

Integrated Asset Management

Asset Management & Maintenance Conference - 4 December 2013

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Chair: Collaborative Research Network: Policy & Planning for Regional Sustainability



Introduction

- Estimated 600B\$+ built assets
 - Geographically dispersed & population sparse
 - Crucial for the nation to function
 - Replacement is expensive & major undertaking
 - Exacerbated by extreme climatic conditions
 - Not widely planned or budgeted for
- Strategic management required
 - Demands integration!



Other challenges & issues

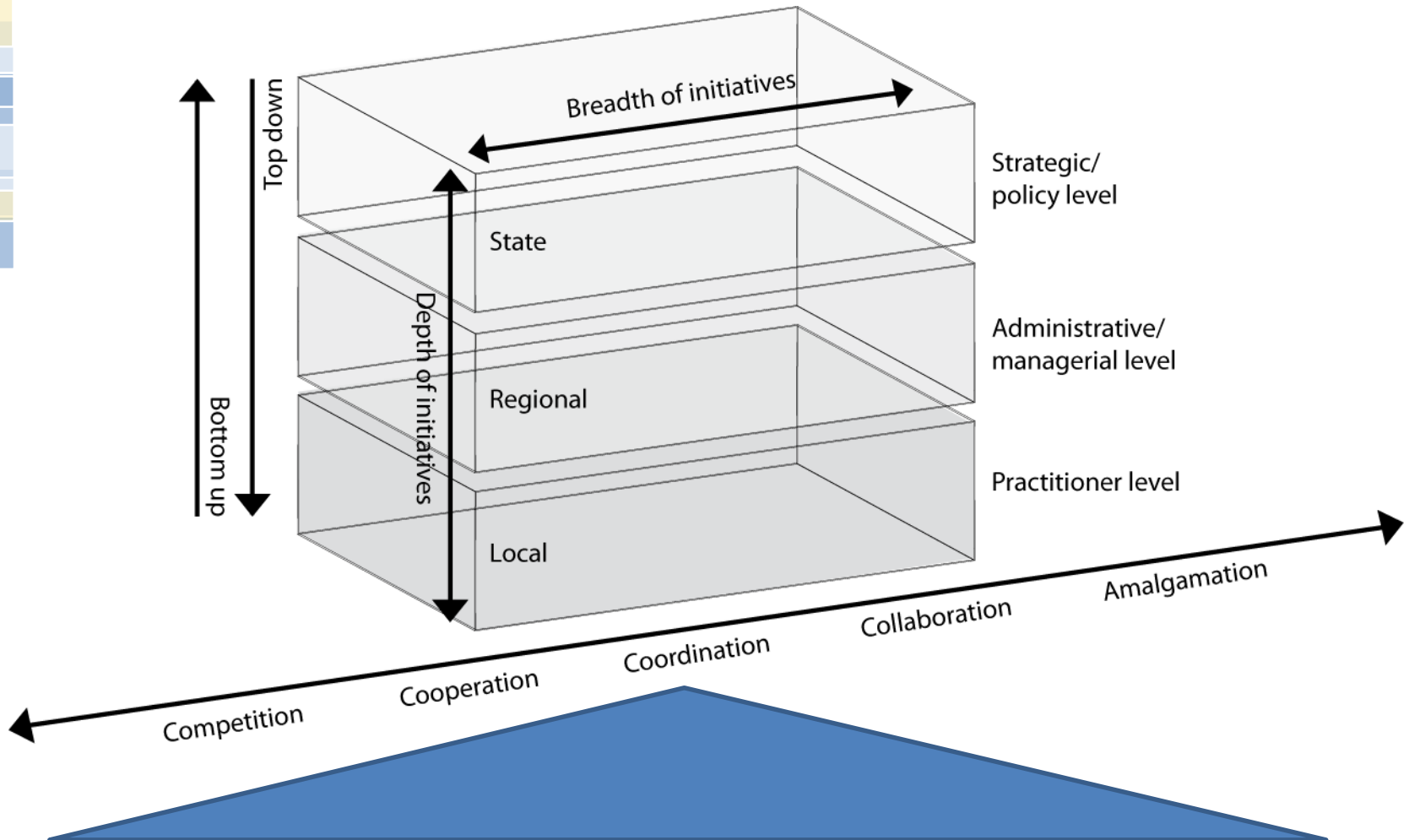
- **Asset service organisations deal with**
 - Resource scarcity
 - Degrading environments
 - Climate change adaptation
 - Sustainability requirements
 - More stringent regulations
 - A greater reliance on a multi-agency delivery model
 - Internally dispersed units & processes
- **Other factors**
 - More sophisticated citizens
 - Changing demographics
 - Government budgets increasingly restrained
 - Technological advances – human errors!
- **Calls for internal & external organisational /systems integration**



