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ISO55001 Asset Management System Standard Scheme

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BSI EMEA, Milton Keynes, UK

Agenda

- The ISO5500X family
- Asset Management Systems – purpose?
- Key decision makers in Asset Management Systems
- Focus of ISO55001 requirements – who?
- Focus of ISO55001 requirements – what?
- Challenges in implementation
- Relationships with other management systems and standards
- BSI ISO55001 Scheme Rules and accreditation
- Audit focus of ISO55001
- Our journey with Scottish Water
- Training

ISO5500X Asset Management Standards

- ISO55000: Asset management — Overview, principles and terminology
- so we can all speak the same language

- ISO55001: Asset management — Management systems — Requirements
- auditable and certifiable

- ISO55002: Asset management - Management systems – Guidelines for the application of ISO 55001
- good value consultancy!

Purpose of an Asset Management System (AMS)

AM is the coordinated activity of an organisation to realise value from assets (ISO55000, p4)

Realising value:

Total cost of ownership: capital, revenue, maintenance, operations, decommissioning .....regulatory compliance, reputation, political environment, social costs, technological costs.

Service utility

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Purpose of an Asset Management System (AMS)

Organisation's Plans & Objectives

Performance evaluation & improvement

Asset Management Policy

Strategic Asset Management Plan: Asset Management Objectives

System support/ resource strategy

Asset Management Plans

Plan implementation

System support

Asset Portfolio

AMS: A set of interacting elements to establish AM policy, AM objectives and processes to achieve those objectives (ISO55000, p4)

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AMS: A set of interacting elements to establish AM policy, AM objectives and processes to achieve those objectives (ISO55000, p4)

Top Management

ACT

PLAN

CHECK

DO
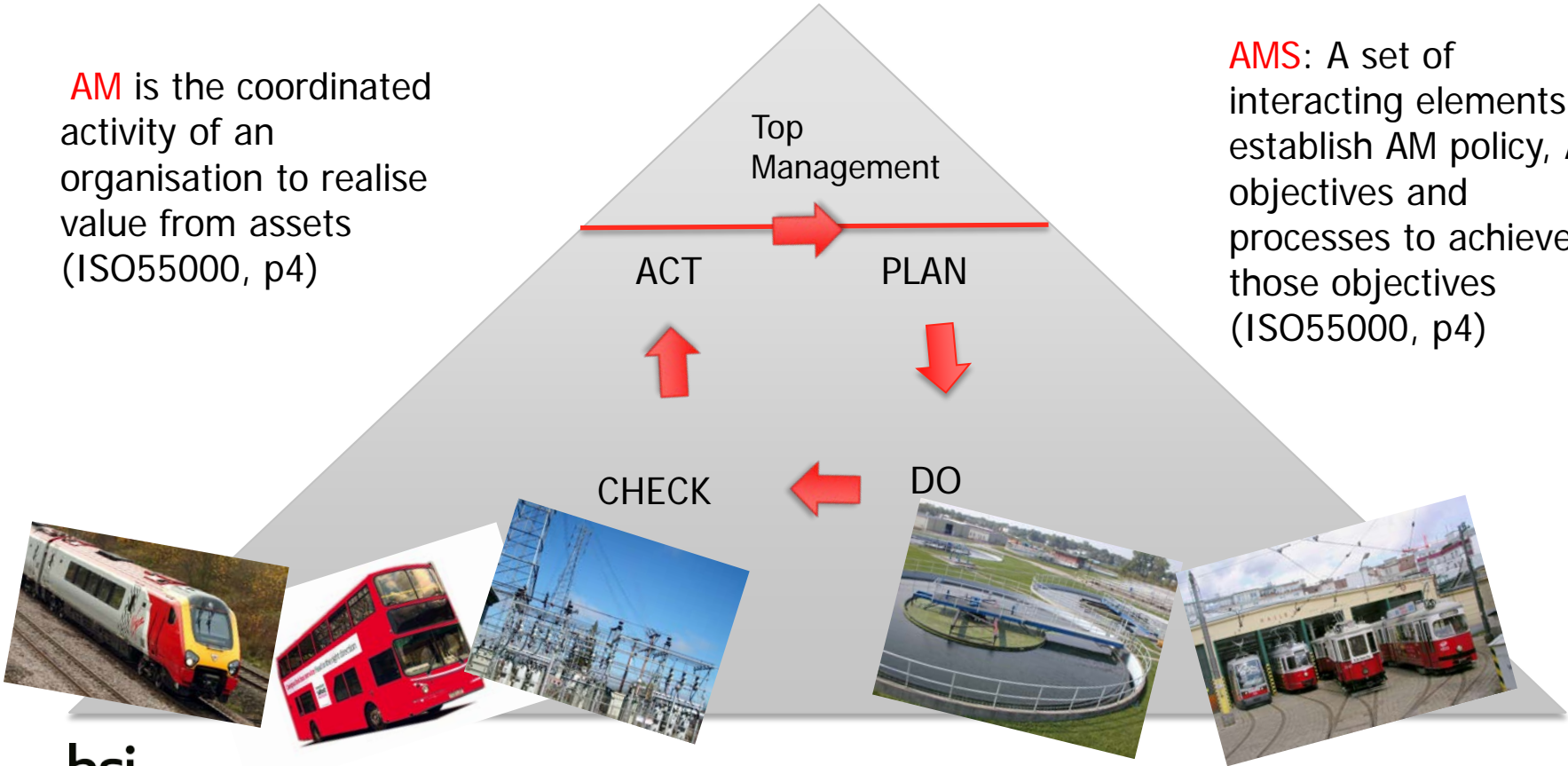
Decision makers for AMS alignment with ISO55001

