UTILITY MANAGEMENT

Effective Utility Management

The Ten Attributes of Effective Utility Management

Quick Facts

- The U.S. EPA and other organizations developed a framework to meet the challenge of effectively managing water utilities
- WRF created a benchmarking tool that identifies performance metrics and practice areas
- By engaging in the benchmarking exercises, water utilities can determine specific opportunities to reach target performance goals

Overview

Organizations representing North American water and wastewater utilities have long been aware of the challenges utilities face. The U.S. Environmental Protection Agency and six North American water and wastewater organizations formed the Effective Utility Management (EUM) Collaborating Organizations in 2007 to collaborate and promote EUM. Together with a Utility Advisory Group, the organizations produced a report, *Effective Utility Management: A Primer for Water and Wastewater Utilities*, that identifies ten key effective management attributes (EPA 2008). The attributes represent desired outcomes applicable to all water and wastewater utilities.

In 2015, the Effective Utility Management Steering Group, representing the EPA and six North American water and

wastewater organizations that had originally collaborated on the EUM development, re-convened to review the EUM attributes in the context of the changes that have been occurring in the water sector since the original 2007 effort. The steering group identified some key changes including:

- Accelerated adoption of automated and smart systems and data integration.
- Growing climate variability and extremes.
- Enhanced customer expectations and public awareness.
- Expanded challenges associated with employee recruitment and retention.
- Increased focus on resource recovery.

Water Research Foundation®

advancing the science of water

> **Through developing the ten attributes, a water utility uses a structured framework to achieve performance excellence.**

- Continued regulatory requirements and operating condition changes.
- Greater consideration of stormwater and watershed management.

Acknowledging the changes, some modification were recommended in the attributes, including recognizing stormwater effluent and recovered resources in the Product Quality attribute; re-naming the Infrastructure Stability attribute to Infrastructure Strategy and Performance; re-naming the Operational Resiliency attribute to Enterprise Resiliency; and re-naming the Water Resource Adequacy attribute to Water Resource Sustainability.

To further support utilities in developing the ten attributes, the Water Research Foundation developed a Benchmarking Tool as outlined in *Performance Benchmarking for Effectively Managed Water Utilities*. The tool gives utilities the ability to conduct self-assessments of the ten attributes at a level of detail to identify priority areas for improvement. The practice areas in the tool emerged from a literature review and a survey of participating utilities. The tool explicitly identifies the practice areas that support the ten attributes, and identifies a structured process to weigh attributes and practices, then score and guide strategy development to achieve performance excellence (Matichich et al. 2014)

Benchmarking Tool Framework: Attributes And Practice Areas

1. Product Quality
   - Comply with regulatory and reliability requirements
   - Address customer needs
   - Address public health and ecological needs
2. Customer Satisfaction
   - Minimize customer complaints
   - Achieve target level of customer service delivery
   - Receive positive customer perceptions
   - Efficiently deliver customer service
3. Employee And Leadership Development
   - Recruit appropriate talent
   - Retain existing talent
   - Address succession planning needs
   - Strengthen core competencies
4. Operational Optimization
   - Provide for ongoing operational improvements
   - Minimize resource use and losses from day-to-day operations
5. Financial Viability
   - Develop sound financial plan
   - Provide financial integrity
   - Achieve budget management effectiveness
6. Infrastructure Strategy and Performance
   - Develop and implement an Asset Management Program
   - Maintain knowledge of assets and costs
   - Incorporate risk-based analysis into decisions
7. Enterprise Resiliency
   - Incorporate risk assessments into decision-making
   - Implement risk mitigation
   - Sustain employee resiliency
8. Community Sustainability
   - Utility organization
   - Infrastructure project sustainability
   - Natural environment
   - Economic strength
   - Social equity
9. Water Resource Sustainability
   - Achieve water supply adequacy
   - Optimize reduction of non-revenue water
   - Implement water conservation
   - Achieve water supply reliability
10. Stakeholder Understanding And Support
    - Stakeholder identification
    - Stakeholder engagement plan
    - Oversight body engagement strategy
    - Media interaction program
    - Stakeholder support performance measurement system

Source: Matichich et al. 2014

The benchmarking tool helps water utilities better understand their current performance and identify gaps between their performance and goals. This information can lead to a dialogue among staff regarding strategies and opportunities to reach target performance goals.

WRF Knowledge Portals provide further information to aid water utilities in developing the ten attributes for effective utility management. ⬡

References

EPA (U.S. Environmental Protection Agency). 2008. Effective Utility Management: A Primer for Water and Wastewater Utilities. http://nepis.epa.gov/Exe/ZyPDF. cgi/P10053BJ.PDF.

Matichich, M., Y. J. Hasit, F. Yeager, J. Englesmith, L. Paralez, W. Francisco, and R. Greenwood. 2014. Performance Benchmarking for Effectively Managed Water Utilities. Project #4313. Denver, Colo.: Water Research Foundation.

Last updated Juy 2016