

The background features a blue horizontal band across the middle. Above and below this band is a grey, semi-transparent mesh structure that resembles a complex, organic form with many interconnected nodes and edges, creating a series of irregular, rounded openings.

# Better Business Benefits by BIM

Andy Moulds

Mott MacDonald – Head of Strategic BIM Consultancy

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# Class Objectives

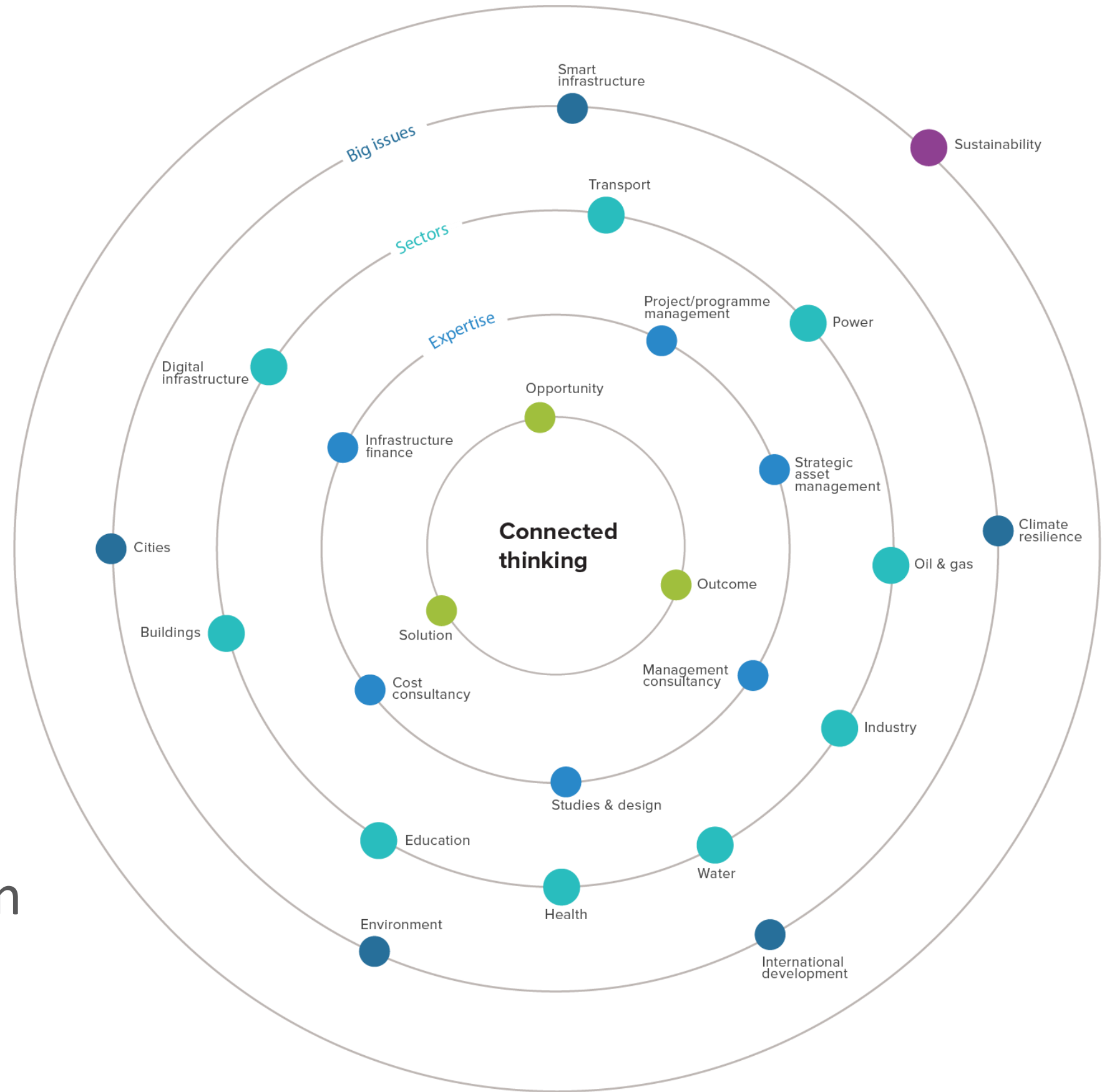
## Learn about:

1. The Mott MacDonald repeatable, strategic approach to BIM implementation
2. How we integrate BIM into clients' existing business processes
3. How we link information strategy objectives to business KPIs
4. Worldwide case studies of successful MM BIM implementation
  - Common, cross-sector IM challenges
  - Selected strategic solutions to these challenges

