Rail Asset Management Summit 2018

Rail Asset Management Summit
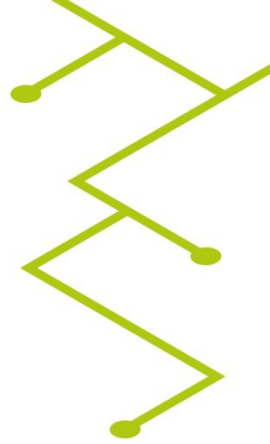2018

Matthew Justin
Technical Director
Asset Management Advisory
WSP Ltd

Moving from BIM to Asset Management

WSP

Building Information Management

"**Process** of designing, constructing or operating a building or infrastructure **asset** using electronic **object-orientated information**"

PAS 1192-2:2013

Processes: Management Information

Asset: Building or infrastructure

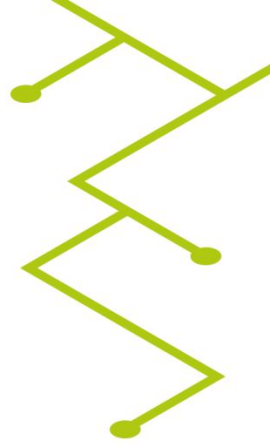**Object-OI:** Categories of object-orientated information system

Asset Management

"Coordinated **activity** of an **organisation** to realize **value** from assets"

ISO 55000:2014

Asset: Item, thing or entity that has potential or actual value to an organisation
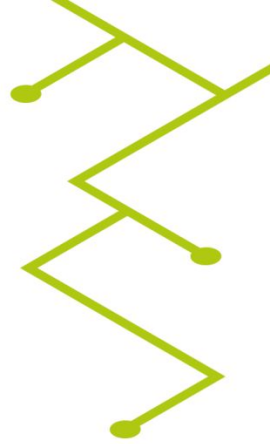
Value: Tangible or intangible, financial or non-financial
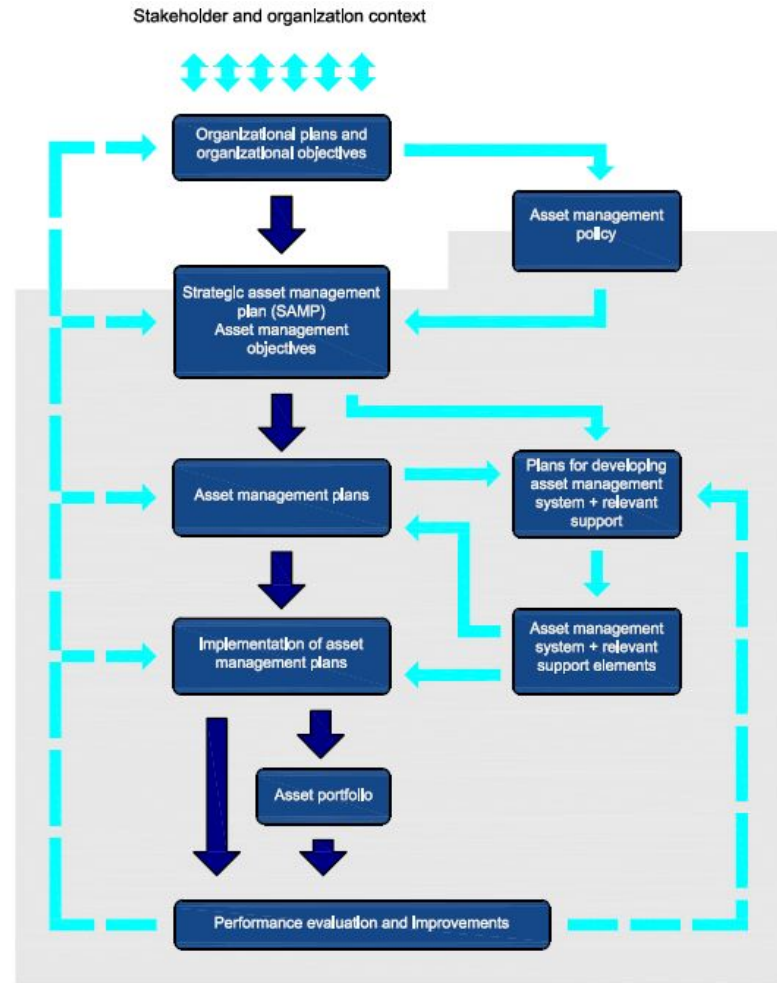
wsp

Management System

"Set of interrelated or interacting elements of an organisation to establish policies, objectives and processes to achieve those objectives"

ISO 55000:2014

Relationship between key elements of an asset management system

Source: ISO 55000-2014

Stakeholder and organization context

Organizational plans and organizational objectives

Asset management policy

Strategic asset management plan (SAMP) Asset management objectives

Asset management plans

Plans for developing asset management system + relevant support

Implementation of asset management plans

Asset management system + relevant support elements

Asset portfolio

Performance evaluation and improvements

WSP

ISO 55001:2014

4.0 Context	
4.3 Scope	
5.0 Leadership	
6.0 Planning	
7.0 Support	
7.5 Information requirements	
7.6 Documented Information	
8.0 Operations	
8.1 Ops Planning & Control	
9.0 Performance	
10.0 Improvement	

BIM and Asset Management

Inform

Asset Management System

Attributes/ Collection

Action to address risk & opportunities

CLIENT

Organisational Strategy

Generates

Asset Information requirements

Inform Need

Management Systems

- ISO 9001
- ISO 14001
- ISO 18001

Quality

Master Information Delivery Plan
(Task Information Delivery Plans)

Execute

BIM Execution Plan

Procurement

Employer Information Requirements

Generate Questions

Supply Chain

Specifies

Project Information Model
1. Brief
2. Concept
3. Definition
4. Design
5. Build & Commission
6. Handover

Contributes

BIM Level 2

Operation
Asset Information Model
1. Documentation
2. Graphical Model
3. Non Graphical Data

Assess /Refurbish / Renew

Asset Portfolio Data

Enterprise Systems
SCADA/GIS/CMMS..
IT Systems
SAP/ Maximo ..

BIM

Common Data Environment

Construction Organisation Business Information Exchange (COBie)
(PAS1192-2/-3 + ISO 12911-2012)
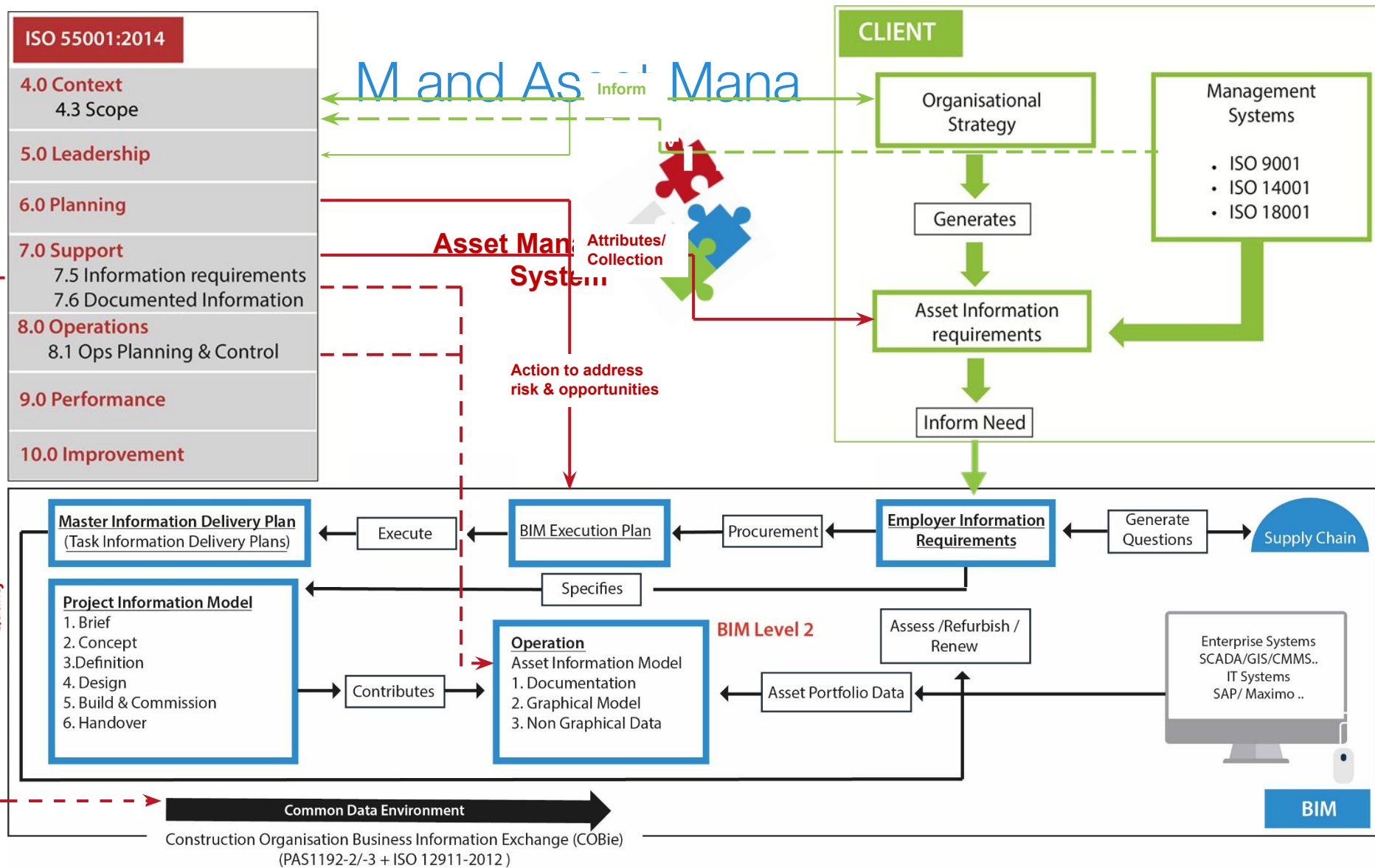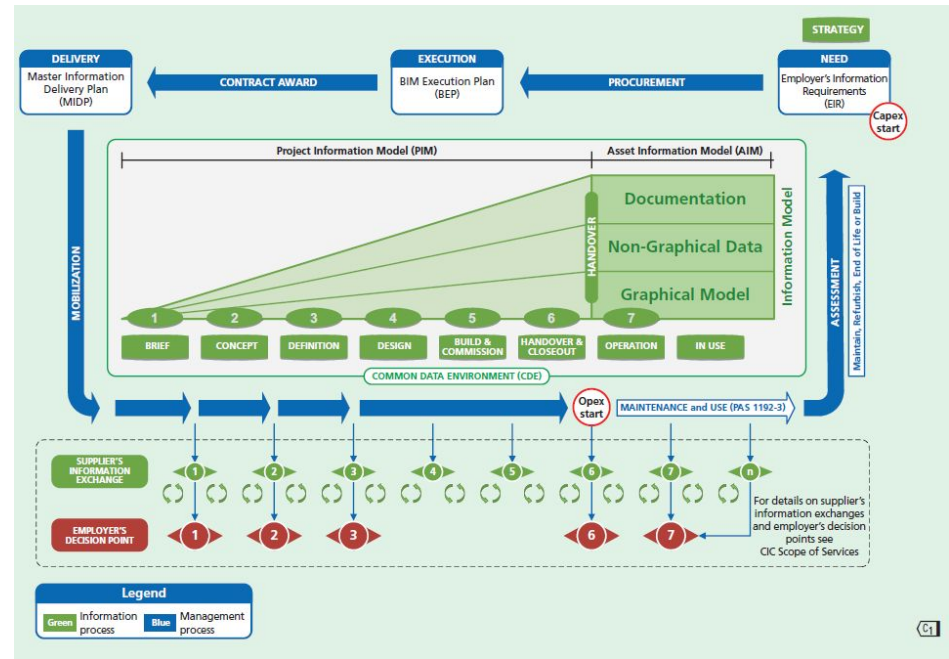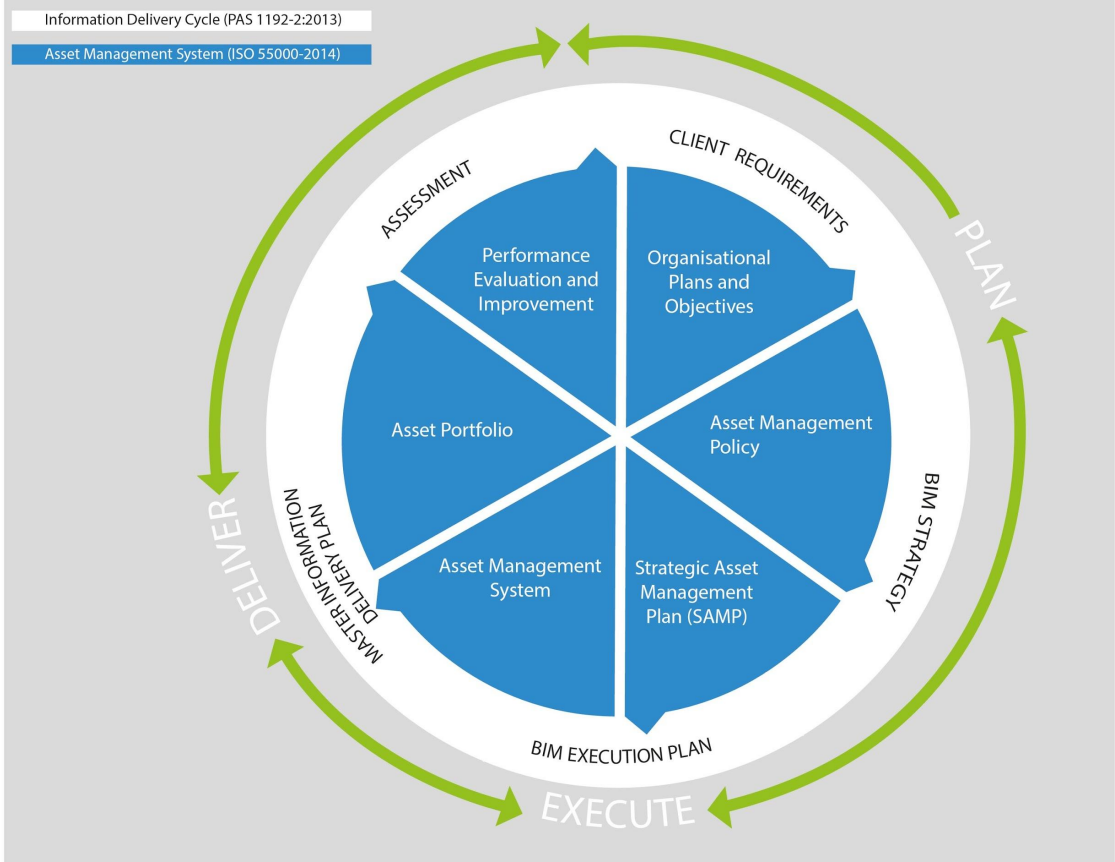
Relationship between key elements of an asset management system (ISO 55000-2014)
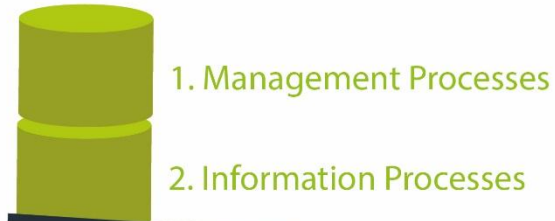
The Information delivery cycle (PAS 1192-2:2013)

