

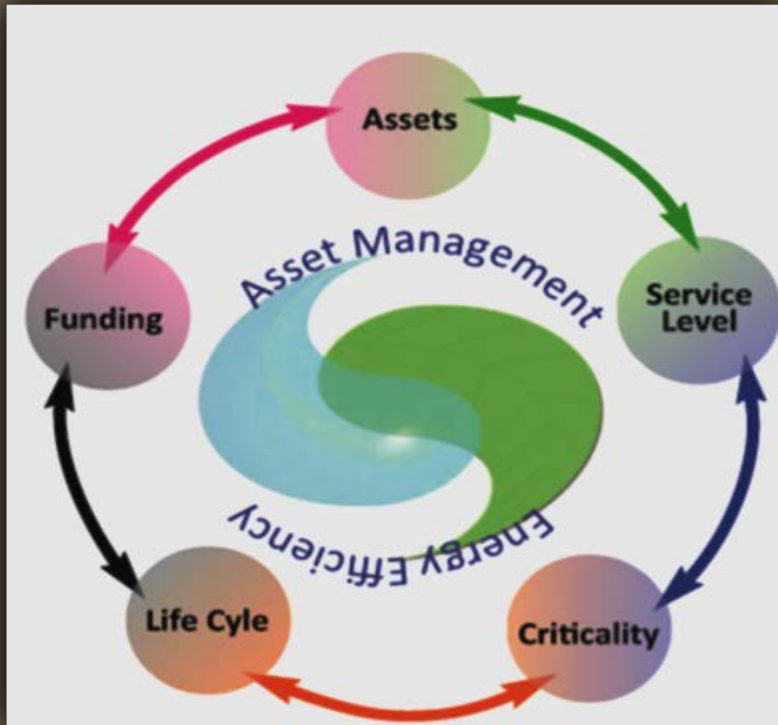
Overview of Asset Management's 5 Core Components



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THE AM THOUGHT PROCESS CONSISTS OF 5 CORE COMPONENTS



CRITICALITY
LIFE CYCLE
FUNDING
COSTING

THE AM THOUGHT PROCESS CONSISTS OF 5 CORE COMPONENTS

ASSETS

What assets do you manage, where are they, what condition are they in, and how much are they worth?

SERVICE LEVEL

What level of service do you want to provide for your customers?

