

ISO 55000 and Asset Management - 5 W's



Aditya Ramamurthy, PMP, ENV SP – Hazen and Sawyer

Ryan Nagel, PE, ENV SP – Hazen and Sawyer



Agenda



- **What** are the various Asset Management Frameworks?
- **What** is ISO 55000 and **How** is it different from other AM frameworks?
- **Why** do we need an AM framework like ISO 55000?
- **Who** should we use ISO 55000 framework?
- **Where** can we find more information on these frameworks?
- **When** is a good time to integrate the ISO 55000 standard into your asset management approach?



Asset Management Is Not Complex

“

Delivering a specified level of service to customers and regulators at an optimal life cycle cost & an acceptable level of risk with a strategy that ensures long term sustainability of public assets

”

Businesslike management of assets



Typical Drivers for Asset Management

External Forces	<ul style="list-style-type: none">• Regulatory compliance• Growth and demand• Pressures from the public and elected officials
Asset Age and Condition	<ul style="list-style-type: none">• Aging and deteriorating infrastructure• Solid justification for capital investments and O&M programs
Service Levels	<ul style="list-style-type: none">• Demand for improved service levels and reliability• Prevention of critical asset failures
Cost Efficiency	<ul style="list-style-type: none">• Drive to do “more with less” through optimized decisions, effectiveness and efficiency• Move toward a “businesslike” culture



Some Current Industry Asset Management Trends


Focus on capital planning, business case development and project justification – ensures funding goes to the most critical projects and creates transparency

Ongoing CMMS implementation, enhancement and upgrades – large utilities aligning with top tier and medium/small utilities with mid-tier vendors with GIS integration

Large organizations embracing asset management as an organizational model – medium/small utilities focusing more on practices and processes within existing structure

Interest in service levels, but still in the early stages – external reporting to rate payers is limited

Utilities Have Taken Diverse Asset Management Approaches



Asset Management Implementation Approaches

1
Technology Approach

- Supports large and diverse organizations
- Aligns and integrates with other city / county departments

2
Pilot Approach

- Focus on momentum and quick wins through “proof of concept”
- Builds champions and internal and external support

3
Organizational Approach

- Delivers wide org. impacts and is a catalyst for change
- Creates new business models and staff opportunities

4
Bottom-Up Approach

- Build support from ground up and staff level buy-in
- Creates ownership and accountability

