

On the Management of an Asset Management System

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Agenda

- A. Introduction
- B. ISO 55001 on Asset management – Management systems
- C. Related Standards of ISO, ISO/IEC and CEN
- D. PAS 55 on Asset Management
- E. Rules of Water and Gas Industry (DVGW, ÖVGW, SVGW)
- F. Relations between these Standards and Rules
- G. Options for Action for Gas and Water Industry

A. Introduction

- A **Management System Standard (MSS)** for **Asset Management** describes, how the Asset Management is organized and managed
- **ISO 55001** is on “Asset management – Management systems – Requirement”
- ISO Management System Standards with similar formal structure
 - Quality management ISO 9000 family
 - Environmental management ISO 14000 family
 - Energy management ISO 50001 etc.

B. ISO 55001

- target staff: Top Management
- for any assets, mainly for physical assets
- deals with asset portfolios, not with assets itself
- describes link - if contently necessary - to “Technical Asset Management” (TAM)

- life-cycle-oriented
- improvement-oriented (“plan – do – check – act”)
- stakeholder-oriented
- emphasizes commitment of management and risk awareness

ISO 55001

- A family
 - ISO 55001 sets out the requirements of an asset management system
“Asset Management – Management systems – Requirements”
 - ISO 55000 gives an overview of the subject and sets out principles and terminology
“Asset management – Overview, principles and terminology”
 - ISO 55002 provides additional useful guidance for applying ISO 55001
“Asset Management – Management Systems – Guidelines for the application of ISO 55001”

