


Advancing the Asset Management Journey

Council Presentation – June 26, 2019



Darla Campbell, P.Eng.
dcampbell@dillon.ca
416-562-9082

Asset Management

Advancing the Asset Management Journey

INTRO

Introduction: Why Asset Management?

PLAN +

Bigger Picture: More than a Plan

588/17

What is required in Ontario Regulation 588/17?

STEPS

Asset Management Framework
Levels of Service & Risk

Asset Management

It's a Journey



**Managing assets as part of
providing services**

Asset Management

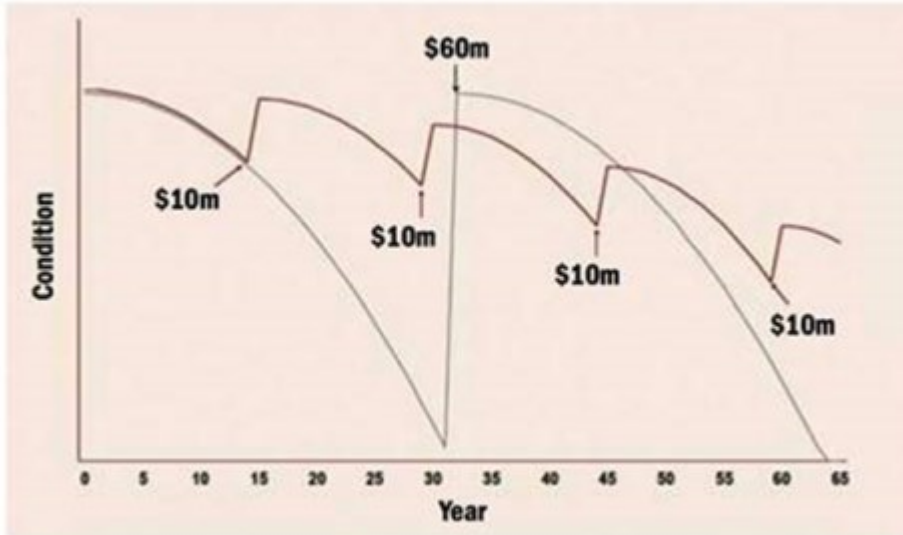
- Investing wisely over the long term
- Balancing operations, risks and costs
- Providing our community with the right service at the optimal cost
- Keeping our community's future needs in mind



REF: FCM's
Municipal Asset
Management
Program (MAMP)
Asset Management
Readiness Scale

Lifecycle Approach

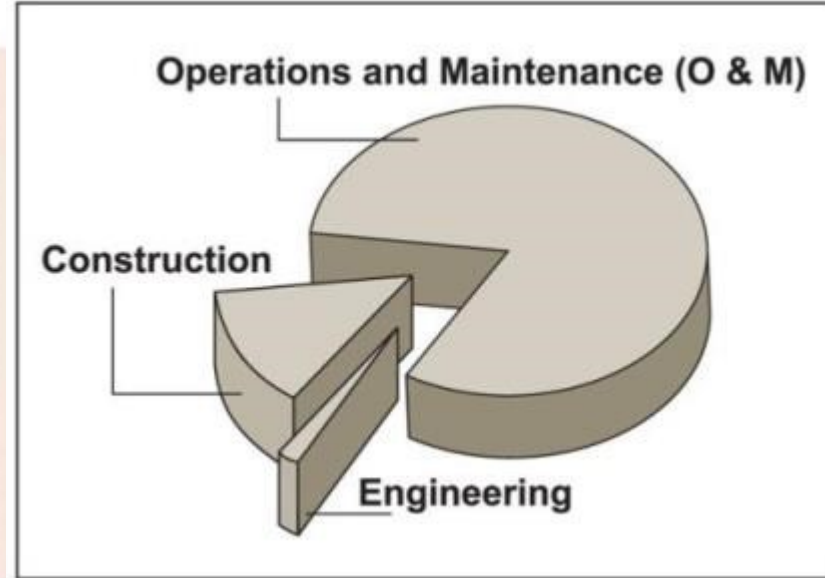
Figure 1: Small but Timely Renewal Investments Save Money



■ Poor Asset Management (\$60m total): Let asset deteriorate, then replace.

■ Smart Asset Management (\$40m total): Make timely investments throughout.

REF: Ontario Guide for Municipal Asset Management Plans



REF: InfraGuide

AM Readiness Scale

Five Competencies from the MAMP Readiness Scale:

1. Policy and Governance
2. People and Leadership
3. Data and Information
4. Planning and Decision-Making
5. Contribution to AM Practice



Policy and Governance

ASSET MANAGEMENT READINESS SCALE

Competency: POLICY AND GOVERNANCE

This competency involves putting in place policies and objectives related to asset management (AM), bringing those policies to life through a strategy and framework, and then measuring and monitoring implementation over time.

		1		2	3	4	5
Readiness Level	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"/>	
	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.	

PLAN +

Strategic Asset Management Policy

VISION

To **proactively manage** its assets to best serve the Municipality's objectives, including:

- Prioritizing the need for existing and future assets to **effectively deliver services**
- Supporting sustainability and economic development, and
- Maintaining prudent financial planning and decision making.

