

# ASSET MANAGEMENT IN THE WATER SECTOR: MEASUREMENT AND IMPROVEMENT OF ORGANIZATIONAL CAPABILITY AND PERFORMANCE

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**Introduction.** Asset management and its processes can be defined as the "systematic and coordinated activities and practices through which an organization optimally manages its physical assets, and their associated performance, risks and expenditures over their lifecycle for the purpose of achieving its organizational strategic plan".

**Materials and methods.** An Asset Management Capability Maturity Model (AM-CMM) was developed as a vehicle for benchmarking, implementing and improving processes of asset management in water utilities. The Capability Maturity Model was designed to formally and systemically capture and evaluate asset management activities, practices and processes in water utilities. Over the last 36 months, the asset management framework was distributed to water utilities in North America, Europe and Eurasia and feedback on the framework solicited through surveys and interviews.

**Results and discussion.** In this study it was found that organizations that operate an asset management system often have processes in place to introduce, implement and operate an asset management system that has integral components for:

- setting operational requirements for assets;
- deriving accurate condition, risk and reliability criteria that define "acceptable system safety";
- Condition and risk assessment as well as a prioritization rationale for asset investments and maintenance;
- engineering specification, e.g. technical reliability, materials;
- the design of operational processes and procedures; and
- the design of incident detection and response procedures.

**Conclusions.** The core value of the model is that it enables organizations to establish their current level of maturity for each of the particular asset management processes, and to identify what steps are necessary to enable the organization to progress to a higher level, building on their strengths and improving on their weaknesses. The model may also be used for benchmarking purposes, enabling organizations to compare themselves against other organizations in the water sector.

## References.

1. British Standards Institute, 2008, Publicly Available Specification 55 PAS 55-1:2008