Top Management

Top Management supported by Finance, Commercial and Asset Management
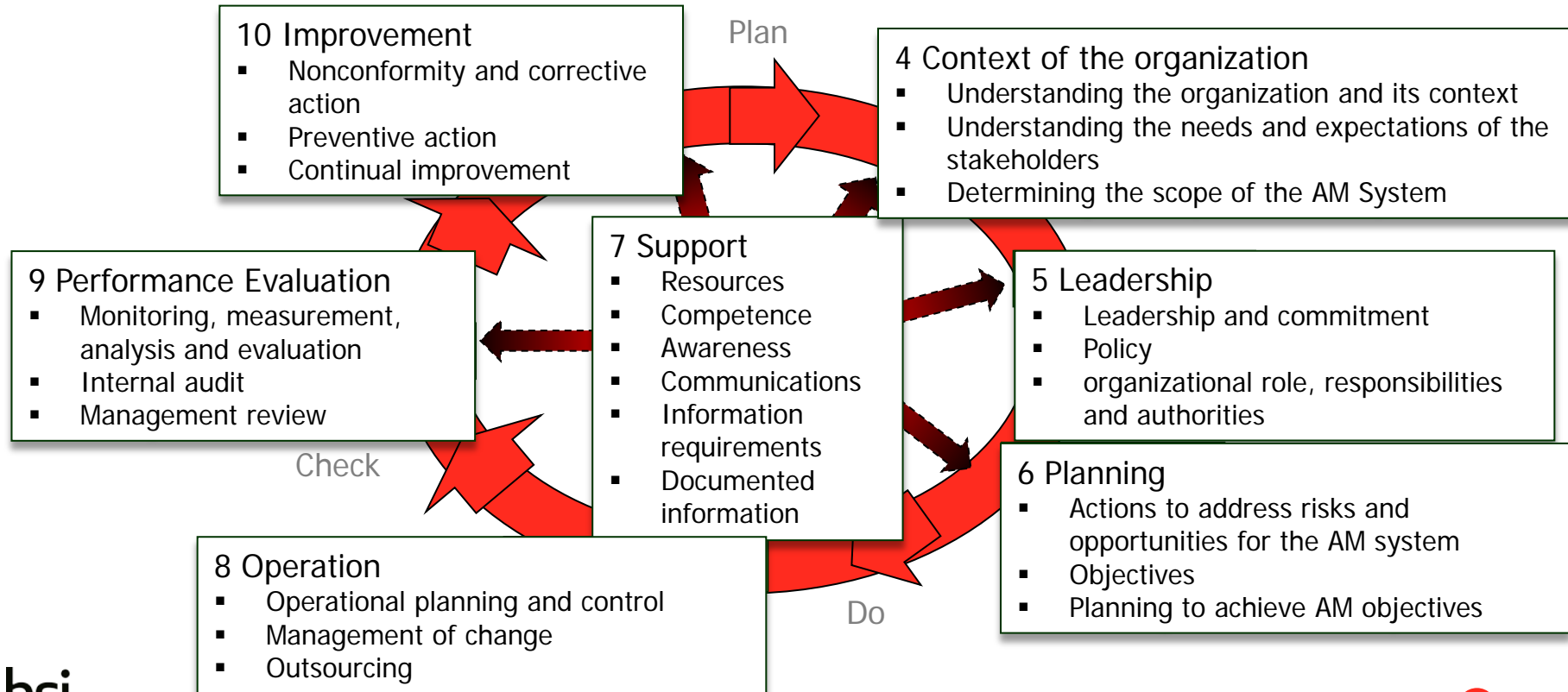
Commercial: Capex & disposals

Finance

Operations

Engineering/ maintenance

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Focus of ISO55001 and Organisation Hierarchy

Executive

Strategic Management

Operational Management

Assets

Management system

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ISO 55001 – Conformance Requirements

10 Improvement
- Nonconformity and corrective action
- Preventive action
- Continual improvement

Plan

4 Context of the organization
- Understanding the organization and its context
- Understanding the needs and expectations of the stakeholders
- Determining the scope of the AM System

9 Performance Evaluation
- Monitoring, measurement, analysis and evaluation
- Internal audit
- Management review

Check

7 Support
- Resources
- Competence
- Awareness
- Communications
- Information requirements
- Documented information

5 Leadership
- Leadership and commitment
- Policy
- organizational role, responsibilities and authorities

6 Planning
- Actions to address risks and opportunities for the AM system
- Objectives
- Planning to achieve AM objectives

8 Operation
- Operational planning and control
- Management of change
- Outsourcing

Do

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Challenges in implementation of ISO55001