PLAN +

∞

OBJECTIVES

- Provide a **consistent framework** for implementing asset management throughout the organization
- Provide transparency and accountability and to demonstrate to **stakeholders** the legitimacy of decision-making processes which combine **strategic plans, budgets, service levels and risks**

Kincardine GG.2.22: August 1, 2018 (Resolution #08/01/18-02)

It's an Enterprise System

Connected

- Strategic Plan
- Official Plan
- Capital Plan
- Growth Plan
- Master Plan(s)

Aligned

1. Vision of asset management in your community
2. AM Strategic Policy
3. AM Strategy
4. AM Objectives
5. AM Roadmap
6. AM System
7. AM Plans

Supported

- Values
- Risk Policy
- Priorities
- Growth Plan

PLAN +

9



REF: FCM's
 Municipal Asset
 Management
 Program (MAMP)
 Asset Management
 Readiness Scale

Line of Sight

- ISO 55000 (Alignment)
- PAS 55 (Line of Sight)
- Linkage of:
 - Policy
 - Strategy
 - Objectives

POLICY = Principles

STRATEGY => Objectives (SMART targets)

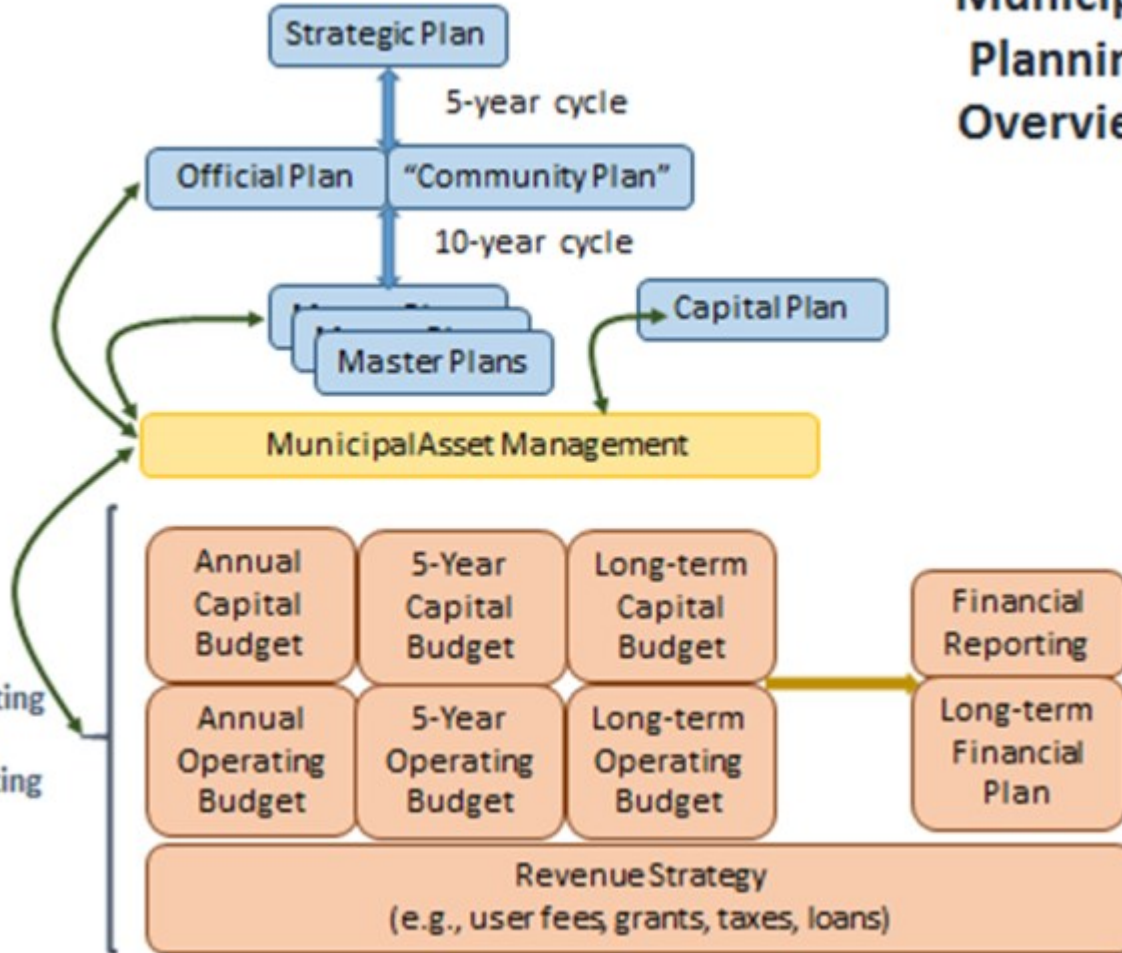
PLAN = Tasks, Time, \$



Asset Management Plan

TASKS	2018	2019	2020	2021
Task 1	\$10			
Task 2	\$5	\$5		
Task 3		\$5	\$5	\$5
Task 4		\$5	\$10	
Task 5			\$5	\$10
Task 6				\$10
TOTAL	\$15	\$15	\$20	\$25

Line of Sight



Line of Sight



Ontario Regulation 588/17

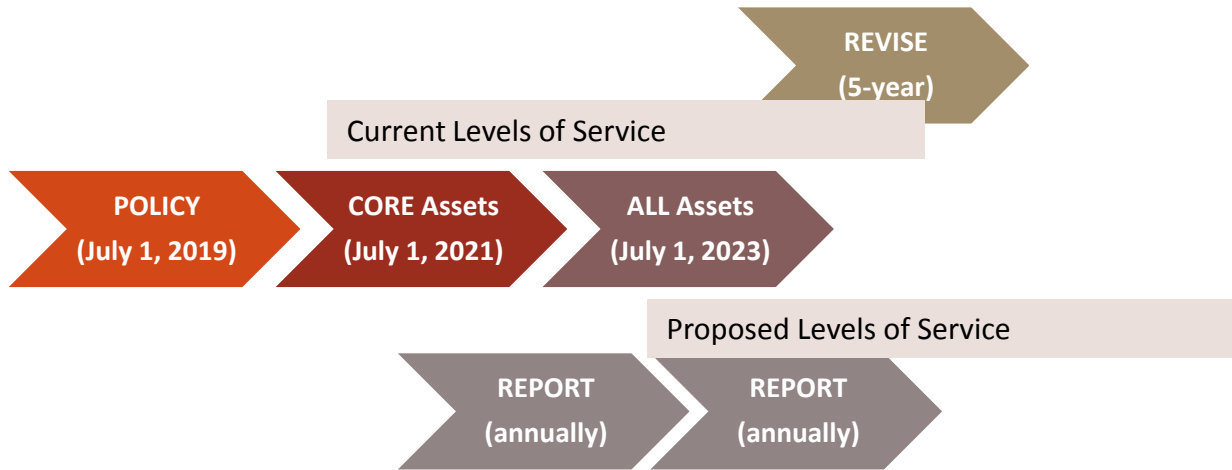
Asset Management Planning for Municipal Infrastructure



