FACING REALITY TOGETHER

Because you can't have what you want if you don't have what you need!



What are you curious about when it comes to asset management?



CONTEXT



BACK TO BASICS

WHY DOES LOCAL GOVERNMENT EXIST?



To provide safe, sustainable, secure services in a predictable, cost effective manner.



What is the role of elected officials?



Stewardship and governance over the organization that provides those services.



- Maintained roads
- Clean drinking water
- Clean streets
- Maintained waste water system
- Community and cultural events
- Garbage and recycling pick up
- Parks and pathways
- Sports facilities
- People to put out that burning house
- A safe community (able to respond to emergencies)
- Play places and programs for ALL

Enforcement of building standards Flood protection

Ploughed sidewalks

Bylaw enforcement

- People to address your concerns
- Support for seniors
- Assistance in finding your lost dog
- Planning and zoning for the future
- Signage
- Attractive public spaces

And so much more!

What was I elected to do?



NOTHING You were elected TO THINK



#1

What services does your community need and want now and in the future?

(and at what level)



#2 What are the services your community is willing and able to pay for?



#1 What services does your community need and want now and in the future?

(and at what level)

#2 What are the services your community is willing and able to pay for?

State of Infrastructure in Canada

1/3

of all assets in **poor or very poor** condition





How did we get here? -SHORT-TERM

- Supporting decisions that don't consider lifecycle infrastructure costs
- Failing to fully recover costs and fees



How did we get here? - REACTIVE

Waiting until an asset fails or requires major renewal





How did we get here? Pretending there is no cost!

#3

Are we spending too much or too little on the infrastructure that provides those services?





A FORMALIZED PLANNING PROCESS FOR THE ASSETS AND SERVICES THAT CONTRIBUTE TO OUR QUALITY OF LIFE.



Informed Decision Making

We need confidence in our empirical evidence to:

Do the right thing
To the right asset
At the right time

You wouldn't like me when I'm angry...

> Because I always back up my rage with facts and documented sources. -The Credible Hulk

- What services do you provide?
- What assets provide those services?
- What assets do you own and where are they? (inventory)
- What condition are they in and what is the expected remaining life? (condition assessments)
- What is the current level of service that our assets provide?
- What is the desired level of service?

Inventory

- Km of water mains
- # of water connections and valves
- # of water meters
- # of fire hydrants
- # of booster stations

- Km of sanitary sewer mains and connections
- # of sanitary lift stations
- # pumps

- Km of storm mains
- # of connections
- # of catch basins
- Km of roads
- Km of lane
- Km of sidewalks
- Km of paved and unpaved walkways

• # of streetlights

• Park buildings

- Playgrounds
- Park benches
- Park garbage cans
- Picnic tables
- Footbridges
- Street trees

Risk assessment

- What service and asset risks need to be prioritized and managed?
- What is the likelihood of failure or service disruption?
- What is the consequence of failure or service disruption?

Long Term Financial Plan

- What needs to be done (repair, upgrade or replacement) and when does it need to be done by?
- How much will it cost?

LOS Changes

• What assets/services can or should be retired?

A systematic approach to maintaining, improving, or decreasing a desired level of service while balancing available funding, time constraints, prioritization, public demand, and legislative requirements

Needs to be:

Reflected in all planning
Entrenched in policy
Embedded into corporate behavior

ASSET MANAGEMENT IS ABOUT ORGANIZATIONAL ALIGNMENT



ACTION STEPS

- Policy
- Information
- Life Cycle Costing
- Priority Setting
- Engagement
- Top of mind



Policy

WHY: Provides direction for staff to develop guidelines and practices in managing, financing, operating current assets and planning for future assets and the delivery of services.

- Defines levels of service and balances it with cost of service
- Determine optimum age to replace assets
- Long-term financial planning over the lifecycle of the asset
- Mitigate risk with renewal strategy
- Determine current and future revenue required for sustaining existing levels of service (cost recovery targets)

Get Curious with the Information

- What is the value of the assets you are responsible for?
- How much remaining life do they have? What is this based on? (Industry standards and best practices vs modified community specific lifecycle predictions based on risk consequence and condition)
- What is your "infrastructure deficit"? (assets beyond their useful life?) What is the right "deficit" for your community?
- How much do we need to invest annually and is it sustainable?

