

Municipal Metrics Catalogue

LOS Working Group

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Session Outline

- Level of Service 101 – (Short version)
- Municipal Metrics Catalogue Overview
- Table Exercise
- Group Discussion
- Break

What do we need to know?

Asset Management

- What do you have? (inventory)
- What condition is it in? (assessment)
- What needs to be done? (forecast)
- What is it going to cost? (budget)
- When does it need to be done? (analysis)
- How will it be funded? (revenue and cash-flow)

Focus : good state of repair of physical asset.

Service Management

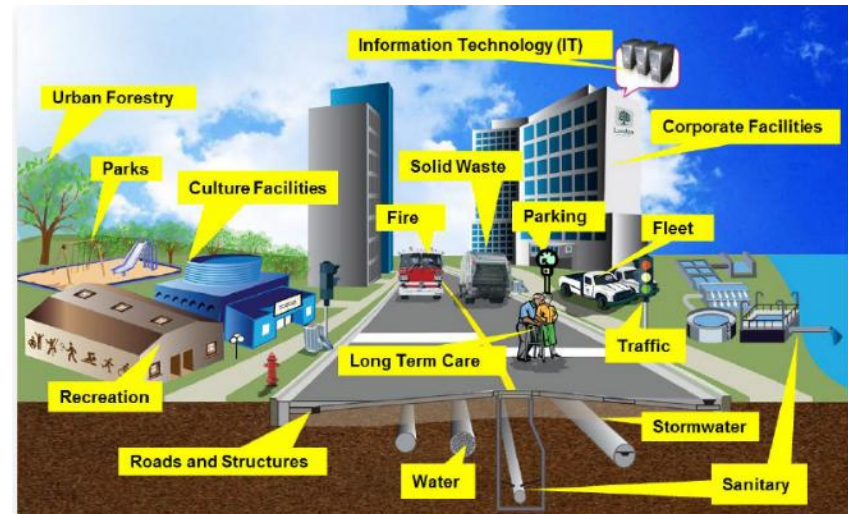
- What is being delivered?
 - What is expected to be delivered?
 - What is the gap?
- Asset Capacity, Performance, or Reliability
- What funding is needed?
 - **Alignment with Corporate Objectives**

Focus : Supporting Healthy Communities

Both Perspectives Are Intimately Related and Equally Important

Services Context

- Services are similar between urban/rural communities
- Delivery / governance often VERY different
- Geography / Density / Terrain are predominant factors in Rural Service Delivery



What is Level of Service (LOS)

- Simple concept
 - IDENTIFY THE EXTENT TO WHICH A SERVICE IS PROVIDED TO USERS***
- Difficult to Articulate
 - Many stakeholders who often have competing interests
 - Public User paying the bill (or taxes)
 - Elected Officials
 - Municipal Administration
 - Field Managers, Supervisors, Crews
- Attributes of a good LOS
 - Easily Measured (reliably with confidence)
 - Must be readily understood and clearly communicate expectations to users
 - Increased service level is expected to have higher costs

LOS Costs and Risk

- Level of Service
- How
- Pu
- Hig

The question becomes:
What is the acceptable LOS at what Cost and still align with Corporate Objectives and within the RISK tolerance of the Organization?

- If your interest is to pay less... etc...

LOS Level 1 - \$\$\$\$	Low Risk – High Reliability
LOS Level 2 - \$\$\$	Moderate Risk
LOS Level 3 - \$\$	Medium Risk
LOS Level 4 - \$	High Risk – Low Reliability

- Finding Operating Efficiency
- Maximized ROI Capital Investments
- Defer work for short term savings **BUT higher future costs**



What Drives Costs?

- Labour
- Materials / Consumables
- Equipment / Tools
- Energy
- Waste materials/products
- Supply
- Manufacture / Construct
- Storage / Maintain
- Packaging
- Delivery
- Billing

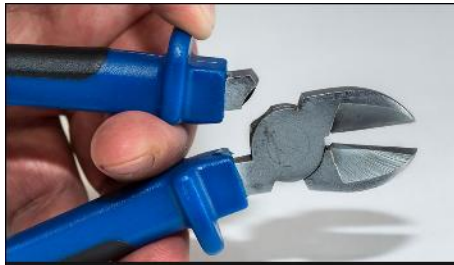


Re-active Repairs

Claims for personal injury and property damages

Common Attributes of every Service

- Safety
- Quality
- Availability
- Reliability
- Regulatory Requirements
- Environmental Impact
- Social Impact



- A single metric is likely to be related to more than one of these service attributes.