- In effect January 1, 2018
- Strategic asset management policy (July 1, 2019)
 - Promote best practices
 - Link AM plan with budgeting, operations, maintenance and other planning activities
- Core infrastructure (July 1, 2021); current levels of service
- All assets (July 1, 2023); proposed levels of service
- Report on implementation annually; 5 year updates.
- *“Actions that may be required to address the vulnerabilities that may be caused by **climate change** to the municipality’s infrastructure assets...”*

588/17

Timelines



Asset Management

Advancing the Asset Management Journey

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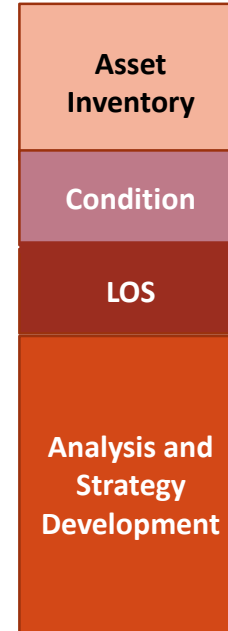
STEPS

Asset Management Framework

Levels of Service & Risk

7 Essential Questions

- 1 What do you have and where is it? (Inventory)
- 2 What is it worth? (Replacement Costs)
- 3 What is its condition and expected remaining service life? (Condition Assessment)
- 4 What is the level of service expectation, what needs to be done? (Capital and operating plans)
- 5 When do you need to do it? (Capital and operating plans)
- 6 How much will it cost and what is the acceptable level of risk(s)? (Short- and long-term financial plan)
- 7 How do you ensure long-term affordability? (Short- and long-term financial plan)



Inventory



Q1. What do you have?
Q2. What is it worth?

Asset Classes in Kincardine

- Roads
- Bridges and Culverts
- Sanitary
- Water
- Storm Systems
- Vehicles
- Machinery and Equipment
- Buildings
- Yard Improvements.
- Sidewalk/curbs, parking lots and streetlights.



Condition Assessment



What is the current state of the asset?

1 VERY GOOD – Like new, physical sound

2 GOOD – Minor superficial deterioration

3 FAIR – Showing deterioration and wear

4 POOR – Major portion of the asset is deficient

5 VERY POOR – Physically unsound and unreliable

Q3. What is the:

- **Current Condition (1 to 5)?**
- **Expected Remaining Useful Life (years)?**

Levels of Service

What is the current Level of Service?

- What is your current performance?

What is the proposed Level of Service?

- How will you measure future performance?

Q4. What is the level of service expectation, what needs to be done?



Service Delivery



What service does the community RECEIVE?

What service does the municipality DELIVER?

Community LOS

The LOS that the organization provides to the Community (Customer)

Technical LOS

The LOS that the asset is capable of providing to the organization

Analysis and Strategy

As you make decisions on what to do next in maintaining your assets:

- **What is the acceptable level of risk?**
- **How much will it cost?**
- **When do you need to do it?**
- **Is it affordable and sustainable?**

Q5. When do you need to do it?

Q6. How much will it cost and what is the acceptable level of risk(s)?

Q7. How do you ensure long-term affordability?



STEPS

Balancing Risk: Strategy Development

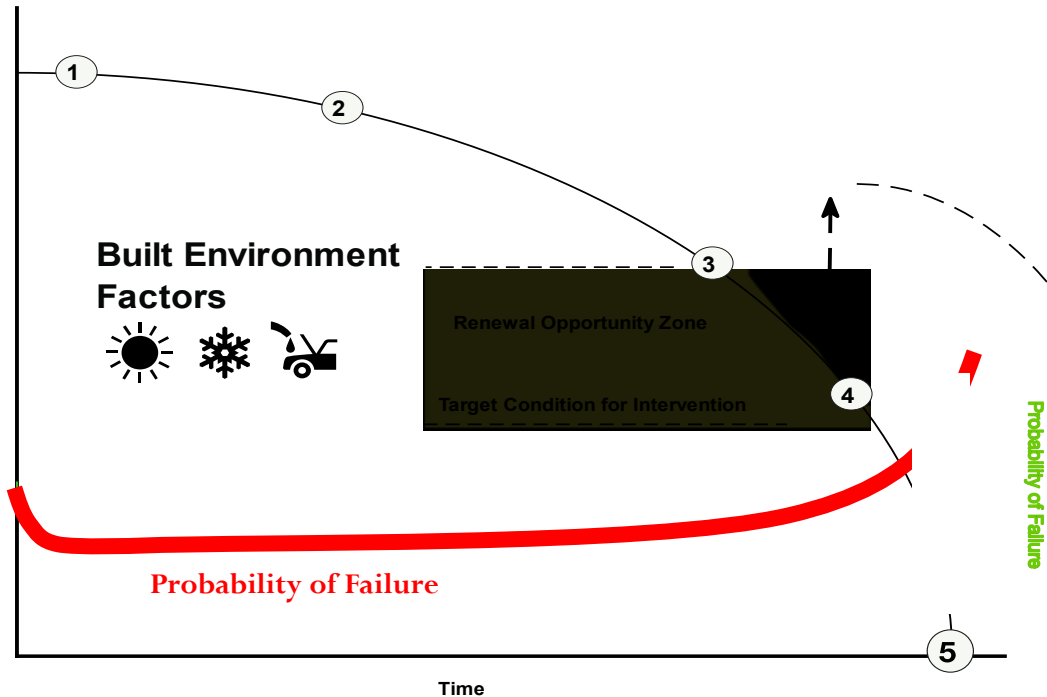
Take what we know.

Apply to future plan.

What are the barriers to
delivering LOS?



