the AM policy. 	<ul style="list-style-type: none"> • We are starting to use AM policy objectives to guide our actions. 	<ul style="list-style-type: none"> • We are managing assets and services in accordance with AM policy and organizational objectives. 	<ul style="list-style-type: none"> • We are validating and refining corporate, service and AM objectives based on the evolving needs of our community. 	

5 Key AM Components

Policy and Governance

- Putting in place policies and objectives
- Bringing policies to life through a strategy or framework
- Measuring and monitoring progress

People and Leadership

- Setting up cross-functional groups with clear accountability
- Ensuring adequate resourcing and commitment

Data and Information

- Using data to support effective AM planning and decision-making: Asset Data, Performance Data, Financial Data

Planning and Decision-Making

- Documenting, standardizing how organization sets priorities
- Plans capital and O&M investment
- Decides on budgets

Contribution to AM Practice

- Training and staff development
- Sharing knowledge internally
- Participating in external knowledge sharing

Secure Funding through MAMP

- Municipal governments and partners applying in partnership
- Lesser of 80% of Eligible Costs and \$50,000

Features:

- ✓ Continuous intake
- ✓ Time from application to decision (max. 8 weeks)
- ✓ Wider distribution (↑ # of Recipients ≥ 550)
- ✓ Projects ≤ 12 months (including 1 month for reporting)
- ✓ Contract with one Lead Applicant (applicants can form partnerships and share resources).

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PARTNERSHIP

Secure Funding through MAMP

Eligible activities include:

- ✓ AM Assessments (needs or risks)
- ✓ AM Plans, Policies, and Strategies
- ✓ Data collection and reporting
- ✓ AM Training and organizational development
- ✓ Knowledge transfer, development and sharing

Broad approach to eligible activities
to ensure inclusivity

Go to www.fcm.ca – Programs – MAMP

Align Planning with AM Efforts

Just 5 Ways AM & Planning Intersect

1. Environmental planning, ESAs, parks, tree protection = natural assets
2. Climate resilience = risk management
3. DCCs, amenity contributions = cost recovery / O&M liability
4. Community engagement = Customer expectations and awareness
5. Alternative Transportation, TDM, density, infill, subdivisions = impact demand for new assets



Benefits

- Sustainable service delivery
- Better decision-making and transparency
- Fiscal stability & less money over lifecycle
- Reduced risks
- Higher customer engagement and satisfaction



Managing Assets for
Sustainable Communities
A CIP Training Series

Thank You!

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