ENVIRONMENTAL
IMPACT POLICY



Measures, Metrics, and Levels of Service

Measures

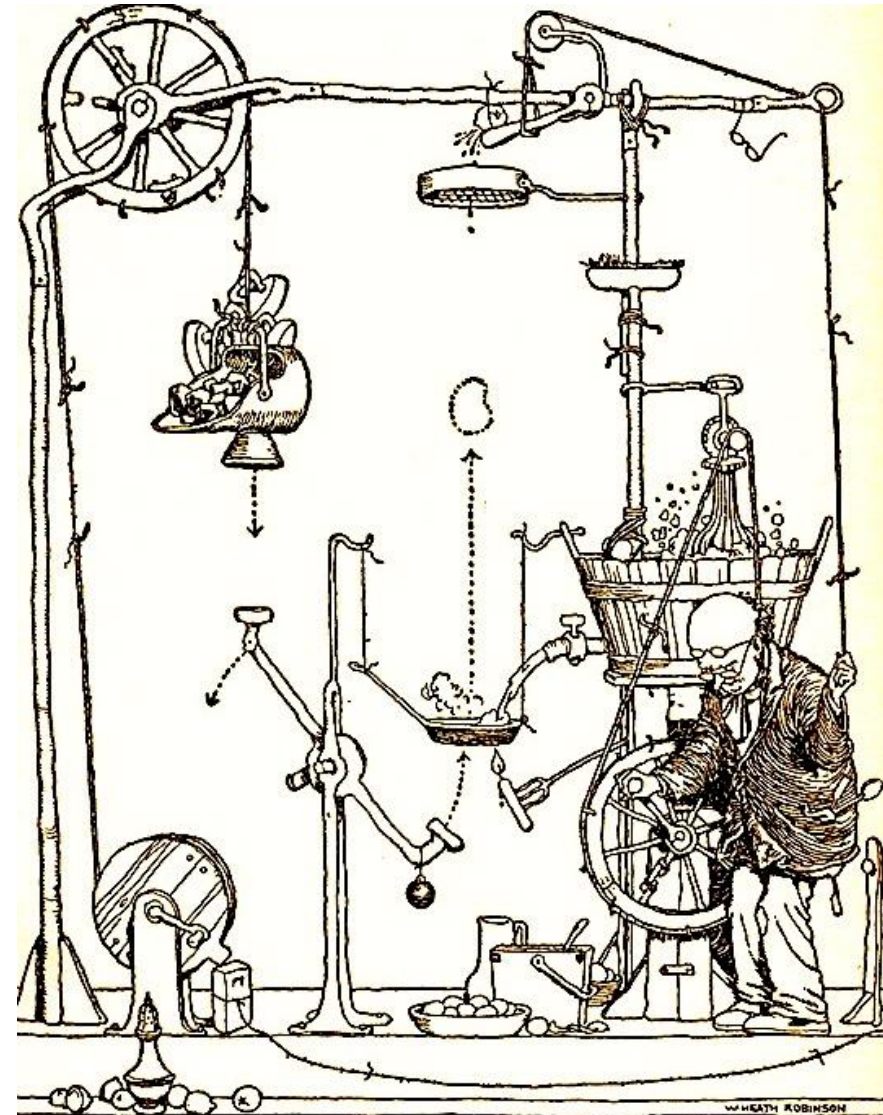
- Directly observable
- Commonly considered 'internal measures'
- i.e. "cable tension", "PPM", "cooking surface temp"

Metrics

- Weighted combination of measures
- i.e. "degree-seconds on pan"

Level of Service Expectations

- Often subjective yet directly relevant to end user
- i.e. "Hot, Fluffy pancake"



