

Asset Management Technical Assistance

Levels of Service

Keys to Decision Making

Objective

- Gain experience with the process of defining meaningful Customer & Asset Levels of Service

Why are Levels of Service Important?

- The basis for asset management decision making;
- The targets by which to measure & understand:
 - What is the state of the infrastructure
 - What is the “infrastructure gap”?
 - Are service objectives being met?
 - What are the risks to services & assets?
 - What are the asset needs, priorities & trade-offs?
 - What are the costs, revenues & resources to sustain the services & assets?
 - Are the service levels & assets sustainable?

Regulatory Requirements

- The Regulation lists specific reporting metrics for 'core' infrastructure.
- Municipalities need to develop additional & relevant LOS measures for their unique decision making needs.

Levels of Service

- ***Customer levels of service*** (CLOS) establish the levels of service the customer is receiving.
- ***Asset (Technical) Levels of Service*** (ALOS) measure the adequacy of assets to provide customer services.

Customer Levels of Service

- Describe how customers expect to receive the service;
- Non-technical & qualitative;
- Subjective & difficult to directly measure;
- Defined by Council in concert with:
 - Asset Management Policy objectives;
 - Strategic Plan objectives &/or strategic service objectives;
 - Aspirational goals set forth by the strategic service objectives.

CLOS Example

Aspirations:
Safety, Quality, Efficiency

Service Objective:
Potable, high quality
& reliable water

CLOS:
I receive reliable,
clean water

Asset Levels of Service

- Describe the attributes of the assets required to deliver the CLOS
 - Outcome/objective oriented
 - Can be mandatory (to meet regulations) or discretionary (Council/public service desires)
 - Can be measured
- States what is necessary of the assets to:
 - Provide acceptable services to the customer
 - Control risk to CLOS at reasonable levels

ALOS Example

CLOS:

I receive reliable,
clean water

ALOS Targets

- A lifetime maximum of X breaks per km W M
- Back up power for all critical systems
- Surplus/backup capacity as required for all critical processes
- Water quality meets or exceeds regulations
- All equipment must have a condition rating of X

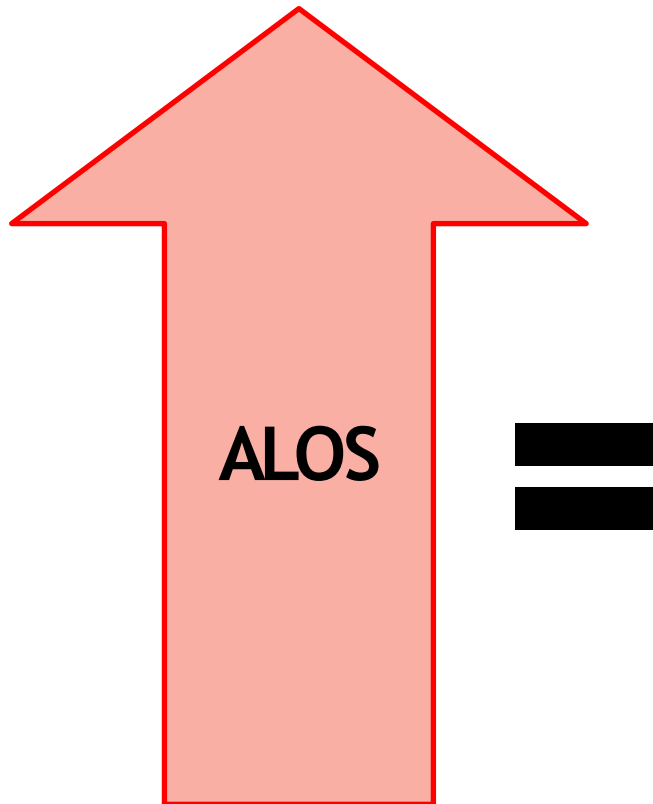
Asset Levels of Service

- Measurable attributes that reflect:
 - Health & Safety
 - Quality & Quantity
 - Efficiency & effectiveness
 - Adequacy & availability
 - Risks to & from the environment

Key Points about ALOS

1. Measuring the 'State of Infrastructure' & 'Infrastructure Gap' is relative to ALOS targets
2. Properties of each ALOS = 'SMARTS'
 - Specific
 - Measurable
 - Relevant
 - Achievable
 - Sustainable

