



# Levels of Service And Integrated Planning

**NAMS Canada Inc.**

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# Get to Know Us



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# The Key Issue:

Can we reliably answer some Fundamental Questions?



# Do we have enough funding to:

- 1. OPERATE**
- 2. MAINTAIN**
- 3. RENEW**
- 4. ACQUIRE**



Providing infrastructure to meet our strategic objectives?





# What if the answer is NO?

Does that lack of funding and resources represent a risk to your community going into the future?



# Who decides?

Working on behalf of our organizations, **who** can provide the answer to these questions?  
And **how**?



# Can we have an informed discussion about the options?

Asset Management Planning  
doesn't help us solve  
affordability .... That's the role  
of the Long-Term Financial Plan

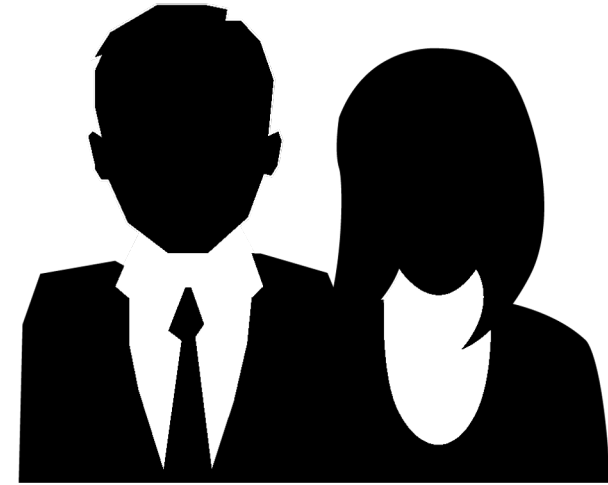
It helps to facilitate informed  
decision making



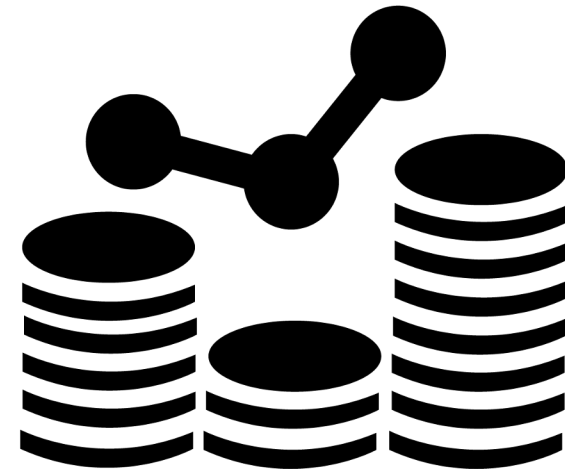


# Can we have an informed discussion about the options?

Who chooses the best value plan?



Do they have full knowledge of the consequences?

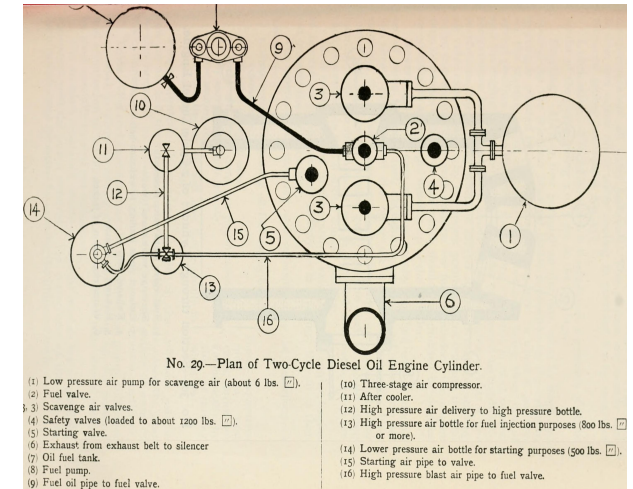


# We still experience a specific view

Most discussions quickly go into the detail:

- Detailed optimised modelling
- Lifecycle costing
- Asset accounting

But to inform decision making we need to forecast and we need to make sure we do not get lost in the detail!