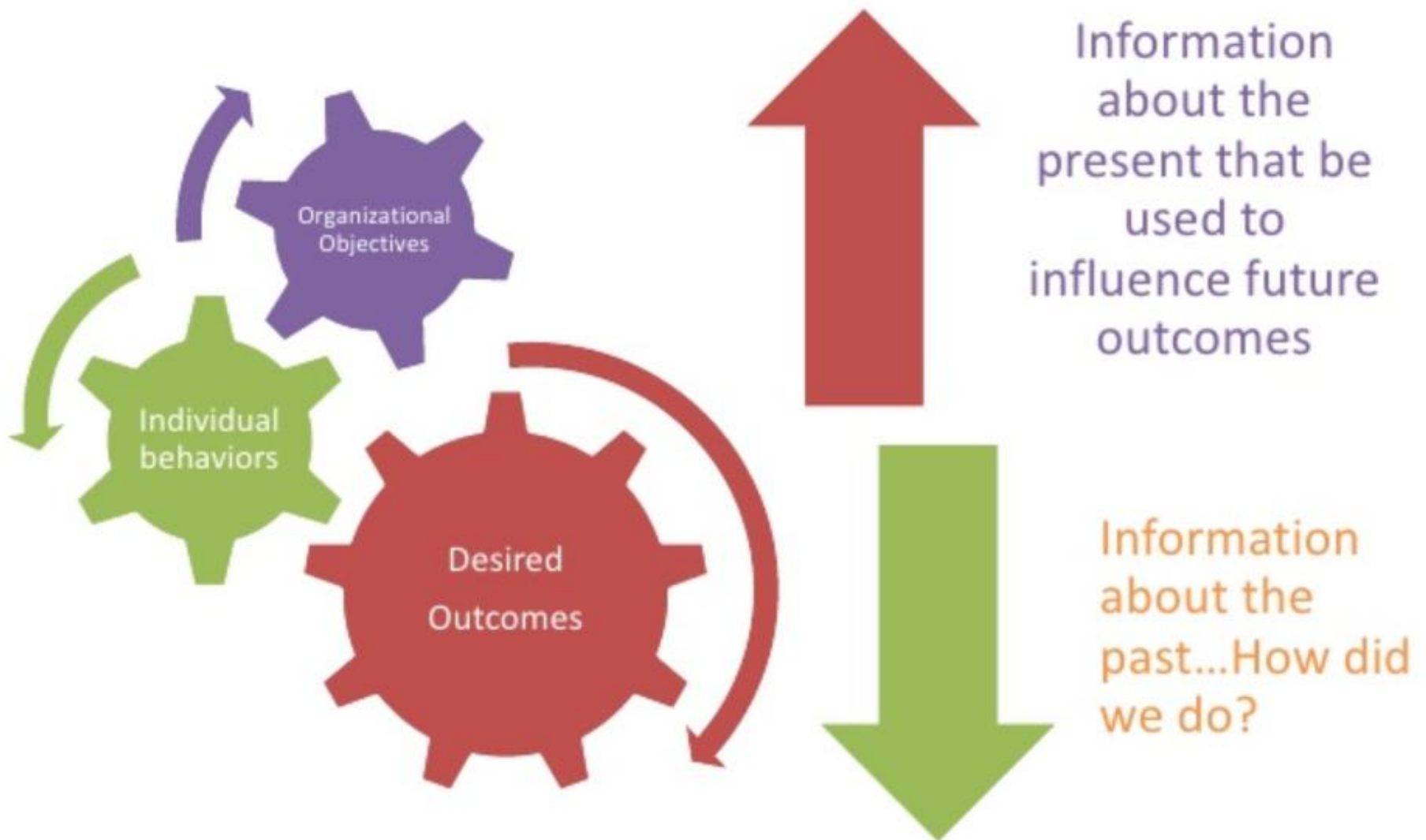
The pancake-making machine

The rabbit hole...

- Common financial metrics...
 - \$ / resident
 - \$ / km
 - \$ (%) increase over last year
- In isolation – a financial metric will lead to erroneous conclusions:
 - The ‘other’ municipality’s tax/utility rates are lower therefore they are more effective.
 - Too expensive - unaffordable
- Total absence of context of quality, risk, reliability, and capacity of services delivered now and into future.



