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through-life management of physical assets

The Institute of Asset Management

Managing asset information quality… by the book

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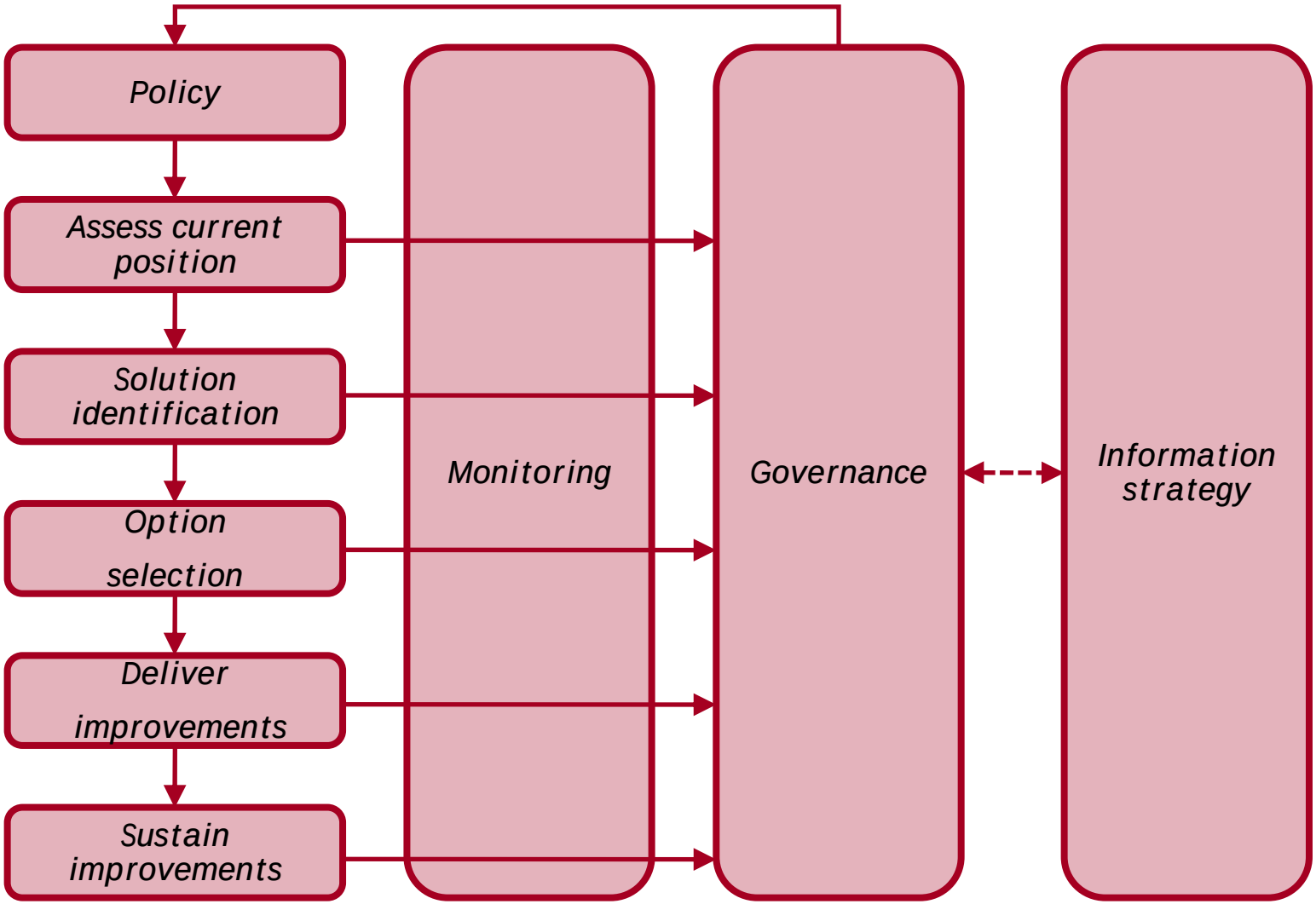
Agenda

- Structure of the Handbook
- Data quality attributes and how to measure them
- Data quality solutions
- Data governance

Structure


Policy
Assess current position
Solution identification
Option selection
Deliver improvements
Sustain improvements
Monitoring
Governance
Information strategy

Data quality attributes

- **Accuracy** – The record is correct in all details and is a true record of the entity it represents
- **Completeness** – The record having all or the necessary attribute values relative to its intended purpose. Additionally, all entities of a particular class or type are recorded
- **Validity** – Data conforms to all standards expected
- **Consistency** – An entity that is represented in more than one data store can easily be matched
- **Uniqueness** – A single record exists for each physical entity
- **Accessibility** – Data is easily accessed when required

Assessing current position

- Current state analysis
- Information availability
- Data quality requirements
- Managing data quality at the correct point
- Data confidence grades
- “Toolbox”

Solution options

- Data quality framework
- “Do Nothing” is a valid option
- Developing and improving standards for asset information ensures there is clarity of information requirements
- Site surveys can be used to gather missing data or to validate data
  - Expensive activities
  - Time consuming
  - Plan and execute carefully
- Improvements to data validation ensure that invalid data is not entered
- Data infill techniques can fill gaps in data without asset surveys
  - It is important that data gathered in this way is clearly marked as such!
- Technology and system changes can improve the management and use of asset data
- Organisation changes to manage data update activities better
- Changing the culture and behaviours towards data
  - Can require ongoing and sustained effort to achieve

Option selection

- There is no “silver bullet”!
- Benefits of data improvement activities are typically diffuse and fragmented
  - Time needs to be spent to identify and quantify all relevant benefits
- The costs of data improvement should be estimated as accurately as possible and should include:
  - Software costs
  - Costs of improvement
  - Training costs
  - Ongoing costs to sustain quality
- Business cases should express the costs and benefits of improving data quality including assessment of payback periods and rate of return

Monitoring

- Ongoing monitoring of data quality and processes is essential
- Agree the key measures to monitor
- Targets should be set to encourage improvements in performance
- Targets should be SMART, i.e. Specific, Measurable, Achievable, Realistic and Timely
- Assurance methods should be developed to encourage compliance
- Presentation of measures should allow key messages to be easily identified
- Benchmarking of other organisations can provide an awareness of areas of strength and weakness
- Suitable audits of both data quality and data related processes will help identify any deviations from planned approaches

Data governance

Data governance

- Data Governance essential for managing the quality of asset data
- Board-level sponsorship is key
- Strategy – vision of where the organisation wants to get to and how
- Legal and business requirements – some data quality requirements may be externally specified
- Roles and Responsibilities – defined, staffed and appropriately motivated/incentivised
- Training/competence
- Written policies, plans and procedures
- Knowledge Management
- Governance processes – to drive data quality forwards and prevent any fallback
- Continuous improvement incorporating lessons learnt

Information strategies

- Information strategies and enterprise architectures will not directly improve data quality
  - Will provide greater awareness of the scale and nature of problems and optimum solutions
- Information architectures provide data models, data dictionaries and metadata
- Assess data as an input, output and enabler of a process
  - Greater awareness of quality requirements can be developed
- Develop a clear strategy for the sources of master data
  - All other systems using this data should replicate this key data
- Master Data Management (MDM) can be utilised where data mastering strategies are more complex
- IT project requirements help ensure they don't degrade data and provide enablers for ongoing data improvement

Thank you for your time

- Public consultation ongoing to 31/12/10 on IAM wet site.