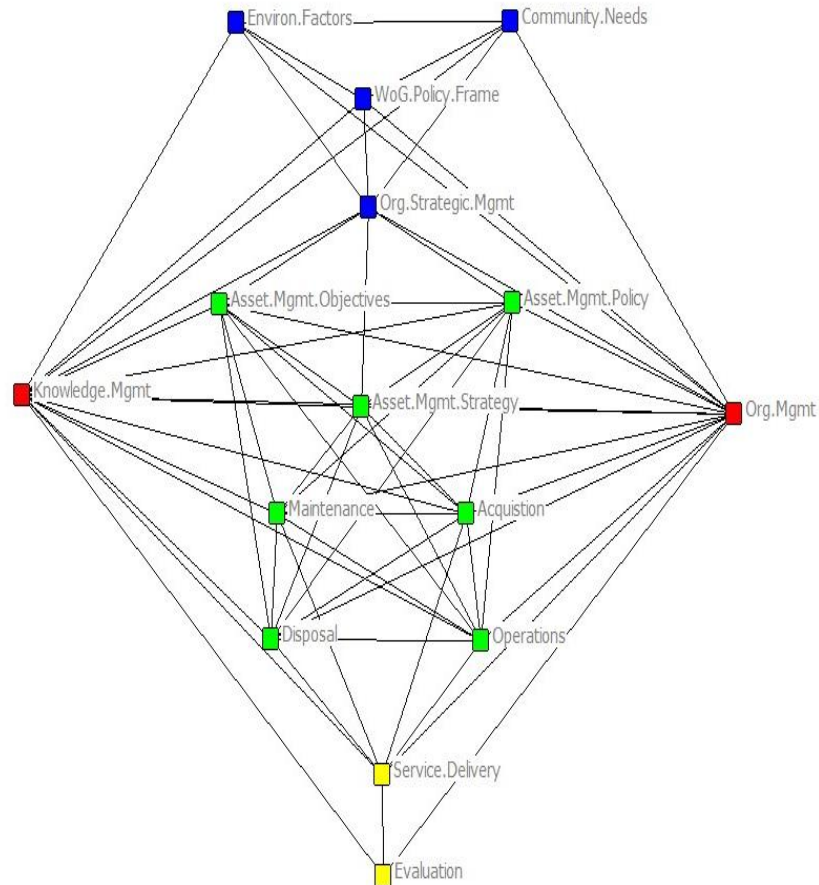
Integration

- Refers to the combination of parts so that they work together or form a whole
- BUT :
 - Different levels
 - Different types
 - Different foci
 - Different approaches