Deterioration Curve

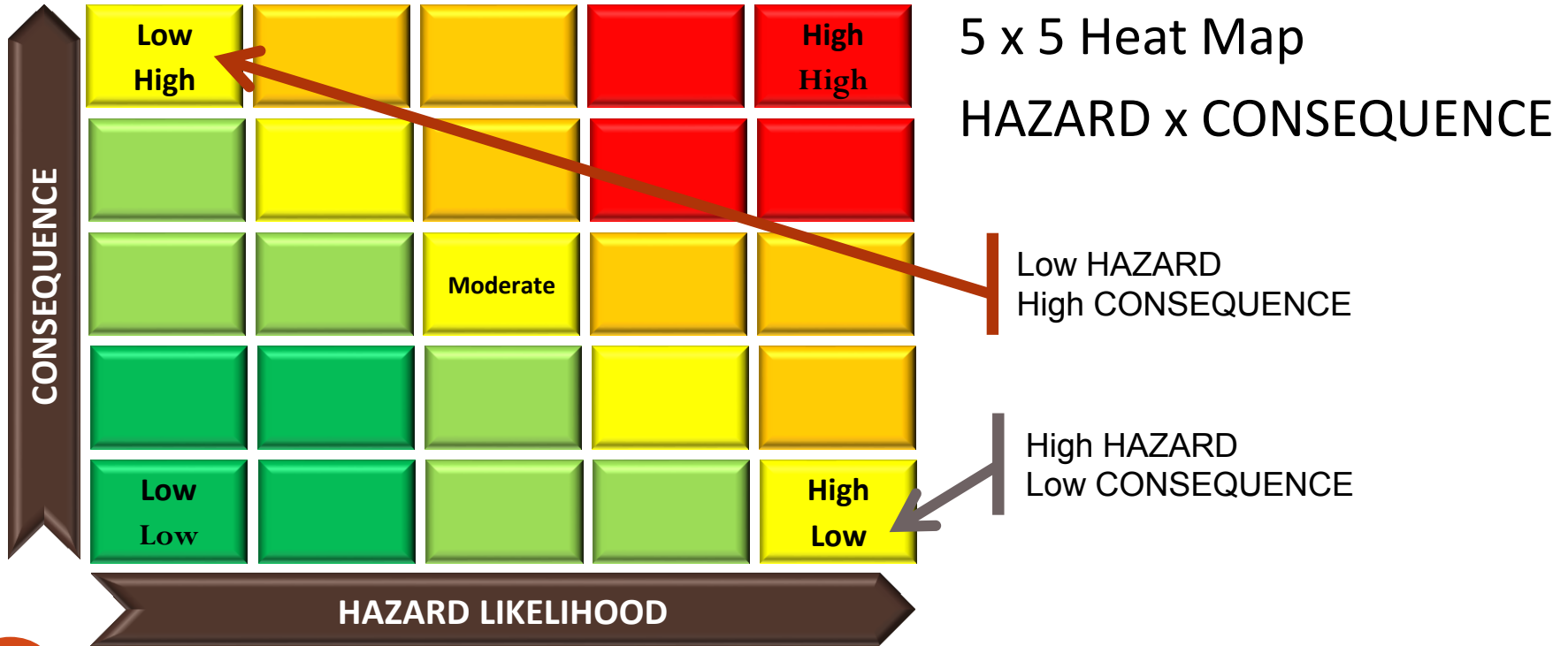


- 5 Point Scale:**
- 1 = Very Good (New)
 - 2 = Good
 - 3 = Fair
 - 4 = Poor
 - 5 = Very Poor

Renewal Zone:

Threshold of acceptability, or state in which an asset required to be rehabilitated/ refurbished in order to avoid failure and potentially costly consequences

Risk "Heat Map"



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Asset Management Framework
Levels of Service & Risk

Strategic Asset Management Policy

- The **Municipality's vision** is to proactively manage its assets to best serve the Municipality's objectives, including:
 - Prioritizing the need for existing and future assets to **effectively deliver services**
 - Supporting **sustainability** and economic development, and
 - Maintaining prudent financial planning and decision making.

Strategic Asset Management Policy

- The Municipality recognizes the importance of **stakeholder engagement** as an integral component of a comprehensive asset management approach. The Municipality commits to provide opportunities for residents and other stakeholders serviced by the Municipality **to provide input into asset management planning**.
- The Municipality will use a **service-based (qualitative)** perspective when applying this policy to municipal assets, rather than a monetary value (quantitative).

How does asset management deliver value to my community?

Risk

Performance

Cost



**Value from
services**



Current Services

Q: What are the current services delivered by the Municipality?

Q: What are the assets that deliver the services?



Service Delivery

What services does your municipality deliver?

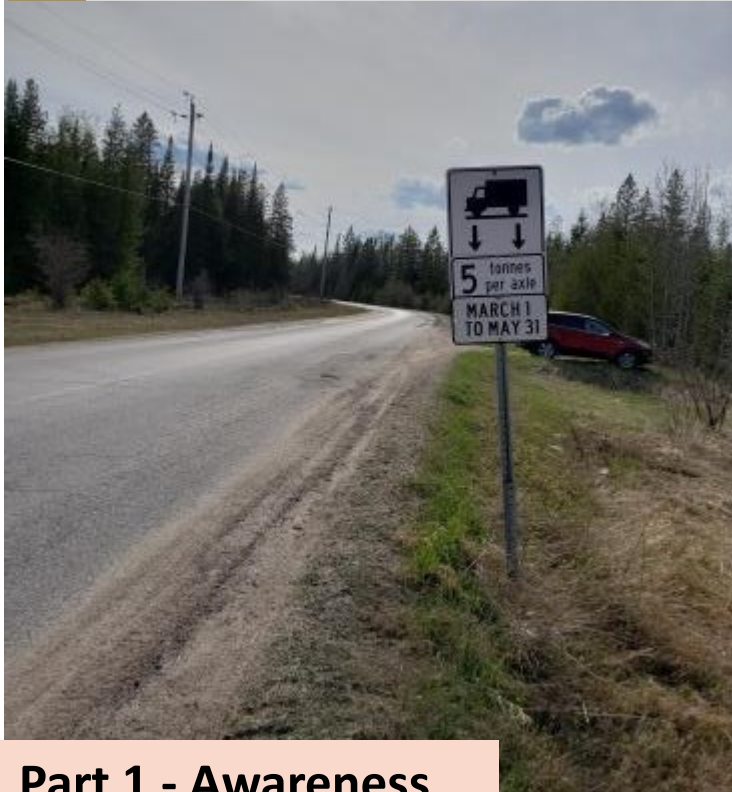
- WATER
- TRANSPORTATION
- EMERGENCY
- RECREATION
- ADMINISTRATION

What assets deliver those services?