FUNDING

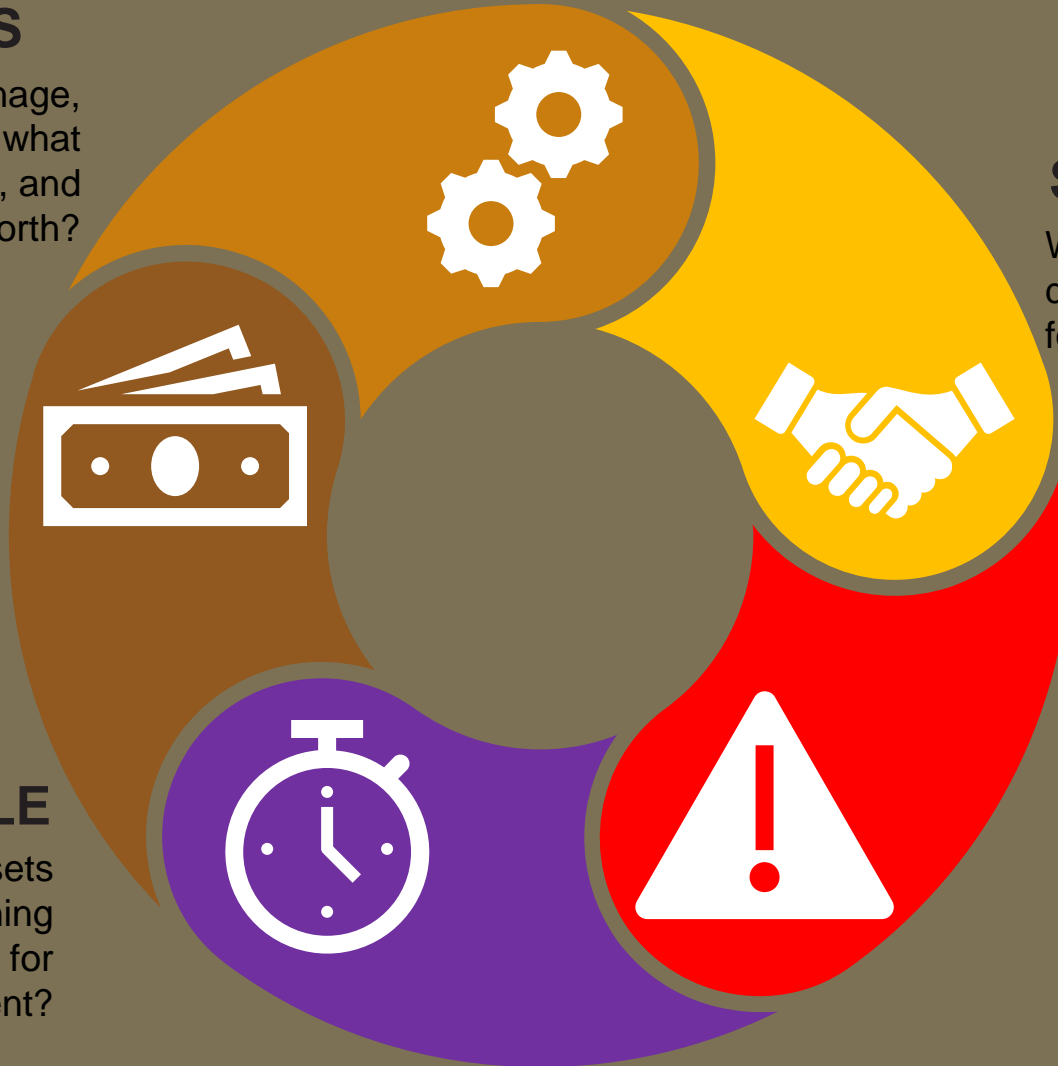
Do you have funding sources to provide the capital you need for O&M and replacement?

CRITICALITY

How important is it that specific assets keep functioning?

LIFE CYCLE

How long will your assets last? Are you maintaining them and preparing for replacement?



CURRENT STATE OF THE ASSETS



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WHAT ASSETS DO YOU OWN?

The Village of Bosque Farms Water Supply System

Pipe Inventory
 Line Style
 --- 1800
 --- 1600
 --- 1400
 --- 1200
 --- 1000
 --- 800