# Introductions

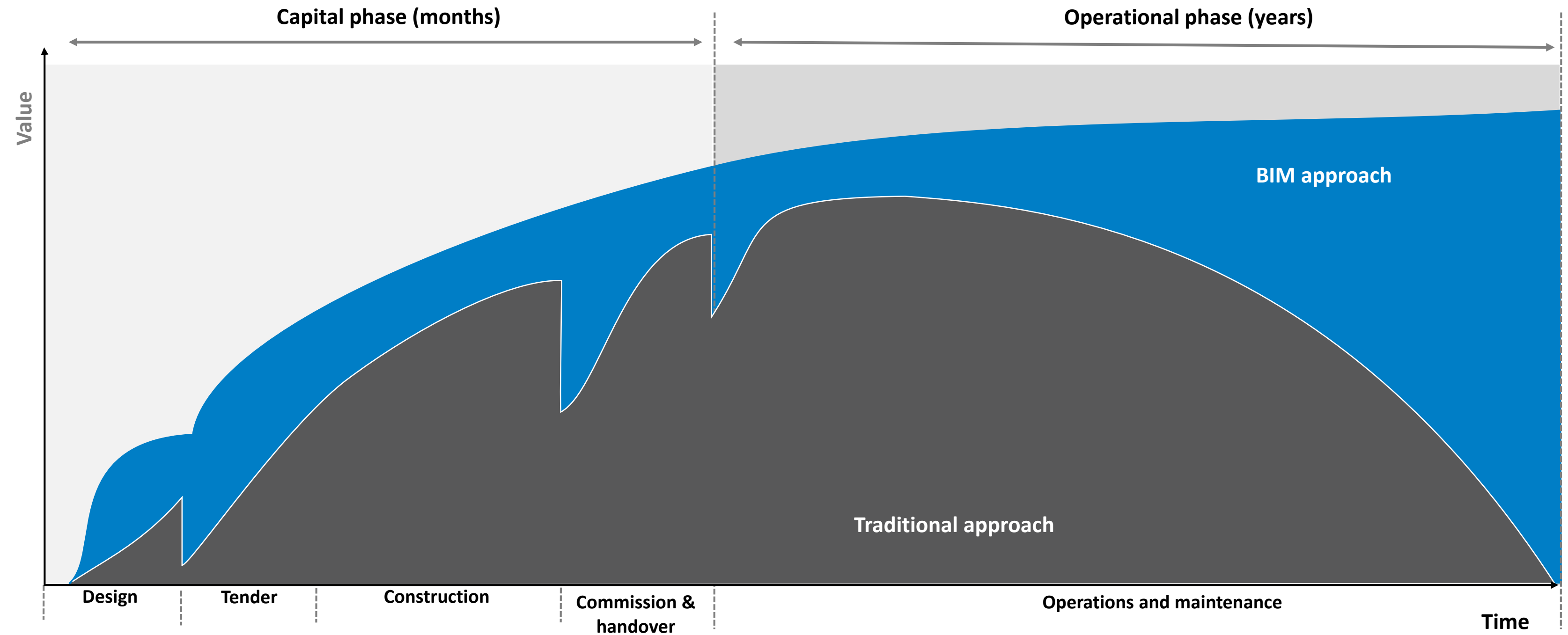


- Andy Moulds
- Associate, Mott MacDonald
-  @AndyMoulds | #AULondon





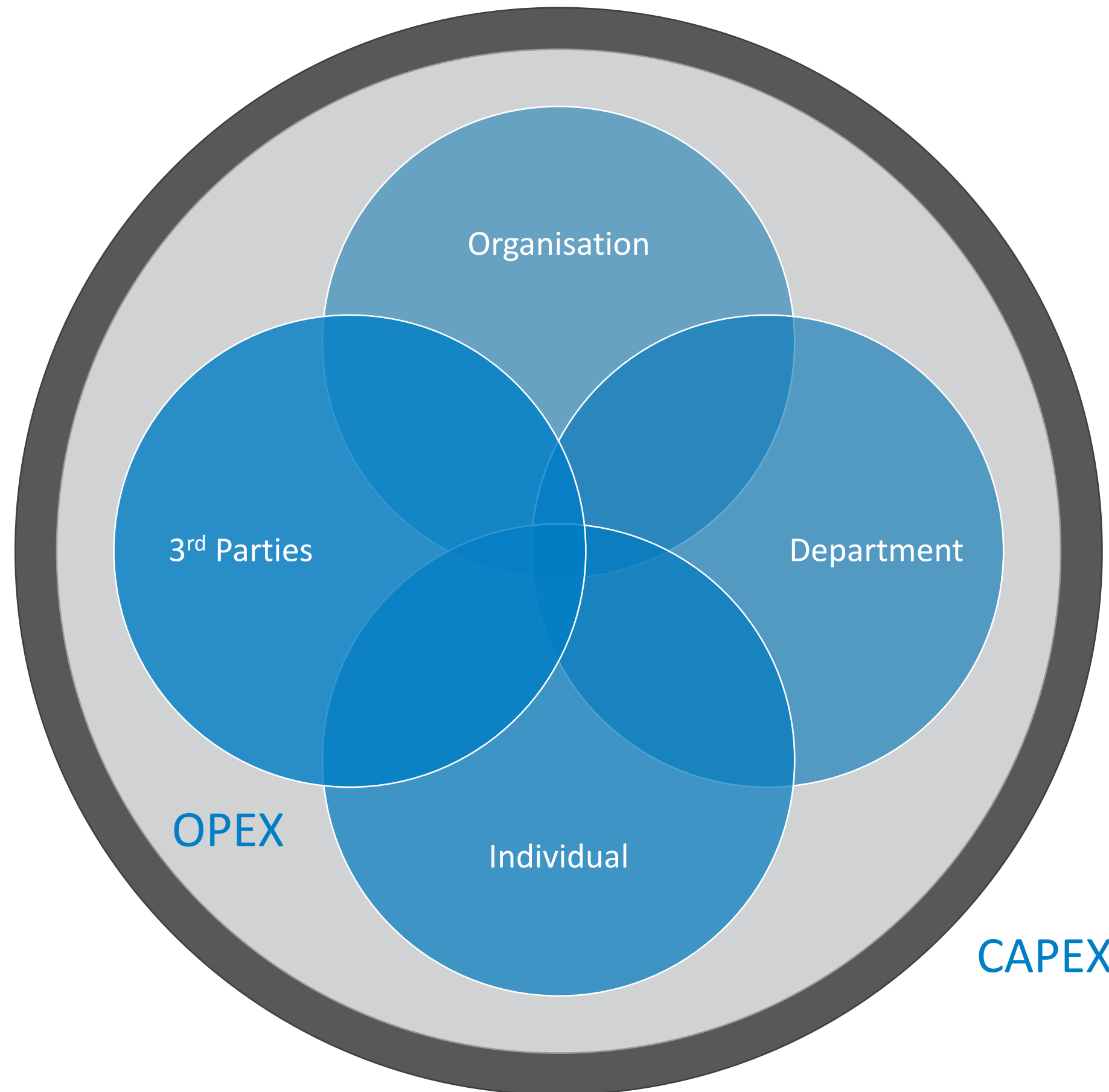
# Value of Information



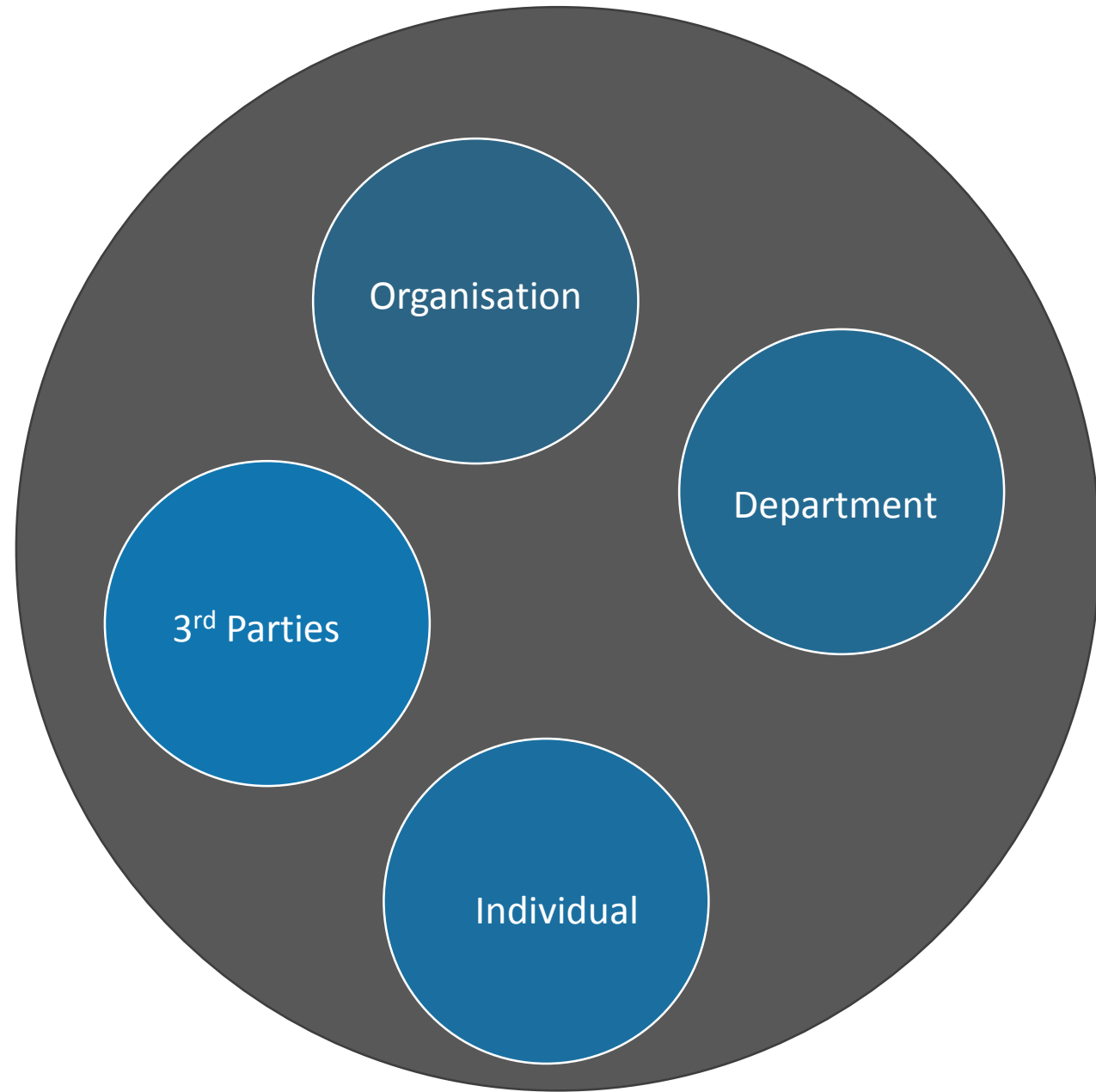
# An information driven approach



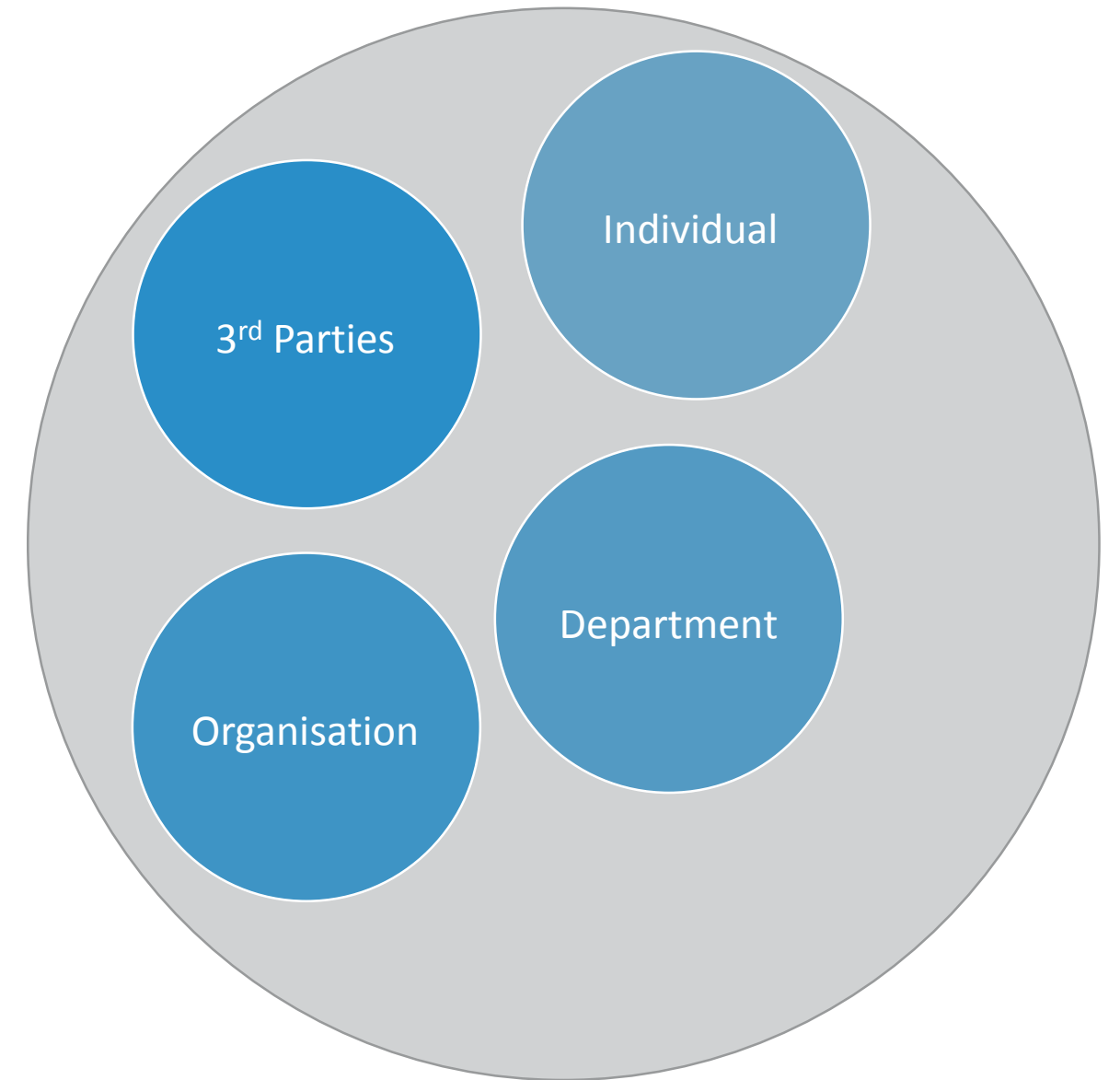
# Challenges



# Challenges

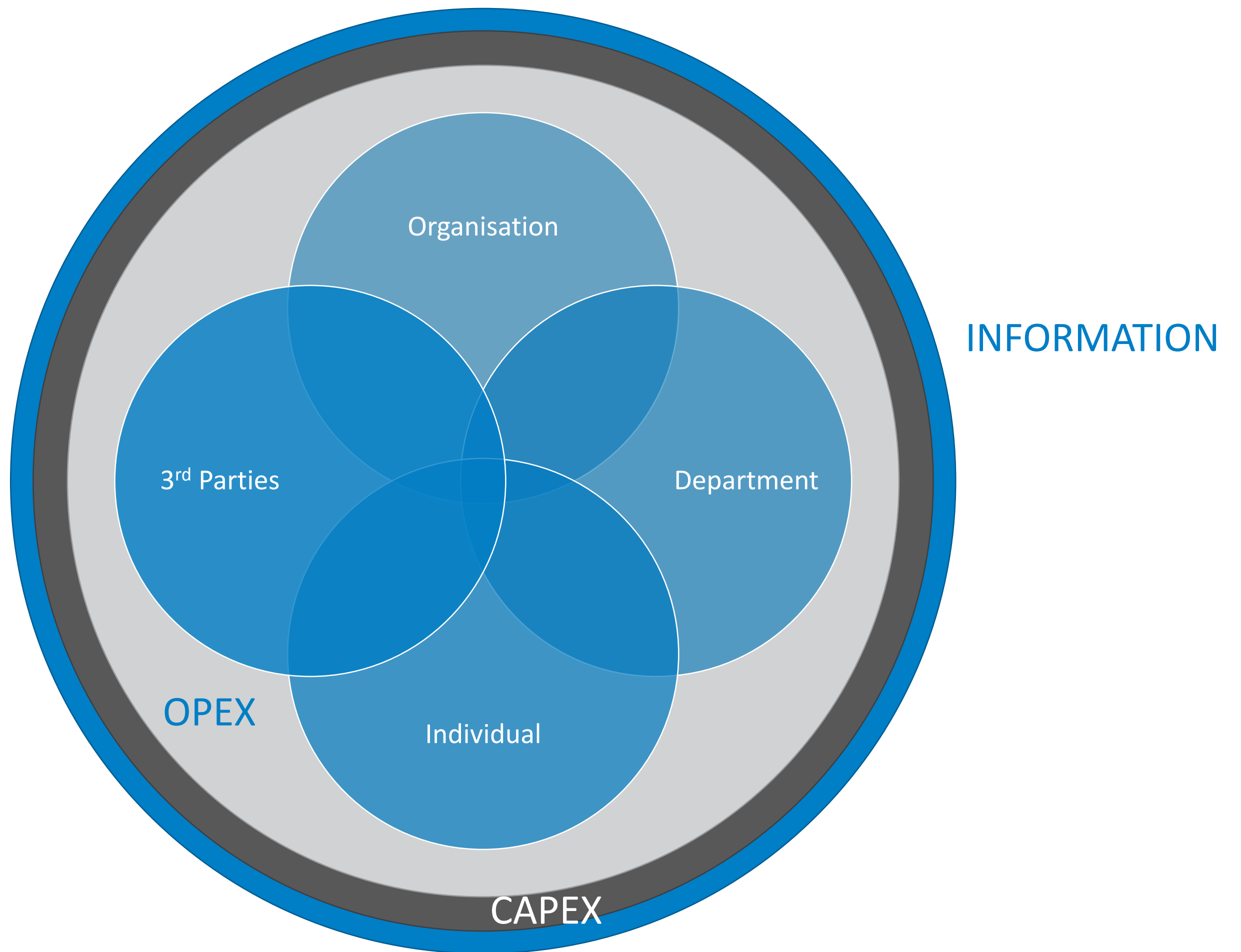


OPEX



CAPEX

# Outcome





# The Mott MacDonald Approach

1

## Strategy

Establish the baseline and visionary position. Ensure alignment with corporate business plans and goals, and provide a point of reference.