**Any questions?**

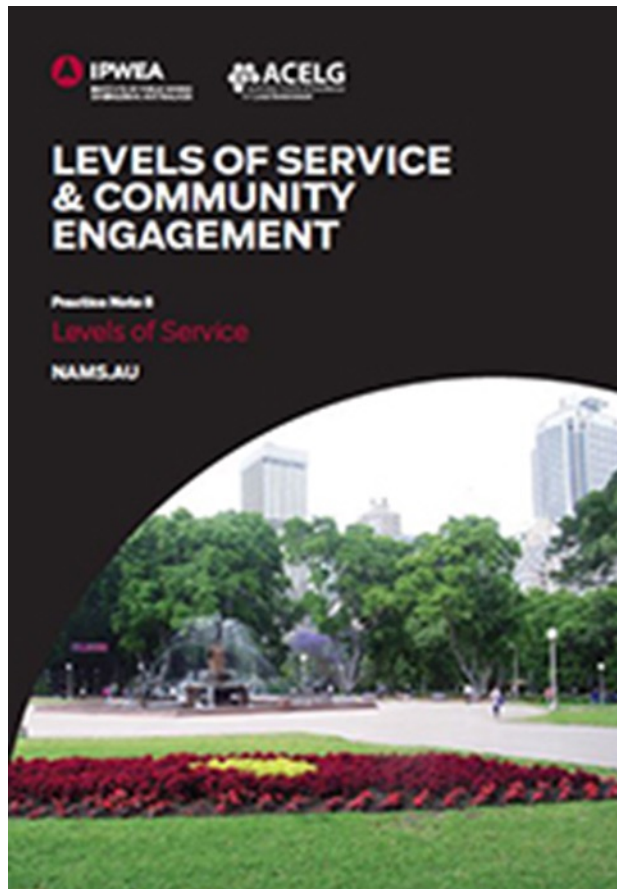






# Levels of Service and Customer Engagement

# Levels of Service & Community Engagement



## Practice Note

- Based on the IIMM
- Fosters a consistent approach
- Offers practical and scalable solutions
- Guidance on engagement techniques



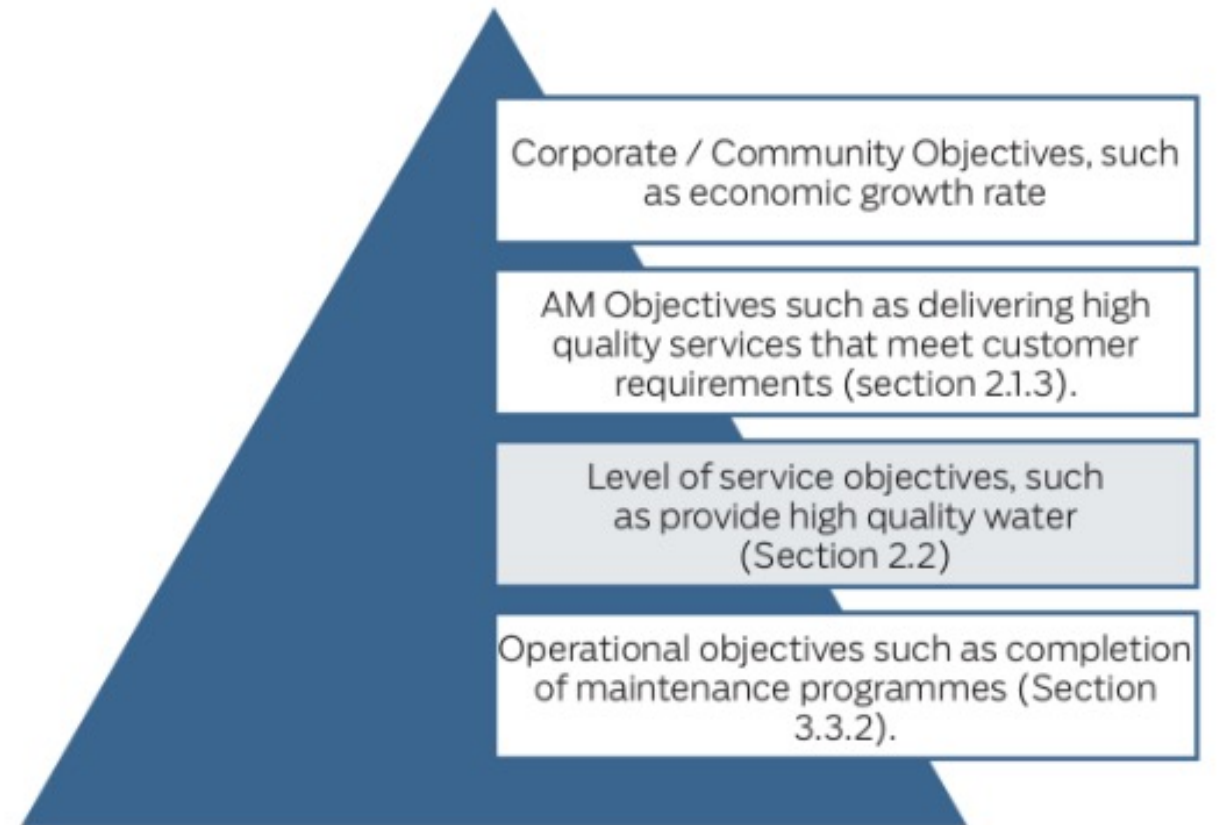
# Level of Service and Community Engagement





# Levels of Service Framework

The link between higher level corporate objectives and more detailed operational objectives