- [water, wastewater, stormwater]
- [roads, bridges, culverts, transit]
- [fire, ambulance]
- [arenas, pools, parks]



Level of Service - Definition



The parameters, or combination of parameters, that reflect the social, political, environmental and economic outcomes that the organization delivers. The parameters can include: safety, **customer satisfaction**, quality, **quantity**, capacity, **reliability**, responsiveness, **environmental acceptability**, cost and **availability**.

(Source: ISO 55000:2014)

Who does the bridge serve?

Bridge



Levels of Service

- Heavy Truck Traffic
- Regular Car Traffic
- Bicycle Traffic
- Pedestrian Traffic
- Other?

What is being served?

- **SERVICE**

How **customers experience** the service delivered.

What do you expect?



Photo by Lefteris Kallergis on Unsplash

Levels of Service (LOS)

Community LOS

(Qualitative Description)

What does the community expect?

- Scope
- Quality
- Performance

Receiving Service



Technical LOS

(Metrics or indicators)

What is required?

Delivering Service

Levels of Service (LOS)

Community LOS

(Qualitative Description)

What does the community expect?
to receive clean water (*what?*)
at my house (*where?*)
when I turn on my tap (*when?*)



Receiving Service



Technical LOS

(Metrics or indicators)

What is required?

Delivering Service

Perceptions of LOS

LOS Parameters

- Safety
- Customer satisfaction
- Quality
- Quantity
- Capacity
- Reliability
- Responsiveness
- Environmental acceptability
- Cost
- Availability

Match assets with LOS Parameters. Which parameters are most relevant?

Assets

- Roads
- Water
- Wastewater
- Stormwater
- Buildings (Arena)

How does asset management deliver value to my community?

Risk

Performance

Cost



**Value from
services**



Levels of Service (LOS) - Proposed

LOS can change over time either by design or by default.



What are the risks to delivering service?

How can Levels of Service (LOS) change over time?

Roads? Bridges? Buildings?

Levels of Service

PROPOSED

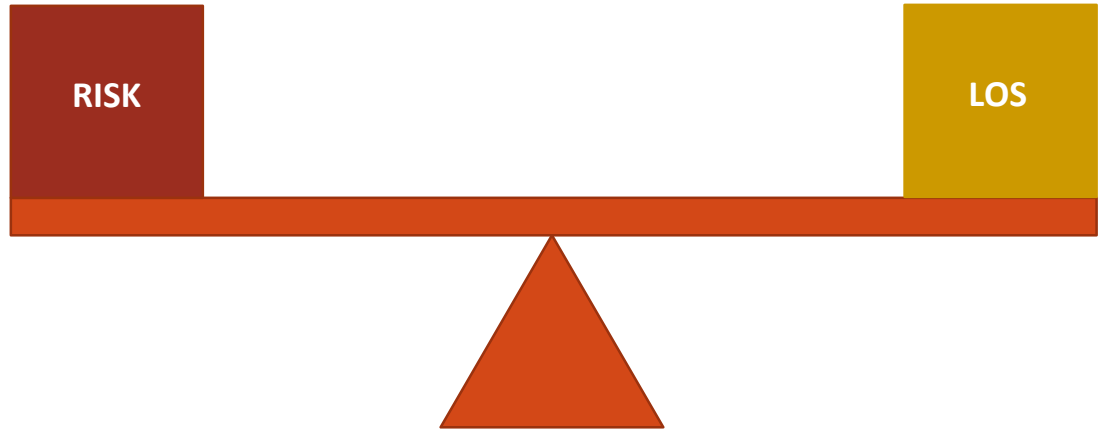
What is the level of service expectation?

How much will it cost and what is the acceptable level of risk(s)?



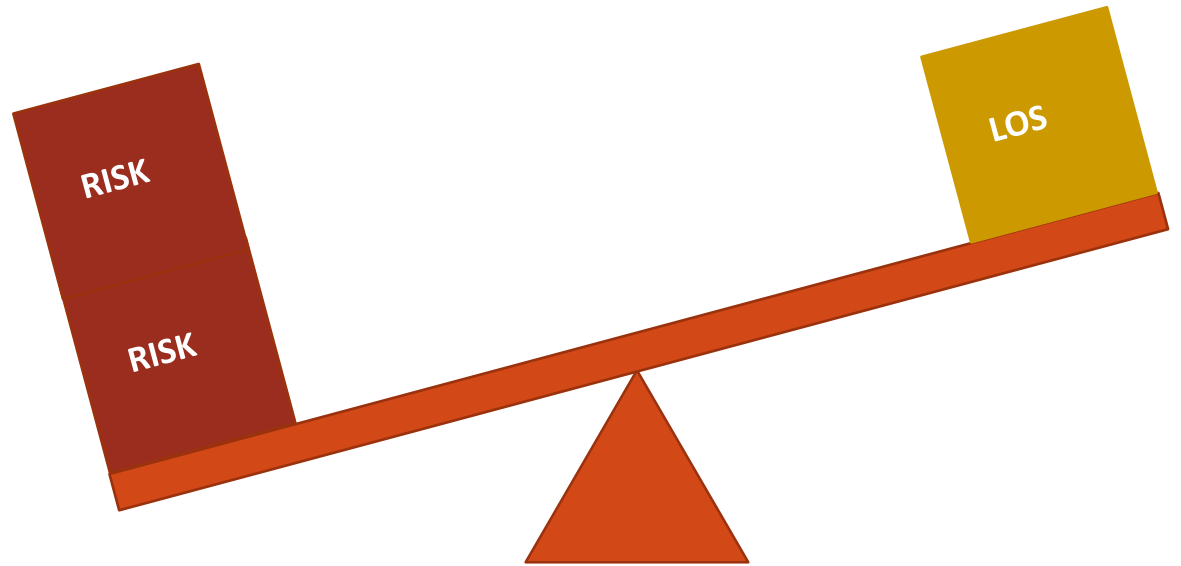
What can we afford?