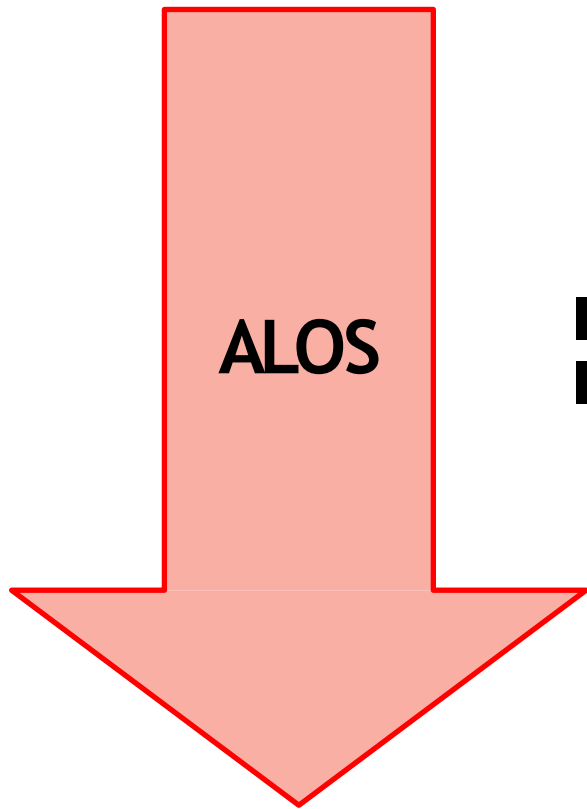
Key Points about ALOS



3. Higher ALOS

- Improves services
- Reduces risks
- More difficult to sustain
- More costly to maintain