2

## Protocols

Create the means of initiating the change. Drive the procurement process by formalising deliverables and responsibility.

3

## Implementation

Trial early initiatives through targeted pilot schemes to help manage risk prior to wider roll-out across the business. Explore what is truly possible.

4

## Information Management

A business as usual state, where asset data is managed in an intelligent and organised way across the business estate through capex and opex.

5

## Asset Sustainability

Maximise the benefits throughout the lifecycle. Put the data to best use in delivering optimum performance through operations and maintenance.

# The Mott MacDonald Approach

1

Strategy

## Key Services:

- Business analysis and diagnosis
- Review existing processes and behaviours
- Define goals and timeframes to achieve them
- Create strategic actions and implementation roadmap



## **Project**

BIM Consultancy

## **Client**

Dubai Roads &  
Transport Authority

## **Sector**

Transport

## **Location**

Dubai, UAE

## **Expertise**

BIM strategy,  
protocols and early  
implementation





# The Mott MacDonald Approach

1

Strategy



## Key Project: Dubai Roads & Transport Authority – Benefits

- Maintain emphasis of supply chain delivery model
- Connect different elements of the business
- Become a leading adopter in the Gulf region
- Exposure to other leading adopters and their approaches

# The Mott MacDonald Approach

## 2

### Protocols

#### Key Services:

- Definition of information requirements
- Regular maturity assessments
- Guidance on standards and naming conventions
- Training and education plans
- BIM execution planning