Balancing Risk and LOS



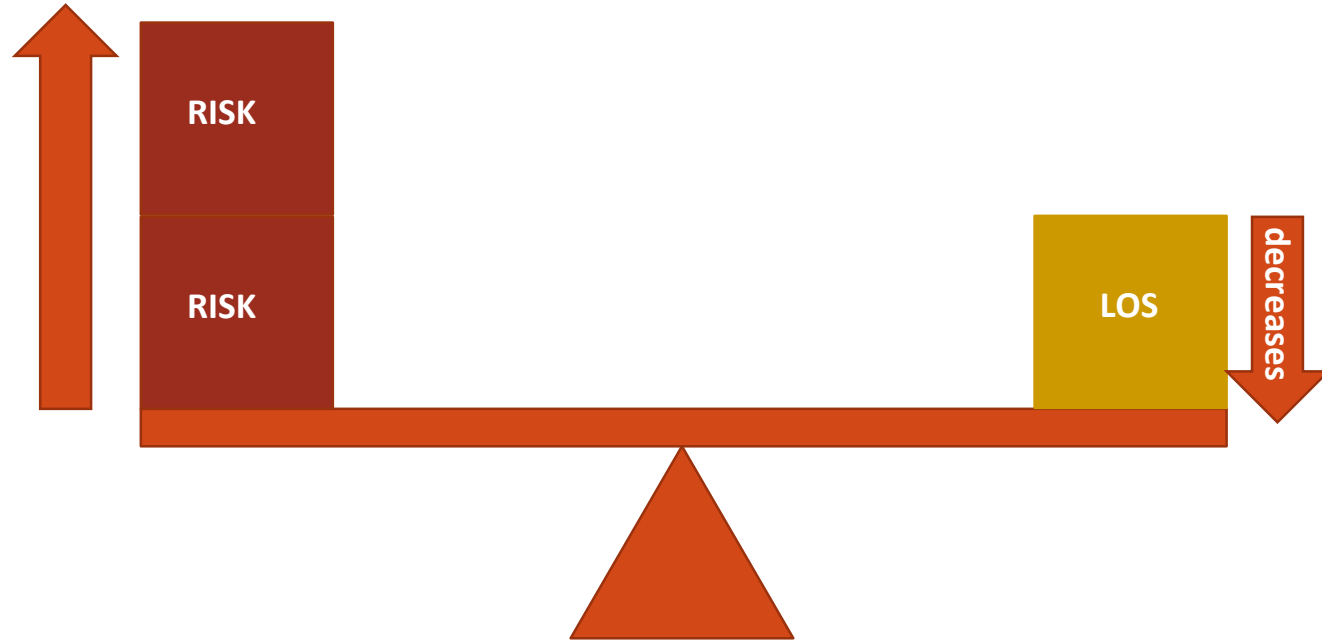
Balancing Risk and LOS

How to achieve
balance?
Lower RISK to
delivers LOS.