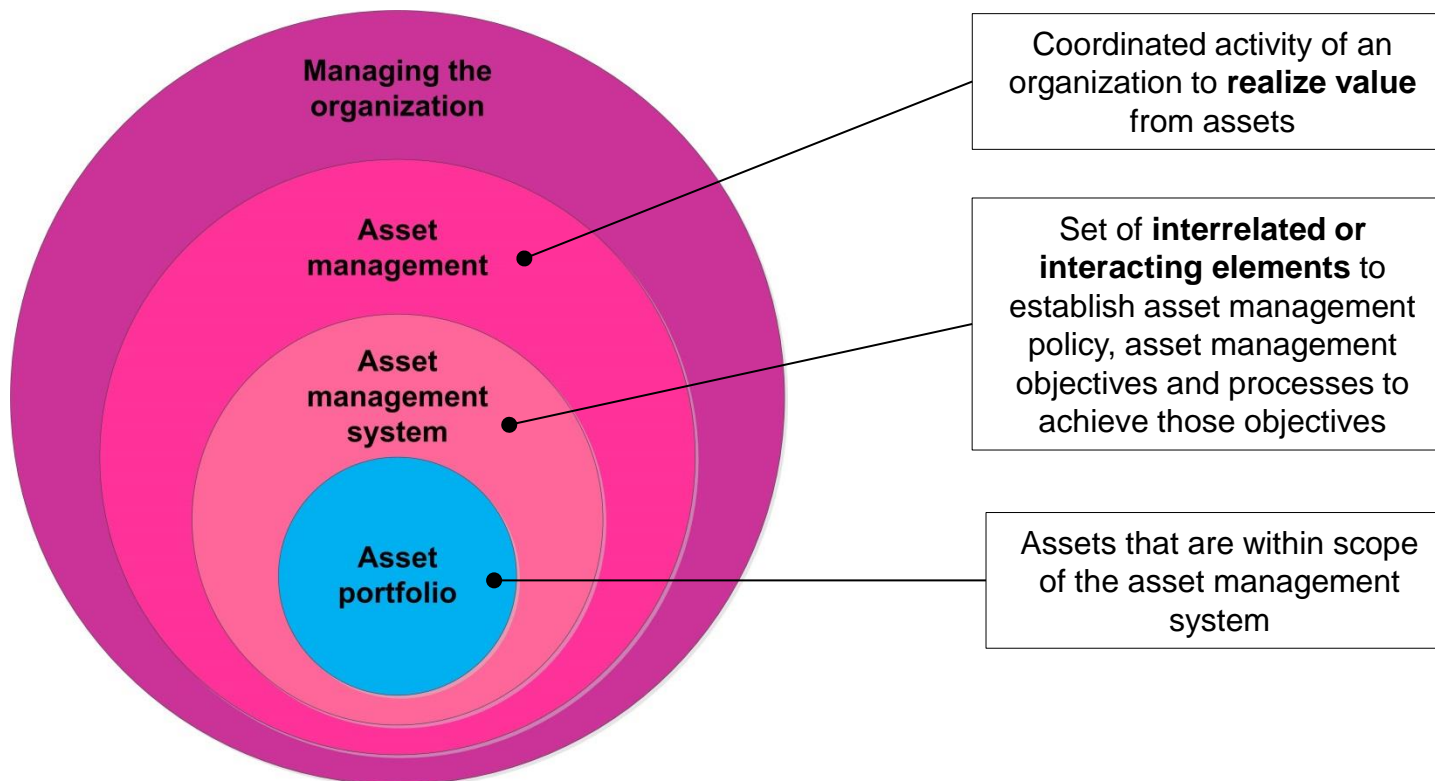
ISO 55001

- structure follows ISO Guides for Management System Standards
 - > “the integrated use of management system standards”
 - eliminating redundancies
 - establishing consistency
 - optimizing processes and resources
 - consolidating assessments
 - reducing maintenance of the management system
 - improving decision making
- integration with quality and environmental management

ISO 55001 - content

- Scope
- Normative reference
- Terms and definitions
- Context of the organization
- Leadership
- Planning
- Support
- Operation
- Performance evaluation
- Improvement