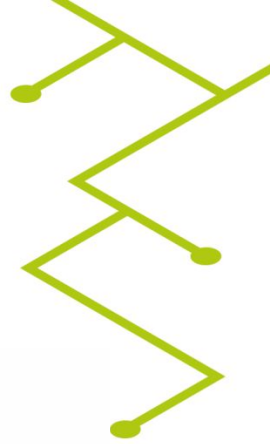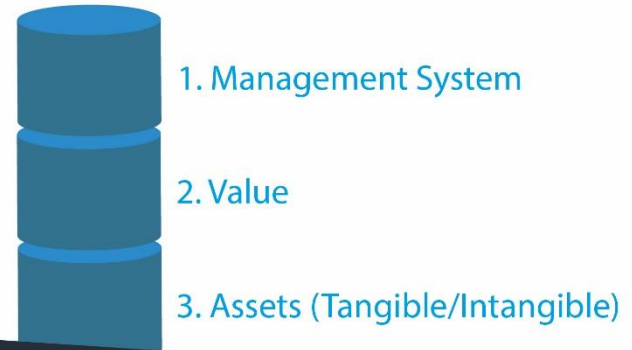# An Integrated Approach to Obtain Asset Value

An Optimised Approach

BUILDING INFORMATION MANAGEMENT

1. Management Processes

2. Information Processes

ASSET MANAGEMENT

1. Management System

2. Value

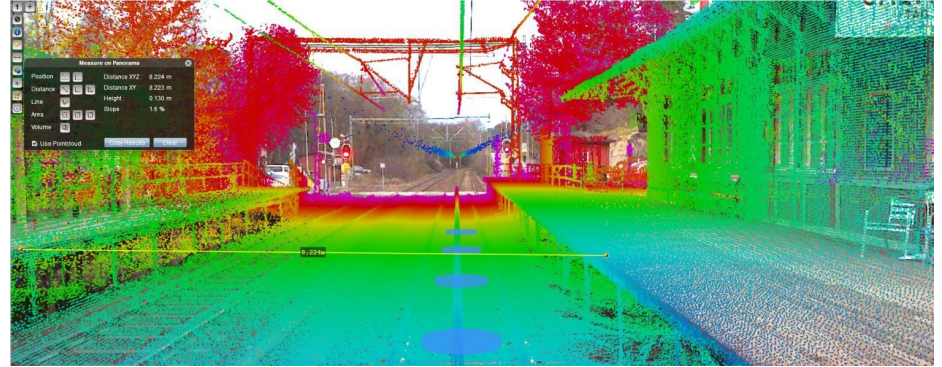3. Assets (Tangible/Intangible)

WSP

Asset Data Management – Present and Future

Singapore Land Transport Authority project
Condition assessment of RTS infrastructure using mobile technology

Data collection using LiDAR

Data collection activity generating millions of data points to inform asset portfolio condition

Embracing the Internet of Things
Intel predict that by 2020 there will be 200 billion connected devices in the world.

WSP