Wells and Tanks
 Type
 ● EXISTING WATER TANK
 ● EXISTING WATER WELL
 □ WATER PRODUCTION FACILITY

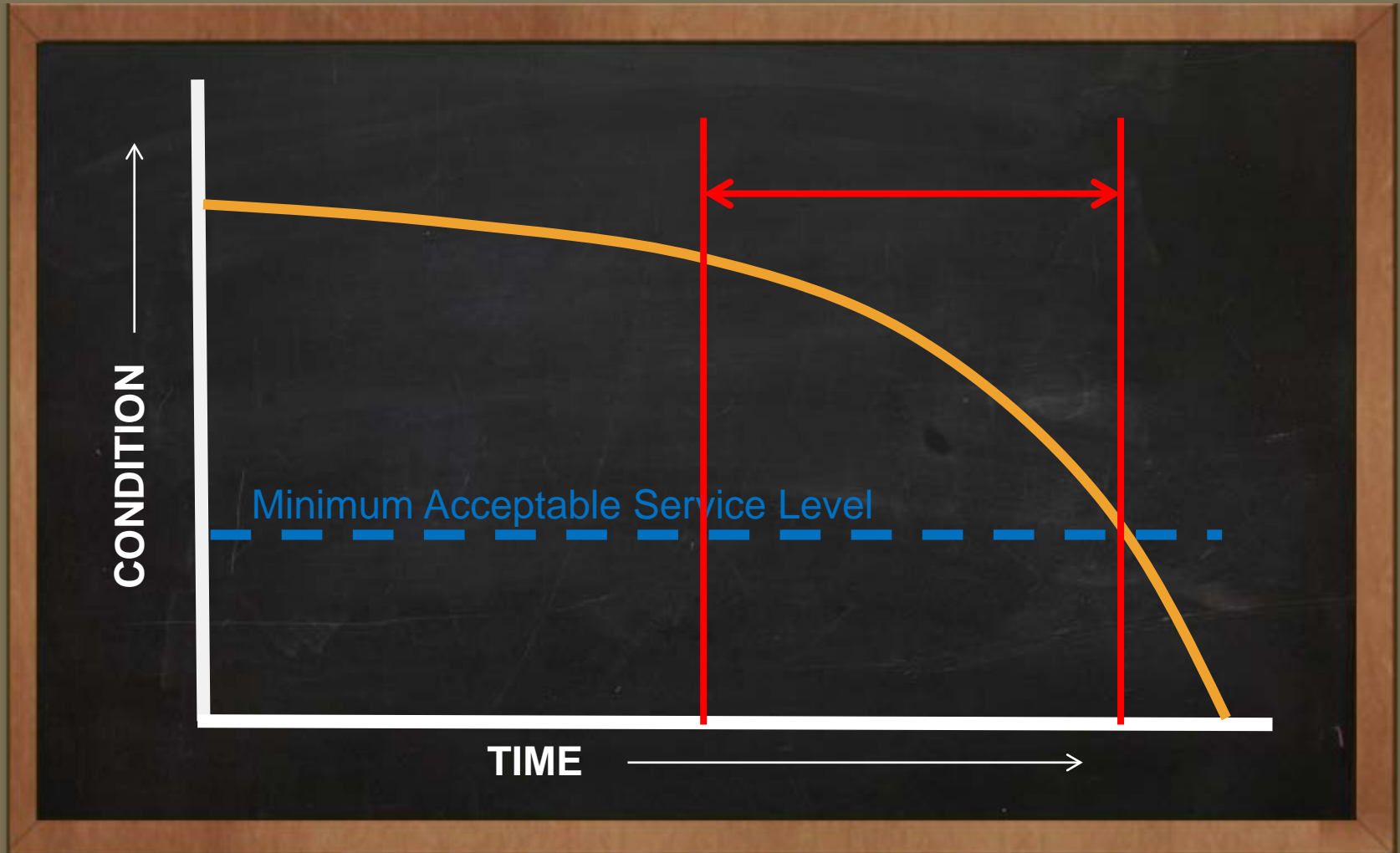
Source: Bosque Farms, NM





**WHAT
CONDITION
ARE THEY
IN?**

WHAT IS THEIR REMAINING USEFUL LIFE?



WHAT IS THEIR REPLACEMENT VALUE?