Source: IIMM(2015), Section 2.2.1, Figure 2.2.2, p 2|24

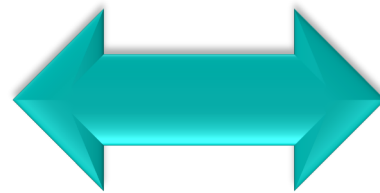


# Levels of Service Framework

## Customer Values

### Customer LoS

How the customer receives the service



### Technical LoS

What the organisation does to deliver the service



# Key Points in Developing LoS

- S**pecific Defines results to be accomplished for a specific aspect of the service.
- M**easurable Defines quantity, cost or quality metrics to determine process.
- A**chievable A realistic assessment of the performance required.
- R**elevant Supports organisational goals and provides a clear picture of whether the relevant level of service is being delivered.
- T**imebound Specifies due date or frequency of action.
- E**valuation Ongoing evaluation of the appropriateness of the measures and targets.
- R**eassess Review performance measures and targets in light of above.

Source: IIMM(2015), Section 2.2.3, p 2|26





# What drives your Level of Service?

**We want to capture what provides value to customers**

- Customer expectation
- Legislative requirements – minimum requirements
- Strategic plan
- Availability of resources / financial constraints



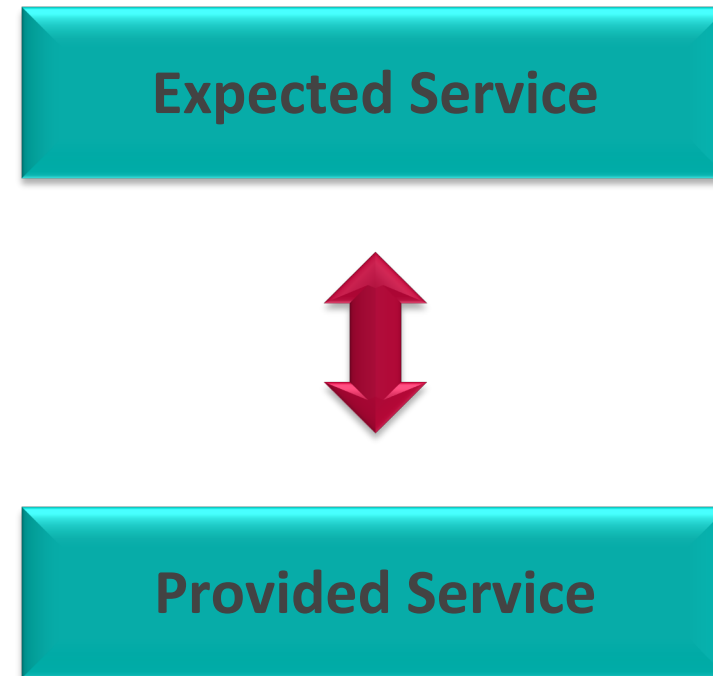


**Any questions?**



# Are we able to have productive discussions on Affordable Service Levels ?

Matching levels of service provided by an asset network with the expectations of customers





# Customer Values - Potable Water Example

Typical Customer Values:

- Quality
- Reliability
- Affordability



# Customer Research and Expectations

## Service Objective:

To provide safe and reliable water for a total urban demand of 750 litres per capita per day.

Performance Measure	Satisfaction Level				
	Very Satisfied	Fairly Satisfied	Satisfied	Somewhat satisfied	Not satisfied
Quality	10%	20%	60%	10%	
Reliability		25%	40%	30%	5%
Affordability			20%	50%	30%



# Customer Values – Potable Water Supply Example

## Service Objective:

To provide safe and reliable water for a total urban demand of 750 litres per capita per day.

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Safe to drink	<ul style="list-style-type: none"> <li>• Customer surveys</li> <li>• Complaints register</li> <li>• Inspection &amp; test reports</li> </ul>	Meets all mandated health and safety requirements. 90% satisfaction.	Number of complaints expected to continue at current levels.
Good pressure		Minimal pressure variations. 65% satisfaction.	Complaints expected to increase.
Affordable		The biggest concern. Water bills increasing. 20% satisfaction.	Satisfaction levels trending downwards.





# Customer Levels of Service

Measures of “FACT”

- The Customer Levels of Service are considered in terms of:

- **Quality**

How good is the service ... what is the condition or quality of the service?

- **Function**

Is it suitable for its intended purpose .... Is it the right service?

- **Capacity/Use**

Is the service over or under used ... do we need more or less of these assets?



