“Benchmarking/Cost Savings Justified by Asset Management”

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Organizational Process Benchmarking

Enabling Business and Customer Value through better Asset Management

World’s largest process benchmarking project (44 participants/cross industry), mapping to ISO 55000 and EUM:

- An asset/utility management maturity assessment
- Understanding of leading-edge practice across the lifecycle
- Peer networks with other organisations internationally
Global Benchmarking Participation

Toho
Portland Water
DC Water
MCES
Albuquerque
Rancho (California)
Montgomery County (Ohio)
Region of Peel
Region of York
Los Angeles Sanitation District
Vancouver, Washington
Process Overview

Focus Areas:
• Strategy & Planning
• Finance & Decision-Making
• Life Cycle Delivery
• Information & Systems
• Organization & People
• Risk & Resilience

➤ Assessment
➤ Networking
➤ Improvement
Value proposition for Utilities

✓ **Demonstrate** to customers and regulators that businesses are effective and efficient.

✓ **Continuous improvement** via practices, metrics and safety performance; target-setting, improvement initiatives and linkages to organizational strategic plans.

✓ **Peer collaboration and learning**, particularly leading practices and consortium benchmarking; networking with leading practitioners nationally and internationally.

✓ **Integration** with major industry programs such as **ISO 55000** and other standards.

✓ **Achieving cost savings**: application of improved practices can lead organizations to between 10% and 30% Capex and Opex savings.
Details of the assessment structure

• Designed to examine the process capability and execution which underpins outcomes
• Evaluates business processes across 7 key functions
Rigorous hierarchy of questions and scoring

- 7 Functions
- 49 Processes
- 203 Sub Processes
- 553 Measures

Details:
- Process Development
- Process Documentation
- Process Coverage & Frequency
- Process Effectiveness

Flow:
- Capability
- Execution
- Score

Constraints
Example Results

Processes

Functions
Leading Practice Workshop

- **ActewAGL (Australia):** Automating asset-specific plans and renewals timing
- **Albuquerque Bernalillo County Water Utility Authority:** Customer Engagement; Managing performance
- **City of Vancouver, Washington:** Operations and maintenance contracting; Using business case evaluations
- **DC Water and Sewer Authority:** Innovation program; Linking strategic planning to process improvement
- **Los Angeles Sanitation:** CIP development; [One Water](#); Resource recovery management
- **Metropolitan Council Environmental Services:** Employee engagement; Integrated water planning
- **Portland Water Bureau:** Collaboration conduit; Managing the risk of asset failure
- **Rancho California Water District:** MyWaterTracker; Asset Management Plan (AMP) framework and AMP groundwater production wells
- **Region of Peel:** Drinking water quality management system; Policies, risk, strategy, strategic asset management plans
- **Sydney Water:** Operational optimization using BI and data analytics
- **Toho Water Authority:** Asset acquisition, testing and acceptance processes; Workforce management, processes and procedures
- **Yarra Valley Water:** Determination of acceptable levels of service to customers
MCES by the numbers

- 7 Wastewater treatment plants
- 1 Water Reclamation Plant (recharge)
- 370 MGD capacity (250mgd average)
- 109 communities/2.7 million residents
- 850 industrial customers
- Over 30K assets throughout the system*
- 600 miles of pipes (up to 14’ dia)
- 62 lift stations
- 206 metering sites
- $7.4 billion in infrastructure
- $140 million in capital renewal annually
We deliver services of value to communities and the region, guided by our customer’s expectations.

- Meet Customer LOS at lowest lifecycle cost.
- Higher Rate increases in recent budget cycles
- Uncertain asset data in system
- Optimize system reliability
- Aging infrastructure
- Asset Lifecycle Management
- Changing regulatory expectations
- Workforce knowledge transfer
- Operational certainty

Balancing Conflicting Drivers

Throughout the Asset Life Cycle

Metropolitan Council Environmental Services

Identify Need | Design for Reliability | Construct | Commission/Transition to O&M | Operate & Maintain | Dispose
AMCV Project
Comparative Benchmarking Areas

Organizational Management

1. Organizational Management
2. Asset Capability Planning
3. Asset Acquisition
4. Asset Operation
5. Asset Maintenance
6. Asset Renewal

Support Applications

7.
AMCV Project
Recommended Initiatives

1. Risk Management
2. Customer LOS
3. Communications Plan
4. Data Analysis and Decision Making

5. Asset Management Plans
6. Technology Planning and Integration
7. Performance Management
8. Resource Requirements And Allocation

9. Staff Development and Training
10. CIP Development and Implementation
11. Improved Business Processes
12. Operational Efficiency and Effectiveness
AMCV Project
Recommended Initiatives Mapped to AM Roadmap

Through 2016

- Strategic Plan and Visioning
- WSAA Benchmarking
- Create AM Function/Group
- Charter AM Steering Team
- Develop AM Policy
- Define Customer Levels of Service
- Charter SMB Facility Team
- Draft SMB Facility AM Plan
- Peer Exchanges/Collaborations
- CRL Training, Certifications
- Pilot Projects (RCM, Criticality Analysis)

2016 - 2017

- Develop AM System
- Strategic AM Plan
- Charter 6 more Facility Teams
- Draft Facility AM Plans
- Charter EAM Steering Committee
- Map Business Processes
- Launch IAM MN Branch
- AM, Reliability Training
- Operational Efficiency Pilot Project
- O&M Planning & Scheduling

2017 - 2018

- Develop Risk Management Plan
- Develop Long Range Financial Plan
- Develop CIP Planning Process
- Develop Technology Plan
- 5 year AM Roadmap & Implementation Plan:
  - Asset Life-Cycle Costing Plan
  - Maintenance Plan
  - Reliability Plan
  - Skills Development Plan
  - Data Integrity Plan
  - Warehouse, Spares Management

2018 - 2022 & beyond

- Implement Developed Plans
- Re-Benchmark (WSAA)
- Continuous Improvement Loop (Plan - Do - Check - Act)
- Revise Plans as Needed
- Revise Processes as Needed
Cross Functional Benchmarking Wins

- Clarity across the organization of business drivers and needs
- AM Plan has Line of Sight and Alignment with Mission, Vision and Values
- Cross functional collaboration embedding into our culture
- Integrated Business Planning, not in separate silos
- Implementing AM initiatives allowed accurate facility budgeting plans with a resulting < 4% rate increases over next 5 years.
- Accurate asset lifecycle data = accurate capital renewal budgeting