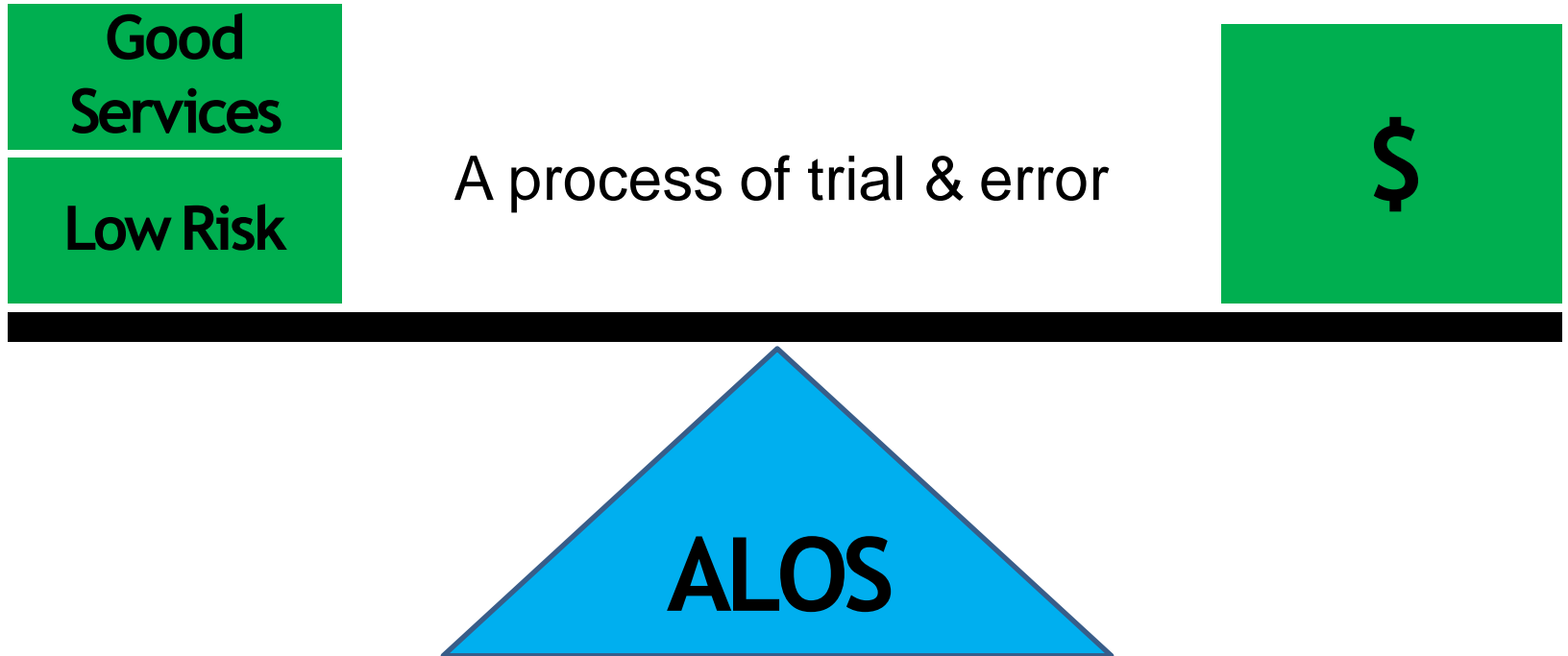
Key Points about ALOS



4. Lower ALOS

- Reduces services
- Increases risks
- Easier to sustain
- Less costly to maintain

Finding the Balance



- Start with reasonable community expectations
- What services are good, what need improvement?
- Maintain ALOS for what works, revise for what doesn't

Process to Develop ALOS



Exercise #3: Adanac Township

Step 1: Identify Service Objectives

What are Council's Service Objectives?

- Maintain Adanac as a sustainable summer destination
- Provide a safe, reliable road network for residents & visitors



Exercise #3: Adanac Township

Step 2: Identify Customer Levels of Service (CLOS)

What would customers experience from the service objectives?

1. Safe, accessible roads
2. A comfortable drive
3. Reliable driving conditions



Exercise #3: Adanac Township

Step 3: Identify the Assets

What asset groups provide the services?

- Use the asset hierarchy



Exercise #3: Adanac Township

Setting Asset Levels of Service (CLOS)

Required materials:

- Exercises 3A & 3B – Adanac Roads Levels of Service Diagram (optional printed copies provided)
- Completed Exercise 1 – Adanac Roads, Service to Asset Hierarchy
- The “Adanac Township Case Study Background”
- Asset Levels of Service Summary (printed copies provided)

Exercise #3: Adanac Township Setting Asset Levels of Service (ALOS)

- Complete the 'Adanac Roads LOS Diagrams'
 1. ID common threat to the assets
 - Refer to the foot of the tool for guidance
 2. Use the drop down list & 'Asset Levels of Service Summary' to select the most appropriate ALOS type or enter your own where indicated
 3. Assign an appropriate target/measure for the ALOS (if required)

Exercise #3: Adanac Township

Step 4: Identify the Threats

Some possible threats:

1. Pavement Failures
2. Rough driving conditions
3. Washouts/flooding
4. Structure failure & closures
5. Sewer & ditch blockages
6. Pipe collapses



Exercise #3: Adanac Township

Step 5: Identify the Asset Levels of Service (ALOS)