# Customer Levels of Service - Quality – Potable Water Example

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Quality	Water is safe to drink	State of the Assets: % good/very good % fair % poor/very poor	38% good/very good. 52% fair 10% poor/very poor.	38% good/very good. 52% fair 10% poor/very poor.  Budget will meet health and safety requirements but will need to increase inspection program due to ageing assets.
		Number of drinking water quality complaints per 1,000 connections	4 per 1,000 connections	4 per 1,000 connections
<b>Confidence level</b>			High (Professional Judgement supported by extensive data)	High (Professional Judgement supported by extensive data)



# Customer Levels of Service - Function – Potable Water Example

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
<b>Function</b>	Water infrastructure is 'fit for purpose'	State of the Assets: % good/very good % fair % poor/very poor	38% good/very good. 52% fair 10% poor/very poor.	34% good/very good. 52% fair 14% poor/very poor.  Budget shortfall will result in more assets not meeting 'fit for purpose' expectations and requirements.
		Service requests relating to low pressure per 1,000 connections.	4 per 1,000 connections	6 per 1,000 connections
<b>Confidence level</b>			Medium (Professional judgement supported by data sampling)	Low (Professional Judgement with no data evidence)



# Customer Levels of Service - Capacity – Potable Water Example

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
<b>Capacity</b>	Water infrastructure meets the capacity requirements	State of the Assets: % good/very good % fair % poor/very poor	38% good/very good. 52% fair 10% poor/very poor.	24% good/very good. 56% fair 20% poor/very poor.  Budget shortfall will result in more assets not meeting demand due to growth.
		Service requests relating to poor supply per 1,000 connections.	4 per 1,000 connections	8 per 1,000 connections
<b>Confidence level</b>			Low (Professional Judgement with no data evidence)	Low (Professional Judgement with no data evidence)







**Any questions?**



# Technical Levels of Service

Take a lifecycle approach

- Acquisition
- Operation
- Maintenance
- Renewal
- Disposal



# Technical Service Levels – Acquisition Example

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
<b>Acquisition</b>	To meet projected growth and demand needs.	% of projects delivered as per Strategic Plan	Two thirds of projects.  Limited to 'critical projects' only.	100% of recommended projects.
<b>Budget</b>			<i>\$5,000,000</i> <i>10-year annual av.</i>	<i>\$7,500,000</i> <i>10-year annual av.</i>

Annual average performance over the planning period related to: -

\* Planned Budget

\*\* Forecast lifecycle costs.



# Technical Service Levels – Operation Example

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
<b>Operation</b>	Ensuring water infrastructure is safe for users.	% of assets meeting required inspection schedule.	95% achieved within existing budget allocation	100% achieved within existing budget allocation
<b>Budget</b>			<i>\$4,000,000</i> <i>10-year annual av.</i>	<i>\$4,145,396</i> <i>10-year annual av.</i>

Annual average performance over the planning period related to: -

\* Planned Budget

\*\* Forecast lifecycle costs.





# Technical Service Levels – Maintenance Example

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
<b>Maintenance</b>	Ensure defects are acted on within the agreed response times.	Average response time from notification.	92% within four hours	85% within four hours
	Minimize breaks and leakage.	Main breaks/leaks per 100km	8.5 per 100km	10.0 per 100km
<b>Budget</b>			<i>\$15,000,000 10-year annual av.</i>	<i>\$15,546,965 10-year annual av.</i>

Annual average performance over the planning period related to: -

\* Planned Budget

\*\* Forecast lifecycle costs.



# Technical Service Levels – Renewal Example

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
<b>Renewal</b>	To replace existing assets at the optimum time.	Proportion of asset stock being replaced.	1.5% / year on av. Only critical assets are replaced based on risk.	2.0% / year on av. To sustain current service levels and minimise risk.
			Water Storage 80 – 100 years High Lift Pumps 20 – 30 years Reticulation Pipes 60 – 80 years	Water Storage 70 – 80 years High Lift Pumps 15 – 25 years Reticulation Pipes 50 – 60 years
<b>Budget</b>			<i>\$16,000,000</i> <i>10-year annual av.</i>	<i>\$22,350,000</i> <i>10-year annual av.</i>

Annual average performance over the planning period related to: -

\* Planned Budget

\*\* Forecast lifecycle costs.



# Technical Service Levels – Disposal Example

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
<b>Disposal</b>	Decommission of assets no longer required.	As identified in the Strategic Plan.	No disposals identified.	No disposals required.
<b>Budget</b>			<i>No disposals scheduled for the planning period.</i>	

Annual average performance over the planning period related to: -

\* Planned Budget

\*\* Forecast lifecycle costs.