BALANCE

Balancing Risk and LOS

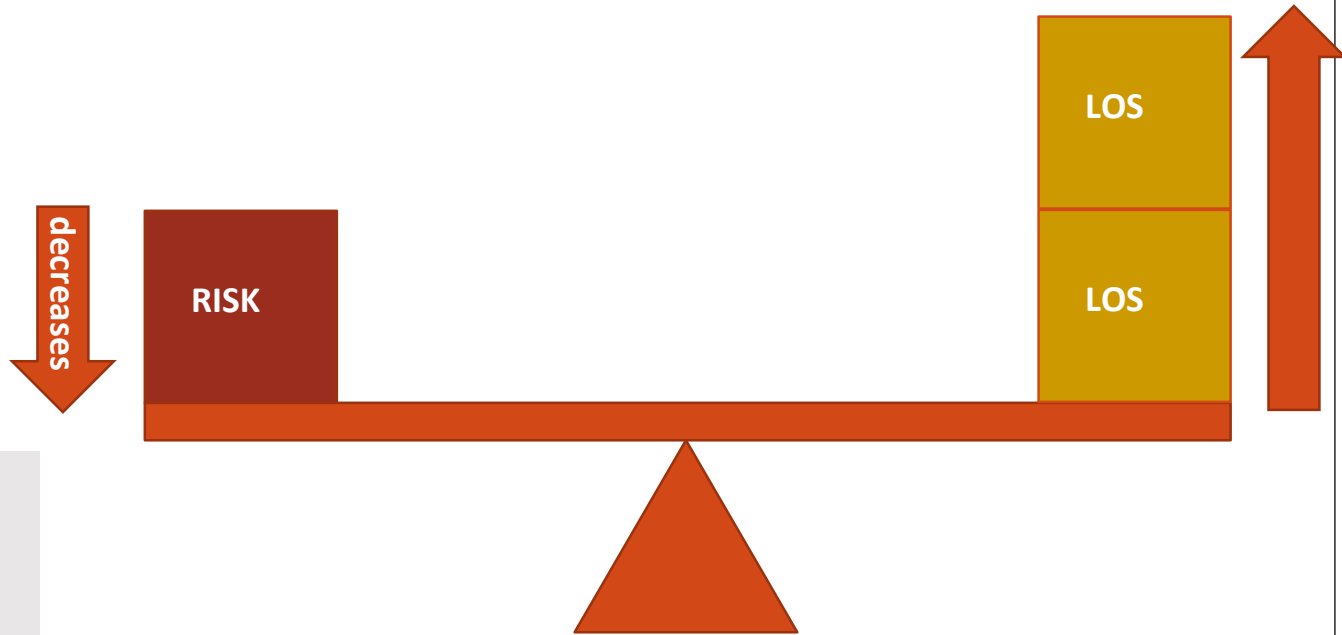


Balancing Risk
and
Levels of Service

Part 3 - Future

BALANCE

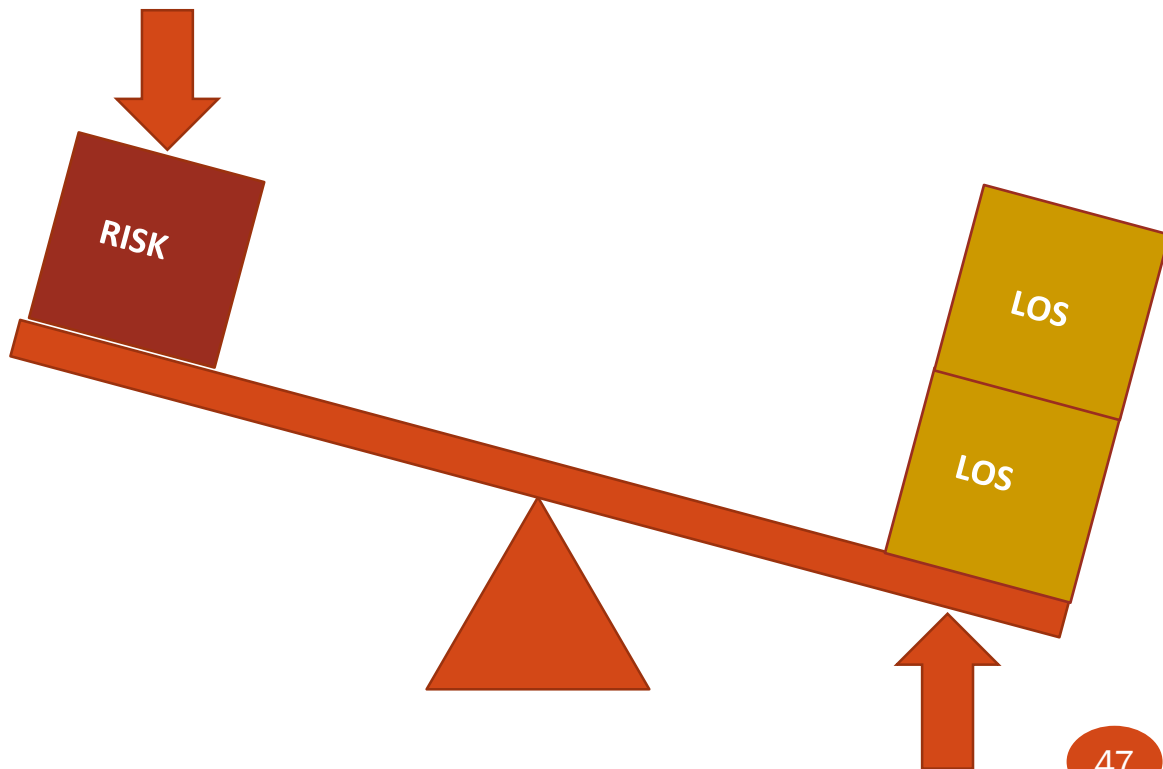
Balancing Risk and LOS



Balancing Risk
and
Levels of Service

Part 3 - Future

Balancing Risk and LOS



How to achieve balance?

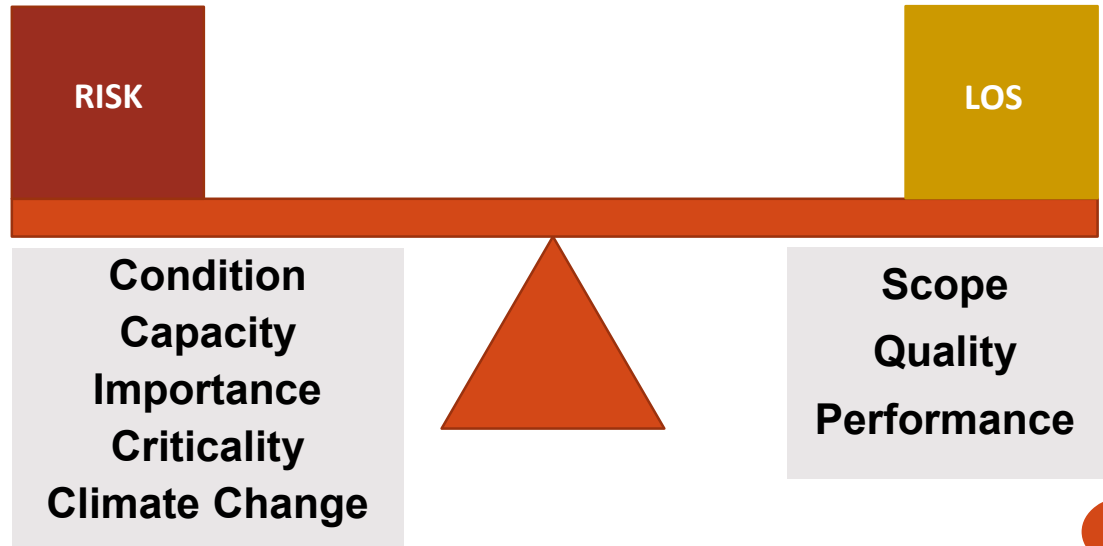
1. Decrease RISK that delivers LOS; or
2. Reduce LOS to match RISK

Part 3 - Future

BALANCE

Balancing Risk and LOS

What makes up RISK?