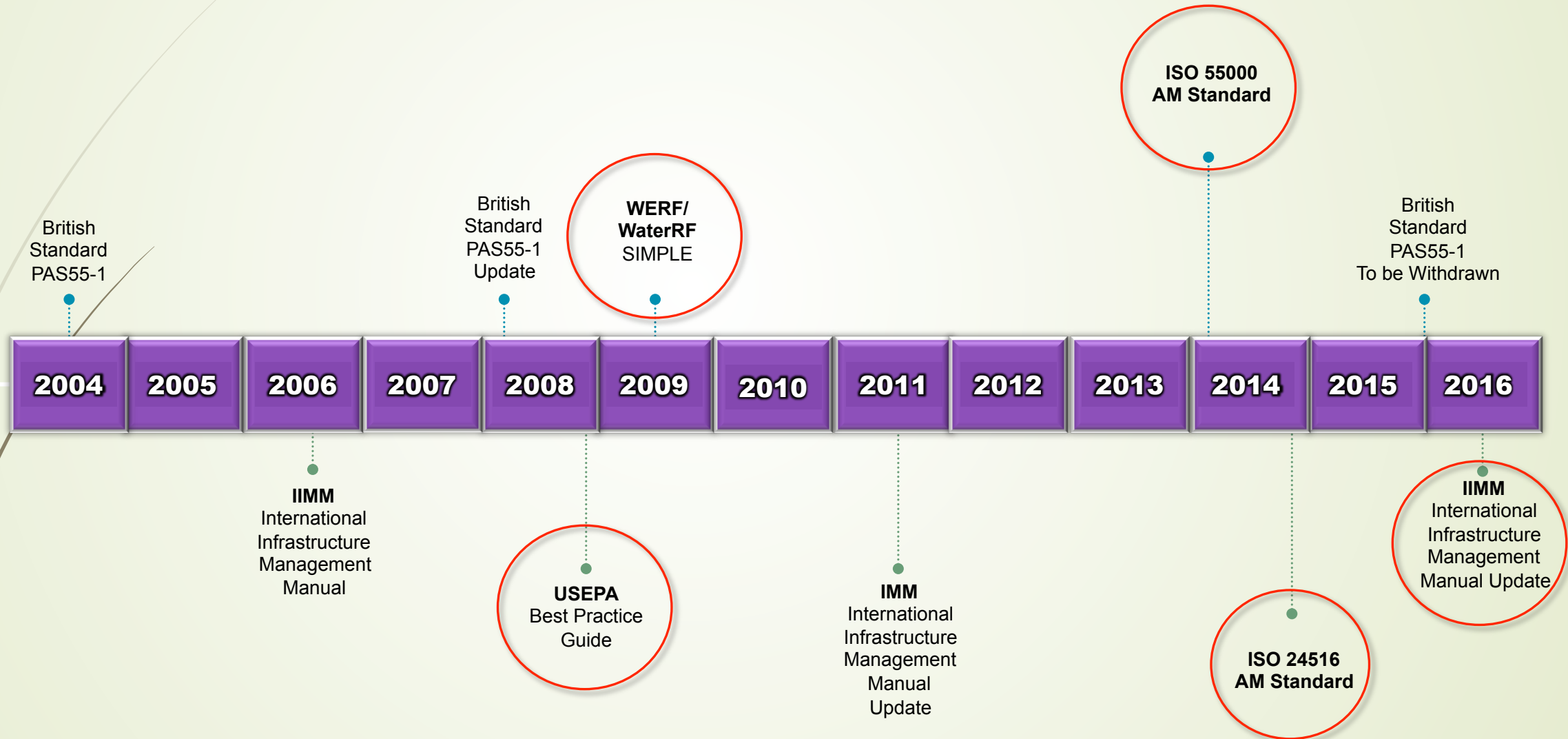


Need for an Asset Management Framework

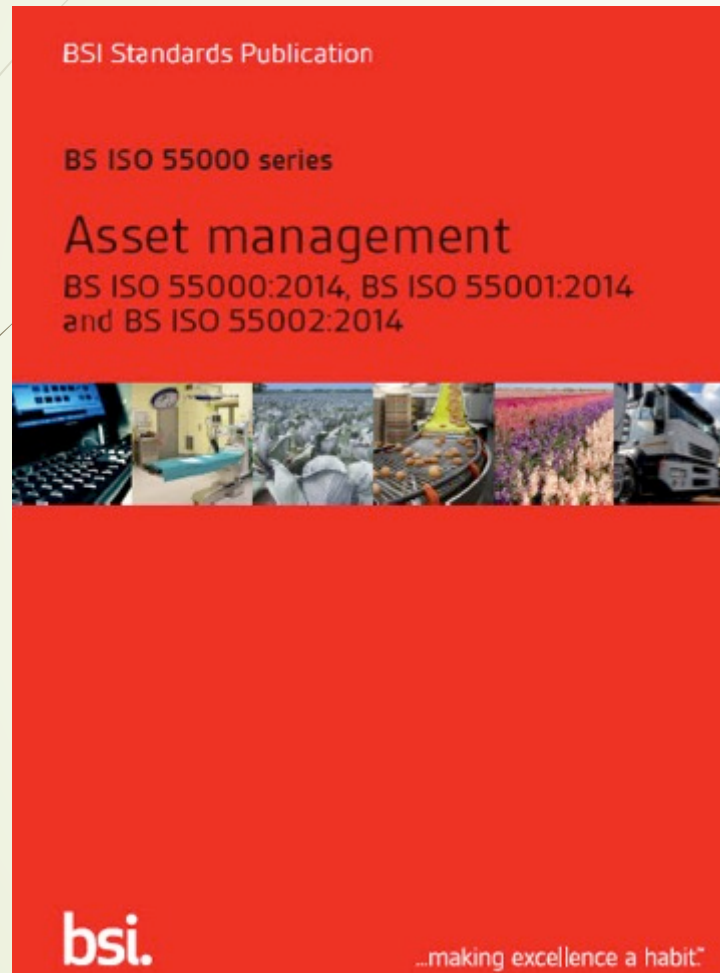
- ▶ Value of an Asset Management Program
 - ▶ Regulatory Changes
 - ▶ 2014 Water Resources Reform and Development Act (WRRDA)
 - ▶ State Revolving Funds (SRF) Programs
 - ▶ Recipients develop and implement Fiscal Sustainability Plans
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Asset Management Frameworks - Timelines