**Project**

BIM Roadmap

**Client**

UK Power Networks

**Sector**

Power

**Location**

London, UK

**Expertise**

Information  
management  
advisory



# The Mott MacDonald Approach

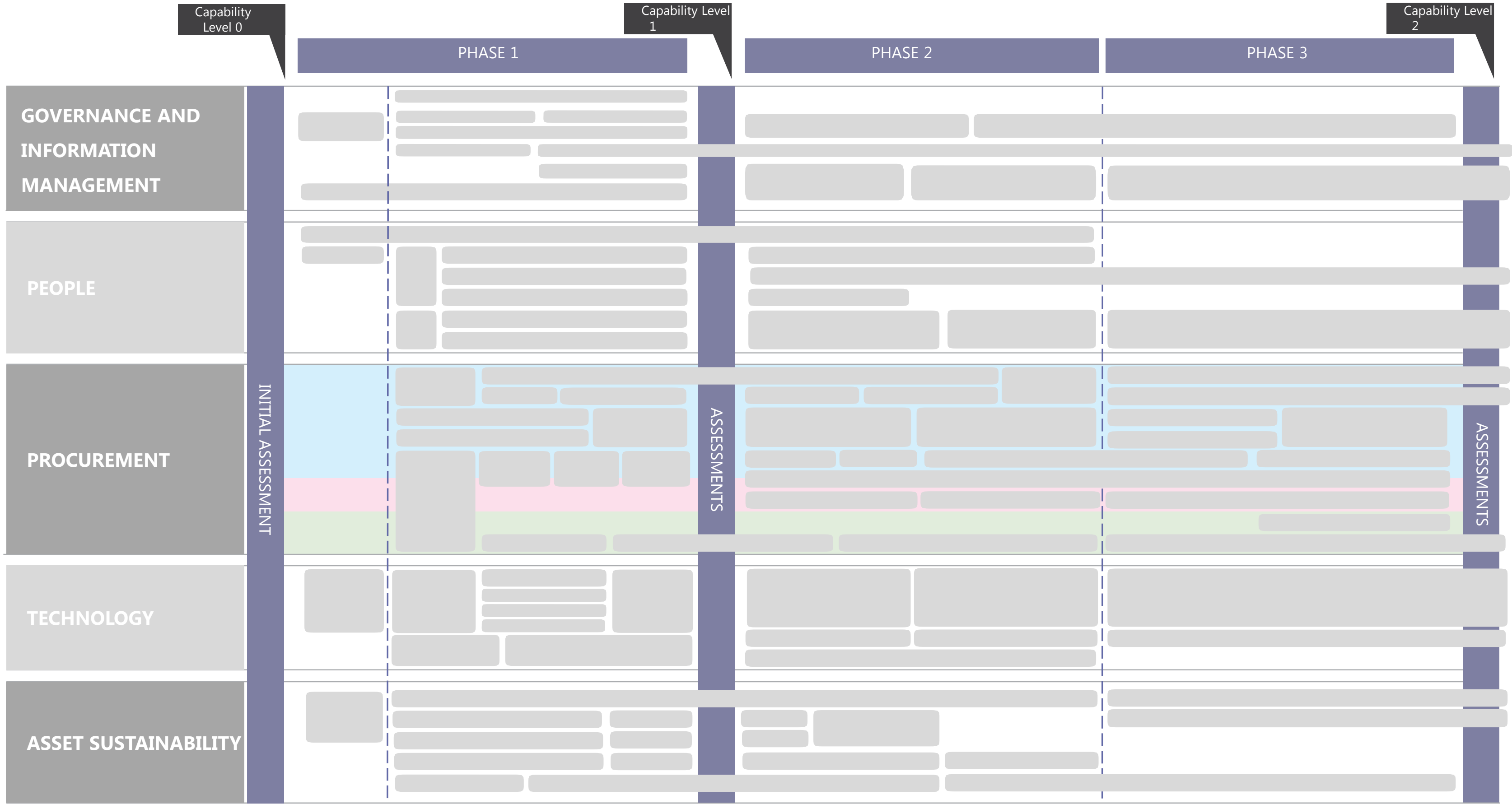
2

Protocols



## Key Project: UK Power Networks – Benefits

- Robust project delivery
- Standardised solutions
- Collaborative working
- Asset/network records management
- Enhanced asset systems integration
- Common understanding and knowledge sharing



Capability  
Level 0

Capability Level  
1

Capability Level  
2

## PHASE 1

## PHASE 2

# GOVERNANCE AND INFORMATION MANAGEMENT

# PROCUREMENT

# ASSET SUSTAINABILITY

## INITIAL ASSESSMENT

## ASSESSMENTS

## ASSESSMENTS

## Information Management Plan

## Component library protocol

Component library development	1
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SAG