LEVEL OF SERVICE



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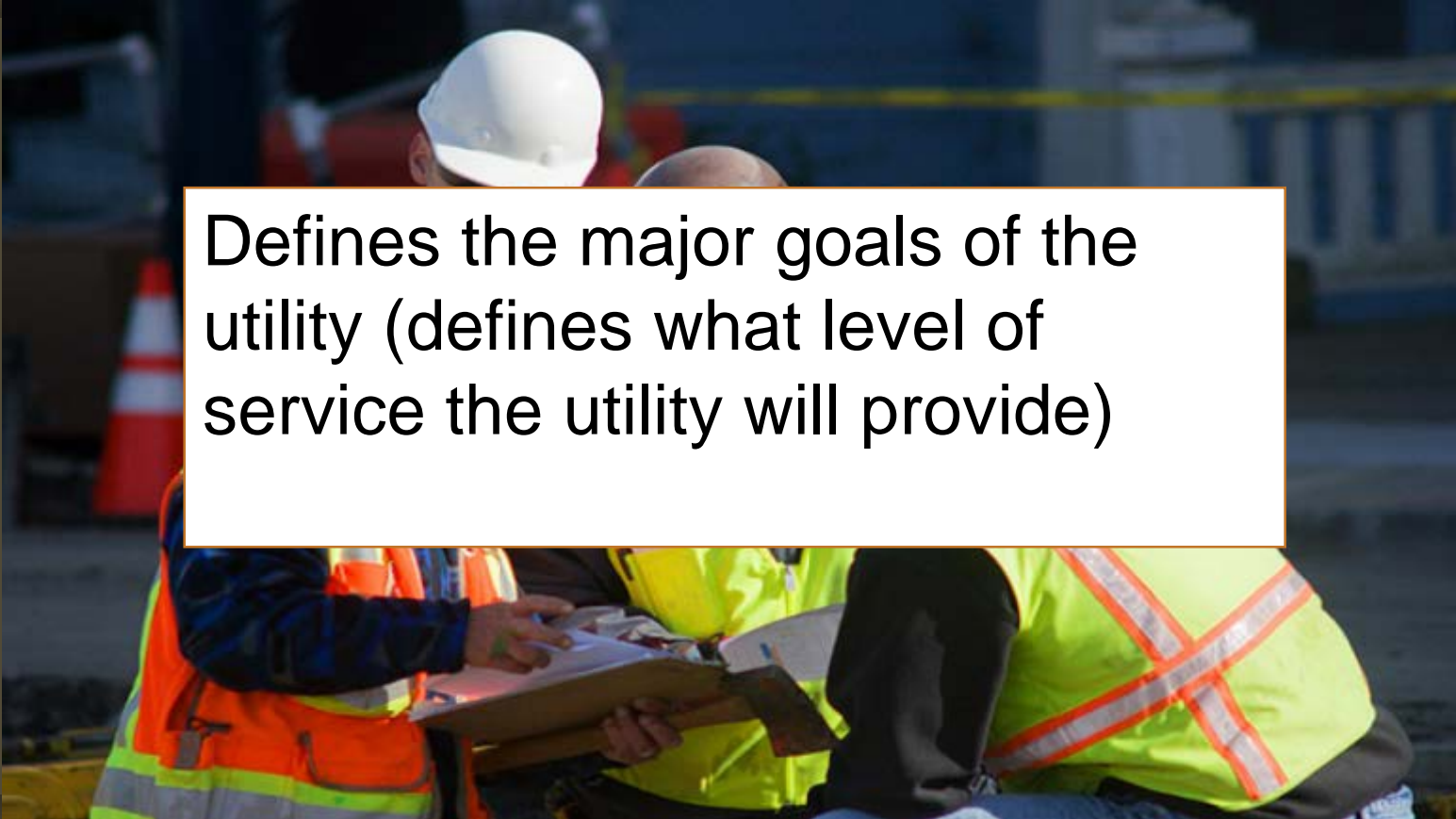
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WATER UTILITIES ARE FIRST AND FOREMOST CUSTOMER SERVICE BUSINESSES



SO IT'S ALL ABOUT THE CUSTOMERS

CUSTOMER SERVICE IN ASSET MANAGEMENT TERMS

A photograph of two construction workers wearing hard hats and high-visibility safety vests. They are standing on a construction site, looking down at a set of plans or documents that one of them is holding. The background is slightly blurred, showing more of the construction area with some equipment and safety barriers.

Defines the major goals of the utility (defines what level of service the utility will provide)

CALLED LEVEL OF SERVICE

LEVEL OF SERVICE IS A CHANCE TO



What's really important

HAVE A CONVERSATION WITH CUSTOMERS


UNDERSTANDING OF COSTS



Service and
cost are related

higher levels of service = higher costs
lower levels of service = lower costs

Goals



1. _____

2. _____

3. _____

SETTING SMART GOALS



ONE MORE ACRONYM.....KISS

“Everything should be made as simple as possible, but not simpler.”