Part 3 - Future

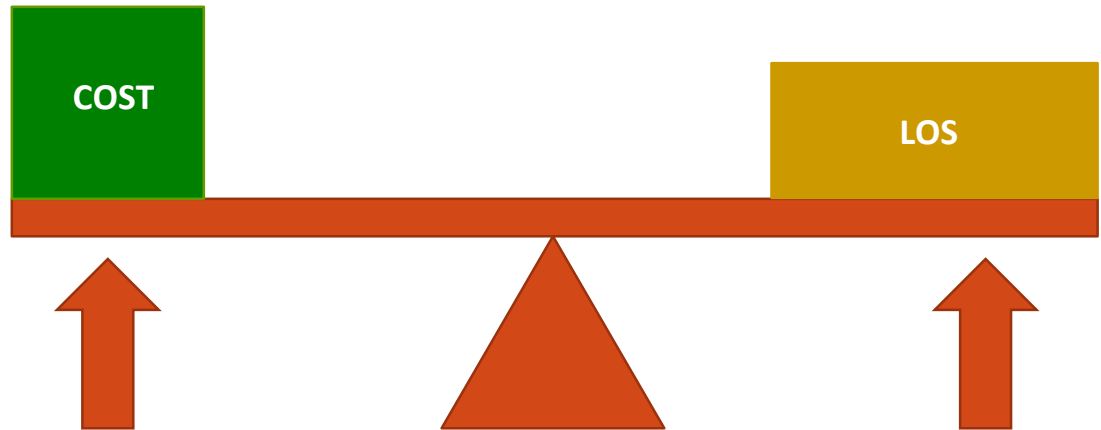
BALANCE

Balancing Risk and LOS

Affordability
and
Customer Expectations

How to achieve balance?

1. More investment = more LOS
2. Less investment = less LOS



Part 3 - Future

Priorities for Service Delivery

- 10-year

- 20-year

How does asset management deliver value to my community?

Risk

Performance

Cost



**Value from
services**



Asset Inventory

- Review and analyze data; identify any gaps
- Current performance, current LOS
- Condition and summary of each asset category
- Asset replacement costs, impact of growth
- **WORKING SESSIONS with each department**

D1: State of Local Infrastructure

Levels of Service

- FOCUS GROUP: Input from Council, Staff and Public
- **Levels of Service Workshop:** identify proposed LOS
- Lifecycle activities and cost for current/proposed LOS
- **WORKSHOP:** AM Training with Council and Staff

D2: Proposed LOS

Risk Assessment

- **WORKSHOP Risk Assessment** including climate change
- Review other requirements of O.Reg. 588/17
- Finalize written Asset Management Plan
- Review and approval

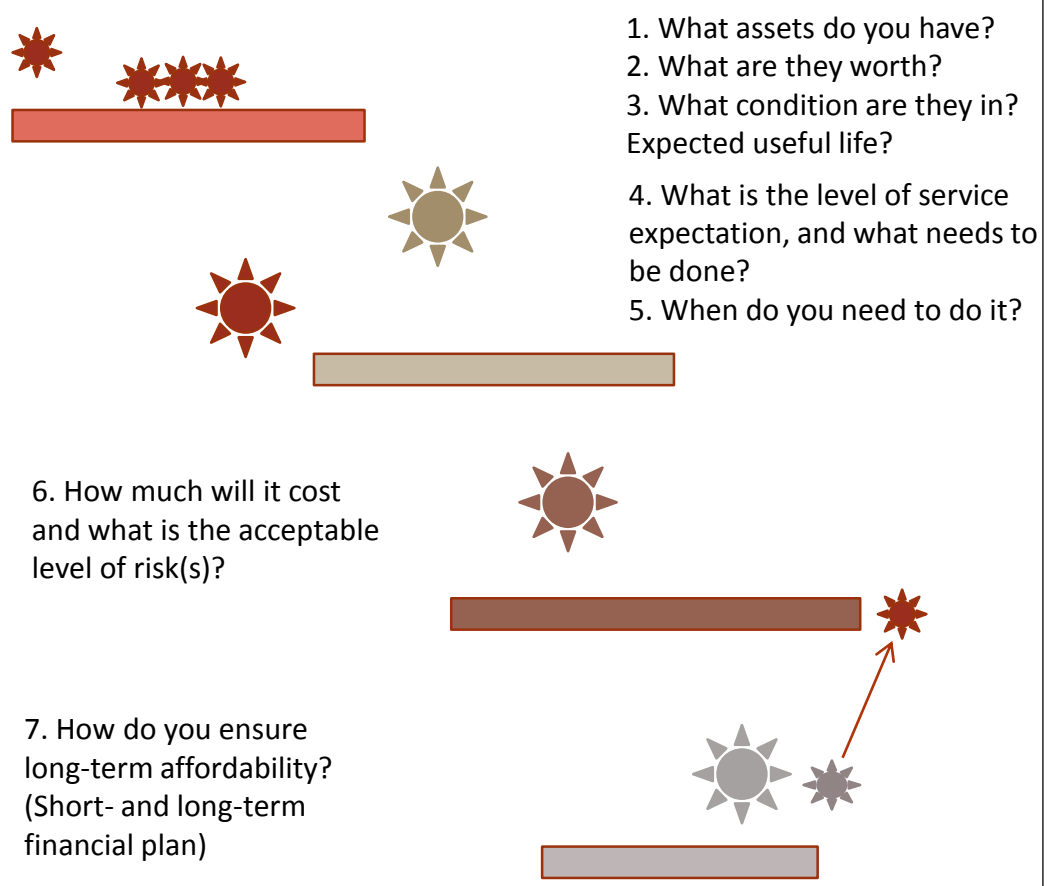
D4: Asset Management Plan 2019

Financial Strategy

- **Financial Workshop** on financial practices and policy
- Develop strategy to budget for replacement; project prioritization; engage Council in developing plan
- 20-year long-term financial plan for Council adoption

D3: Financial Strategy

MAY-JUNE	JULY-AUGUST	SEPT-OCT	NOV-DEC
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1. What assets do you have?
2. What are they worth?
3. What condition are they in? Expected useful life?
4. What is the level of service expectation, and what needs to be done?
5. When do you need to do it?

6. How much will it cost and what is the acceptable level of risk(s)?

7. How do you ensure long-term affordability? (Short- and long-term financial plan)

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