# Activities, Resources and Timing

## Lifecycle Activities

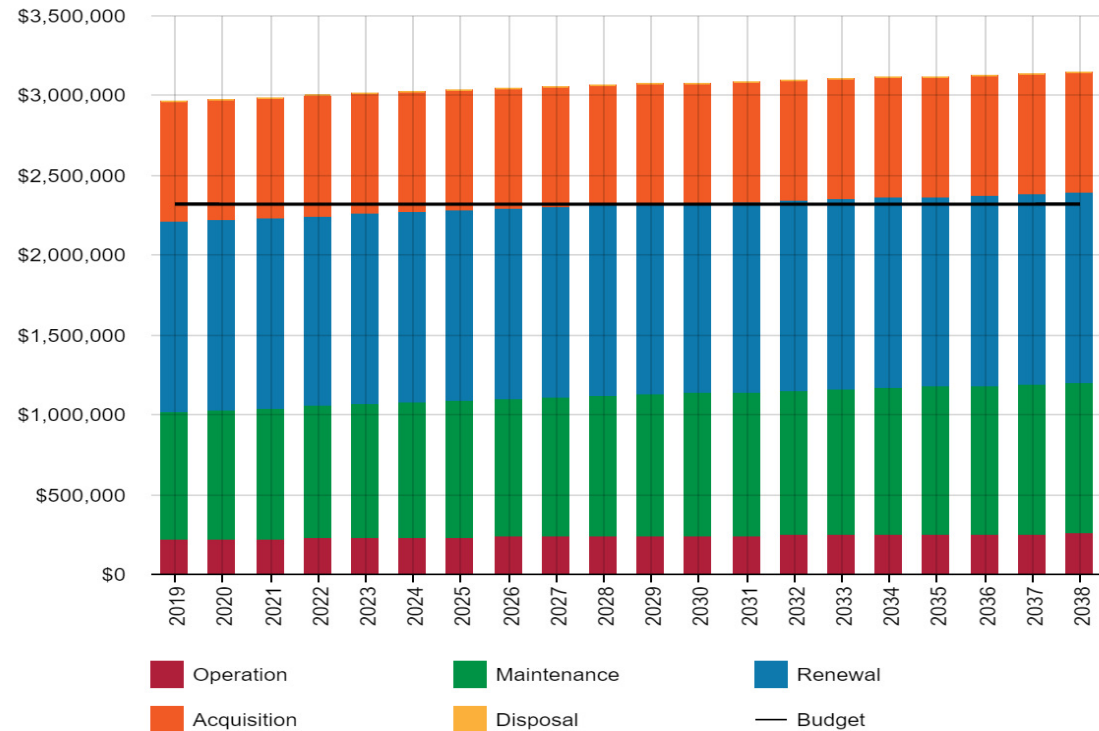
- Acquisition
- Operate
- Maintain
- Renewal/Replace
- Disposal