Frameworks & Guidance



ISO 55000 Series



- PAS 55 to ISO 55000 – 2009
- **Alignment** of organizational objectives feeding into AM strategies, objectives
- Whole **life cycle** asset management planning & cross disciplinary planning
- **Risk** management and risk based **decision making**
- **Enablers** for decision making
 - Leadership
 - Communication
 - Information Management
 - Competency Development

Stakeholder and organisational context



Organisational plans and organisational objectives

Asset Management policy

Strategic Asset Management plan
Asset Management objectives

Asset Management plans

Plans for developing Asset Management system & relevant support

Implementation of Asset Management plans (Life-cycle activities)

Asset Management system & relevant support elements

Asset portfolio

Performance evaluation and improvement

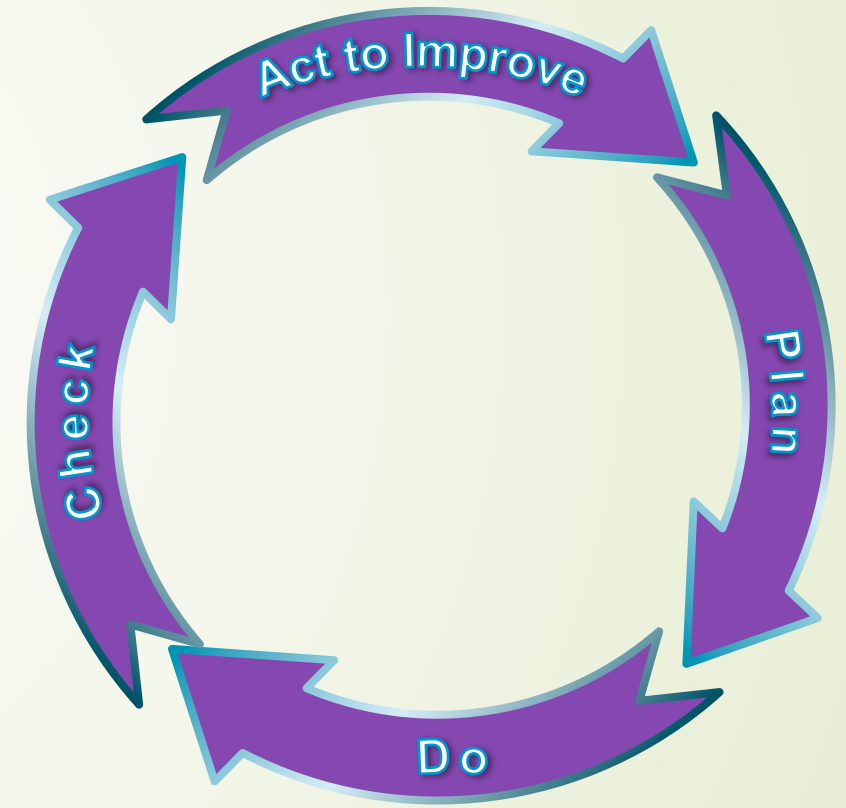
PLAN

DO

ACT

CHECK

Designates Asset Management system boundary



ISO 55000 Framework

1. Context of the organization
2. Leadership
3. Planning
4. Support
5. Operation
6. Performance Evaluation
7. Improvement