Relationship between key terms

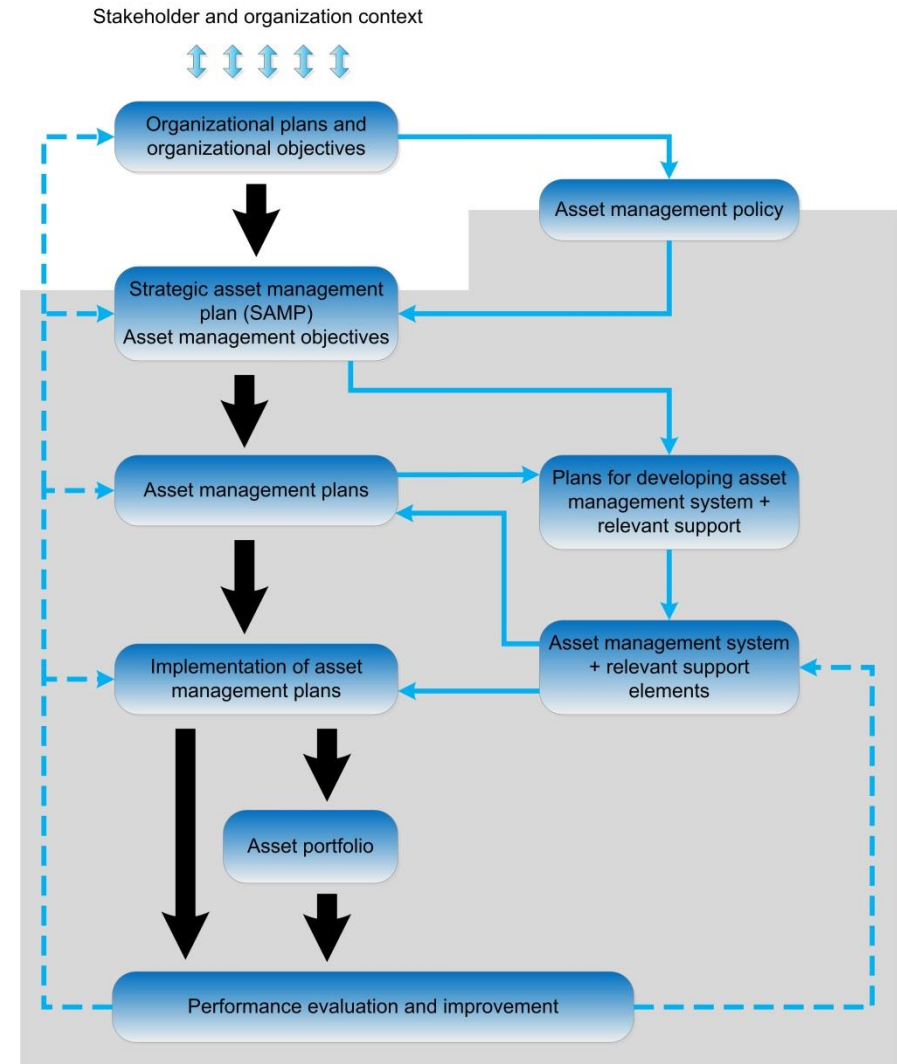


source: ISO 55000

Relationship between key elements of an asset management system

NOTE: The gray highlighted box designates the boundary of the asset management system

source: ISO 55000



C. Related Standards of ISO, ISO/IEC and CEN

- Standards
 - ISO/IEC 15288 on «System and software engineering – System life cycle process»
- Drafts
 - IEC on «IEC Application Guide – Dependability and Financing Processes for Implementing ISO 55001»
 - CEN with prEN 16646 on «Maintenance – Maintenance within physical asset management»
 - ISO with ISO/NWI 24516 on «Guidelines for Management of Assets of water supply and wastewater systems» (TAM)
- Drafts of IEC and CEN are criticized

DRAFT ISO/NWI 24516

«Guidelines for Management of Assets of water supply and wastewater systems»

- Part 1 “Drinking water distribution networks” (24516-1)
- Part 2 “Drinking water plants including treatment, pumping and storage (also in the network)” (24516-2)
- Target staff: AM-Team and operation
- deals with assets (ISO 5500x deals with asset portfolios)
- Interface with ISO 55001:
 - Asset management plan
 - not: Asset Values etc.

D. PAS 55 Asset Management

- Publicly Available Standard (PAS)
- Institute of Asset Management (IAM) with British Standards Institution (BSI). 2004
- Part 1: Specification for the optimized management of physical assets
- Part 2: Guidelines for the application of PAS 55-1

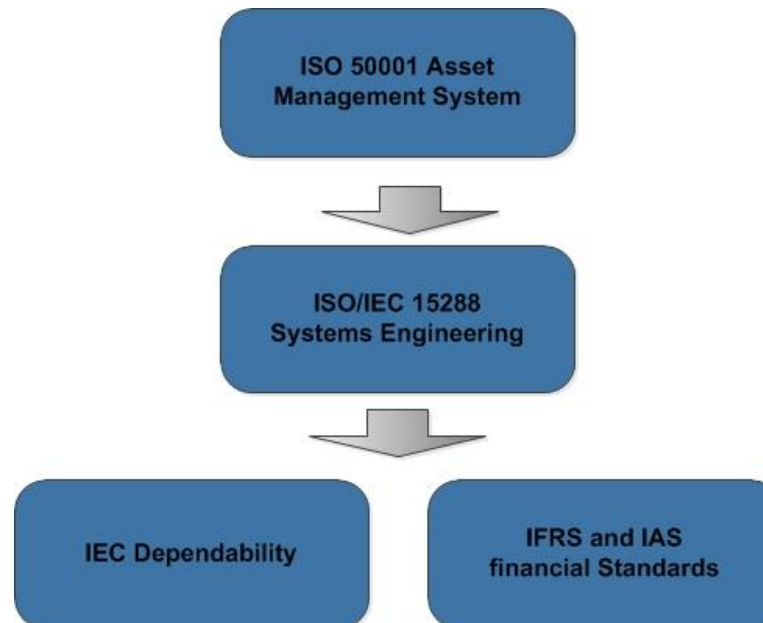


E. Rules of the Water and Gas Industry

- DVGW, e.g.
 - W 400 parts 1 to 3: «Technische Regeln Wasserverteilungsanlagen»
- SVGW, e.g. for water works
 - W 1005 recommendation for the strategic planning
 - W 1006 recommendation for financing
- CH: NFP54 and Agenda 21 -> Draft for “Handbuch kommunales Infrastrukturmanagement”
- EPA (United States - Environmental Protection Agency):
“Asset Management: A Handbook for small community water systems”