## Resources

- Financing and staffing

## Timing

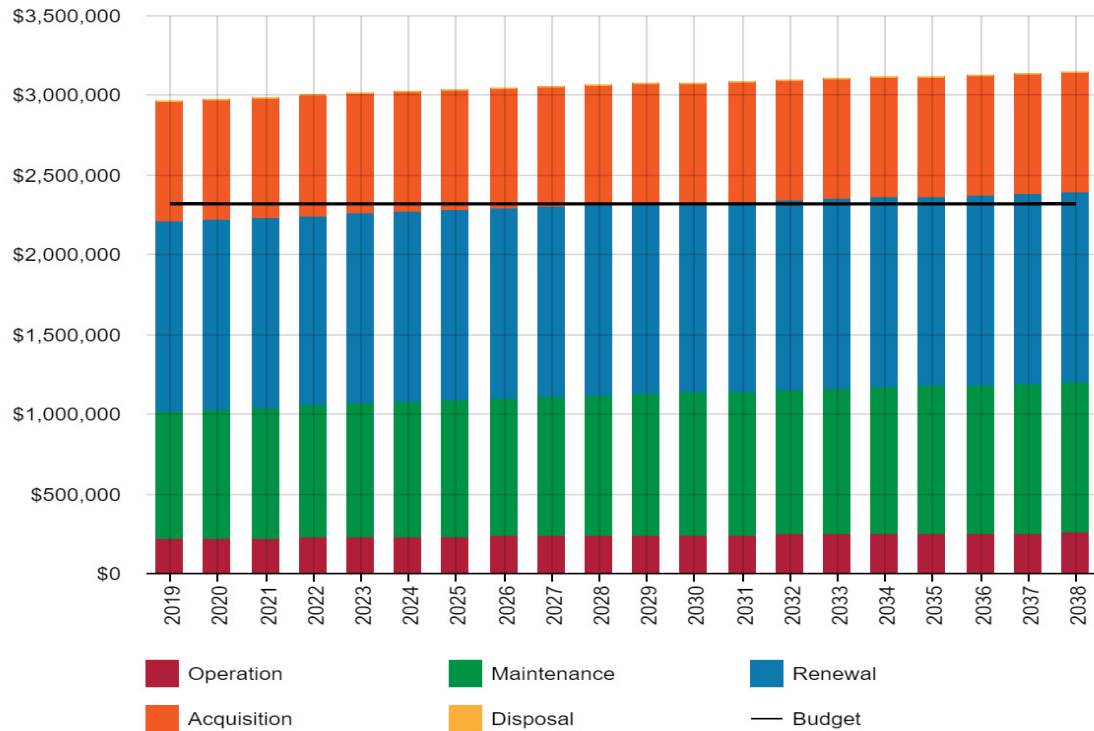
- Work Programs



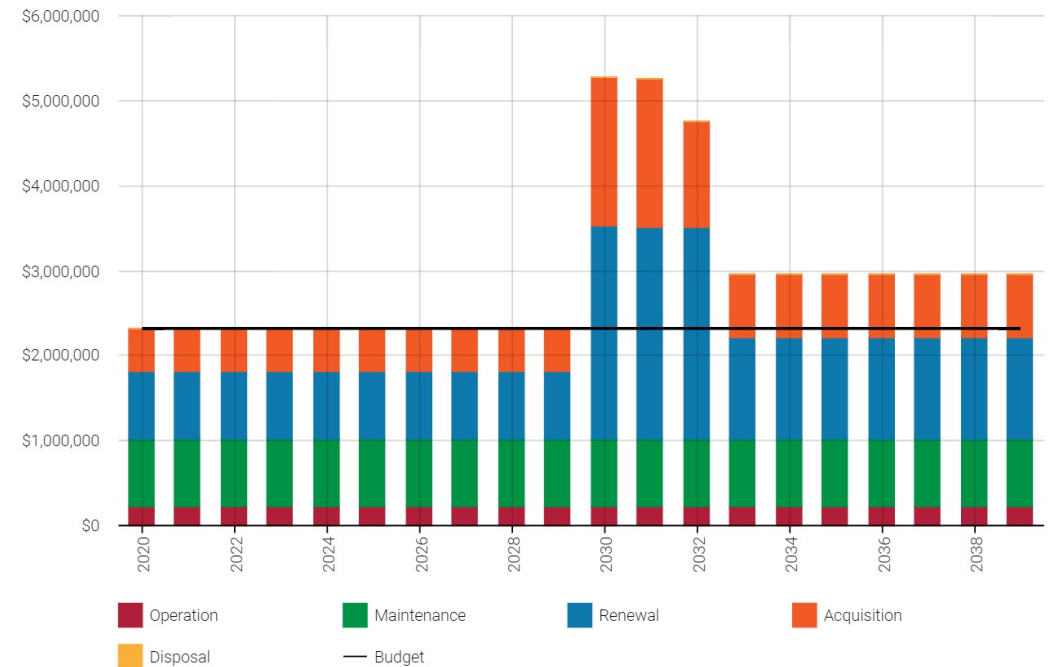


# Achieving the Organization's Strategic Objectives and Sustainable Service Delivery

While balancing performance, cost and risk



Projections based on current requirements

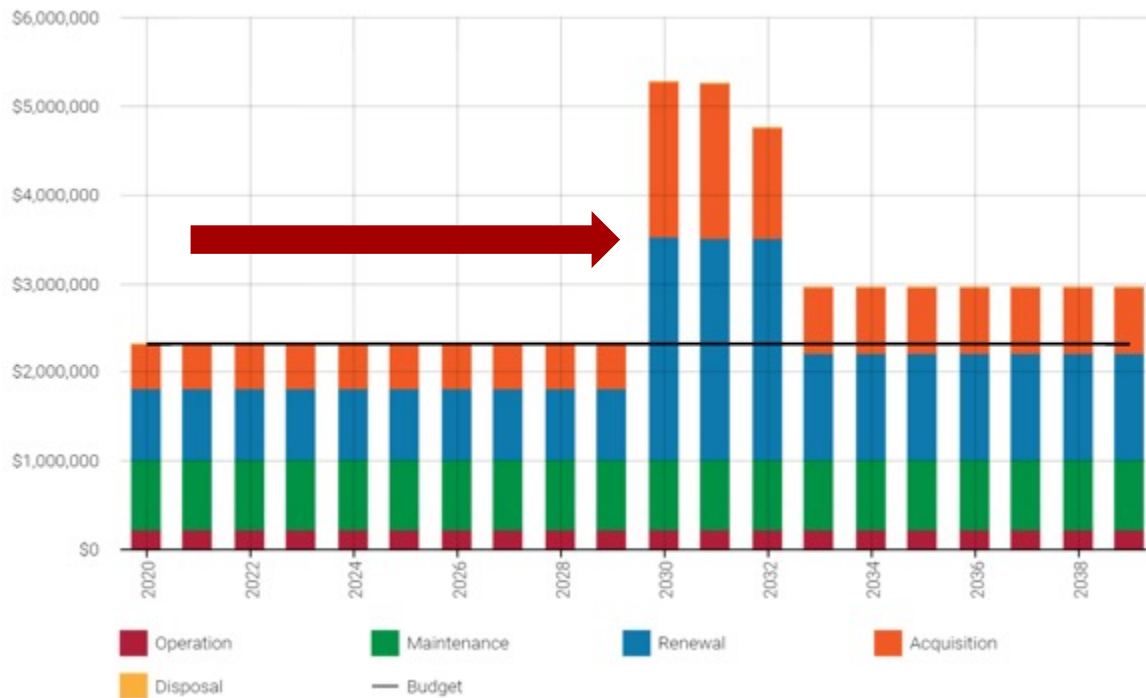


Projections based on planned budgets



# Achieving the Organization's Strategic Objectives and Sustainable Service Delivery – Reality Check!

balancing costs, performance & risk



Projections based on planned budgets



Deferral of activities and programs



Likely reduction in service levels



Generation of additional service risks



# Balancing costs with managing risks and service Levels



# Typical Level of Service improvement areas

## Customer Values

- Take a customer perspective
- Look at the expected trend given the current budgets
- Keep the discussion to the key outcome areas

## Customer Levels of Service

- Measures of fact to go alongside any customer “perceptions”
- These are not the activities – the things we do in the business to deliver the service

## Technical Levels of Service

- These are the activities
- Aligns with budget and financial plan ... so we need to engage our accountant
- What would we do more/less of

**Comment: Professional judgement is a suitable starting point**







**Any questions?**



The background is a teal color with a semi-transparent image of a person's hands working on a laptop. A white diagonal line runs from the bottom right towards the center. The text 'Service Level Options' is written in white, bold, sans-serif font across the middle of the image.

# Service Level Options

# Developing Service Level Options

- Customers often make value choices when they balance the benefit of product/service options against the cost associated with each choice.
- Often the value choice involves making trade-offs between service level options to obtain the best value outcome.
- To make value judgements, customers need details on levels of service and cost options together with the service, risk and cost implications.
  - Service implications (how is the service going to change)
  - Risk implications (how will risks associated with the current position change)
  - Cost implications (what is the change in funding required to provide the changed service)