Integration: Big Picture



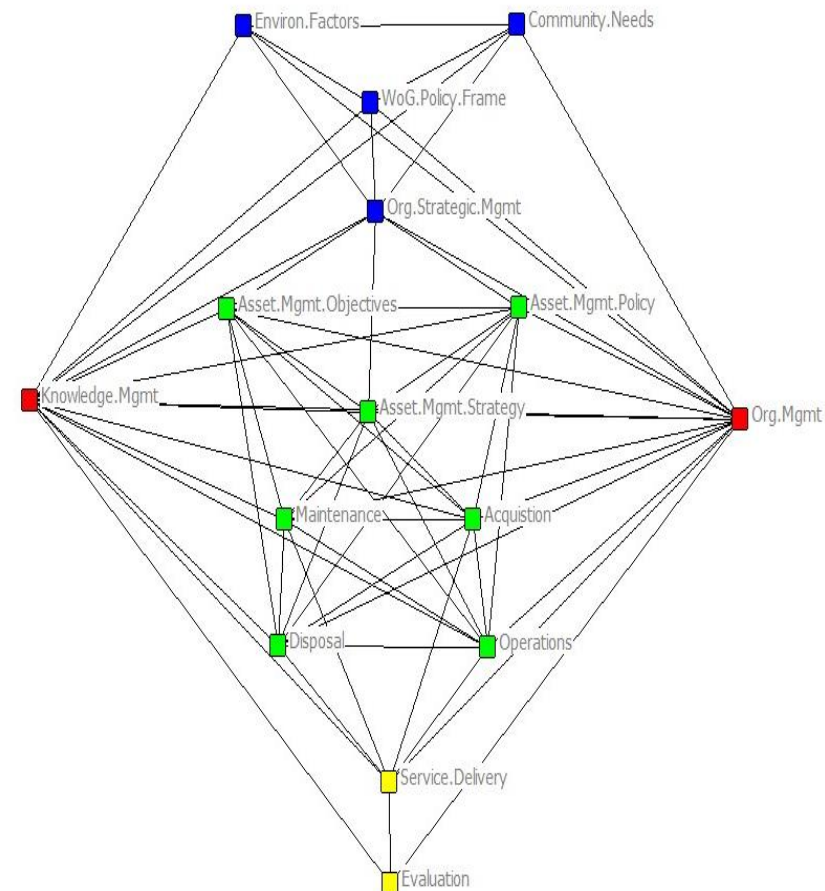
Integrated Framework



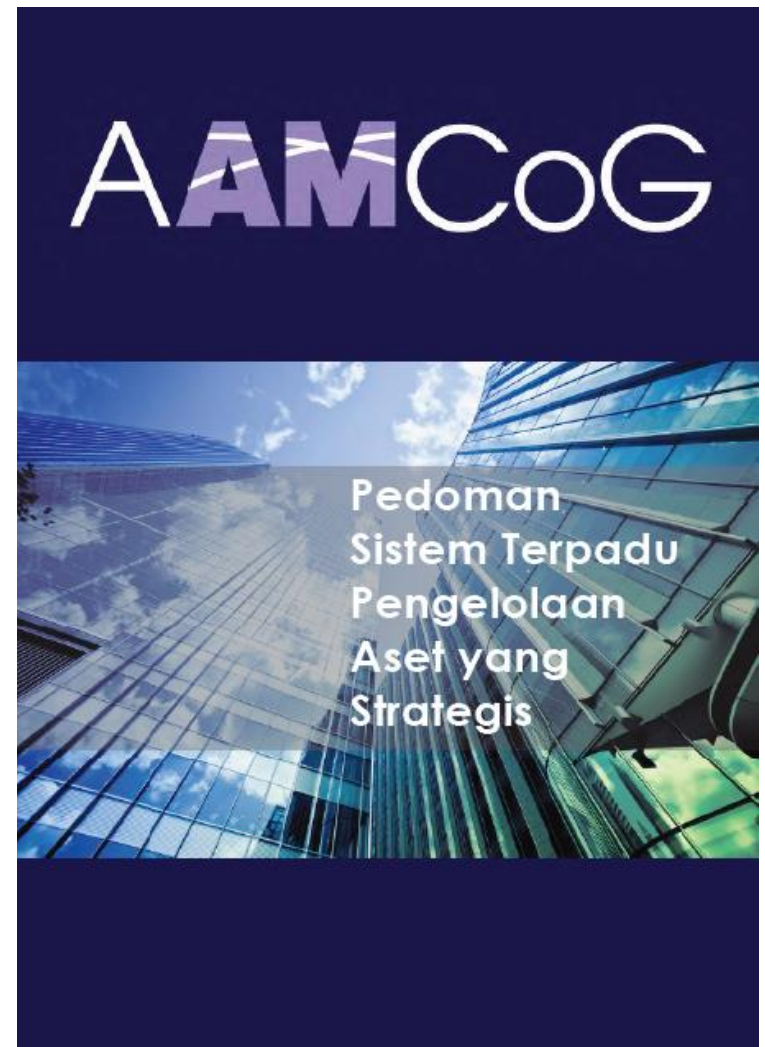
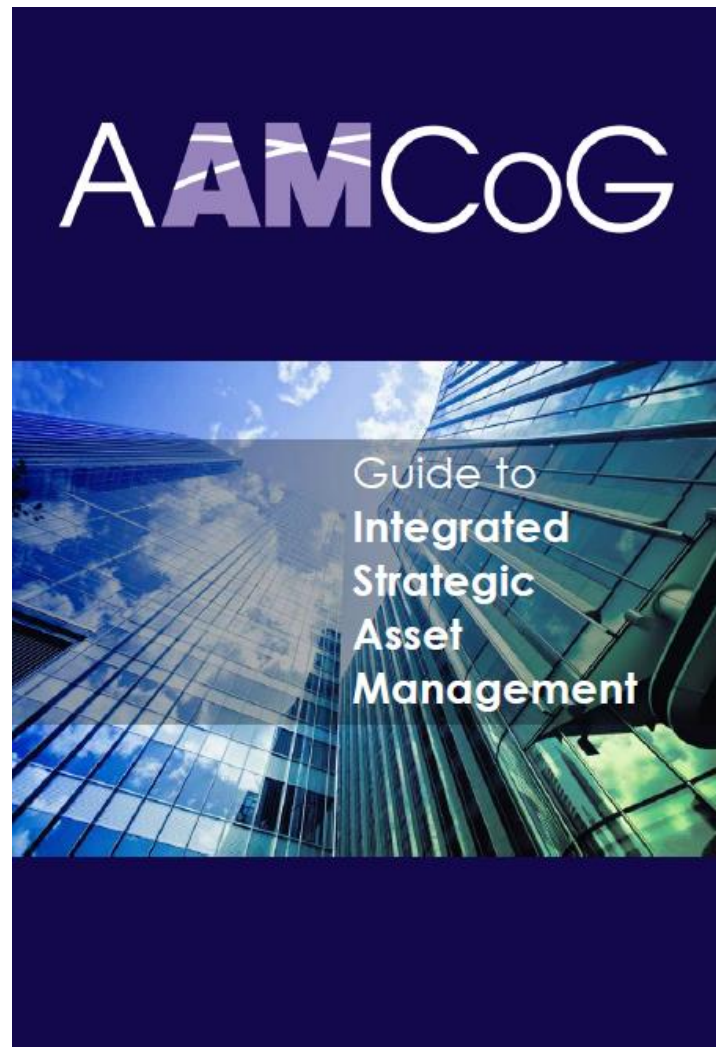
AM NetworX: Network Analysis

The processes of the ISAM framework are presented here as a network map

- Each node represents a coordinator for each of the functions of asset management
- The ties between the nodes are the relationships that must exist for efficient service delivery
- The network map provides a blueprint for an 'ideal' model for organisations to use in strategic asset management
- The aim is to structure organisational charts and processes in the most efficient manner possible for service delivery

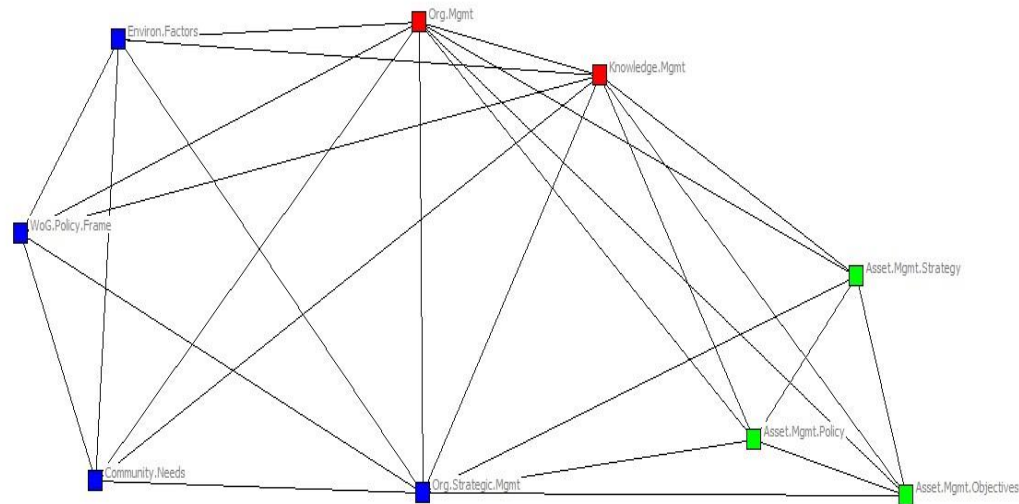


Asset Governance & Management through the ISAM Guide



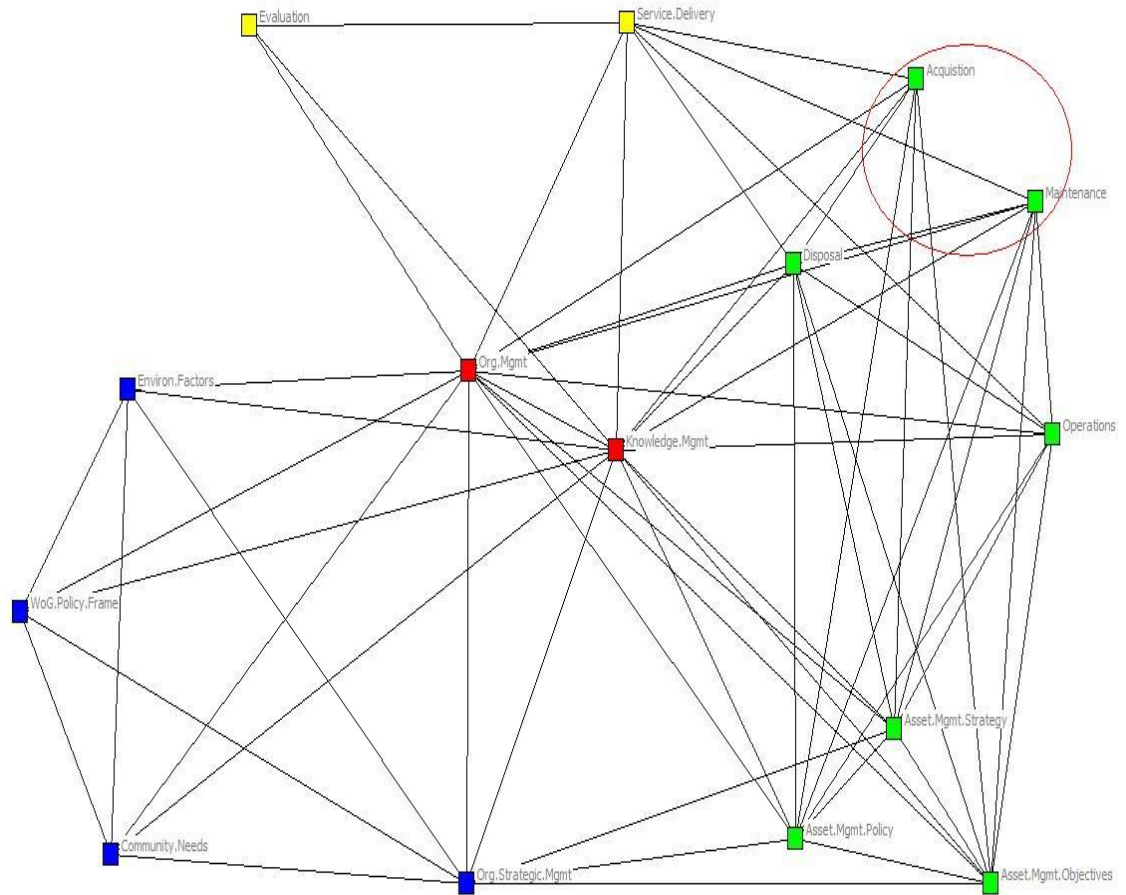
Diagnostic - Incomplete networks

- Asset management is an extended process that covers the life of the asset.
- Organisations with assets in the early stages of development may not have identified all of the necessary people responsible for later functions.
- In this instance the strategic planning functions are undefined, as are the service delivery and evaluation functions.

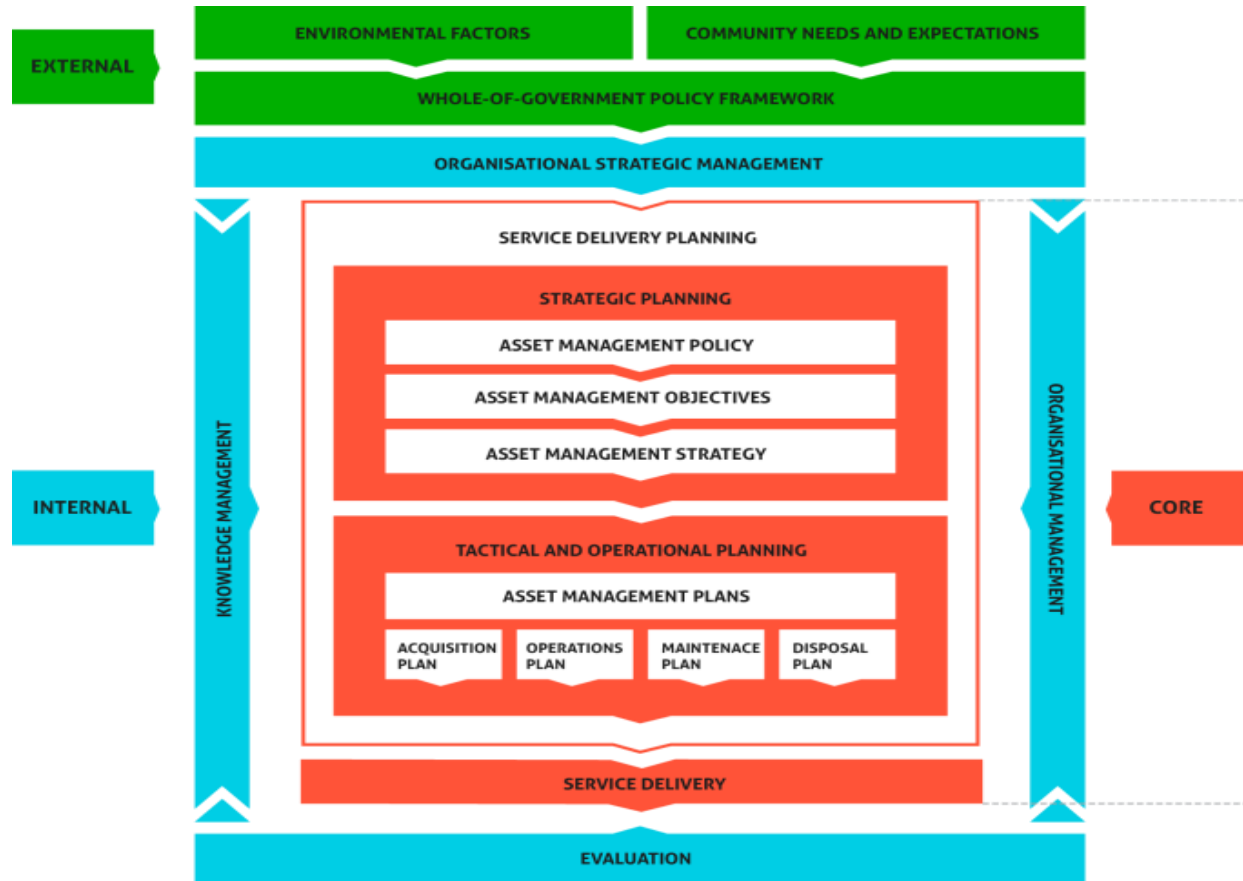


Diagnostic - Missing links

- Those networks that are not fully integrated, where the different functions are not connected, will be missing the links between them.
- The links between “Acquisitions Planning” and both “Operations Planning” and “Maintenance” in the top right hand corner are missing.
- The lack of these connections make it harder for these functions to co-ordinate or share information.



Integrated Strategic Asset Management: One Guide





Framework Components

Environmental Factors

- Environment affects assets, their functions and their safety
- Risk management provides adequate responses
- Sustainable management reduces the ecological footprint

Community Needs and Expectations

- A key to understand the needs for assets and services
- Critical activity: stakeholder management



Framework Components

Whole-of-Government Policy Framework

- Whole-of-Government Policy
 - Use government resources to make decisions and prioritise services to meet community needs and expectations
- Whole-of-Government Model
 - Provides overall direction for Asset Management
 - Gives effect to government policy decisions
 - Improves consistency and control
 - Provides cost effective and efficient service delivery

Organisational Strategic Management

- Gives effect to whole-of-government policy
- Involves an understanding of governance, corporate policy and corporate objectives



Framework Components

Service Delivery Strategic Planning

- Provides high value service delivery outcomes
- Considers sustainability principles
- Is guided by asset management policy and objectives
- Is implemented through asset management strategy

Service Delivery Tactical and Operational Planning

- Implementation of an organisation's asset management strategy
- Acquisition, Operations, Maintenance and Disposal plans



Framework Components

Service Delivery

- Creation, maintenance, renewal, upgrade and disposal of the assets
- Clear assignment of responsibility and accountability

Evaluation

- Measuring asset performance
- Reporting
- Reviewing
- Auditing



Framework Components

Knowledge Management

- Underpins the capacity to develop new ways of creative responses
- Improves decision making
- Increases productivity
- Knowledge management tools:
 - Asset Register
 - Asset Data