Albert Einstein



Keep it Simple and Sustainable

WRITTEN GOALS CHANGE YOUR OPERATION



GOALS ARE NOT SET IN STONE

**GOALS
CAN BE
CHANGED**



**GOALS
CAN BE
ADDED OR
REMOVED**

**OR
ADJUSTED
OVER
TIME**

CRITICALITY



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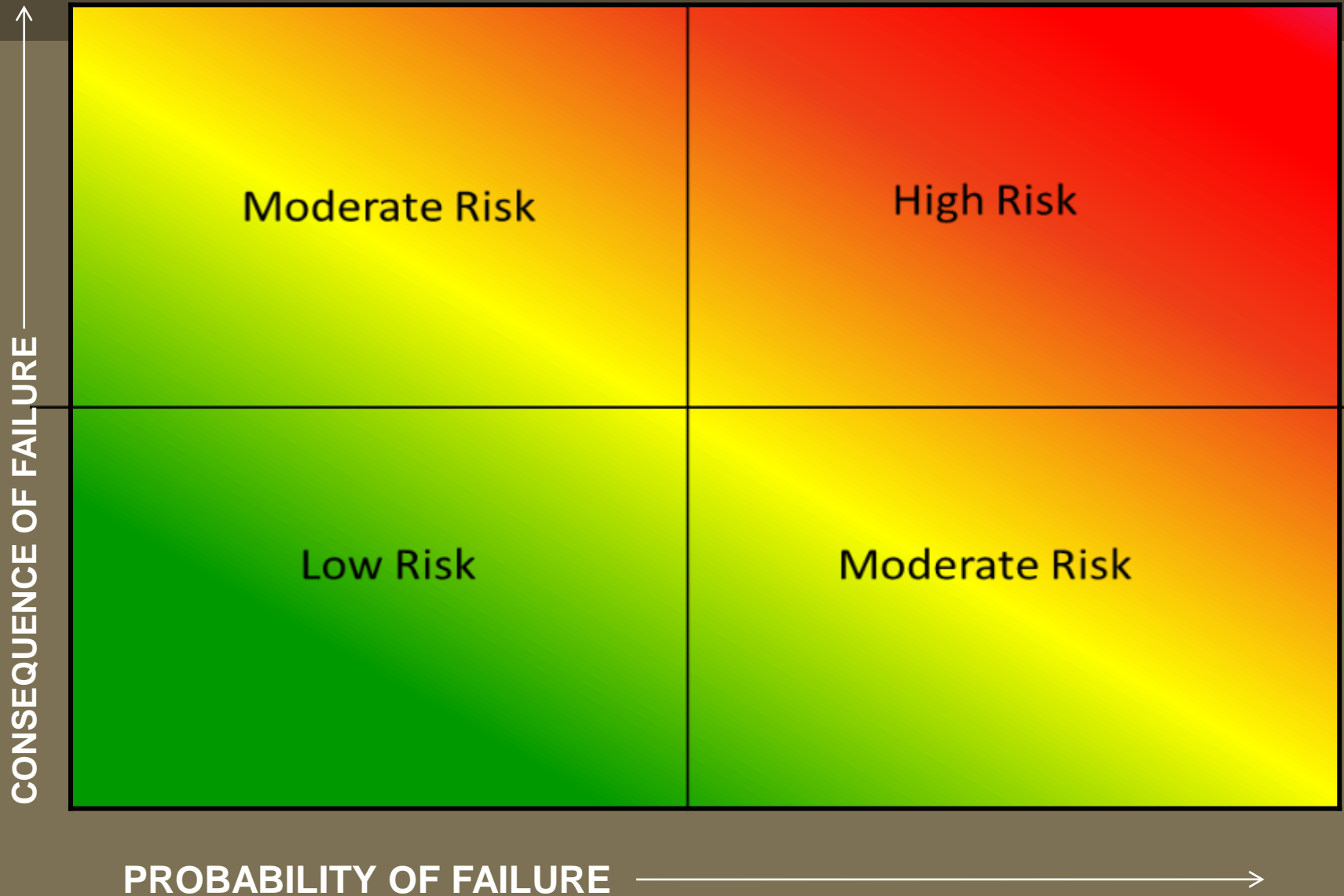


What is the likelihood that an asset will fail?

