



Asset Productivity for Infrastructure Business

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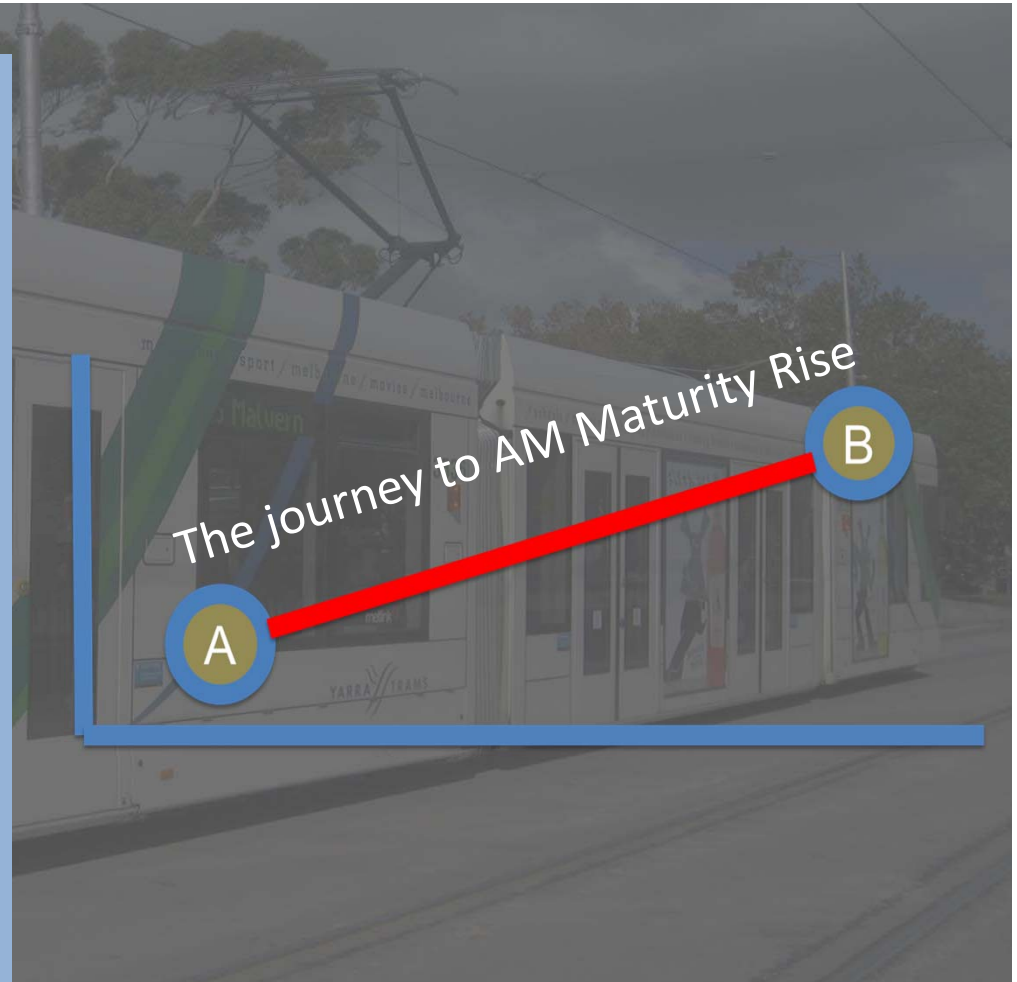
Global Service Line Leader, Asset Operations



Content

Provide context around the role of Asset Management and **Asset Productivity** in the infrastructure business, with a synopsis of two recent industry case studies, that are most relevant to any infrastructure business:

- **ISO55000** – case study
- **AMIS** – case study



Preface

Move to long term strategic improvement,
rather than short term fix

- Merseyrail Liverpool AMIP Partnership – including alignment with PAS 55, **UK**
 - Pennsylvania Department of Transportation (PennDOT) Transportation AM Plan Development, 2011-Present, Mid-Atlantic **US**
 - Washington Metropolitan Area Transit Authority (WMATA) AM program – 2012/13 – **UK**
 - Centro Rail, West Midlands, UK – PAS 55 Assessment and Improvement RoadMap, **UK**
 - Heathrow Express (Hex) – AM Improvement Programme, **UK**
 - Charlotte Area Transit Authority (CATS); EAMS (Cityworks) Implementation to Map21 Requirements; 2013-Present; **US K&IMS Practice**
- + Many more . . .