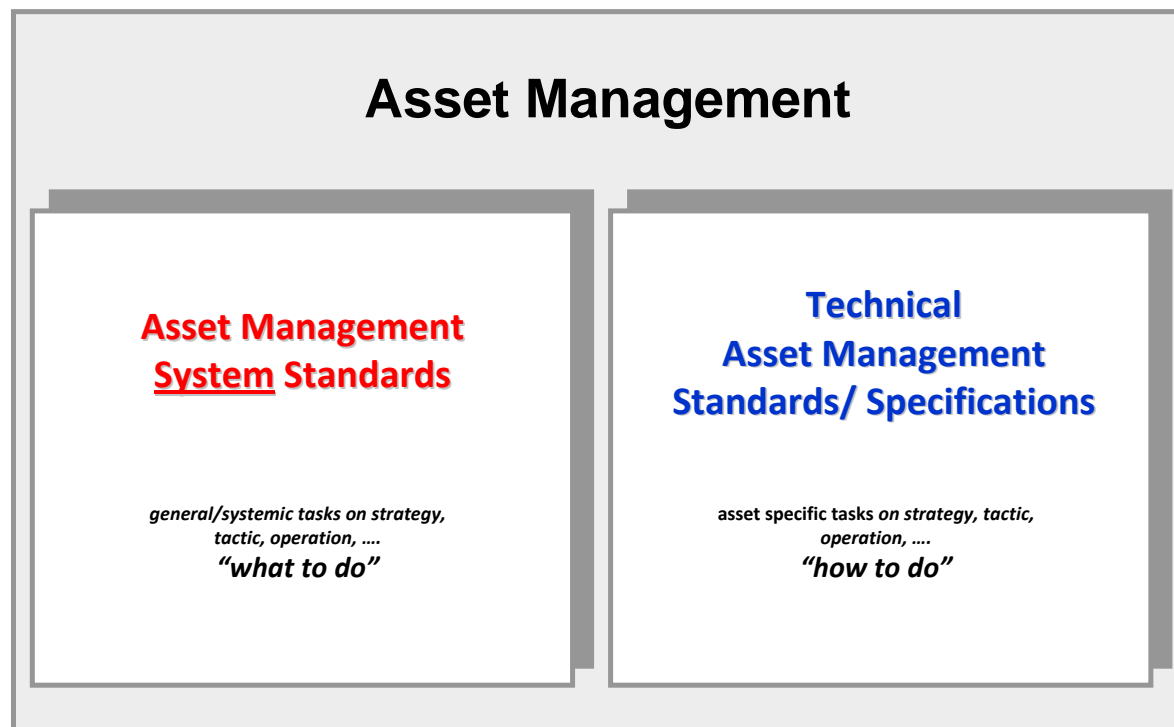
F. Relations between these Standards

IEC System Approach



source: IEC Application Guide – Dependability and Financing Processes for Implementing ISO 55001