Resolving conflicts between Finance and Engineering senior managers/directors

Strategic Asset Management Plan (SAMP)
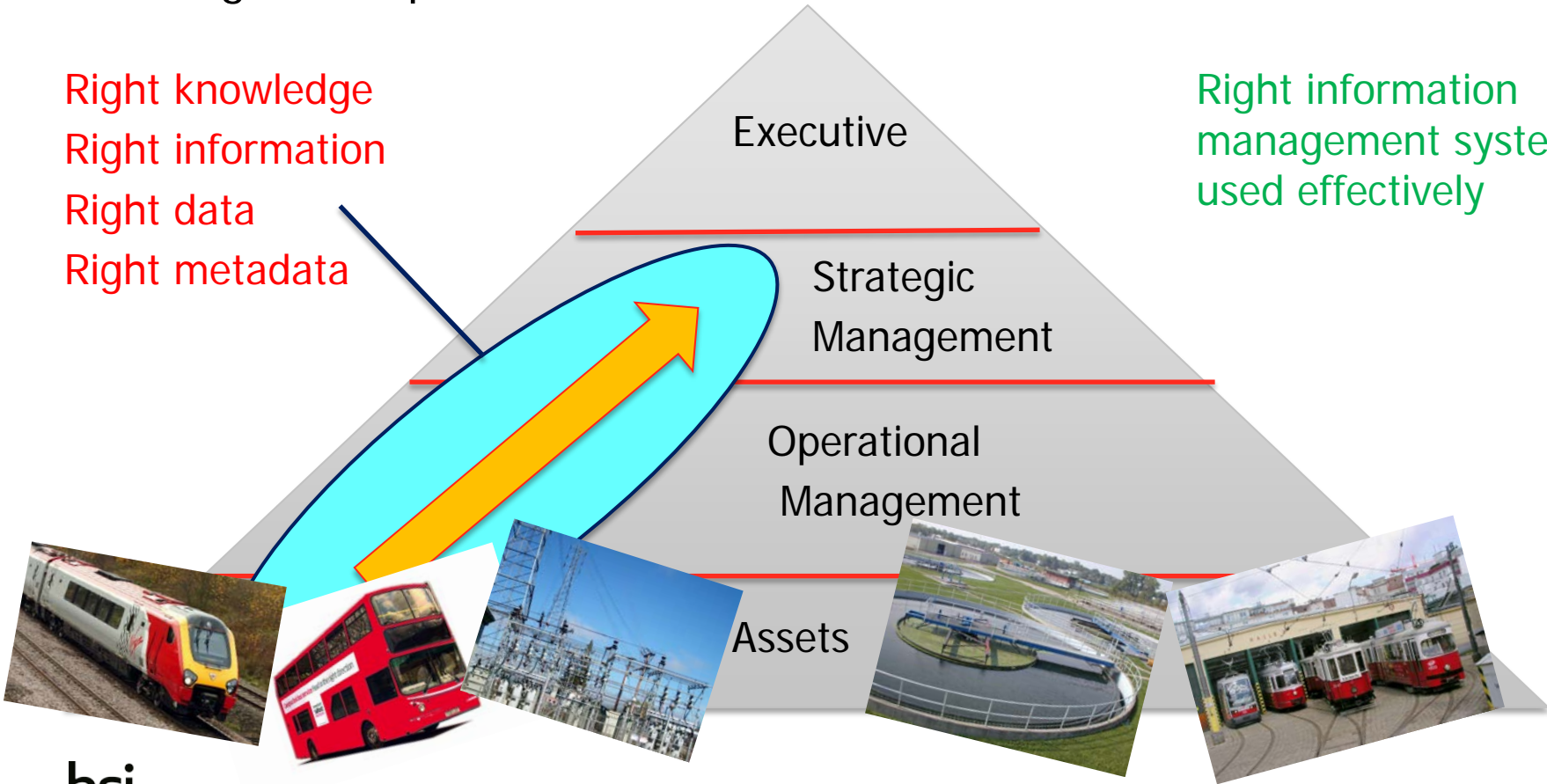
Executive

Strategic Management

Operational Management

Assets

Challenges in implementation of ISO55001

Right knowledge
Right information
Right data
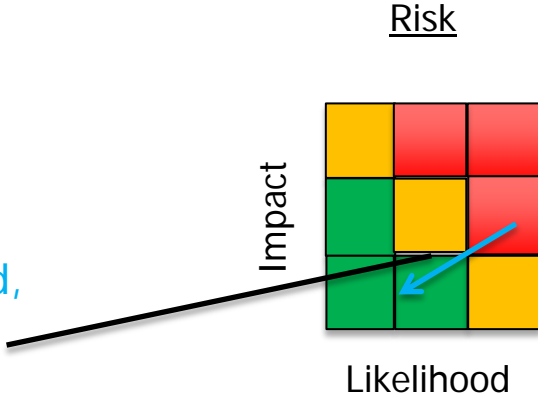Right metadata

Executive

Strategic Management

Operational Management

Assets

Right information management systems, used effectively

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Challenges in implementation of ISO55001

Risk

Risk control:

Reduce likelihood,
Reduce impact,
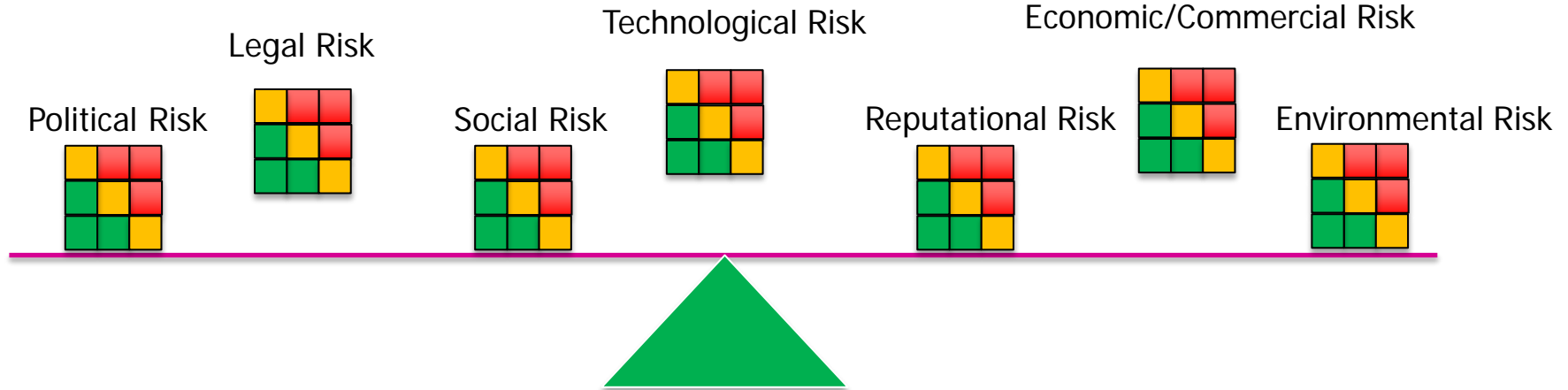Reduce both

Impact

Likelihood

Unacceptable risk

Borderline risk

Acceptable risk

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Challenges in implementation of ISO55001

Assessing, ranking, balancing and controlling different risk types against each other

Establish a comprehensive and consistent risk assessment and control process

Legal Risk

Technological Risk

Economic/Commercial Risk

Political Risk

Social Risk

Reputational Risk

Environmental Risk

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Relationship between AMS and other formal management systems

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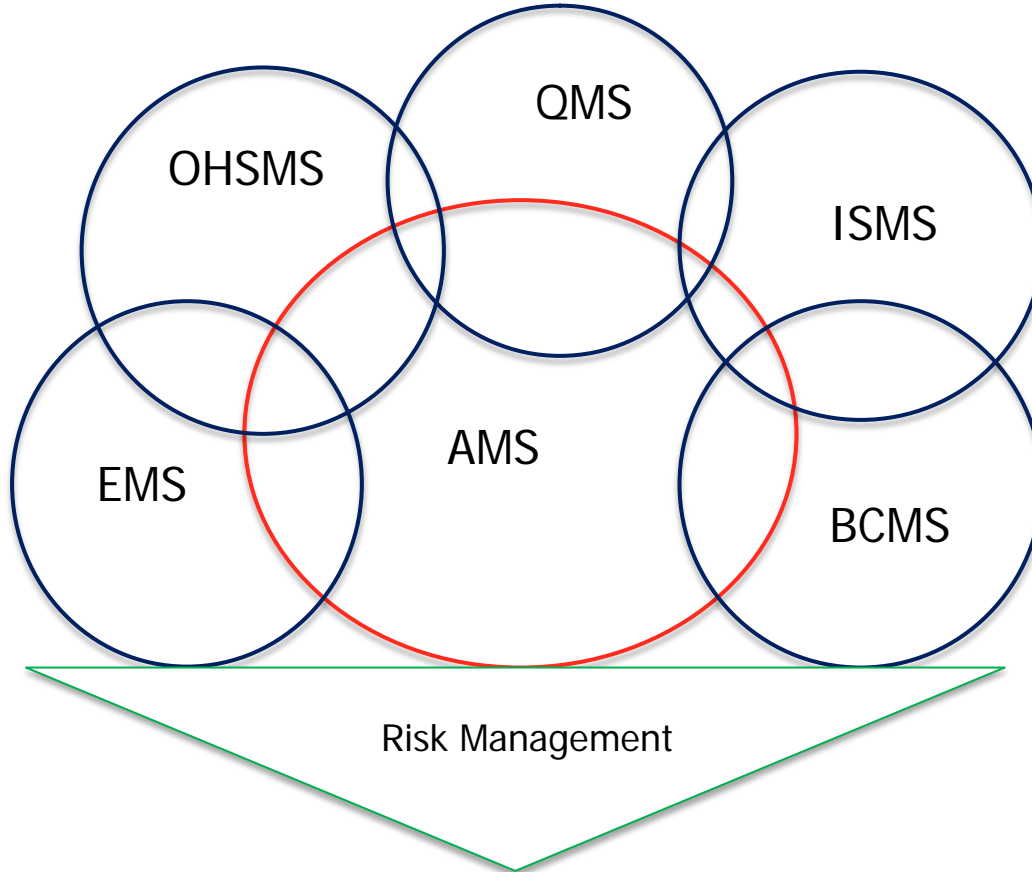
Relationship between ISO55001 and other formal management systems standards