What is the consequence if the asset does fail?



ASSET RISK



CALCULATING CRITICALITY

POF = PROBABILITY OF FAILURE

COF= COST OF FAILURE

Redundancy Factor = RF

Criticality = POF X COF X RF

WAYS TO REDUCE RISK

Routine &
Preventative
Maintenance

Redundancy

Spare Parts

Specialized
Training

Replace
Assets Early

Monitoring

CRITICALITY CHANGES

- ✓ **CRITICALITY IS NOT STATIC**
- ✓ **EACH DAY CRITICALITY CHANGES SLIGHTLY**
- ✓ **NEED TO REASSESS CRITICALITY AT LEAST EVERY YEAR IF NOT SOONER**
- ✓ **REASSESS WHEN MAJOR CHANGES ARE MADE (UPGRADES, REPLACEMENTS, MAJOR CONSTRUCTION, REHABILITATION, REDUNDANCY ADDED)**

Life Cycle Costing



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CAPITAL COSTS ONLY



VS. LIFE CYCLE COSTS



MANAGEMENT



O&M



Rehab



Repairs

COSTS OVER ENTIRE LIFE

Capital
Cost

Impact on what you choose to do?

Life
Cycle
Cost

An Example

**ADDITIONAL
MAINTENANCE,
REPAIR AND REHAB
TO FORESTALL
REPLACEMENT**

- Initial Cost = 100,000
- O&M per Year = 2,000
- Repair Costs = 30,000
- Rehab = 60,000
- Life of Asset = 30

**30 YEAR
HORIZON**

**TOTAL COST
\$250,000**

**DEFERRED
MAINTENANCE;
REPLACE MORE
OFTEN**

- Initial Cost = 90,000
- O&M Per Year = 500
- Repair Costs = 5,000
- Rehab = 0
- Life of Asset = 10