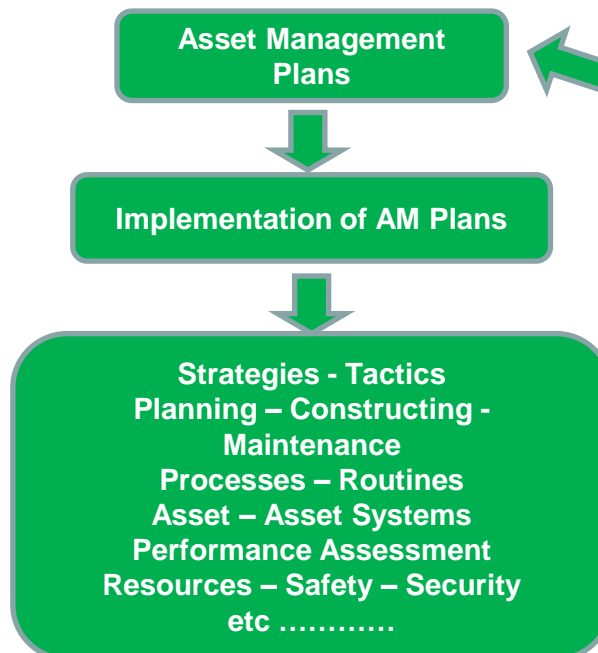
ISO Physical Assets Approach



source: Thomas Zenz (DVGW)

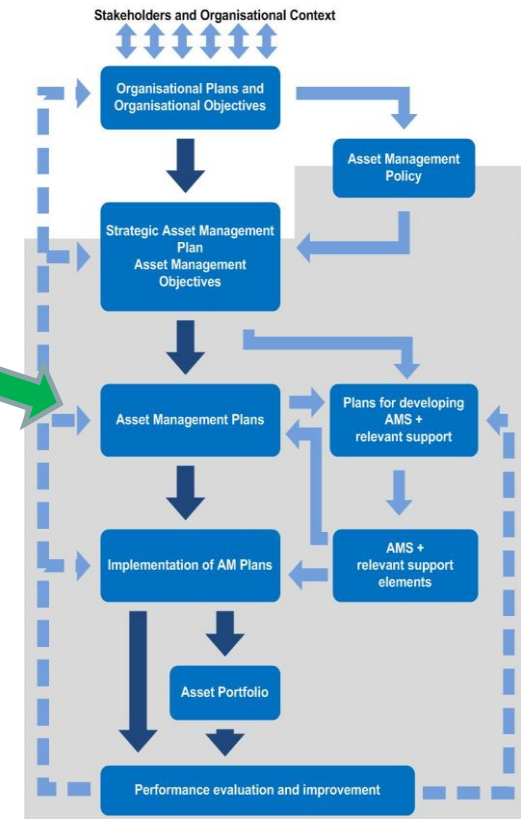
ISO Physical Assets Approach

Technical Asset Management



source: Thomas Zenz (DVGW)