# Community Consultation Service Options

## Consultation Option

**Option A** – affordable levels of service - levels of service that can be provided within known financial resources identified in adopted long-term financial plans.

**Option B** – current levels of service (may also be minimum acceptable levels of service driven mainly by technical, environmental and legal requirements – must do's).

**Option C** - desired level of service (current levels of service plus new services and upgrade of existing services requests known to the organisation).

## Recreation Services



Poor grass cover , mown monthly  
Limited public facilities

\$



Even grass cover, mown 2 weekly  
Some public facilities

\$\$



Irrigated grass cover, mown weekly  
Formal gardens  
Quality public facilities

\$\$\$





# Community Consultation Service Options

## Consultation Option

**Option A** – affordable levels of service - levels of service that can be provided within known financial resources identified in adopted long-term financial plans.

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**Option C** - desired level of service (current levels of service plus new services and upgrade of existing services requests known to the organisation).

## Transport Services



Unsealed road 2 lanes  
Graded 2 / year  
60 km/h design speed  
\$



Sealed road 2 lanes  
80 km/h design speed  
\$\$



Sealed road 2 lanes  
Centreline marked  
Shoulders & guidepost  
100 km/h design speed  
\$\$\$





# Developing Service Level Options

Option	Level of Service	Level of Service Option	Cost (\$/yr)
Current Level of Service	Cleaning Daily (class1) Weekly (class 2) Current condition levels (20% poor) maintained Satisfaction 90%		Operations \$408,000 Capital \$190,000
1 Improve		Daily cleaning all buildings Improve condition to $\leq 5\%$ poor over 5 years	Operations + \$100,000 Capital + \$400,000
2 Improve		Daily cleaning 50% class 2 Improve condition to $\leq 10\%$ poor over 10 years	Operations + \$40,000 Capital + \$200,000
3 Maintain			Operations + \$2,000 Capital + \$10,000
4 Reduce		3 times weekly cleaning class 1, weekly cleaning class 2 buildings Lower condition to $\leq 25\%$ poor over 10 years	Operations - \$30,000 Capital - \$60,000
5 Reduce		Weekly cleaning class 1, 2 weekly cleaning class 2 Lower condition to $\leq 30\%$ poor over 5 years	Operations - \$50,000 Capital - \$100,000



Level of service option 1  
Unsealed road  
Graded on 2 year cycle  
Resheeted on 20 year cycle  
Operating cost \$2,000 per year



Level of service option 2  
Unsealed road  
Graded 2 times per year  
Resheeted on 5 year cycle  
Operating cost \$10,000 per year