**30 YEAR
HORIZON**

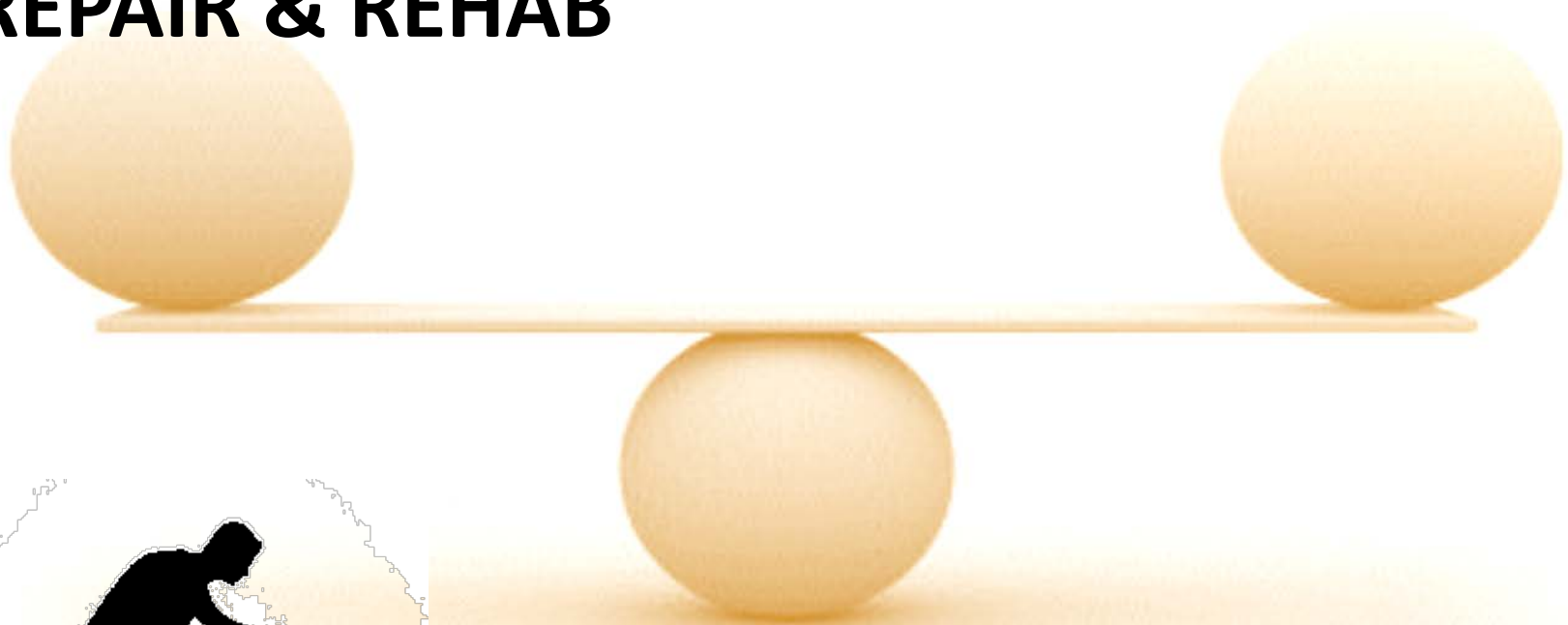
**TOTAL COST
\$300,000**

Life Cycle Costing is About Balance

O&M

REPAIR & REHAB

REPLACEMENT



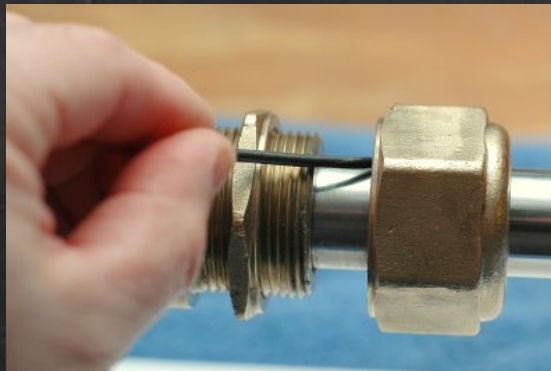
MAINTENANCE ACTIVITIES



ROUTINE



PREDICTIVE



PREVENTATIVE

CAPITAL ACTIVITIES



HOW TO DECIDE WHEN TO REPAIR, REHABILITATE, REPLACE

BASED ON
ECONOMICS



BASED ON
RISK



BASED ON
AVAILABLE
TECHNOLOGY



☒ NOW
☐ LATER

CAPITAL PROJECTS



LOOK CAREFULLY AT HIGH DOLLAR PROJECTS

Long Term Funding Strategies



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WHAT ARE YOUR FUNDING NEEDS?

**DAY TO DAY EXPENSES?
(O&M)**

**CAPITAL EXPENDITURES
(LONG TERM EXPENSES)**

WHERE WILL THE MONEY COME FROM?

O&M – GENERAL FUNDS, OTHER FUNDS, RATES, FEES, PENALTIES

CAPITAL PROJECTS – SYSTEM FUNDS AND/OR OUTSIDE FUNDING (GRANTS, LOANS)

Develop your funding story
Based on data and information



WHY DO YOU NEED THE
FUNDING? WHAT IS THE BENEFIT?

WHAT IS THE RISK IF YOU DON'T
GET THE MONEY? NEED
SPECIFICS

SOME THOUGHTS

It's better to walk on the right
road than run on the wrong one

SOME THOUGHTS

Asset Management is best done
by the people who own, manage,
and operate the assets

SOME THOUGHTS

Efficient management of assets
is necessary to be good
stewards of the public assets