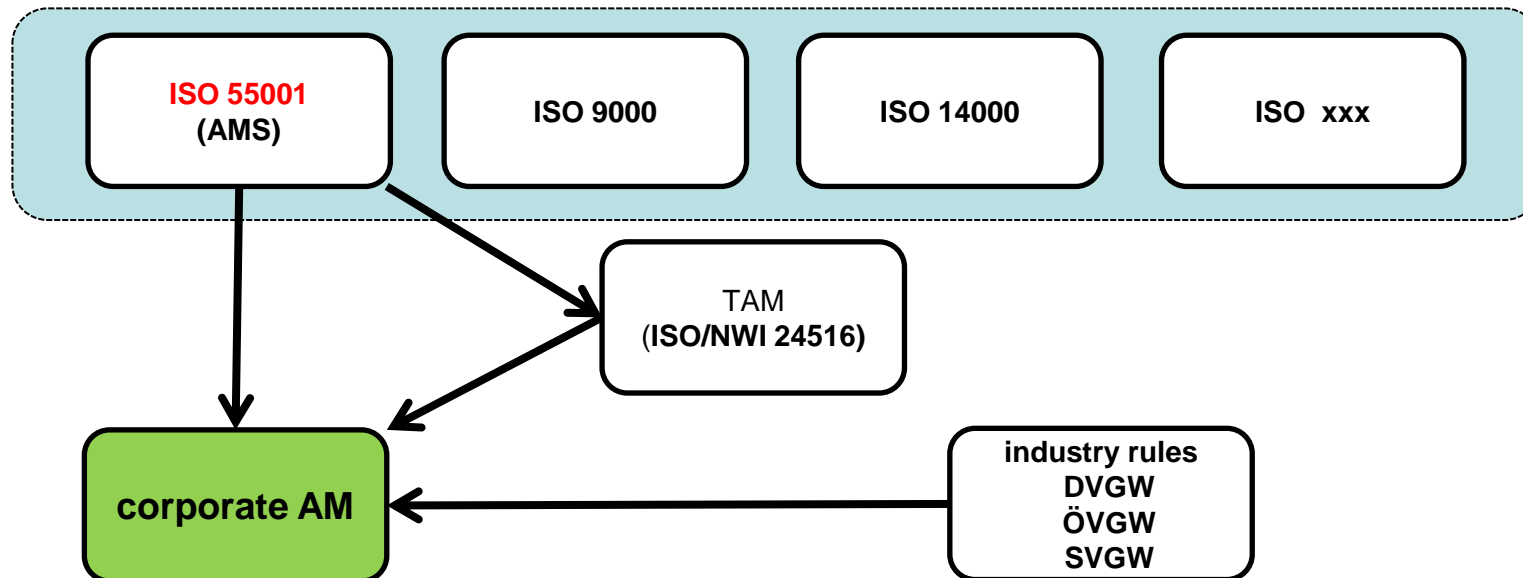
Asset Management System



G. Options for Action to Manage an AMS for Water and Gas Industry

ISO 55001 combined with ISO 9000 and ISO 14000 etc. as management system standards (MSS) with common structure and philosophy

TAM and industry rules

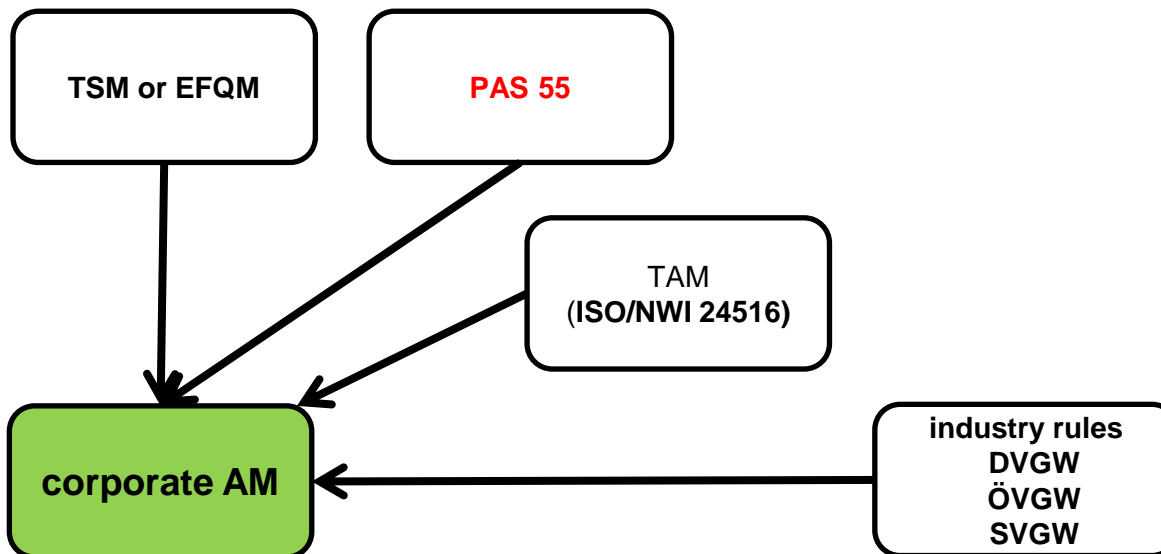


G. Options for Action to Manage an AMS for Water and Gas Industry

TSM or EFQM Quality Management Excellence Model

PAS 55 as guide for corporate specific Asset Management

TAM and industry rules



G. Options for Action to Manage an AMS for Water and Gas Industry

TSM or **EFQM** Quality Management Excellence Model
 ISO 55001 as check for completeness management
TAM and **industry rules**