SIMPLE MATH



You are spending 100K Engineer recommends = 500K Risk management = 250K Funding shortfall = 150K/year Funding shortfall over 10 years?

Life Cycle Costing: Lust to Dust

What does it cost to build, operate, proactively maintain and renew an asset over the life span?

Can we sustain an asset over its life cycle?



Priority Setting: Maintenance

Will we retain our existing services and maximize their asset lifecycles rather than ignoring and reacting?



Priority Setting: Replacement

How do we target our limited resources to plan, manage risk and maintain sustainable service delivery?



Level of Service





- Width of a local road
- Sidewalk on both sides or one side
- Weekly or bi-weekly garbage collection
- Frequency of snow removal
- Hours of operation for recreational facilities
- Beautification/maintenance of public spaces

Community Engagement

You can't ask people what they are willing to pay for if they don't know the costs.



Community Engagement

Don't try to make everyone happy



"Whoa! Time out. The loud guy in the white shirt is right — that was a ball. My mistake. Sorry everyone. Thank you, sir."

Knowing - Doing Gap

What are you going to do with what you know?



How brave are you?

I know ya think its boring But the numbers are soaring The deficit ain't going away

You think your getting hosed 'cause you still drive on the roads You're gonna have to fix 'em someday

Take'n care of business **Everyday** Take'n care of business **Everyway** Take'n care of business It's alright Take'n care of business It won't happen overnight **COME ON**

Can't just defer And only do what you prefer The sewer needs to handle the flush

Your kids will be annoyed If the water's null and void They'll wonder why you didn't rush

Take'n care of business **Everyday** Take'n care of business **Everyway** Take'n care of business It's alright Take'n care of business It won't happen overnight **COME ON**

Better start behaving 'cause the climate is changing Don't bury your head in the sand

If the water lines are breaking If ya think that staff is faking Better listen to this truth talking band

Take'n care of business **Everyday** Take'n care of business **Everyway** Take'n care of business It's alright Take'n care of business It won't happen overnight **COME ON**

Early in the season Just about budget time Council wants no tax increase Staff starting to lose their mind

'Cause the infrastructure gap is growing
We got no policy
We deferred our maintenance
Be reactive is our strategy

Down on the Corner Under the street Water main's about to blow Bring a nickel, tap your feet

Buried under piles of data None of it makes sense Do we need the experts To help clean up the mess

Inventory and condition What's their life expectancy We need more information To know what the cost will be

Down on the Corner Under the street Sewer main's about to blow Bring a nickel, tap your feet

How do we tell the public That things are really bad It's gonna cost some money And you know they will be mad

We have to tell the truth Communication is the key For future generations What is our destiny Is it gonna be.....

Down on the Corner Under the street Water main's about to blow Bring a nickel, tap your feet



AMO Conference

Asset Management as a Decision Making Tool for Council

Dan Wilson, Managing Director of Corporate Services/Treasurer

Township of Centre Wellington

August 18, 2019



Agenda



- 1. Introduction
- 2. Overview of Provincial Asset Management Requirements
- 3. Providing Sustainable Services
 - a) Levels of Service Analysis
 - b) The Importance of Lifecycle Costing
 - c) Risk Based Asset Management



Asset Management Planning Timeline



Year	Asset Management Reference
2000	Province communicates the need to start planning for assets
2002	Walkerton Inquiry outlines the need to have full cost pricing (water)
2009	Public Sector Accounting Board (PSAB) approves section 3150
2012	Province publishes asset management "Building Together" guide
2014	Province starts linking grant applications to asset management plans
2016	Infrastructure for Jobs and Prosperity Act (IJPA) is passed
2017	Ontario Regulation 588/17 is passed, making asset management a requirement for Ontario Municipalities







Association of Municipalities Ontario



Must have an approved "Strategic Asset Management Policy" (July 1/2019)

- Which <u>municipal goals</u> the AM Plan would support (i.e. strategic plan, official plan, master plans).
- How the AM Plan is to be considered in developing the <u>annual budget</u> and any long-term financial plans.
- Approach to **continuous improvement** and adoption of best practices.
- **<u>Principles</u>** that would guide AM Planning in the municipality.
- Commitment to consider <u>climate change</u>.
- Align AM Planning with <u>water/wastewater</u> financial plans (Safe Drinking Water Act).