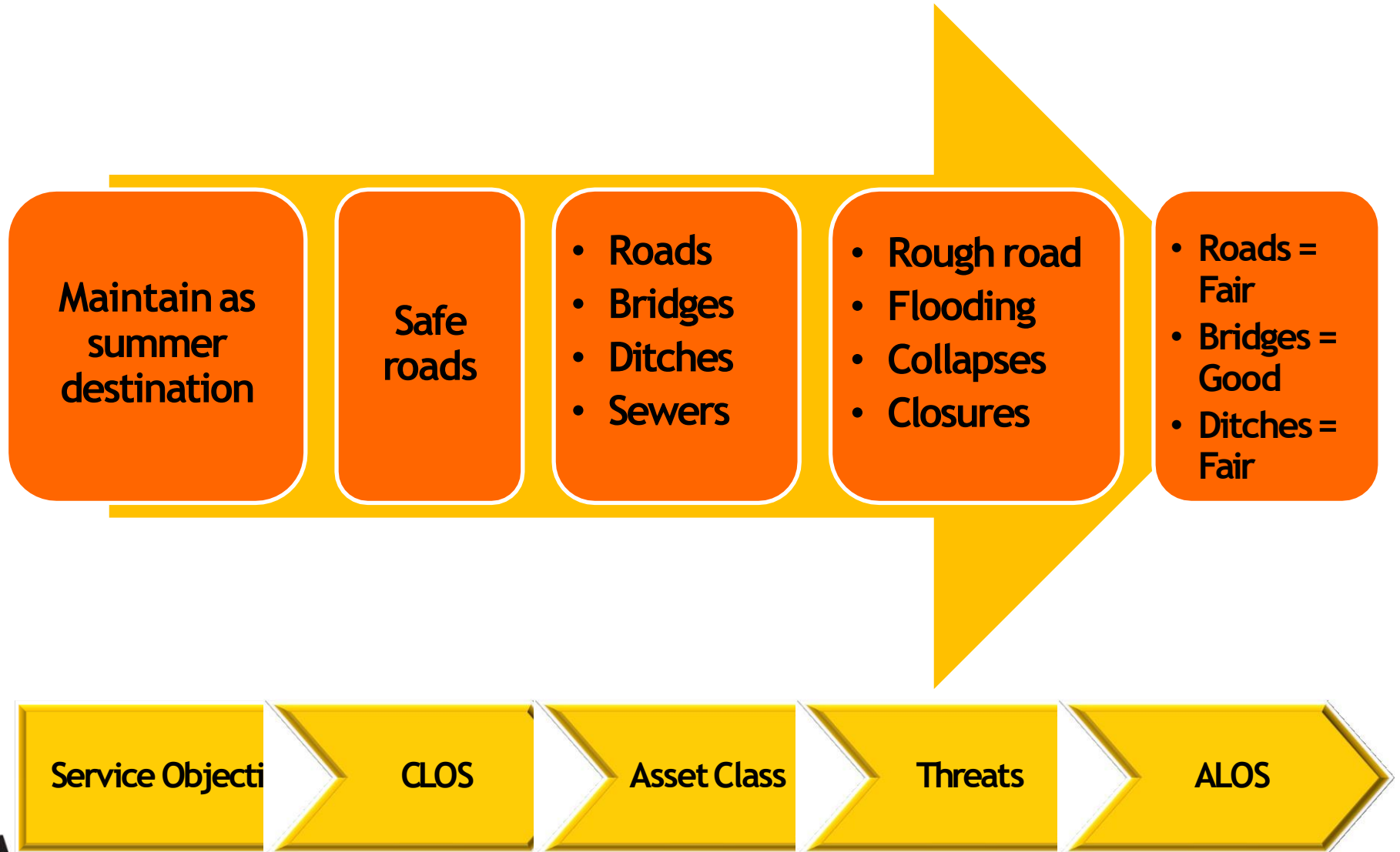
Some possible ALOS...

1. Pavement/Gravel = Fair
2. Bridges & Culverts = Good
3. Ditches & Minor culverts = Fair
4. Sewer pipes = TBD (no data)
5. Retaining Walls = Good



Summary

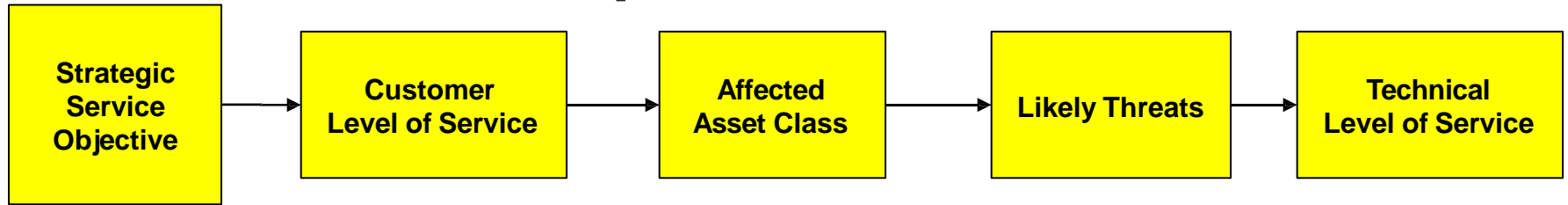
Adanac Service to Asset 'Line of Sight'