**Any questions?**



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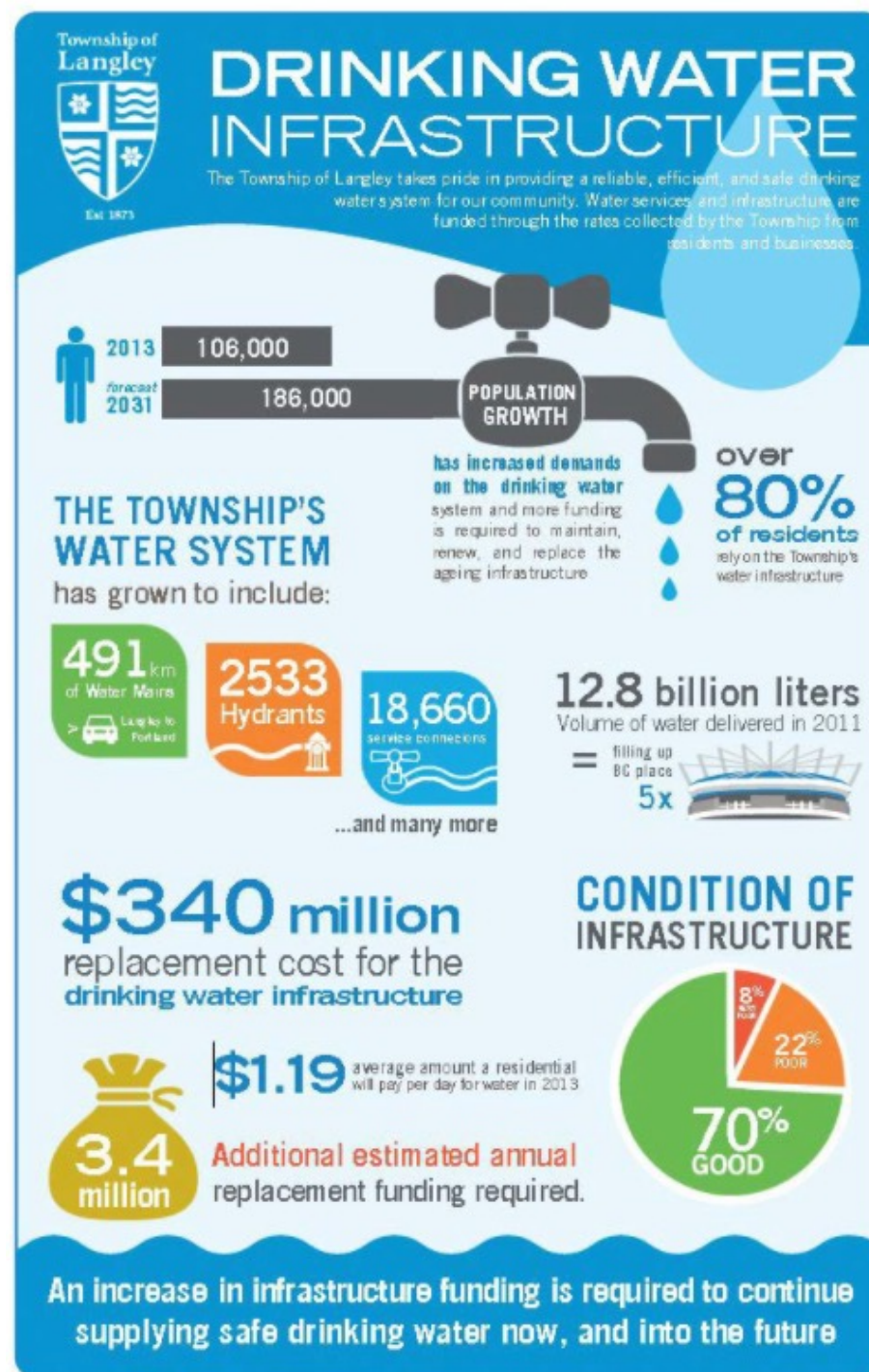
# Communicating Service Level Performance



	<b>INFORM</b>	<b>CONSULT</b>	<b>INVOLVE</b>	<b>COLLABORATE</b>	<b>EMPOWER</b>
<b>PUBLIC PARTICIPATION GOAL</b>	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
<b>PROMISE TO THE PUBLIC</b>	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

The Township of Langley developed an information graphic of its water supply system to provide information of the size and complexity of the system, current condition and increase in infrastructure funding required to continue to supply safe drinking water now and in to the future.

Source:  
Harb Chohan, Township of Langley, BC.







# Asset Management Webinar Series

Utilising IPWEA/NAMS Canada Resources will help you achieve your organisation's Asset Management goals

Website: [www.namscanada.org](http://www.namscanada.org)

Email: [support@namscanada.org](mailto:support@namscanada.org)

Phone: 1-800-923-7647 Ext 2

Thank You