Must have an approved "Strategic Asset Management Policy" (July 1/2019)

- Align AM Planning with Ontario's land-use planning framework.
- Commit to coordinate AM Planning between <u>interrelated infrastructure</u> with separate ownership.
- Identify <u>who is responsible</u> for AM Planning, including an <u>Executive</u> <u>Lead</u>.
- Explain **Council's involvement** in AM Planning.
- Commit to provide <u>opportunities for residents</u> and other interested parties to provide input in AM Planning.





Asset Management Plan (Core Assets by 2021, All Assets by 2023)

- <u>Current levels of service</u> and asset performance measures
- Asset inventory, including age, replacement cost, and condition.
- Lifecycle costs to maintain current levels of service.
- Assumptions regarding growth, including population/employment forecasts (municipalities > 25,000).





Asset Management Plan (Expanded by 2024)

- Proposed levels of service for the next 10 years, with performance measures.
- Lifecycle management strategy to achieve proposed levels of service.
- Financial strategy.
- Document and address <u>available funding</u> and any <u>funding shortfalls</u>.
- Include **impacts of growth** in the lifecycle management strategy
 - Municipalities under 25,000 discussion only.
 - Municipalities > 25,000 lifecycle costs, funding, and risks of growth





Updates, Approvals, Public Availability

- Review/update the Strategic AM Policy and AM Plan at least <u>every 5</u> years.
- AM Plan to be <u>endorsed by the Executive Lead</u> and <u>approved by</u> <u>Council</u>.
- Staff to provide an <u>annual update to Council</u> on "asset management progress" by July 1st each year.
- Post Strategic AM Policy and AM Plan on municipal <u>website</u> and make available to the public, if requested.



Asset Management and Levels of Service

ISO 55000 Series

 involves the balancing of costs, opportunities and risks against the <u>desired performance of assets</u>, to achieve organizational objectives.

Ontario Building Together Guide

 the process of making the best possible decisions regarding the building, operating, maintaining, renewing, replacing and disposing of infrastructure assets. The objective is to maximize benefits, manage risk, and <u>provide satisfactory</u> <u>levels of service</u> to the public in a sustainable manner.



Centre Wellington



Focus on Levels of Service



Municipalities Ontario



Focus on Levels of Service



How are service levels defined?

- Community Levels of Service
 - What the community receives in terms of services and service levels
 - Described using terminology the community understands

Technical Levels of Service

- How the municipality provides services and service levels
- Described in a manner that municipal staff understand in order to do their jobs



Focus on Levels of Service



Example: Municipal Roads

- Community Levels of Service
 - Roads that are safe, smooth, with no congestion.

Technical Levels of Service

- How to provide the community levels of service?
 - Minimum condition rating (i.e. 60/100)
 - Follow Minimum Maintenance Standards
 - Plan for growth to minimize congestion
- Is it the same for all Municipal Roads?
 - Local, Collector Arterial -or- Urban, Rural



Why are we Managing Assets?



Its really about providing <u>services at the "desired" levels</u> in a cost effective manner.

What services will we offer?

What level of service do we provide now?

What level of service do we provide in the future? What does it <u>cost</u> to move to this future level of service? Lifecycle Costs Initial Acquisition Operations Maintenance Rehabilitate Disposal Replacement New Assets



Municipal Road Assets Example



What Services do we offer?	What Level of Service do we provide now?	What level of service do we provide in the future?	What does it <u>cost</u> to move to this future level of service?
Municipal Roads			
safe	Average Condition: 71/100 # Road Segments over 60/100: 180 # Road Segments under 60/100: 36	Minimum Condition: 60/100	Increase annual capital roads program from \$2 million to \$6 million
smooth	Meet Minimum Maintenance Standards	Exceed Minimum Maintenance Standards	Increase annual roads maintenance by 30%
no congestion	Plan for growth using the Roads Master Plan	Implement Roads Master Plan Recommendations	Include new roads and widening of existing roads in the capital forecast



Centre Wellington

The Importance of Lifecycle Costing

 There is more to consider than the initial acquisition of an asset.