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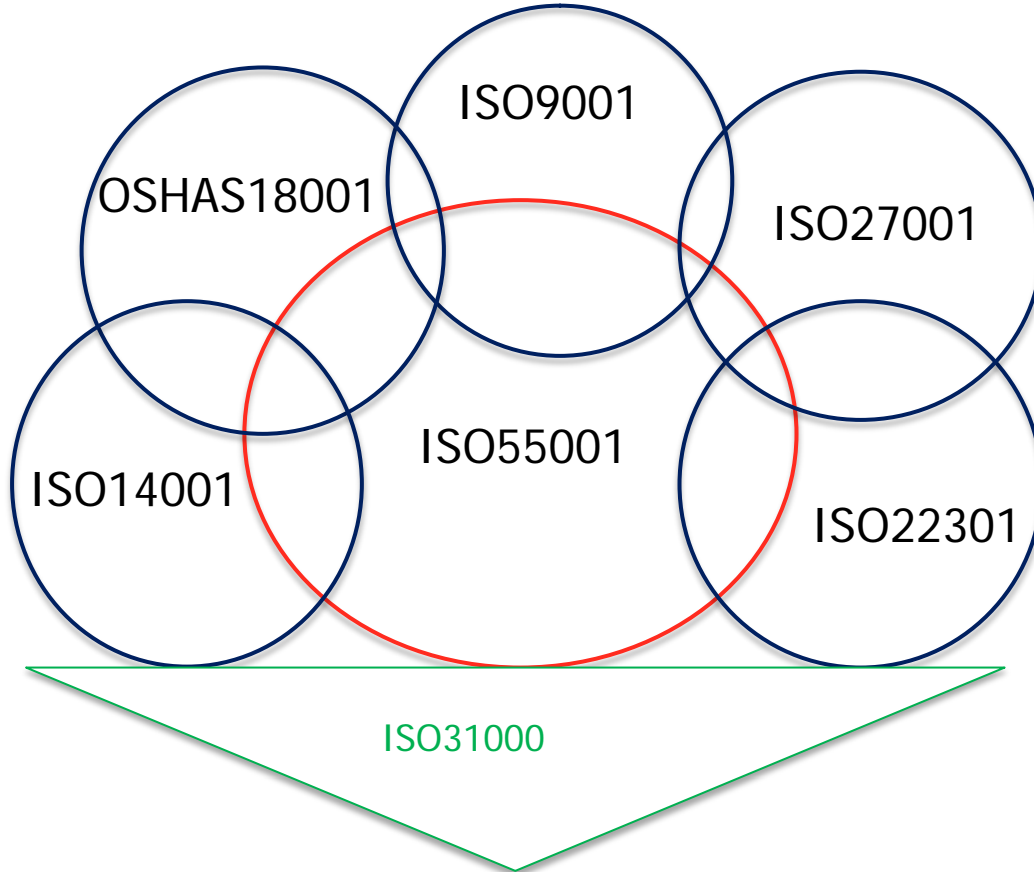
BSI Scheme Management

- To ensure that the delivery of our audit and certification service is:

  - Impartial
  - Independent
  - Competent
  - Confidential

  - To be able to meet the requirements of ISO17021:2011 –
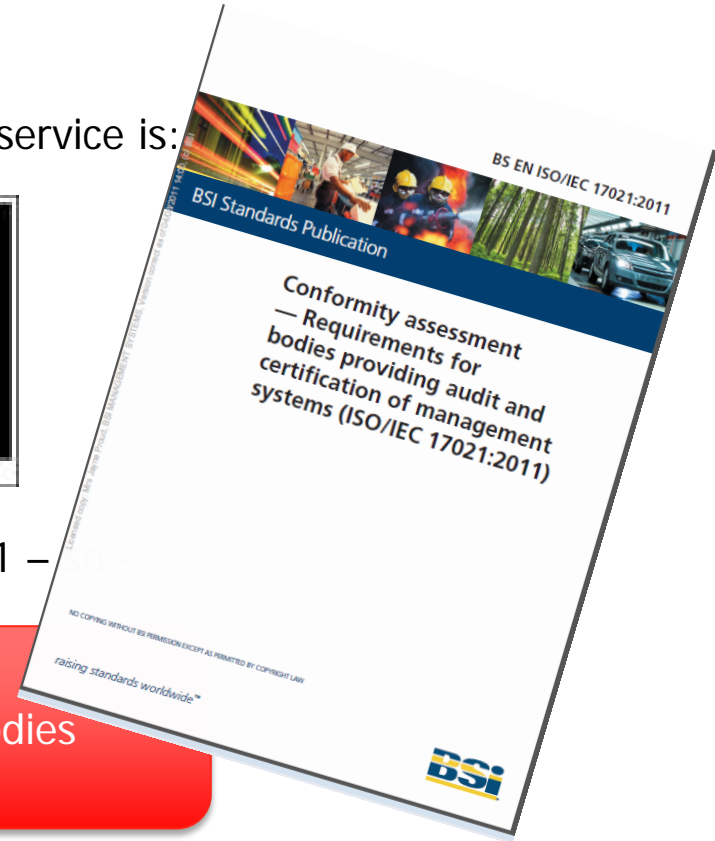
We can be accredited by National Accreditation Bodies

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ISO55001 Certificate Scope Definition

- Important!
  - For clarity of understanding of interested parties
  - Integrity of the certification service

- *'The asset management system in relation to governance of 'brief description of the asset portfolio being managed' and 'the service being provided by these assets'*

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Auditing

- Optional systems 'gap analysis' – informal review of the documentation structure and function.