1. Context of the Organization

- ▶ Understanding the organization and its context
 - ▶ Organizational Plans (ex. Strategic Plan)
 - ▶ Organizational Fit – Goals & Objectives
 - ▶ External context (social, economic, legal, technological, regulatory, political)
 - ▶ Internal context (governance, roles & responsibilities, policies, systems, processes)
 - ▶ Understanding the needs of stakeholders
 - ▶ External & Internal needs (ex. Service Levels & Performance Measures)
 - ▶ Scope of Asset Management
 - ▶ Assets, boundaries, and inter-dependencies
 - ▶ Collaboration with outside organizations
- 



2. Leadership

- ▶ Leadership and commitment
 - ▶ Commitment of Top management through effective communication, establish collaborative work culture etc.
- ▶ Policy
 - ▶ Principles by which the organization intends to apply asset management to achieve its organizational objectives.
- ▶ Roles and Responsibilities
 - ▶ Internal and External (who does what and when)
 - ▶ Job descriptions, organizational charts etc.



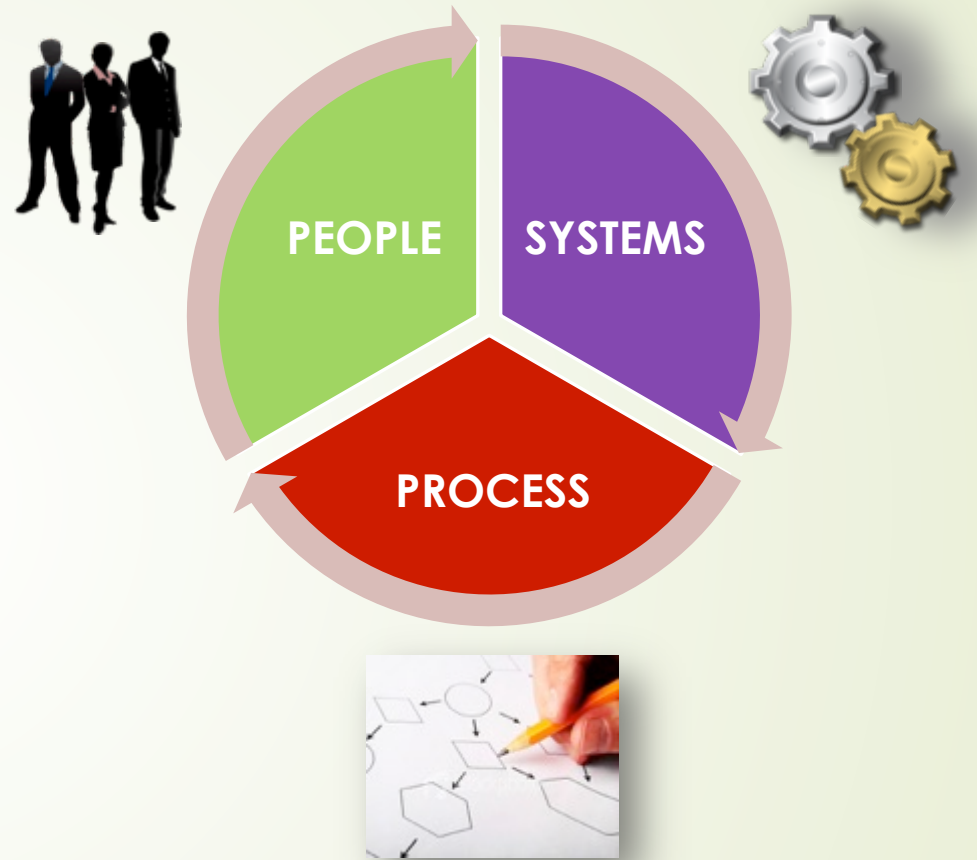
3. Planning



- ▶ Asset Management objectives and planning to achieve them
 - ▶ Link between the organizational objectives and the asset management program objectives
 - ▶ SMART (specific, measurable, achievable, realistic, time bound) objectives
- ▶ Actions to address risks and opportunities
 - ▶ Cause, effects, and likelihood of adverse events