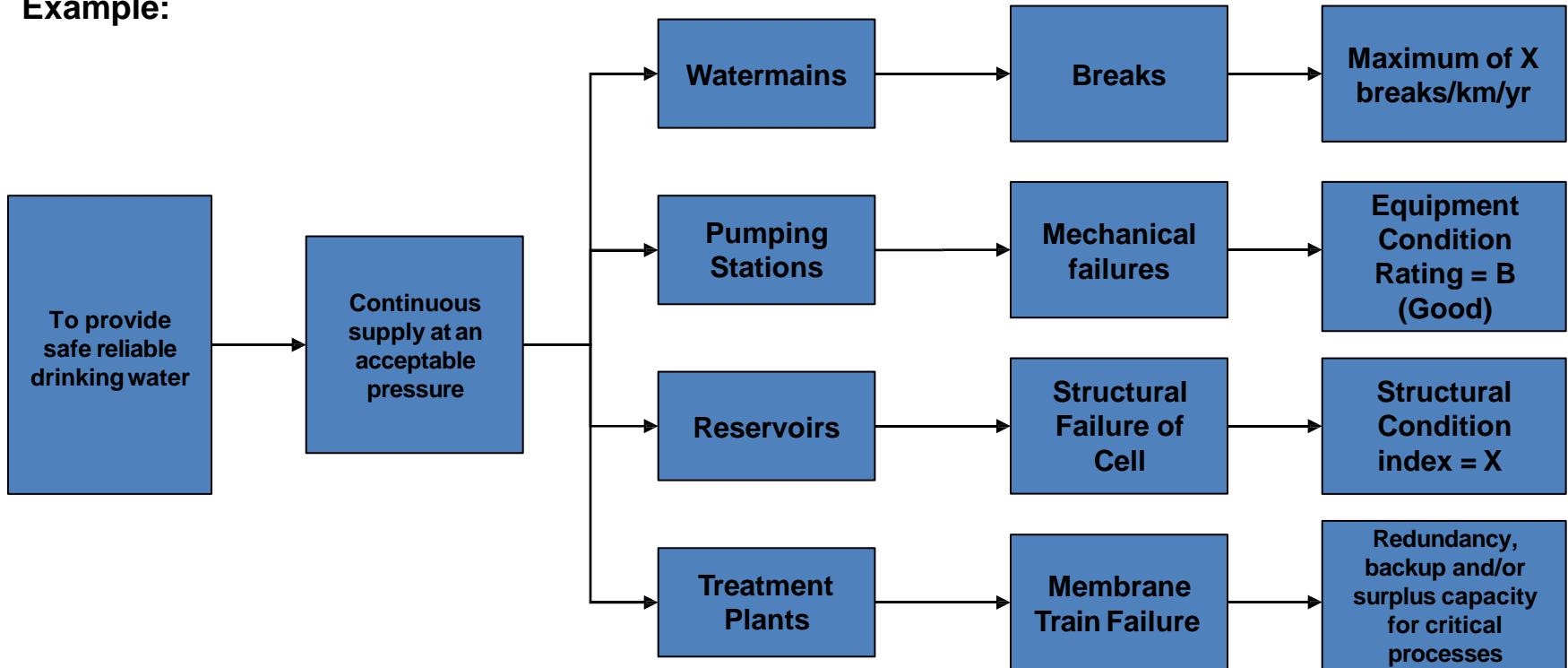
Tips for Developing LOS

- Keep the LOS simple
 - Focus on asset objectives
- Minimize the number of LOS
 - Enough to reasonably mitigate risks & measure adequacy for service delivery
 - *“Why do we need this LOS?”*
 - *“What will it tell us about the asset/service?”*
- Data are or will be available to measure the LOS
- Avoid using specific design criteria
 - Too detailed, prescriptive & numerous
 - design criteria are an input to achieving the overallALOS
- ALOS should be applicable to all assets for each asset class