## Setup Supply chain working Group

Component library agreement

2D component library generation

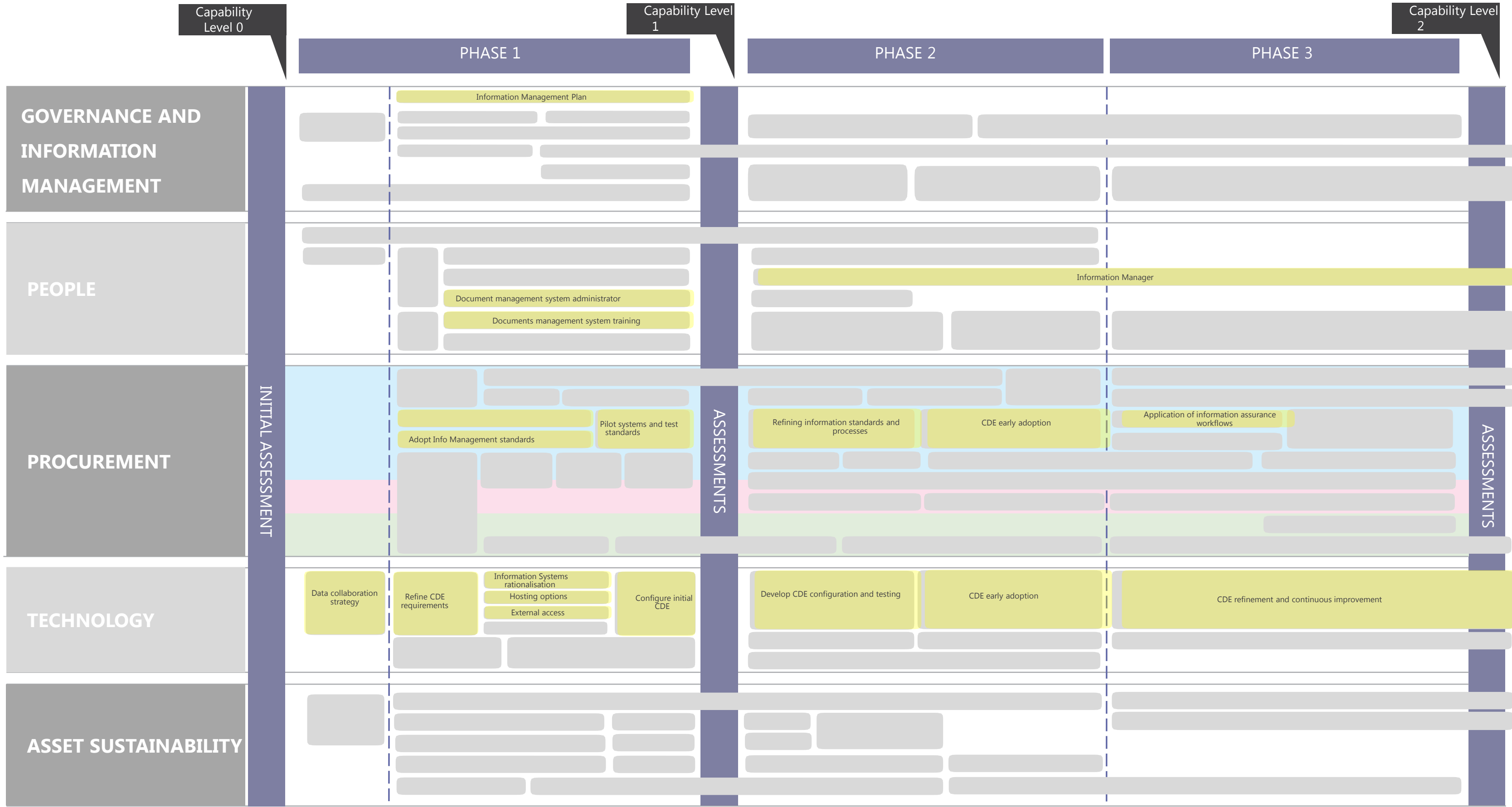
3D object library generation

Integration of embedded operational asset data