4. Support

- Resources
- Competence
- Awareness
- Communication
- Information Requirements
- Documented Information



5. Operations

- Operations planning and control
 - Planning, execution, management & control
- Management of change
 - Review consequences of associated change (planned & unplanned)
 - Risks associated with change
- Outsourcing
 - Management of outsourced entity
 - Processes for the exchange of information, knowledge, people, processes and technology at the start of the agreed period

6. Performance Evaluation

- ▶ Monitoring, measurement, analysis, and evaluation
 - ▶ Performance Evaluation of Asset Management processes and procedures
- ▶ Internal Audits
 - ▶ Self assessment
 - ▶ Test for conformity
- ▶ Management Review

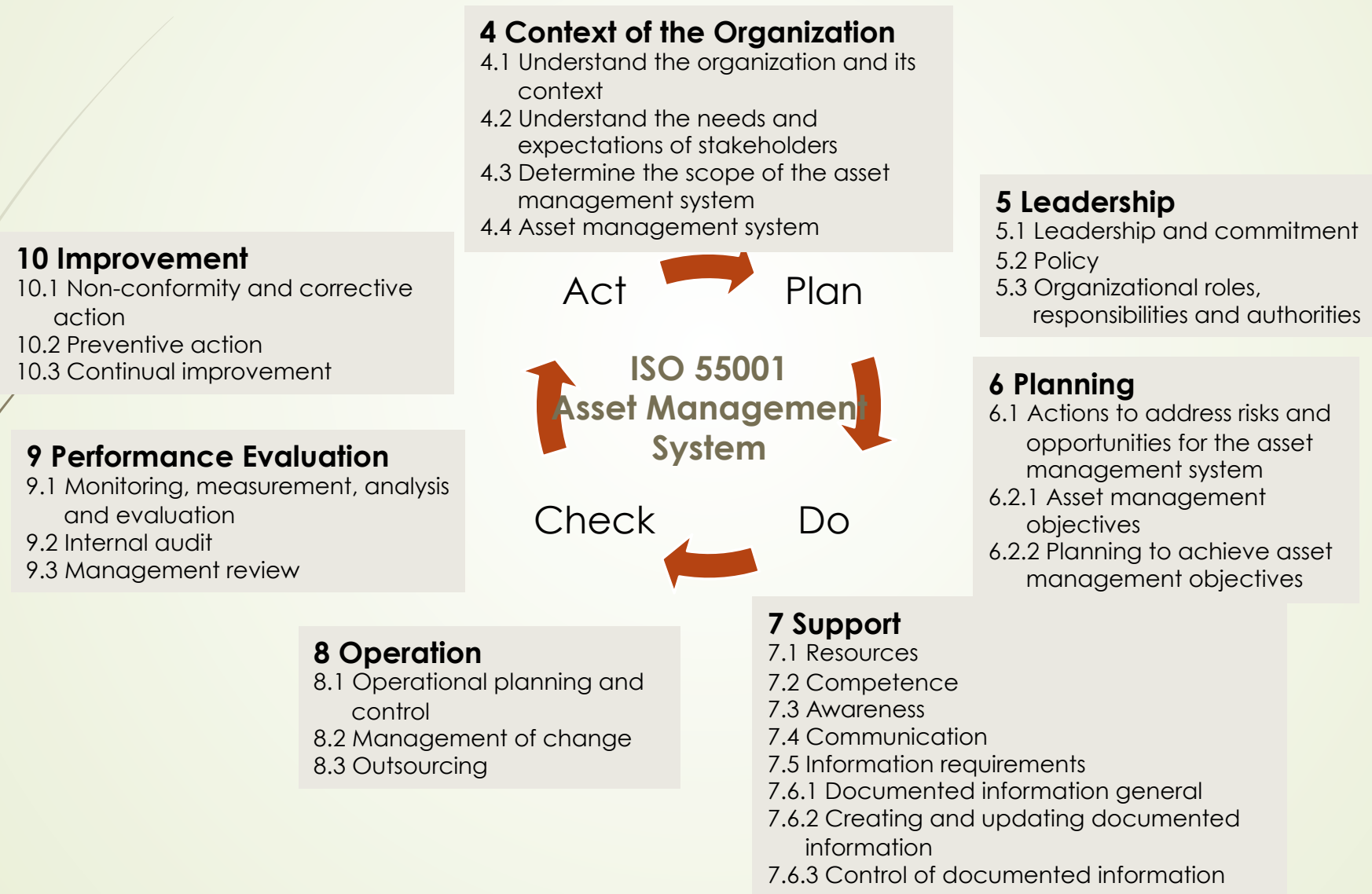
PLAN – DO – **CHECK** - ACT



7. Improvements

- Non conformity and Corrective actions
 - Preventive Actions
 - Continual Improvements
- 

ISO 55000 Framework Summary





Example Approach to ISO 55000 Adoption

- Discuss the organizational approach to ISO 55001
- Validate self assessment and gaps (readiness to certify against ISO55001)
- Test use of the guidelines
- Seek feedback on its usability

ISO 55001 – Maturity Level Assessment

Innocent	Aware	Developing	Competent	Optimizing	Excellent
0	1	2	3	Beyond	
The organization has not recognized the need for this requirement and/or there is no evidence of commitment to put it in place.	The organization has identified the need for this requirement, and there is evidence of intent to progress it.	The organization has identified the means of systematically and consistently achieving the requirements, and can demonstrate that these are being progressed with credible and resourced plans in place.	The organization can demonstrate that it systematically and consistently achieves relevant requirements set out in ISO 55001.	The organization can demonstrate that it is systematically and consistently optimizing its asset management practice, in line with the organization's objectives and operating context.	The organization can demonstrate that it employs the leading practices, and achieves maximum value from the management of its assets, in line with the organization's objectives and operating context.