The Importance of Lifecycle Costing



Scenario:

A small municipality with a \$3.5 million taxation levy and no projected growth receives an unconditional \$2 million grant from the Federal government

>Option 1: <u>New Recreation Centre</u> (preference of residents)

Option 2: Rehabilitate various <u>Roads</u> that are in poor condition (staff are receiving many complaints on these assets)

What questions should you be asking from a sustainable service and lifecycle costing perspective?



The Importance of Lifecycle Costing



New Recreation Ce	entre	Improved Roads		
Initial cost (grant)	\$2 million	Value of Road Assets	\$80 million	
Other Annual Lifecycle Costs:		Current Annual Investment	\$500,000	
Revenue	(\$150,000)	Required Annual Investment ¹	\$1.5 million	
Operations	125,000	Annual Investment Gap	\$1 millon	
Maintenance	150,000	Total Backlog	\$25 million	
Provision for rehab/replace	50,000			
Total	\$175 <i>,</i> 000	¹ Based on the Municipality's Asset Man	agement Plan	



Impact on Taxation: 5.0%



- Using Risk to:
 - Determine desired levels of service
 - Set spending priorities

Asset Risk/Criticality = Asset Probability of Failure X Asset Consequence of Failure

- Probability of Failure: linked to condition, capacity, and functionality
- Consequence of Failure: linked to impact on the Municipality due to failure
 - Cost, injury, loss of service, environmental, ...





• Using Risk to determine Desired Levels of Service:

- Example: Due to consequences of failure on local roads vs. collector roads, minimum condition by type of roads is:
 - Local Roads 60/100
 - Less traffic, reduced speed limit
 - Less of an impact if a road is closed
 - Collector Roads 70/100
 - More traffic, higher speed limits
 - More of an impact if a road is closed





• Using Risk to set Spending Priorities:

Asset Risk/Criticality = Asset Probability of Failure X Asset Consequence of Failure

Probability of Failura	Consequence of Failure				
Frobability of Failure	Insignificant	Minor	Moderate	Major	Significant
Rare	L	L	М	М	Н
Unlikely	L	М	М	М	Н
Possible	L	М	М	Н	Е
Likely	М	М	Н	Н	Е
Almost Certain	М	Н	Н	Е	E

• Not necessarily fixing the road with the lowest condition rating first!





• Using Risk to set spending priorities:

Probability of Failura	Consequence of Failure				
Frobability of Failure	Insignificant	Minor	Moderate	Major	Significant
Rare	L	L	М	М	Н
Unlikely	L	М	М	М	Н
Possible	L	М	М	Н	Е
Likely	М	М	Н	Н	Е
Almost Certain	М	Н	Н	Е	E

Road Segment	Probability of Failure	Consequence of Failure	Overall Risk	Priority Rank
Road A	Almost Certain	Moderate	High	2
Road B	Likely	Significant	Extreme	1
Road C		Minor		3



Conclusion: Asset Management Benefits

- Provincial Grant Application Based Funding:
 - Requires submission of an asset management plan
- Federal Gas Tax Funding:
 - Requires an asset management plan for all assets

• Development Charges Act:

- Requires an asset management plan
 - Capital costs proposed to be funded under the DC bylaw
 - Ensure assets are "financially sustainable over their full lifecycle"





Conclusion: Asset Management Benefits

Internal Benefits:

Ca

www.centrewellington.

- Knowledge of assets owned
 - Replacement value, condition, etc.
- Great planning tool
 - Linkage to budget process and strategic plan
- Identification of priorities
 - Required for grant applications and gas tax allocations
- Long-term identification of gaps in both asset spending and investing
 - Infrastructure Gap
 - Funding Gap





Thank-you!

Dan Wilson, Managing Director of Corporate Services/Treasurer

Township of Centre Wellington