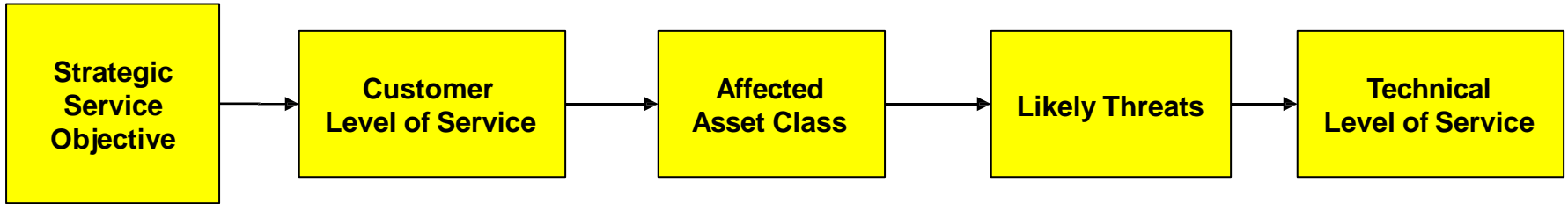
Example: Water ALOS



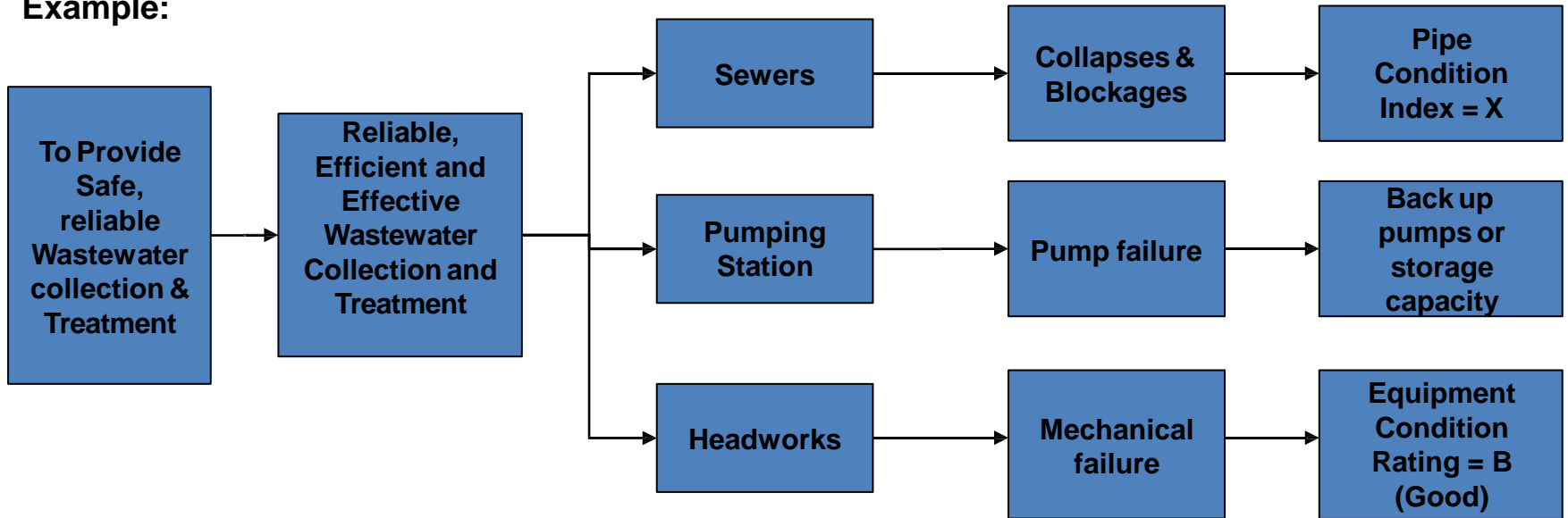
Example:



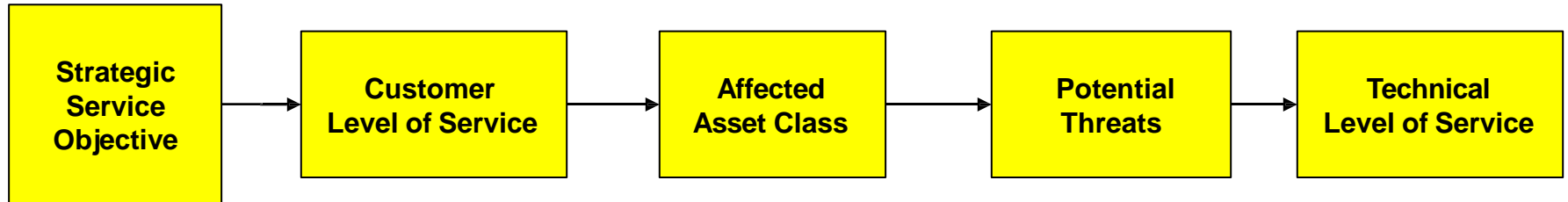
Example: Wastewater ALOS



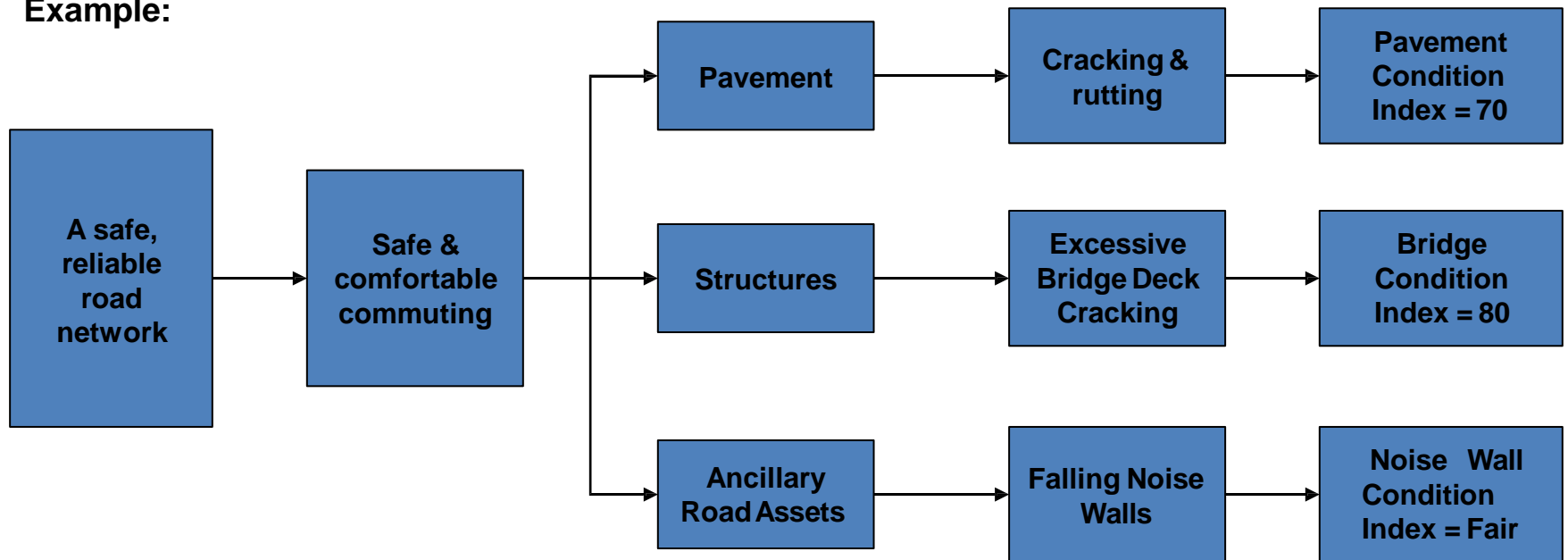
Example:



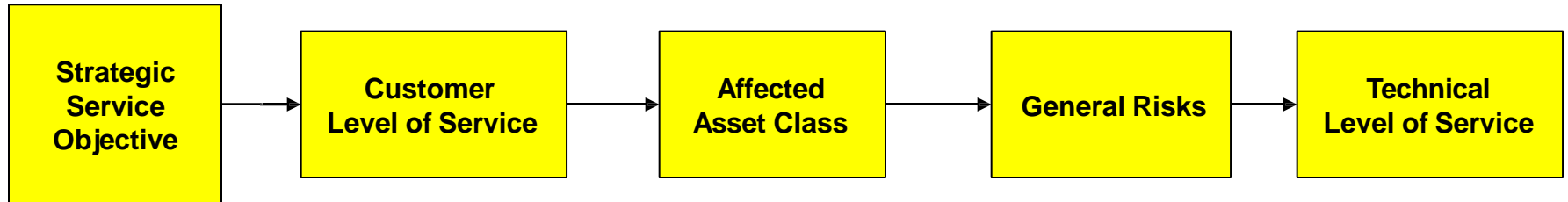
Example: Roads ALOS



Example:



Example: Building ALOS



Example:

