

# Integrated Strategic Asset Management

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# Why asset management

- The goal of asset management is to meet a required level of service in the most cost-effective way through the creation, acquisition, operation and maintenance/renewal and disposal of assets to provide for present and future customers and communities.
- The life-cycle approach is central to asset management by taking account of the total cost of an asset throughout its life.
- A better service, not a better asset, is a key indication of successful asset management.

(IPWEA, 2002)

# Introduction

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- Australia has a conservative estimated 600B\$+ in built assets
  - Geographically dispersed & population sparse
  - Crucial for the nation to function
  - Replacement is expensive & major undertaking
  - Exacerbated by extreme climatic conditions
  - Replacement, maintenance & optimal use - 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**

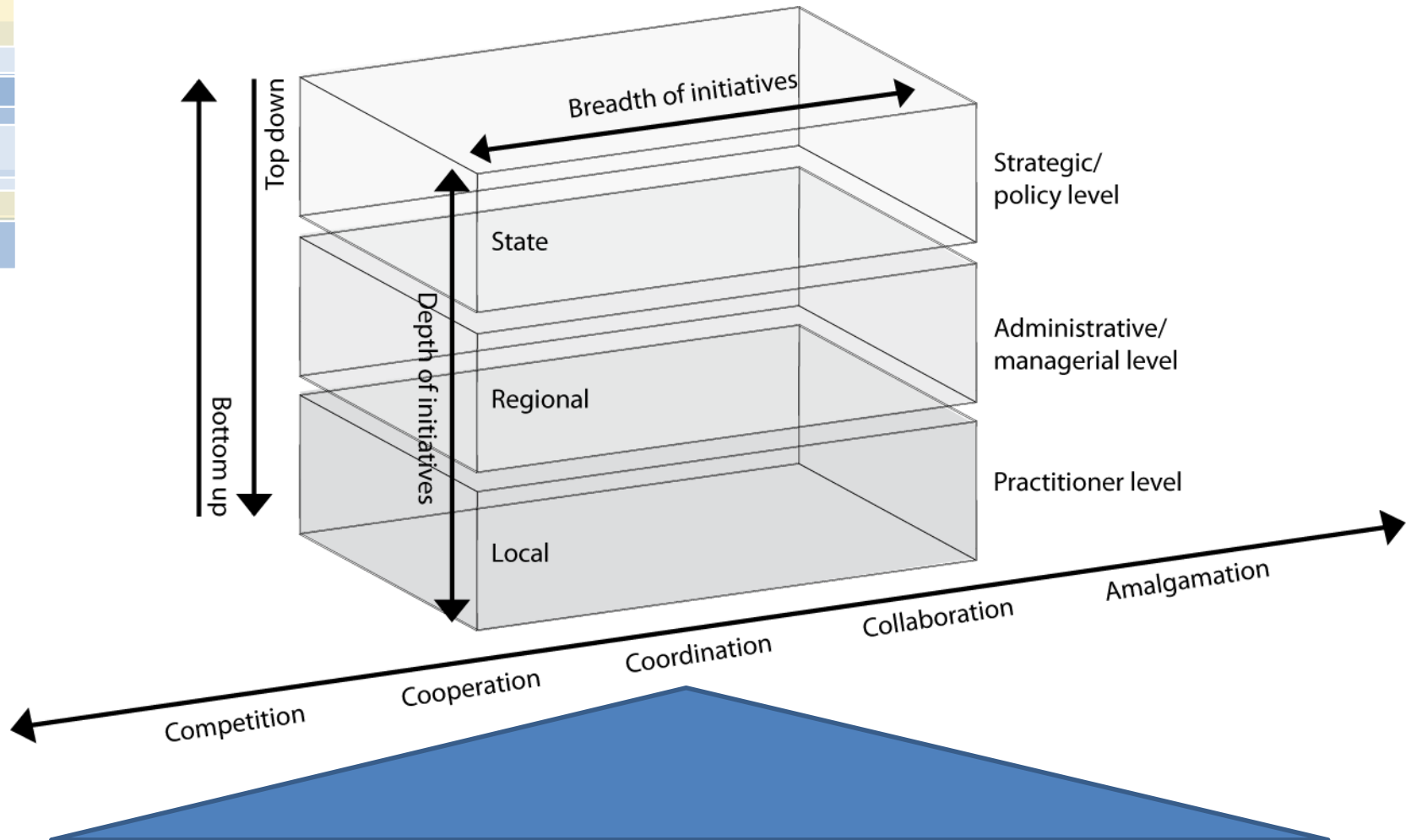
# Strategic

# Integration

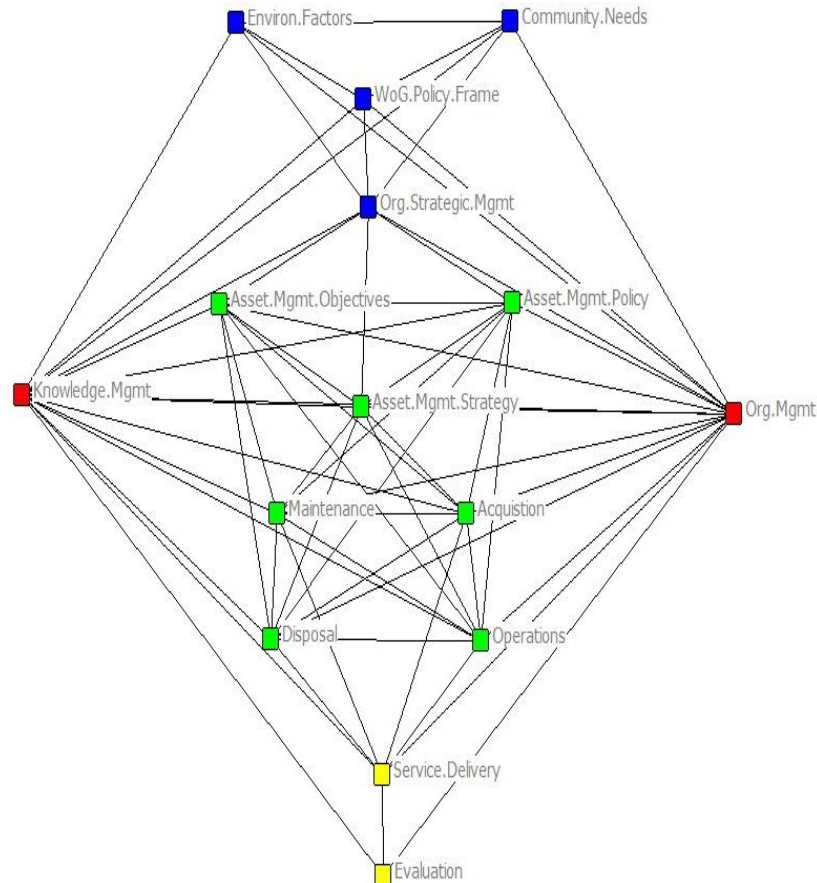
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- Refers to the combination of parts so that they work together or form a whole
- BUT :
  - Different levels
  - Different types
  - Different foci
  - Different approaches

# Integration: Big Picture



# Integrated Framework

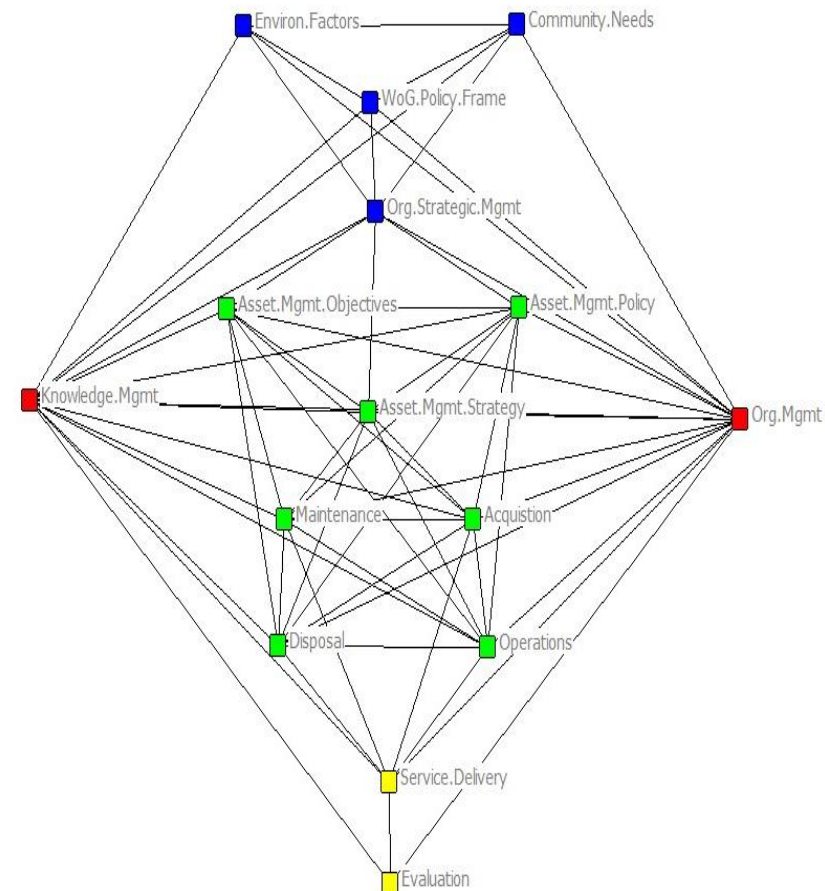




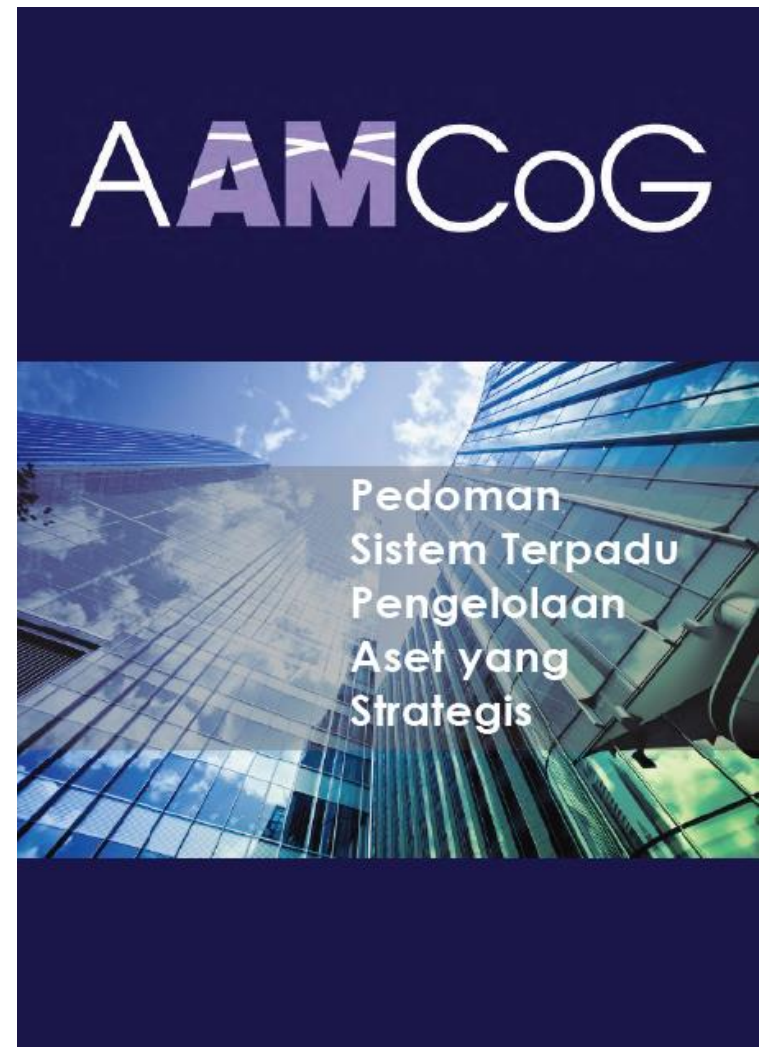
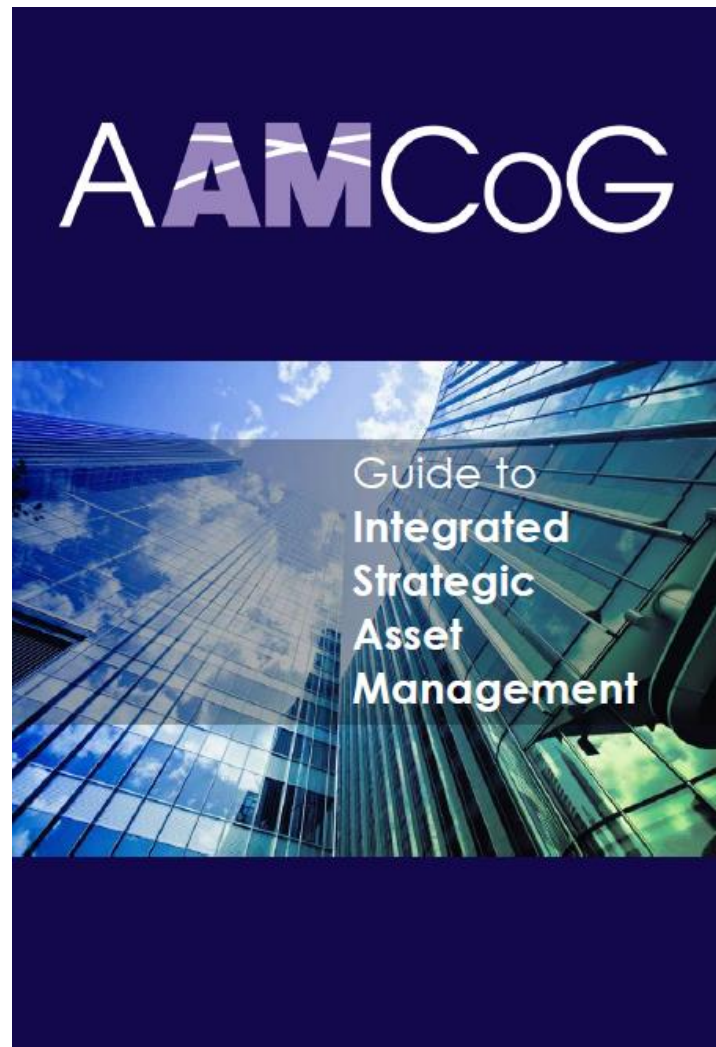
# AM NetworX: Network Analysis

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

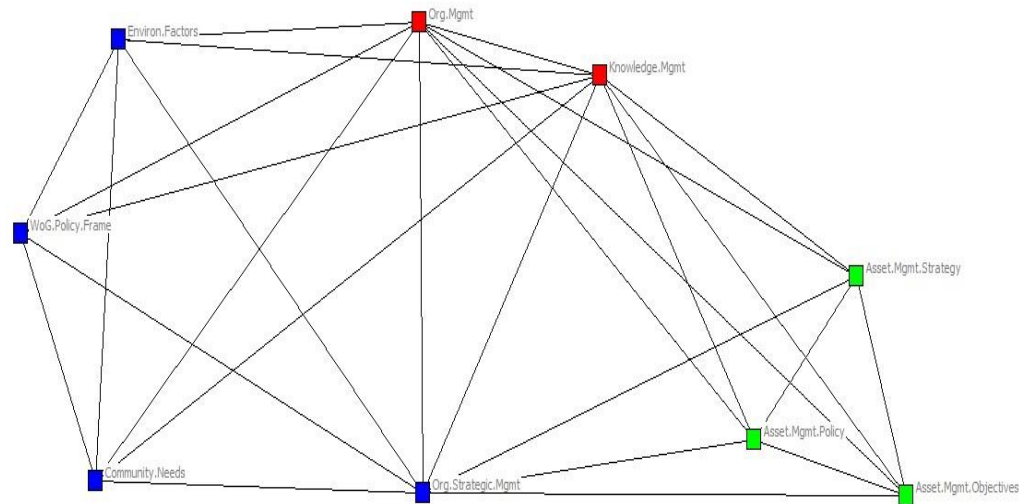


# Asset Governance & Management through the ISAM Guide



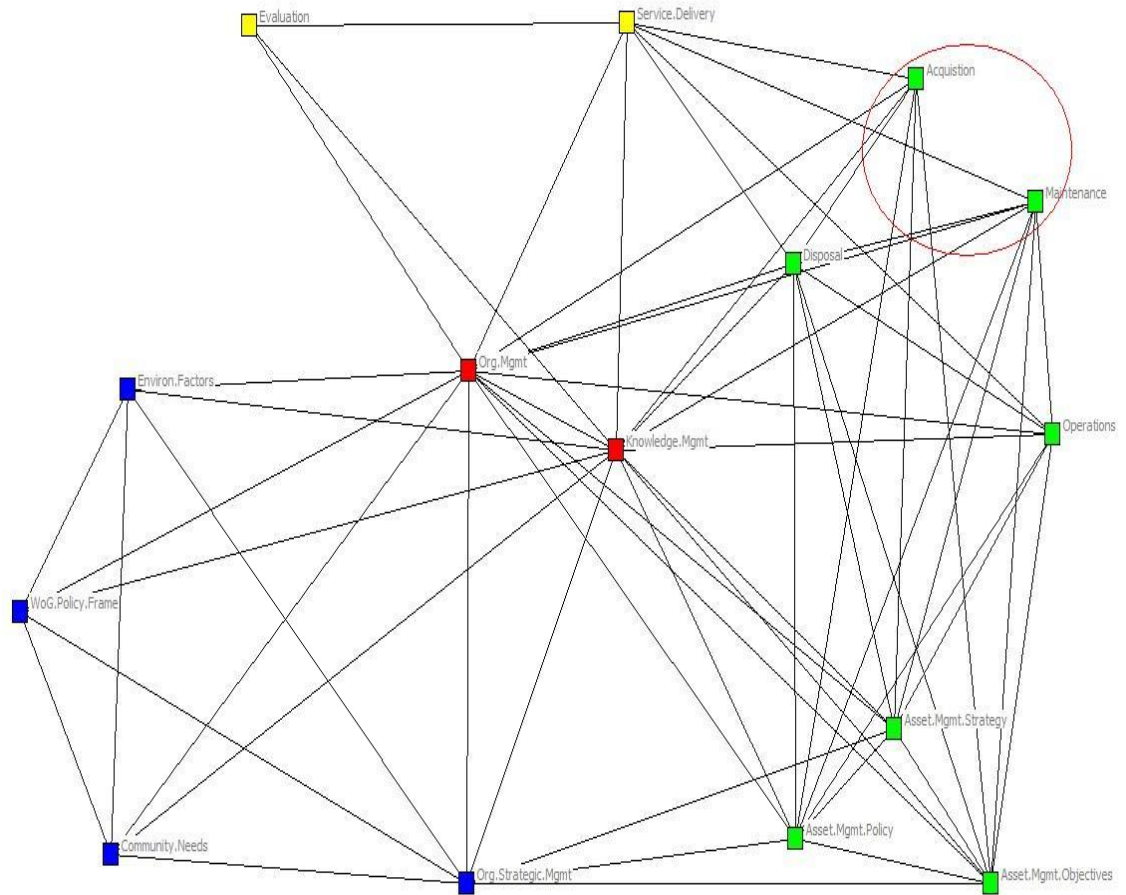
# Diagnostic - Incomplete networks

- 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.

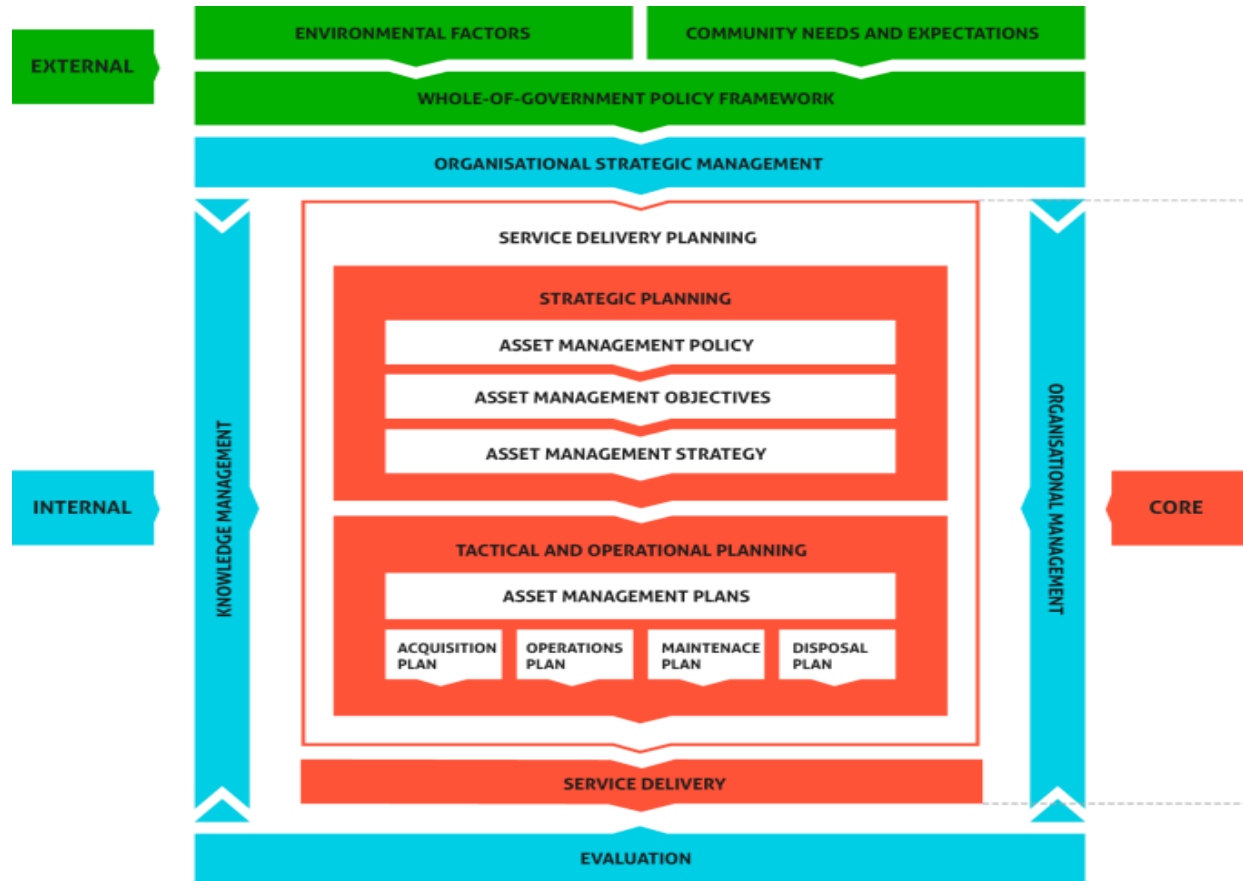


# Diagnostic - Missing links

- 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

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## 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

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## 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

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## 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

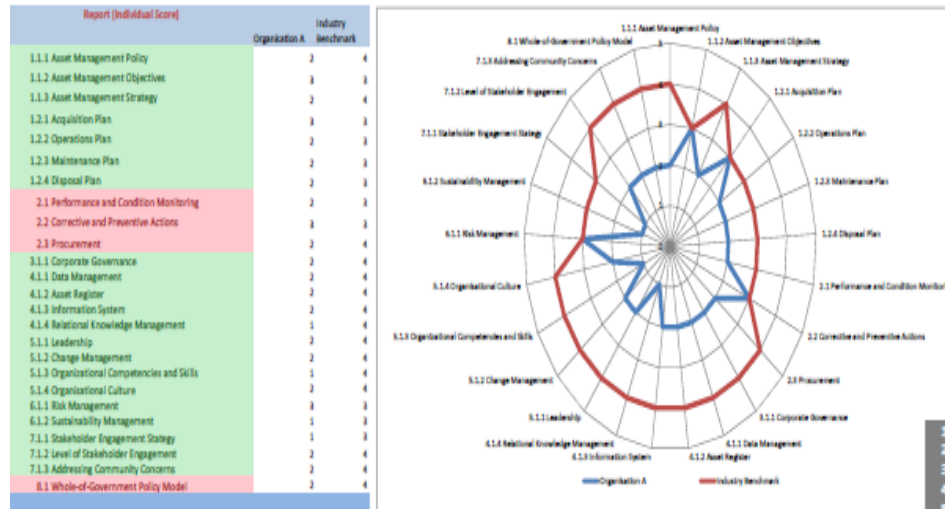
- Optimises service and asset management outcomes through:
  - Leadership
  - Change management
  - Organisational competencies and skills
  - Asset management culture

# So – integrated – or not?

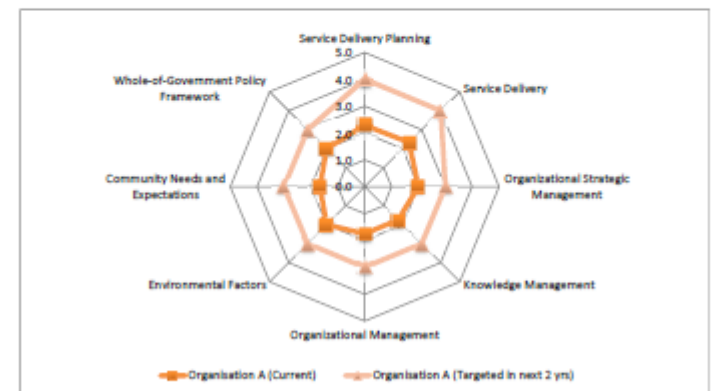


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# Capability Maturity Model



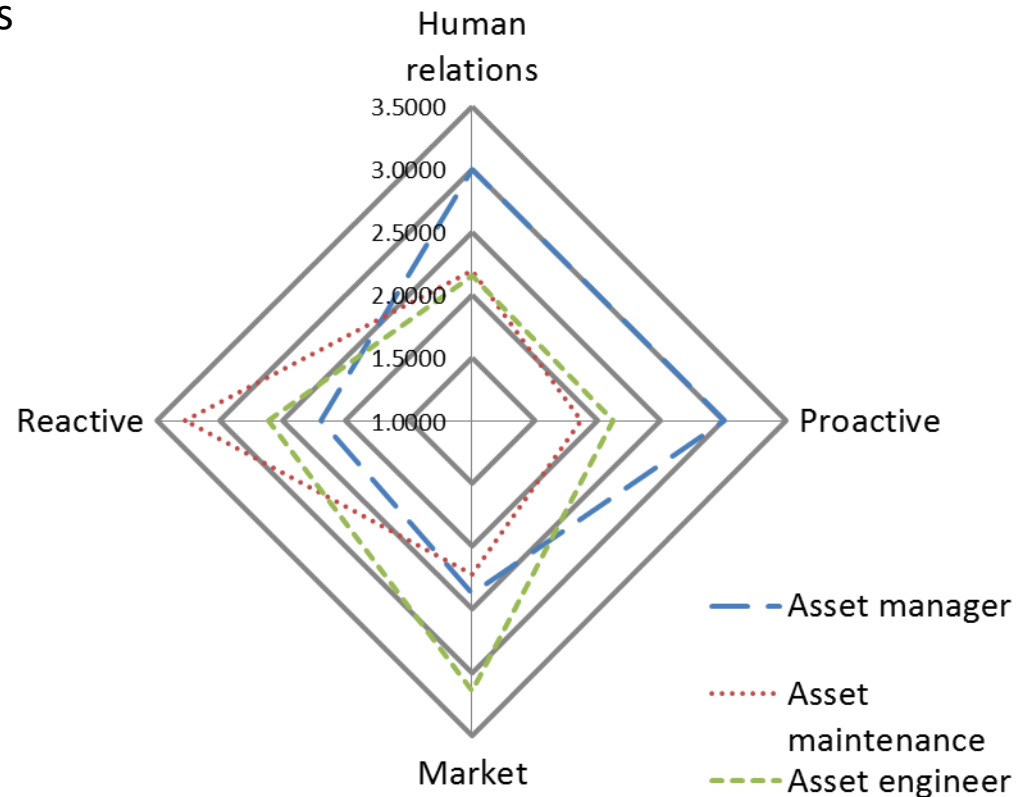
- 🟢 Green Zone: Maturity level  $\geq 3.5$  to  $\leq 5$
- 🟡 Yellow Zone: Maturity level  $> 2$  to  $< 3.5$
- 🔴 Red Zone: Maturity level  $\geq 1$  to  $< 2$



# 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

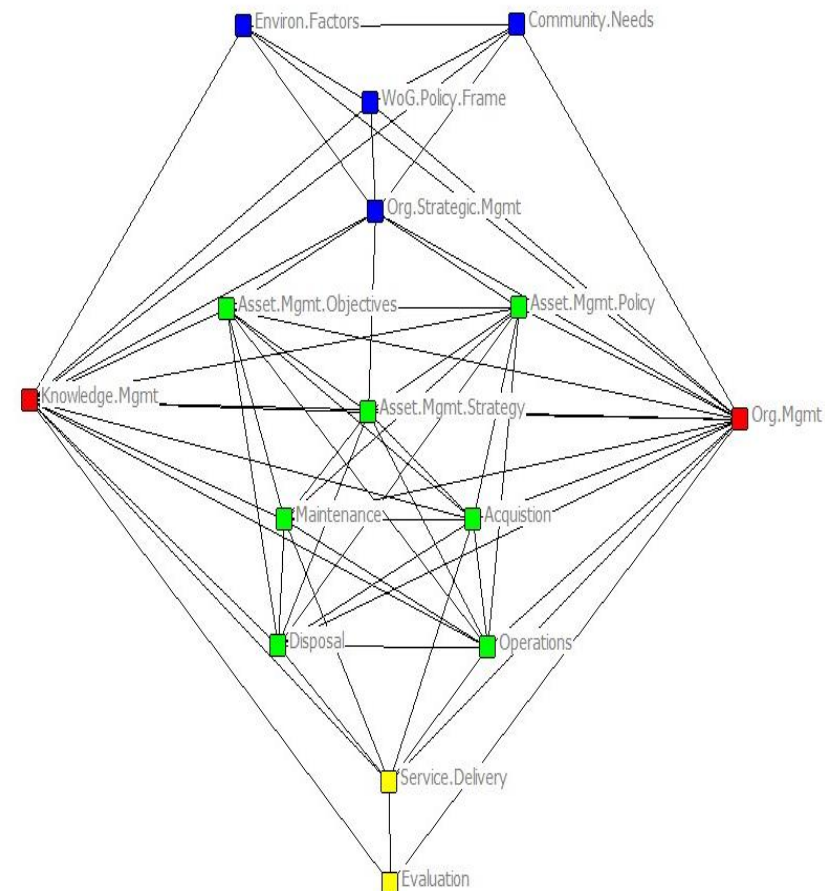
## AM Benchmark



# AM NetworX: Network Analysis

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# Why Strategic

- The benefits of a strategic approach to establishing asset management policy and application include:
- Better allocation of limited resources
- Improved alignment of assets with services & community expectations
- Reduced demand for new assets through better integration of service & asset planning
- Improved processes & accountability for capital & recurrent works
- More effective use & maintenance of existing (& future) assets
- Use of non-asset solutions to meet service demand
- Increased use of sustainable development solutions



# Why internal integration?

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- 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?

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- 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

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- 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