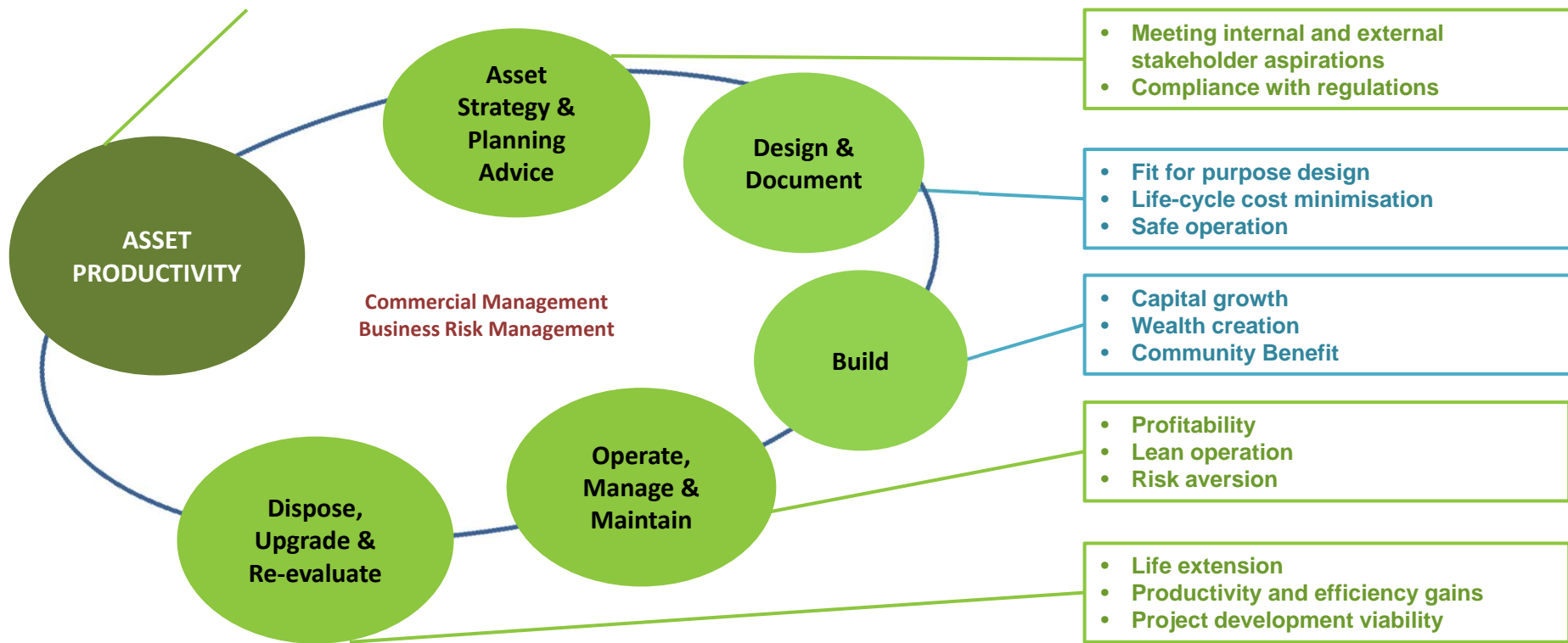


The Asset Productivity Message



The Asset Value Chain

Ability to offer integrated management services throughout the asset value chain

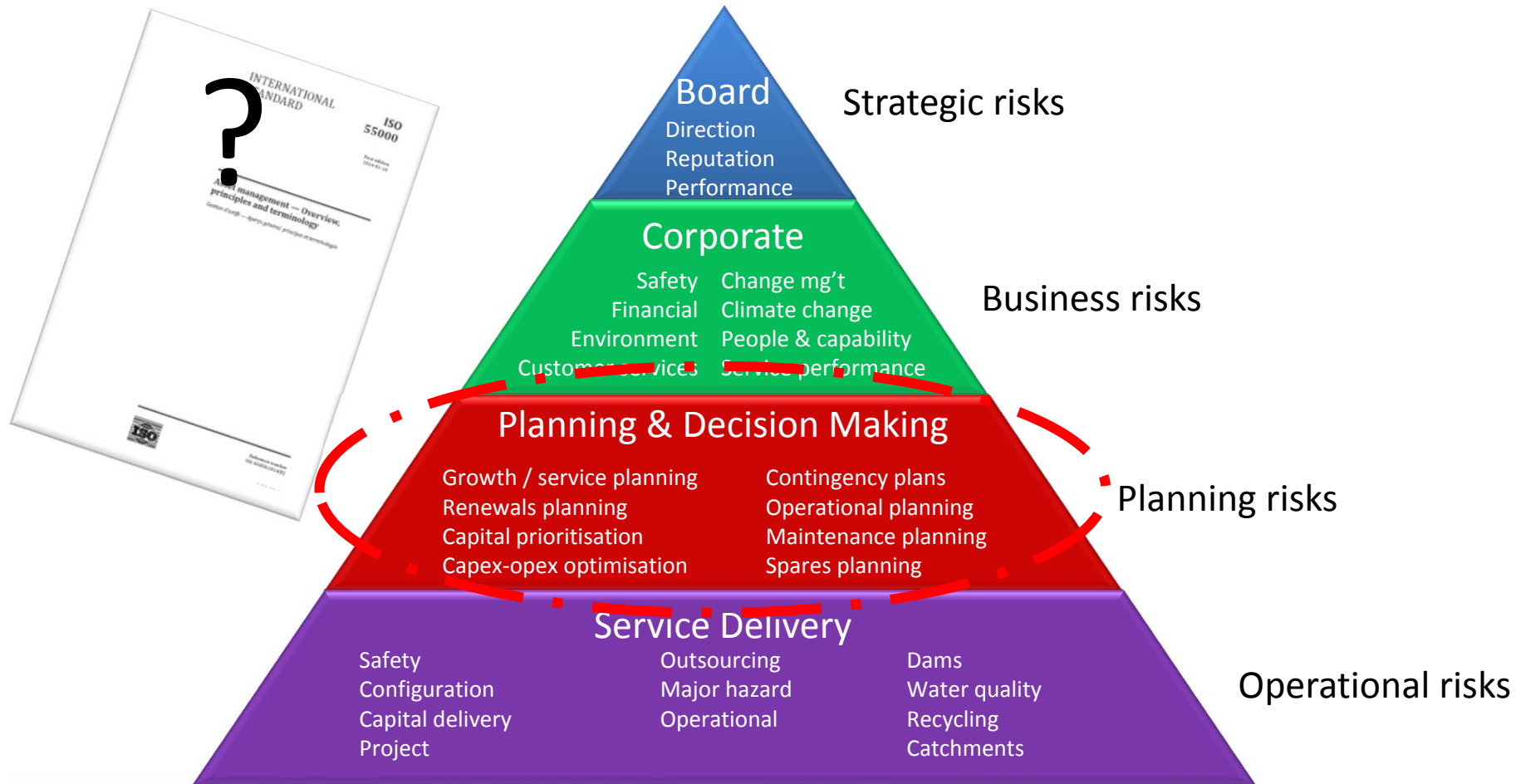


Management Systems Approach

Case Study



Asset Management – The new ISO 5000 Series



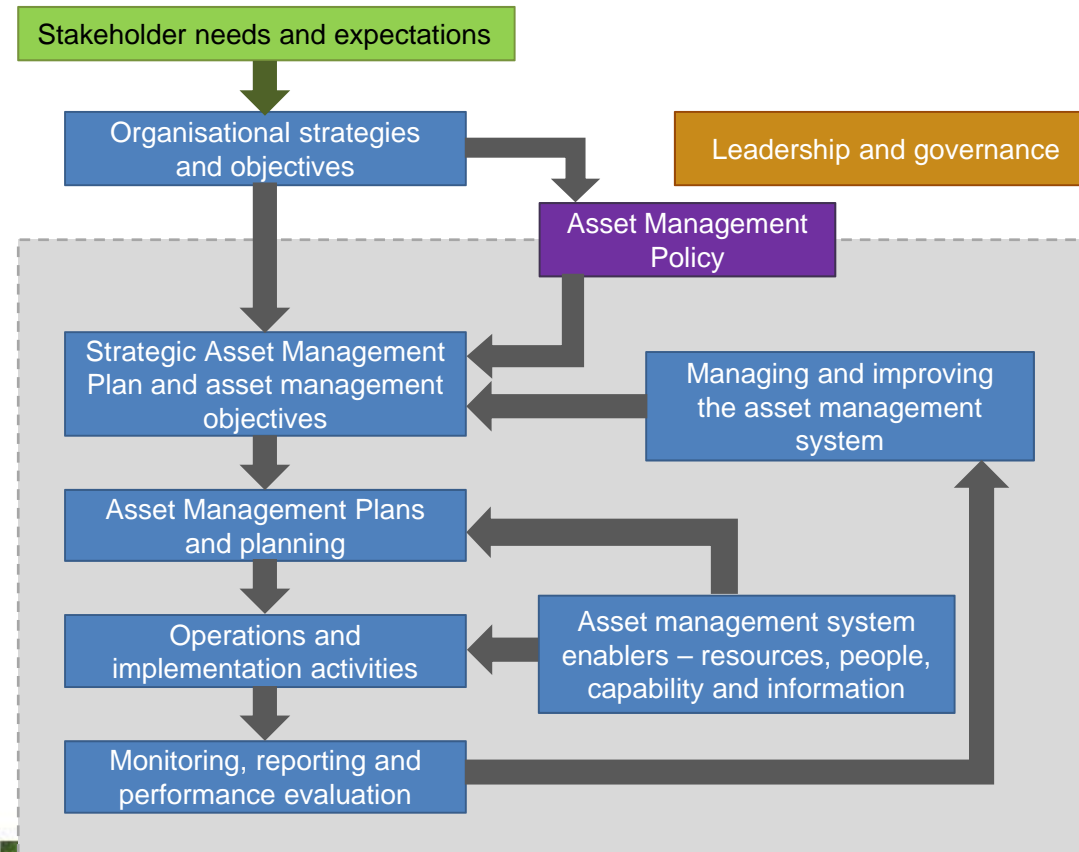
ISO 55000 Series – Overall Structure

- **T**hree parts:
 - ISO 55000 Asset management — Overview, principles and terminology
 - ISO 55001 Asset management — Management systems — Requirements
 - ISO 55002 Asset management — Management systems — Guidelines for the application of ISO 55001
- First ISO standard to apply the Joint Technical Coordination Group's (JTCG's) 'Annex SL' (a common structure and text for management system standards)
- Still basically a PDCA management system – but this structure is no longer explicitly acknowledged or evident
- Key themes remain: line of sight, whole life-cycle approach, risk-based decision-making and enablers



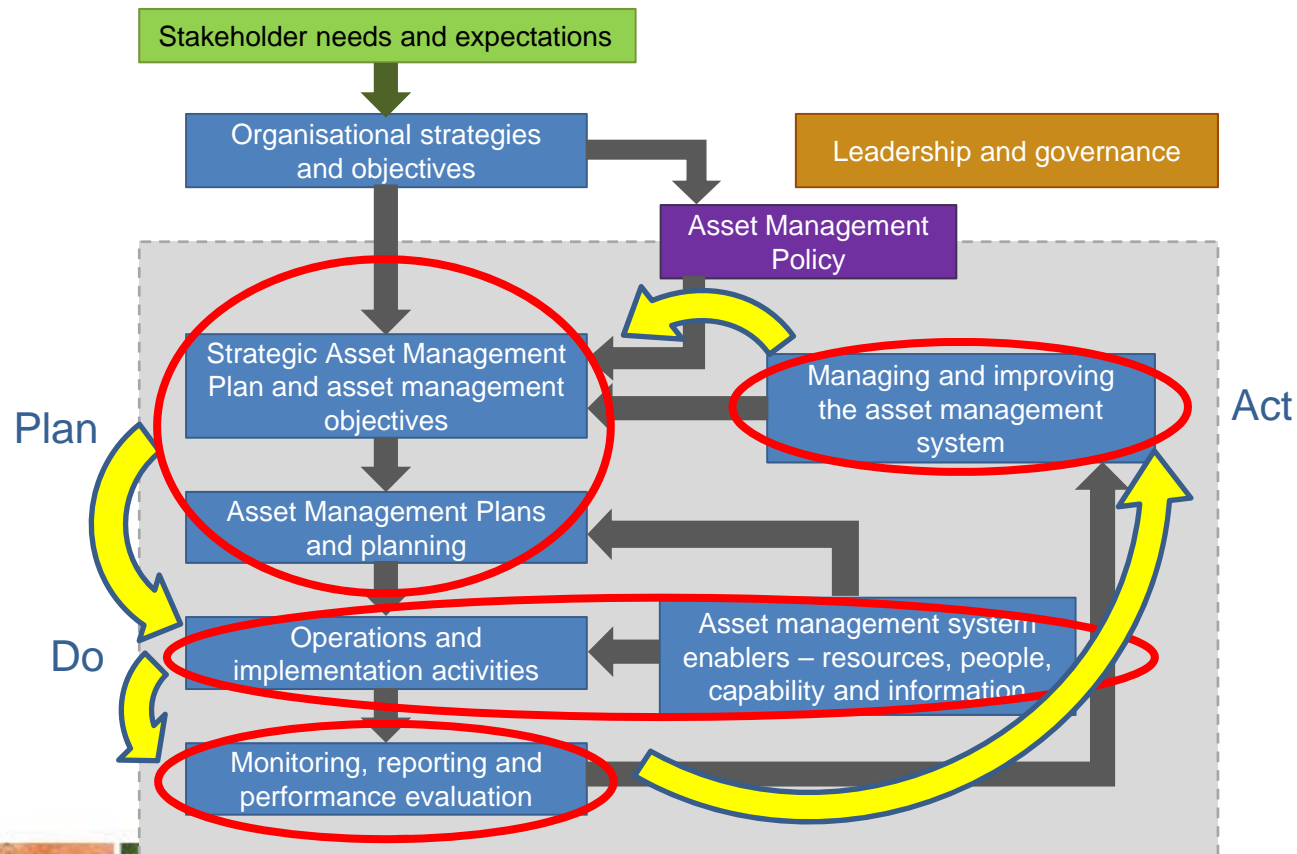
Asset Management – The new ISO 55000 Series

The asset management system



Asset Management – The Plan Do Check Act Cycle

Management systems approach to asset management

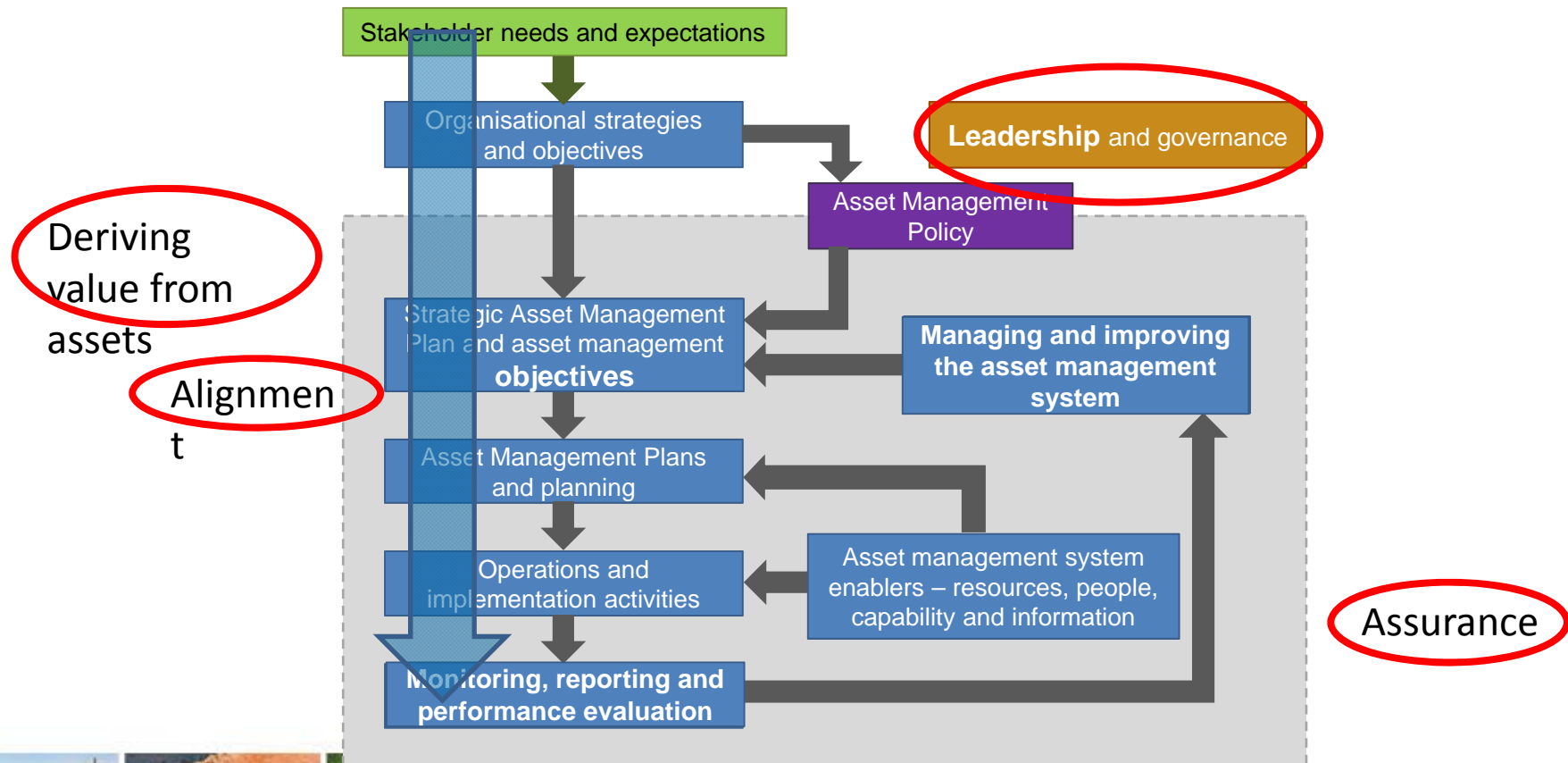


The asset management system



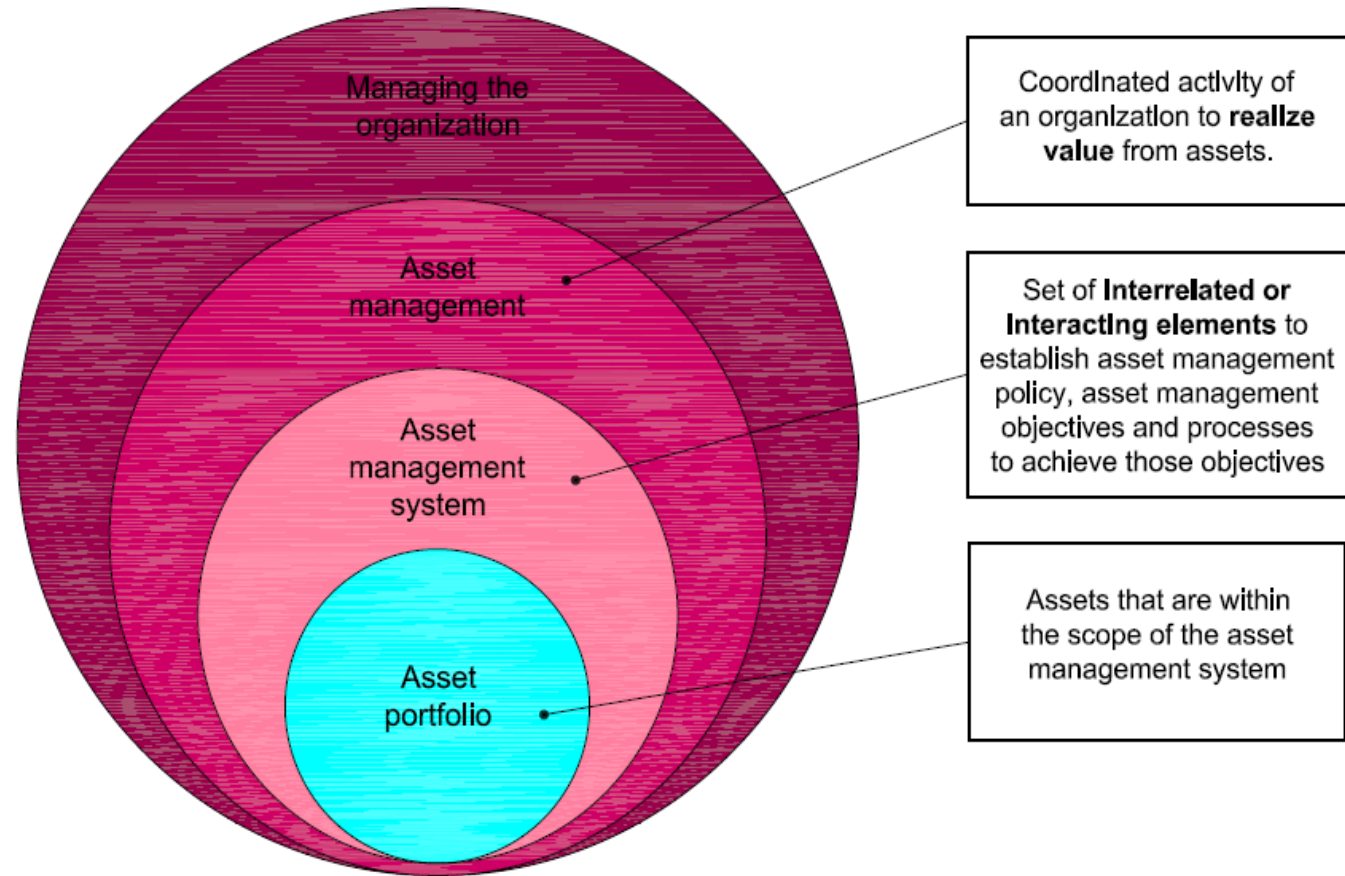
Asset Management Fundamentals

The asset management system



Scope of the AMS and Asset Portfolio

Specifying the asset management system, its scope and the asset portfolio within it

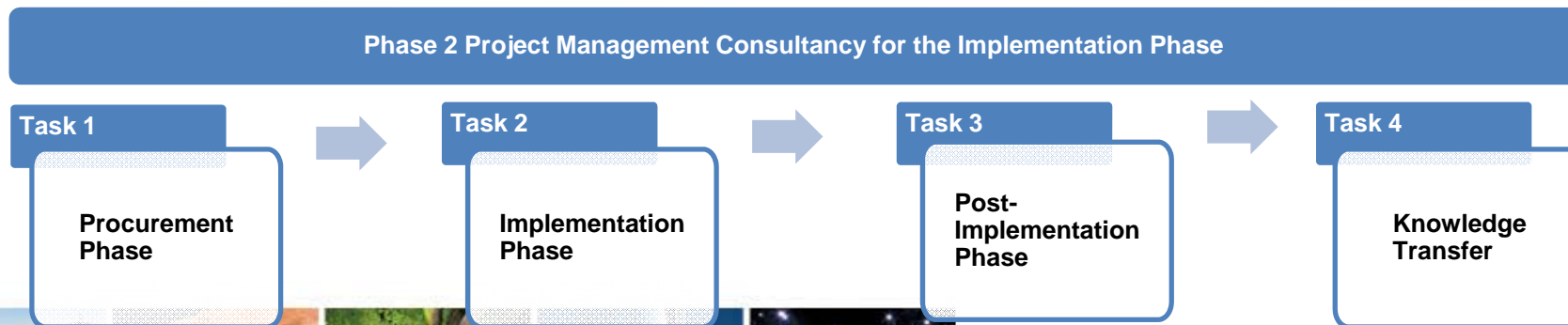
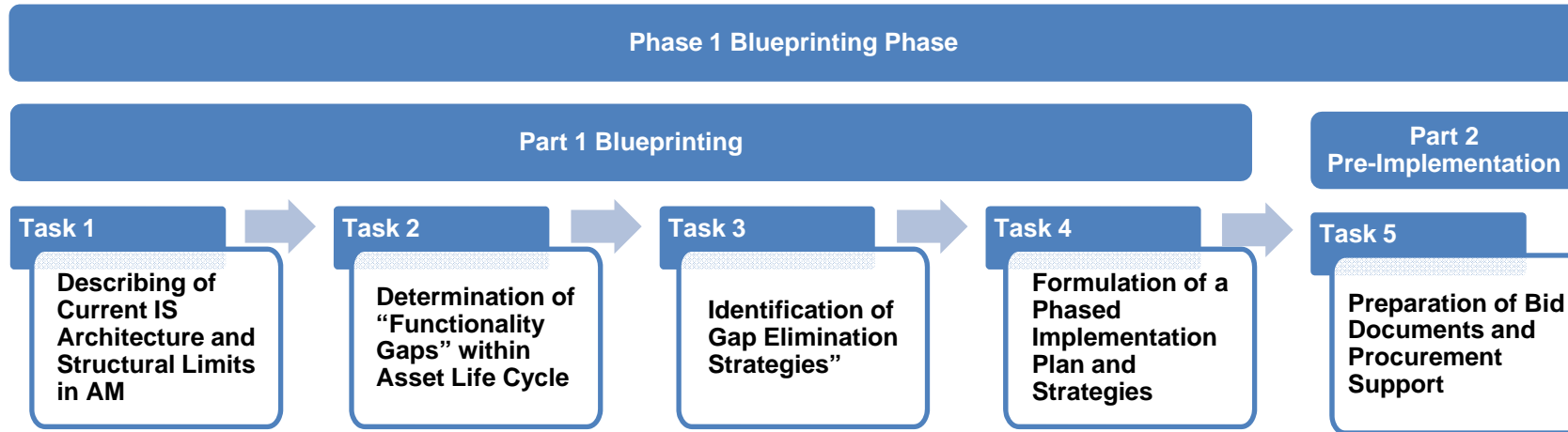


Asset Management Information System (AMIS)

Case Study

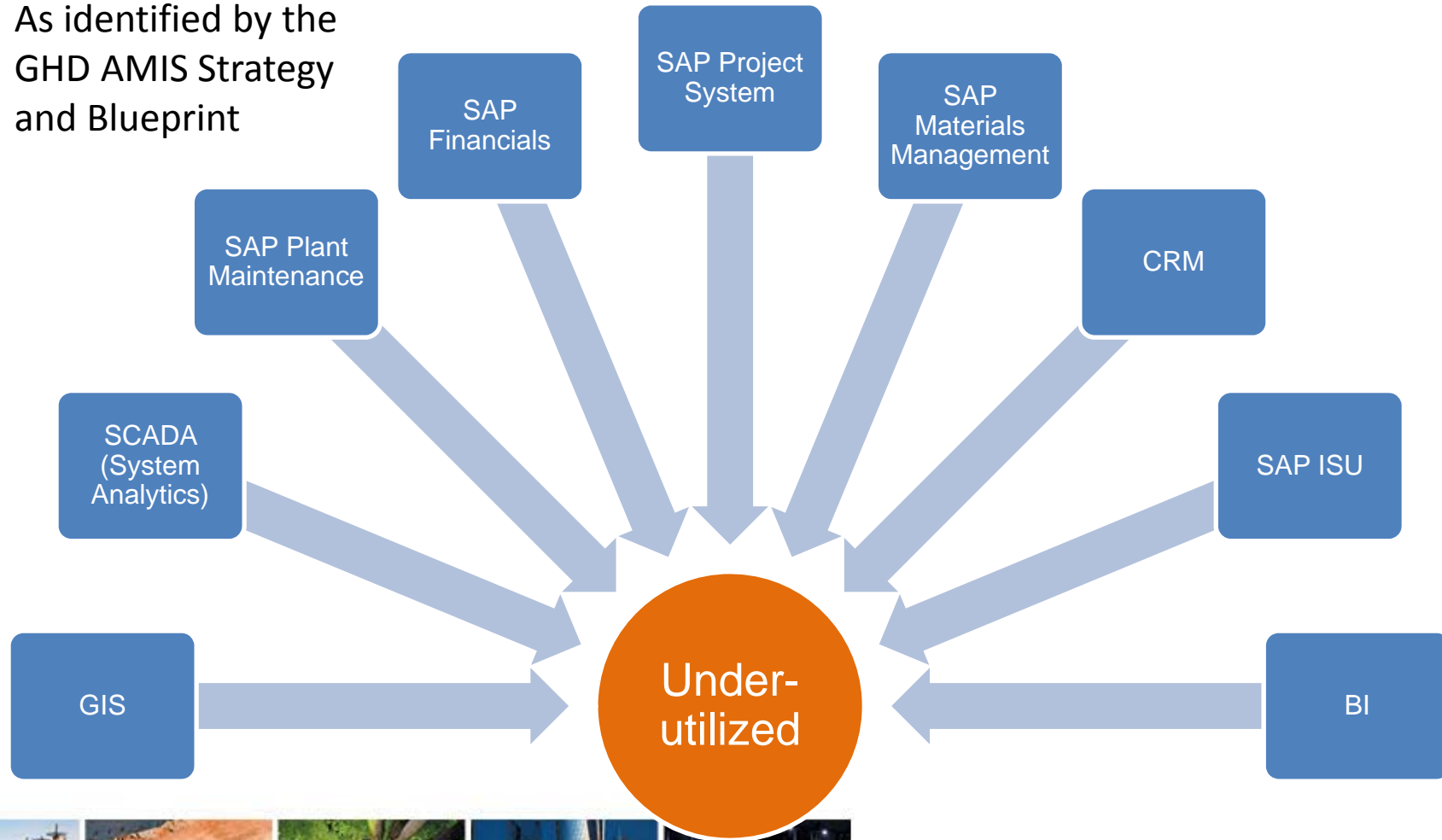


Project Context



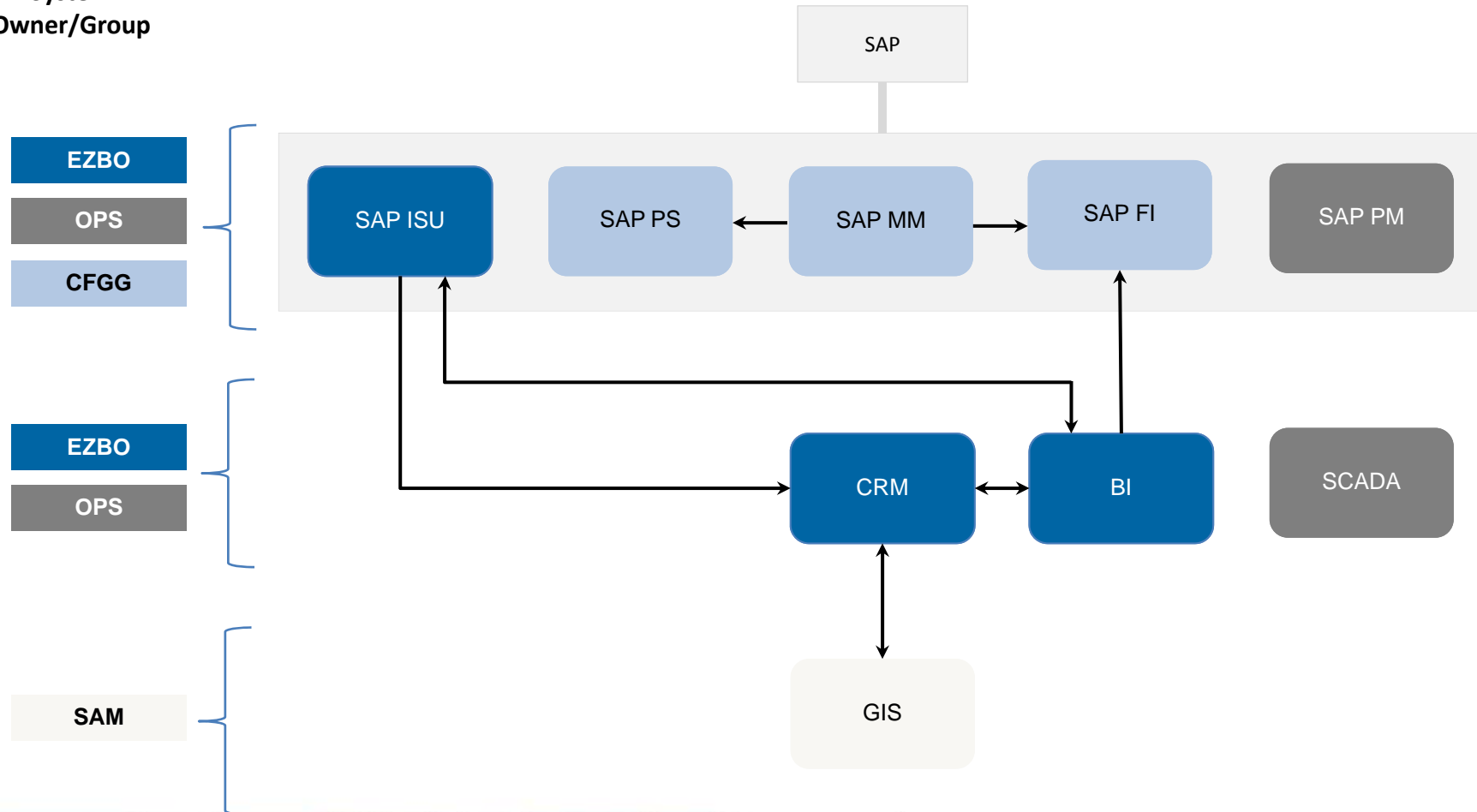
Key Theme

As identified by the GHD AMIS Strategy and Blueprint



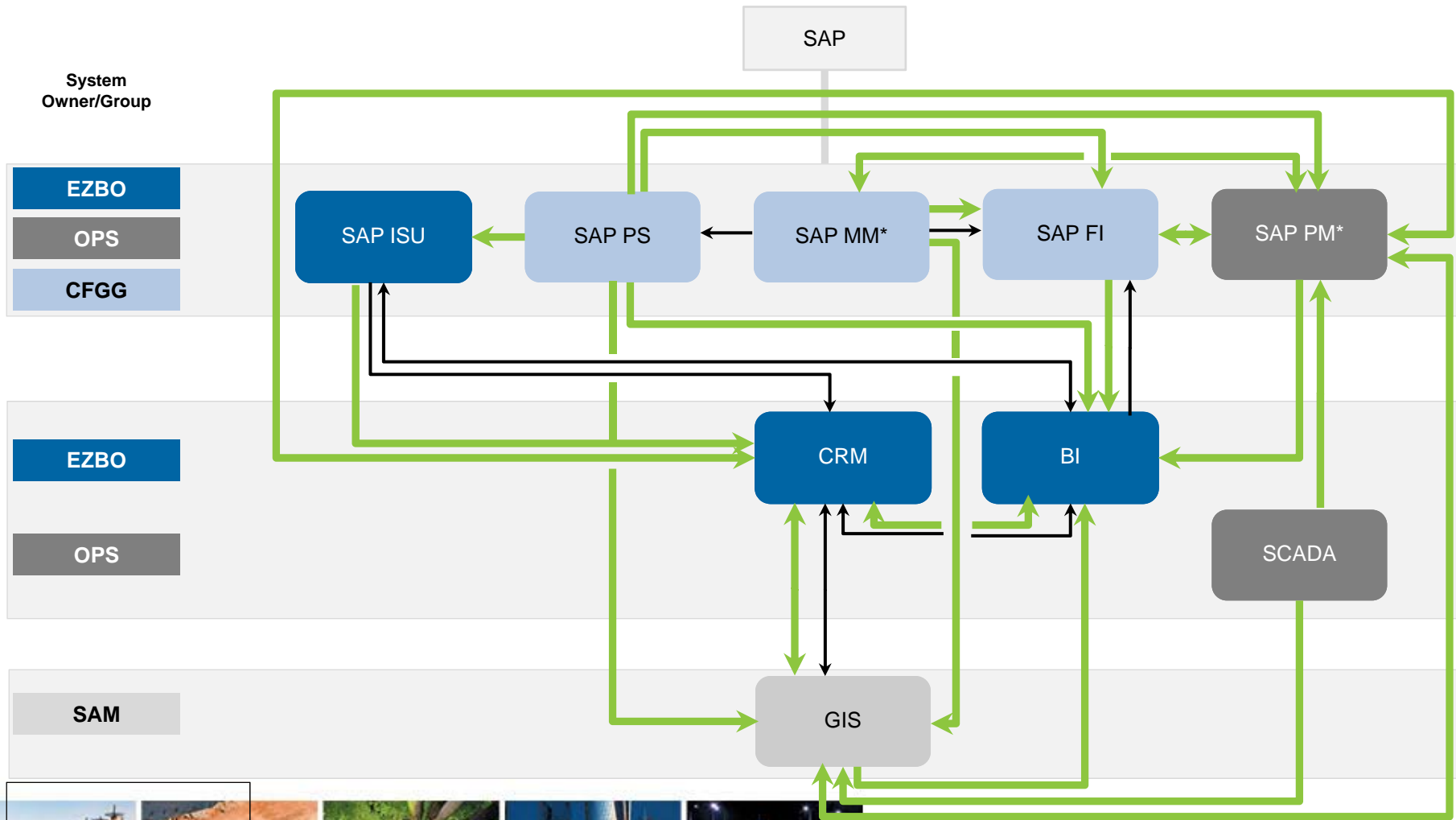
System Architecture – AS IS

System
Owner/Group



System Architecture – TO BE

Legend:
 — Existing
 — To Be



Spatial Systems

07. GIS

Register Assets

Capture Failure Data

Import Cadastral Maps

Integrate / Report / Analyse

Enterprise Asset Maintenance

01. SAP PM

Source Register Asset

Maintenance Budgeting

Maintenance Planning

Maintenance Execution

Maintenance Completion

Analytics

Performance Monitoring

06. SCADA

Source Asset from Asset Register

Set Alarm Levels

Set Monitoring Points

Report Compliance w/ Alarms/Monitoring Points

Customer / Levels of Service

09. CRM

Identify / Register Issue

Locate Asset

Prioritise Issue

Dispatch

Monitor Status

Report KPI

Business Performance Monitoring

08. BI

Define Monitoring scope

Capture Data

Analyse Information (e.g. revenue / cost)

Monitor Status

Report KPI

Modify Operation

Materials Management

02. SAP MM

Procurement

Requirements Determination

Order Processing

Goods Receipt and Vendor Rating

Invoice Verification

Inventory Management

Inventory / Spare Parts / Receipts Issuance

Inventory / Spare Parts Balance

Financial Management

03. SAP FI

Accounts Payable

General Ledger

Cost Centre / Profit Centre Accounting

Fixed Asset Accounting

Revenue Management

05. SAP ISU

Create Meter

Create Meter Reading Orders

Output Meter Reading Outputs

Upload Meter Reading Results

Issue Bill

Capital Works

04. SAP PS

Set Project Structure

Project Budgeting

Resource Planning

Sequencing of Tasks

Execution/ Actions

Period-End Activities

System Integrations



Questions and Discussion



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