- Stage 1 audit – formal assessment of organisation's documented system, governance structure and plans for implementing and operating the management system.

- Stage 2 audit – formal assessment of the operation of the management system and its effectiveness in achieving the management objectives.

- CAV (Continual Assessment Visit) – surveillance of the operation of the management system.

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Certification Cycle


```
┌─────────────────────┐                      ┌─────────────────────┐
│     OPTIONAL        │      2-6             │  Stage 1 (focus on  │      2-4
│  Pre- assessment    │─────months────▶      │   formal system)    │─────months──▶
│  (Gap Analysis)     │                      │                     │
└─────────────────────┘                      └─────────────────────┘
                                                                    ┌─────────────────────┐
                            12 (6 by                                │ Stage 2 (focus on   │
                            exception)                              │  operations and     │
                            months                                  │  effectiveness)     │
                                                                    │   - CERTIFICATION   │
                                                                    └─────────────────────┘
┌─────────────────────┐                      ┌─────────────────────┐      10 (4 by
│ 3 year Strategic    │◀────────────────     │  CAV (surveillance) │─────exception)
│ Review              │────────────────▶     │                     │      months
│ RECERTIFICATION     │                      │                     │
└─────────────────────┘                      └─────────────────────┘
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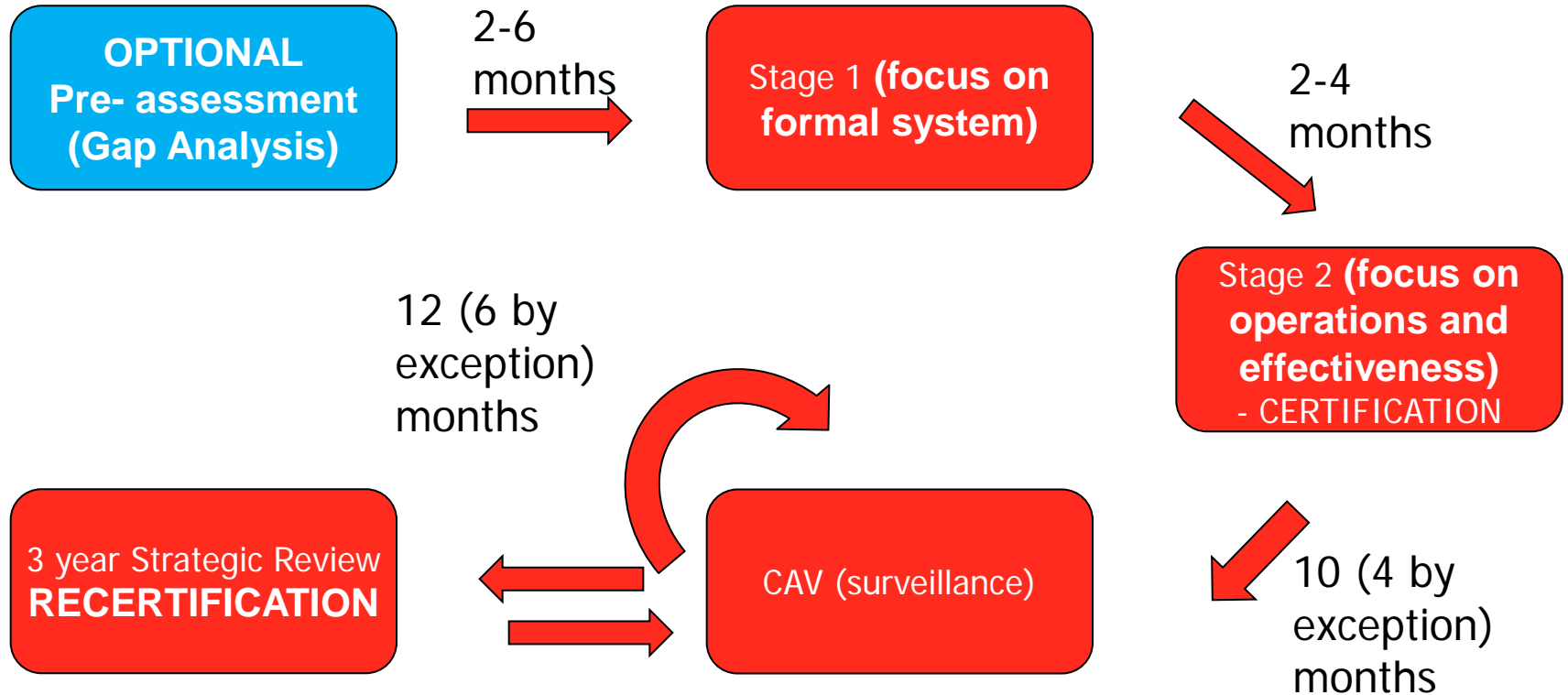
Focus of Auditing to ISO55001

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Strategic Management