Leading vs. Lagging Indicators



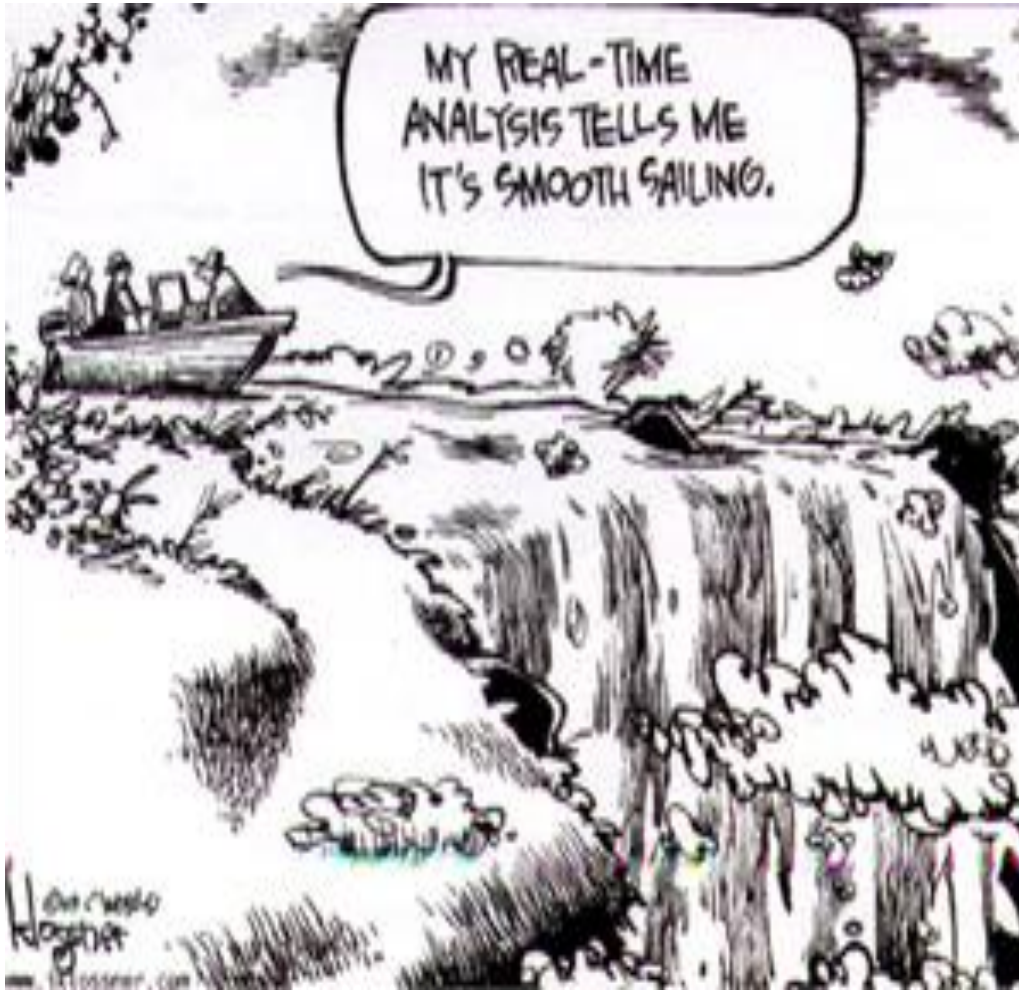
Metrics Line-of-Sight

Current State

Change

	Current State	Change
Outcome Lagging Metrics	<p><i>30% Water Loss</i> Lagging Measure</p>	<p>\$\$\$\$ Savings to reduce Water Loss 10%</p> <p><i>20% Water Loss</i> Lagging Measure</p>
Related Leading Metrics	<p><i>Replace Water Main 80 Years old</i> Current Practice</p>	<p>+/- \$\$\$ to replace based on failures not age</p> <p><i>Replace pipe after 3rd main break</i> Actionable Item</p>
	<p><i>Leak Detection Public Community</i> Current Practice</p>	<p>\$ to establish Leak Detection Program</p> <p><i>Implement Leak Detection Program: 25% of system / year</i> Actionable Item</p>
	<p><i>8 weeks to install meter in new buildings</i> Current Practice</p>	<p><i>No change at this time</i> Actionable Item</p>

Which metrics matter?



- The lagging metrics that represent the outcomes that align with your Corporate Objectives, Asset Management Strategy and Plan(s)
- Identify leading metrics that affect the outcomes.
- Common challenge - ***using metrics that are easy to capture instead of the ones that align with Corporate Objectives & Strategic Plan.***

Trip Time - LOS Context



Level of Service Framework

Corporate LOS

The key corporate performance expectations, based upon core values and mission statements
e.g. provision of safe, Potable water

Customer LOS

The LOS that the Asset Manager/Corporation commits to provide to the Customer
e.g. 7 minute Fire response time

Asset/Technical LOS

The established LOS that the asset is expected to provide
e.g. water pressure - max. hourly demand not less than 40 psi

Municipal Metrics Catalogue

- Commonly used metrics
- Leading or Lagging
- Category (technical, financial, qualitative)
- Common inputs
- Suitability of Use as a LOS
- Pros/Cons with the metric
- Recommended context in which to use it
- Impact on Customer Values
- Interpretations of the values
- Relationships between metrics (which metrics are influenced by other metrics and to what degree).

Municipal Metrics Catalogue – V1.0 Release

- Focus on Core Municipal Services (Roads/Bridges, Water, Wastewater, Stormwater)
- Criteria for inclusion:
 - Regulatory (i.e. Ont Reg 588/17)
 - Most commonly used (or mis-used).
 - Industry best examples
 - Focus on Lagging metrics that have high value as LOS and Leading metrics that directly support them. (i.e. not L/Hp of pump).
- Consolidate parallel metrics into ‘generic’ where same measure applies to multiple service areas.

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Metrics Catalogue – Next Steps..

- **Deepen the content** – particularly relationships between metrics
- **Additional metrics** – particularly financial metrics
- Additional **peer review**
- **Example** implementations and calculations.

- Expand into other municipal service areas:
 - Facilities/Buildings
 - Recreational Facilities and Services
 - Cultural Services
 - Housing
 - Etc..

Interactive LOS Exercise

- Take 5 minutes individually
 - Think of a LOS for a service in your organization.
 - Identify 4 leading metrics or actionable items that will raise or lower that LOS.
 - Think of a reason why or why not that LOS is comparable to another municipality.
- Take 2 minutes each to share at your table your LOS information.
- At your table – pick one of LOS to share with the group.
- I'll pick a table at random to share the LOS info with the group for broader conversation.