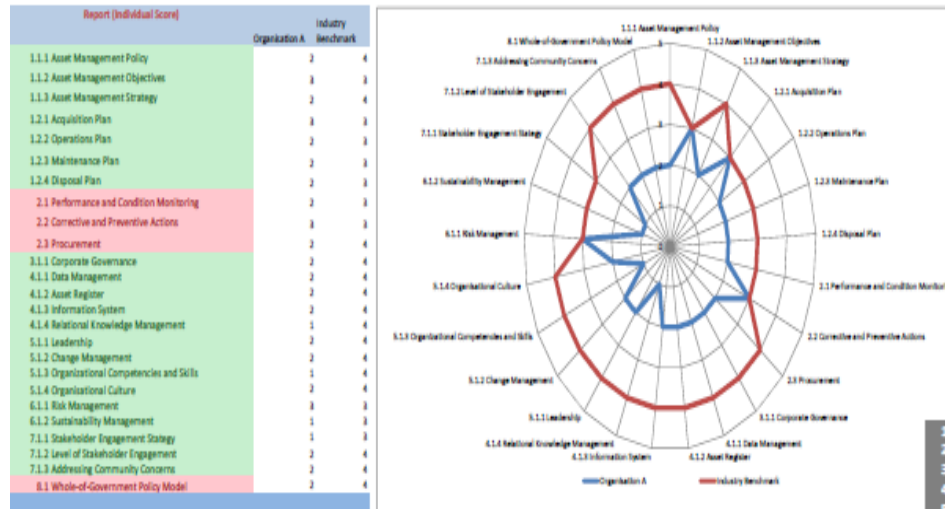
Organisational Management

- Optimises service and asset management outcomes through:
 - Leadership
 - Change management
 - Organisational competencies and skills
 - Asset management culture

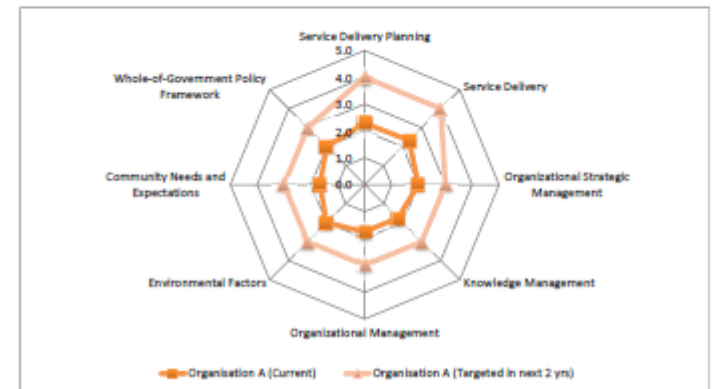
So – integrated – or not?



Capability Maturity Model



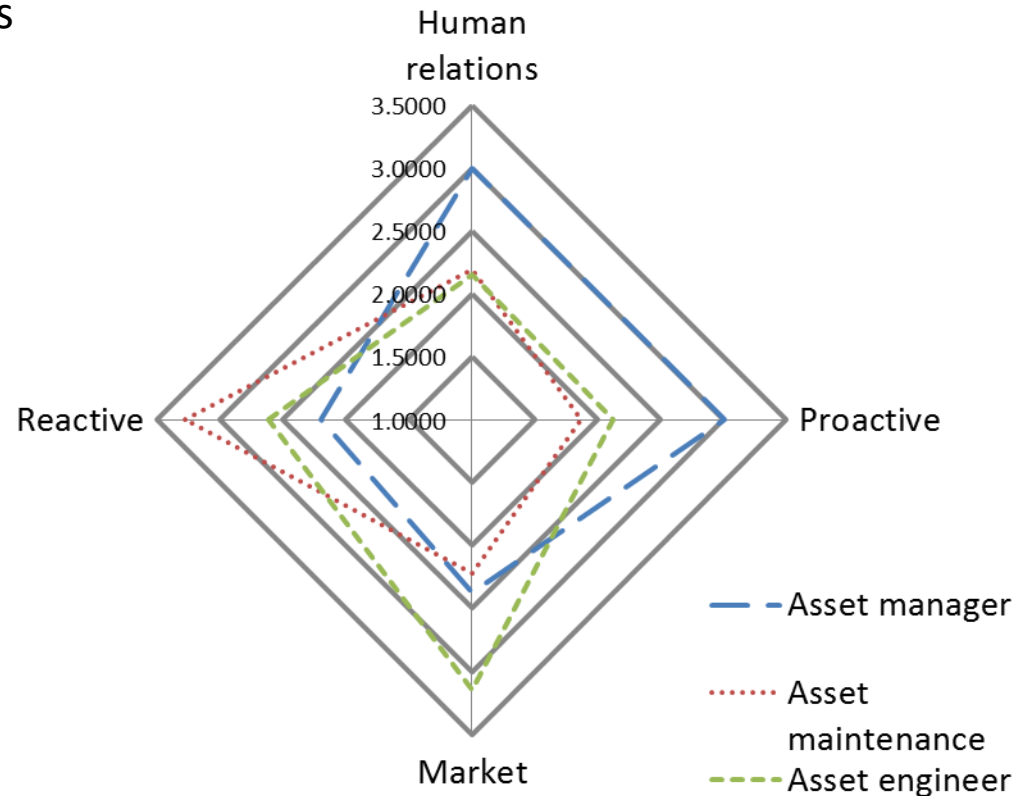
- 🟢 Green Zone: Maturity level ≥ 3.5 to ≤ 5
- 🟡 Yellow Zone: Maturity level > 2 to < 3.5
- 🔴 Red Zone: Maturity level ≥ 1 to < 2