ISO 24516 - Guidelines for Management of Assets

- ISO 24516 – Part 1: Drinking Water Distribution Networks
- ISO 24516 – Part 2: Drinking water Plants (incl. treatment, pumping, storage)
- ISO 24516 – Part 3: Wastewater Collection Networks
- ISO 24516 – Part 4: Wastewater Treatment Plants
- ISO 24516 – Part 5: Examples of the management of assets of drinking water systems
- ISO 24516 – Part 6: Examples of the management of assets of wastewater systems



So.... Should my organization adopt ISO 55000 standards?

- ▶ Asset Management Framework is CRITICAL!!!
- ▶ Comprehensive Framework
 - ▶ International Infrastructure Management Manual (IIMM) & ISO 55000
 - ▶ Gap Analysis is a good place to start !!!
- ▶ ISO Certifications - Compliance & Audit
- ▶ Regulatory Trends
 - ▶ 2014 Water Resources Reform and Development Act (WRRDA)
 - ▶ State Revolving Funds (SRF) Programs
 - ▶ Recipients develop and implement Fiscal Sustainability Plans

Drive AM Momentum by Identifying Short-Term Improvements for Quick Implementation



- Look for “quick-win” opportunities for cost reduction and/or customer service improvement
 - Data collection and management
 - Capital planning and prioritization
 - Identifying and assessing critical assets
 - Visible service level improvement
- Target 6 – 12 months and communicate results internally and externally
- Set the stage for the tougher, long-term goals
 - Data/system integration
 - Asset rehabilitation and renewal programs



NEWEA Annual Conference & Exhibit 2016

January 24 – 27, 2016 – Boston, MA

Questions !!!

Aditya Ramamurthy, PMP, ENV SP
Senior Associate – Asset Management

Hazen and Sawyer

757 785 9492

aramamurthy@hazenandsawyer.com