Operational Management

Assets

Management system

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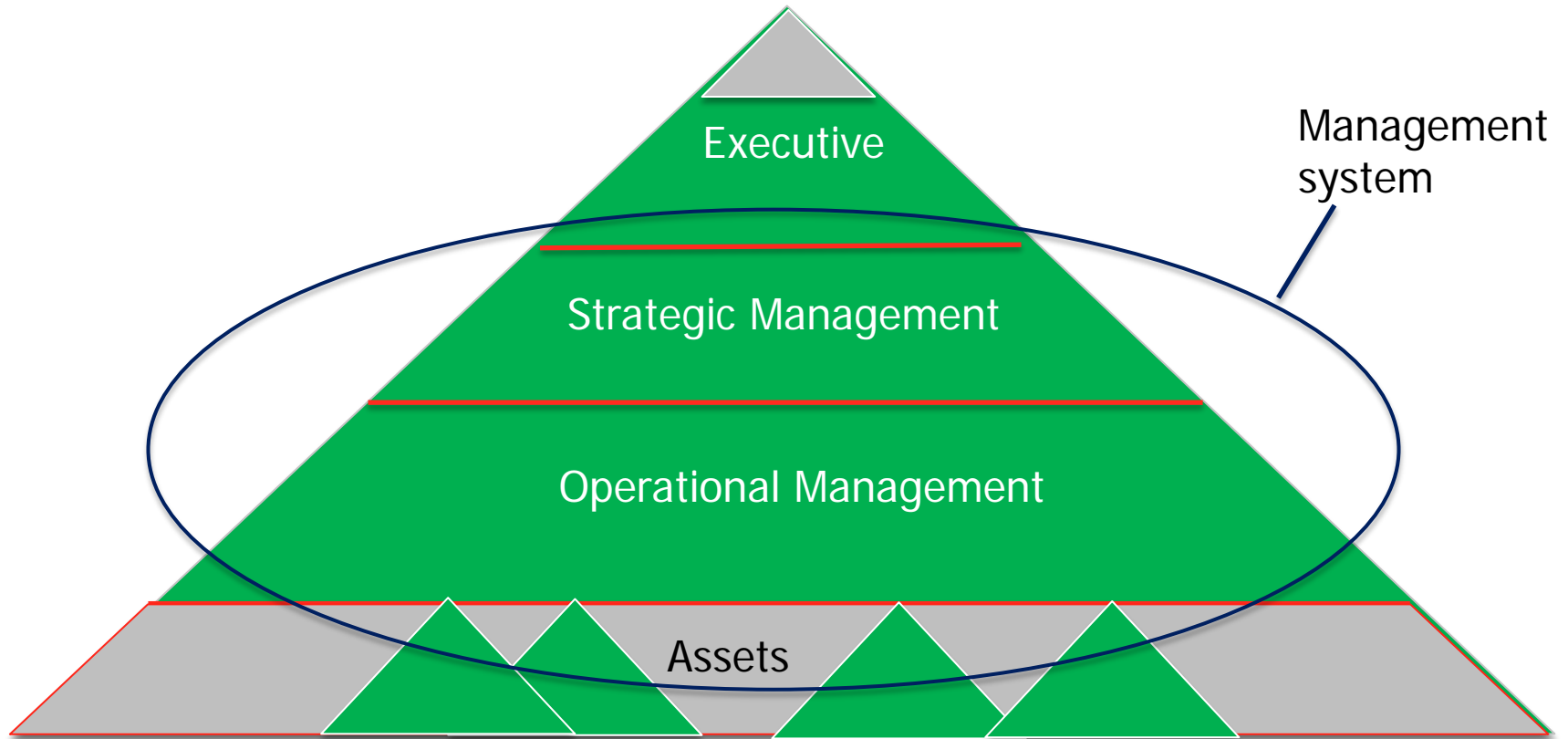
Audits

- Need to visit <u>example asset types</u>, at Stage 2 and CAVs

- ...to verify and validate asset system performance or condition against records.

- Resource intensive and time consuming and is not the focus of systems conformance, so is undertaken on an example rather than sample basis.

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Audit Trail: Themes

'Purpose'

'Line of sight'

'Support'

'Measurement and Improvement'

| 4 Context of the organization | 5 Leadership* | 7 Support | 6 Planning* |

5 Leadership*

6 Planning

8 Operation

9 Performance evaluation

10 Improvement

* Selected subclauses

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Assessment Plans

Stage 2 Assessment Plan

Report Number: SMO 1234566

Sheet Number : 1 of 3

Client: Isle of Sodor Railways			
Visit Objectives: Stage 2 Assessment to ISO55001			
Visit Scope: Organisation's AMS including all assets on the Isle of Sodor			
Management Standard:	**ISO55001**	**BSI Team: Leader:**	**Ivor Nencey**
Opening Meeting Date/Time:	**18/3/14 9:00**	**Members:**	**Willie Dooan Areseay**
Closing Meeting Date/Time:	**19/3/14 16:00**		
Company Representative:	**Sir Topham Hatt (MD)** Jack O'Falltrades (Ast. Mgr)		
Language of Assessment:	**English**		**8 man days**

Date	Time	Assessor	Area/Process	Clause	Client
18/3/14	9.00	IN & WDA	Opening meeting, changes to the system since Stage 1		All
	9.45		**THEME 1 AWARENESS** Context of the organisation -understanding the organisation -needs and expectation of stakeholders	4.1 4.2	J O'F
	11.00		Determining the Scope of the AMS and defining the AMS	4.3, 4.4	J O'F
	11.45		Top Management interview: Leadership and committment	5.1	Sir TH
	12.30		LUNCH		
	13.15	IN	**THEME 2 LINE OF SIGHT** Policy	5.2	
	14.00	IN	Actions to address risks and opportunities	6.1	J O'F