Asset Management Cultures

- It is important to understand Asset Management cultures to improve performance
- The output is a diagram of the competing demands within asset management organisations

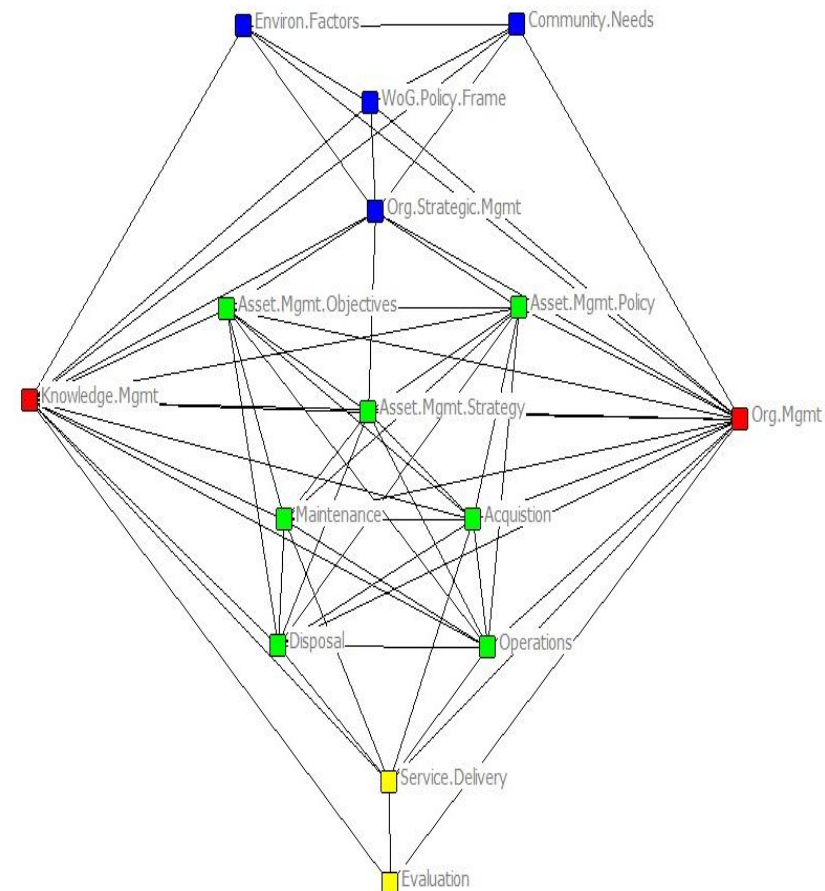
AM Benchmark



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Why internal integration?

- Integrating expertise with an holistic approach to maximize value for the life of your assets.
- Asset (& other personnel) work concurrently to identify and resolve conflicts that could add cost or impair productivity.
- Enables the exploitation of synergies that add efficiency, boost output, and extend the economic life of the asset.
- With integrated models, you have access to information that reduces cross-disciplinary uncertainties and mitigates the need for corrective reactions.
- A well designed integrated asset management system will contribute significantly to business profitability.
- Costs of creating & maintaining an integrated approach is typically less than potential losses

Why national?

- Vast nation – geographically dispersed assets & populations
- To sustain & genuinely advance productivity, growth & well-being
 - Harness & leverage all resources , including those geographically dispersed & population sparse
 - Limit



Going forward

- Conditions in contemporary society call for integration of assets
- All levels – especially within organisations / service systems
- Strategic & deliberate
 - Does not happen by magic & requires
- New approaches, tools and processes
- Dexterous management & dispersed leadership