	14.45	IN	Objectives, planning to achieve asset management objectives	6.2	J O'F

A218 Issue 3 EMEA

The Journey so far with Scottish Water

Top row:
- ISO 9001 assessment
- Develop asset management auditing competence
- Validate training & undertake pilot with SW
- Develop DIS 55001 Competence for pilot
- Gap analysis vs. ISO55001 ….FDIS
- ISO55001 Certification for pilot

Bottom row:
- Gap analysis to PAS55
- ISO 9001 roll out
- Engage BSi on PAS55 pilot
- PAS55 Certification for pilot
- Engage BSi On ISO55001 for pilot
- Gap analysis vs. ISO55001 ….FDIS
- ISO55001 Certification for pilot

Timeline: 2009 — 2010 — 2011 — 2012 — 2013 — 2014

Adapted with permission of Scottish Water

Next steps for BSI

Develop competence to ISO17021-5

Develop overseas capability

Pilot accreditation with UKAS

Field assessments with UKAS

Achieve Accreditation with UKAS

2014

2015
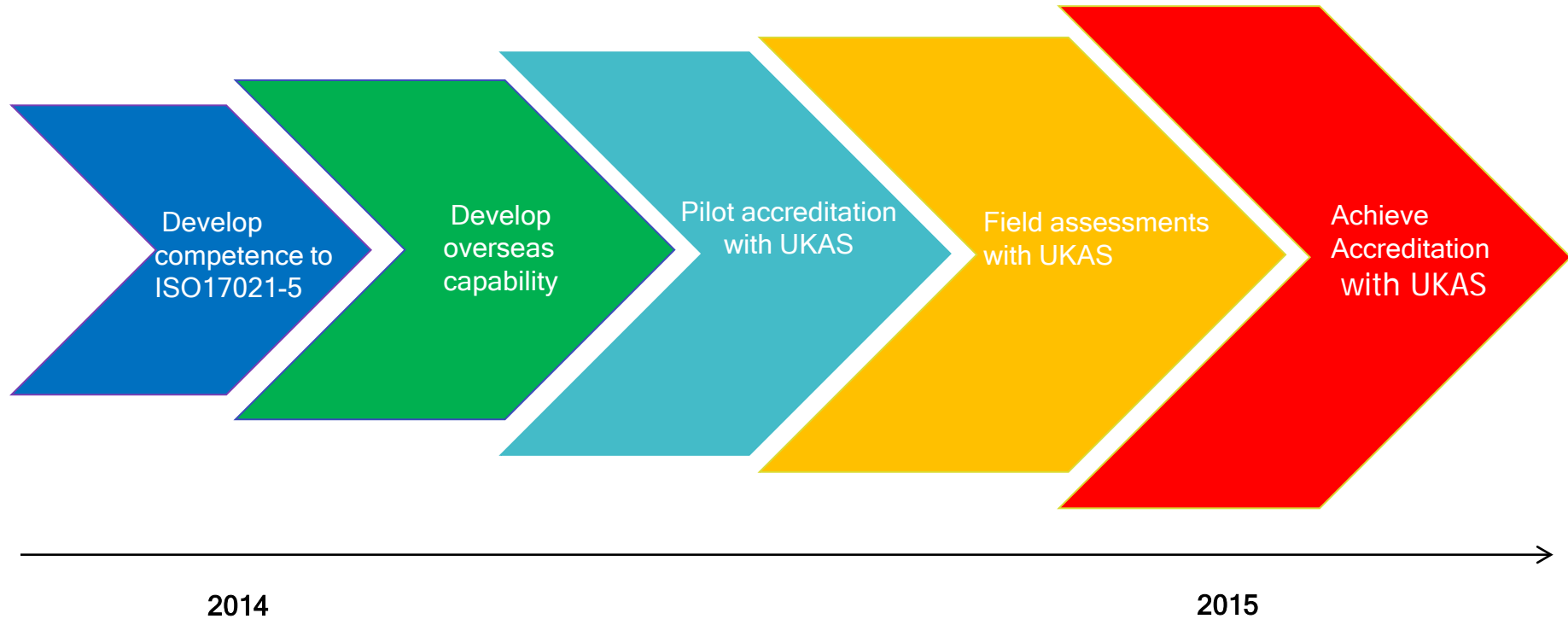
BSI Training

- Fundamentals of Asset Management

- Asset Management: Requirements of ISO55001:2014

- Key Elements of Auditing ISO55001:2014

- In house training

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- http://www.bsigroup.com/en-AE/PAS-55-Asset-Management/ISO-55001-Training-Courses/

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Summary

- Asset Management Systems (AMS) are designed to maximise value from assets.

- ISO55001 represents a formally codified internationally recognised asset management system standard.

- Organisation's success requires top management commitment: SAMP, Good information systems: used effectively, Comprehensive risk assessment and controls.

- BSI Certification of your organisation to ISO55001 provides independent assurance of the organisation's governance and processes for maximising value from assets. For your assurance, your business partner's assurance and to benchmark against your competition. BSI Training can help you on each step of this journey.

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