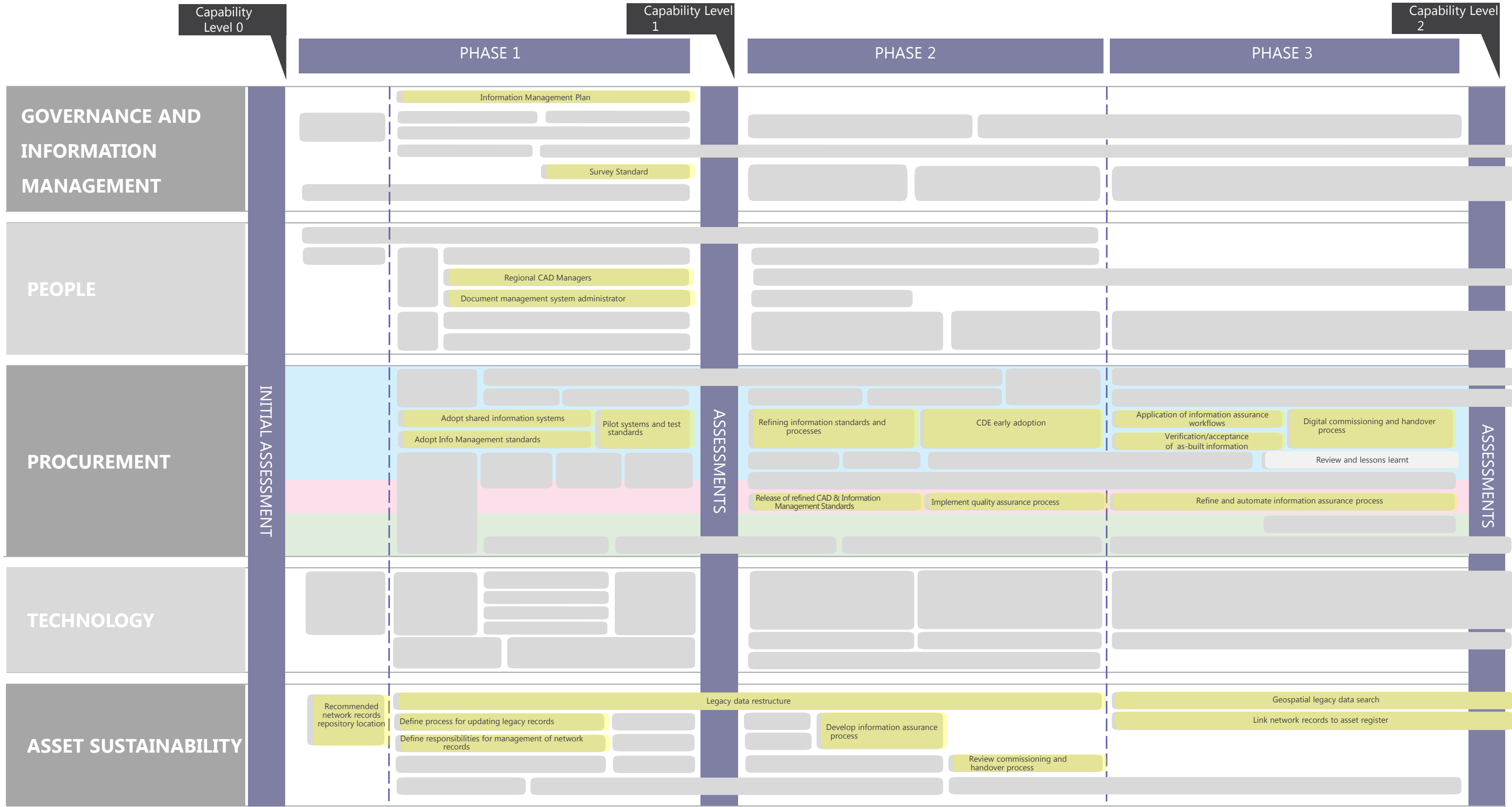
Data collaboration strategy

Recommended network records repository location

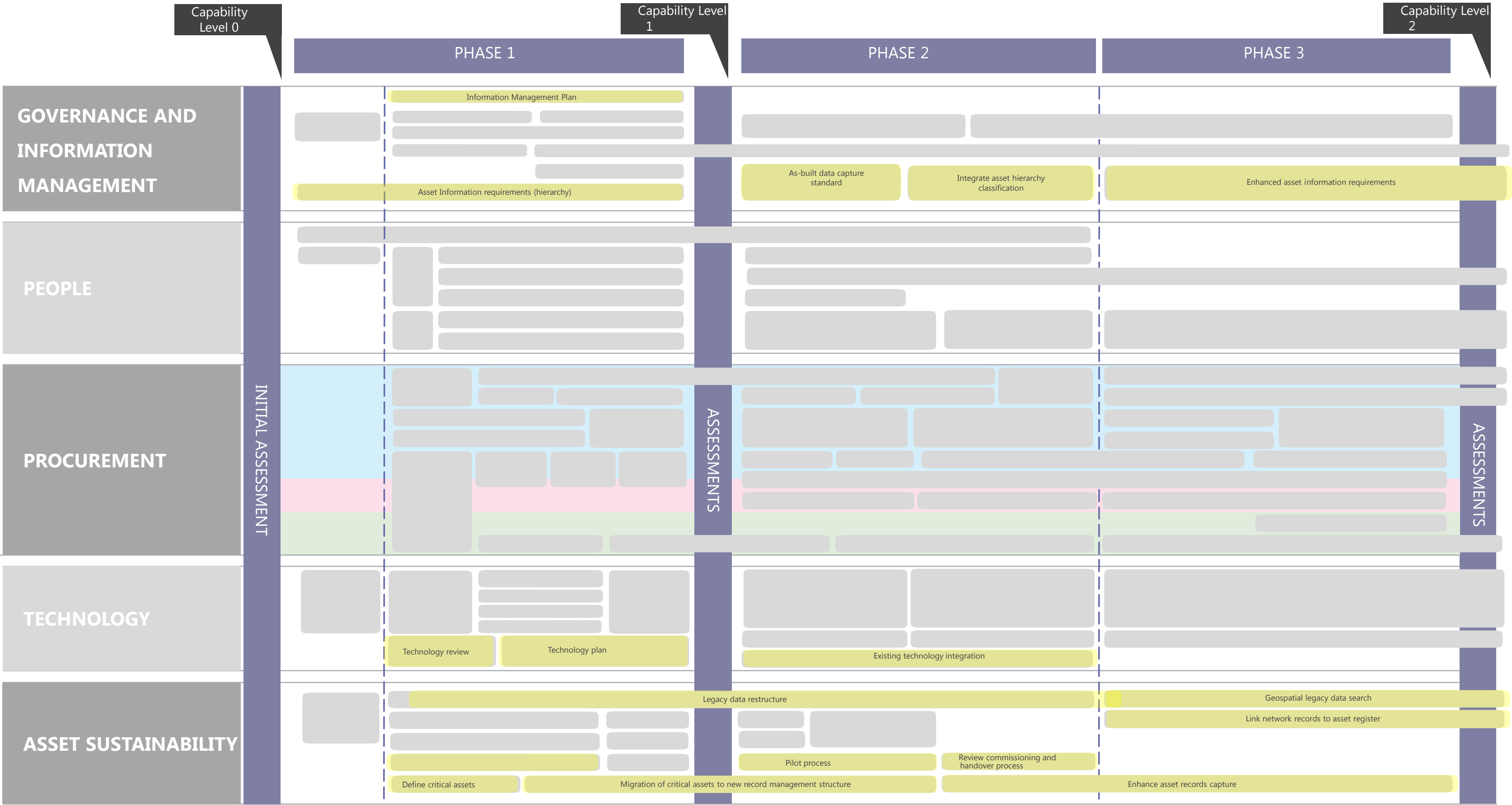
## STANDARDISED SOLUTIONS



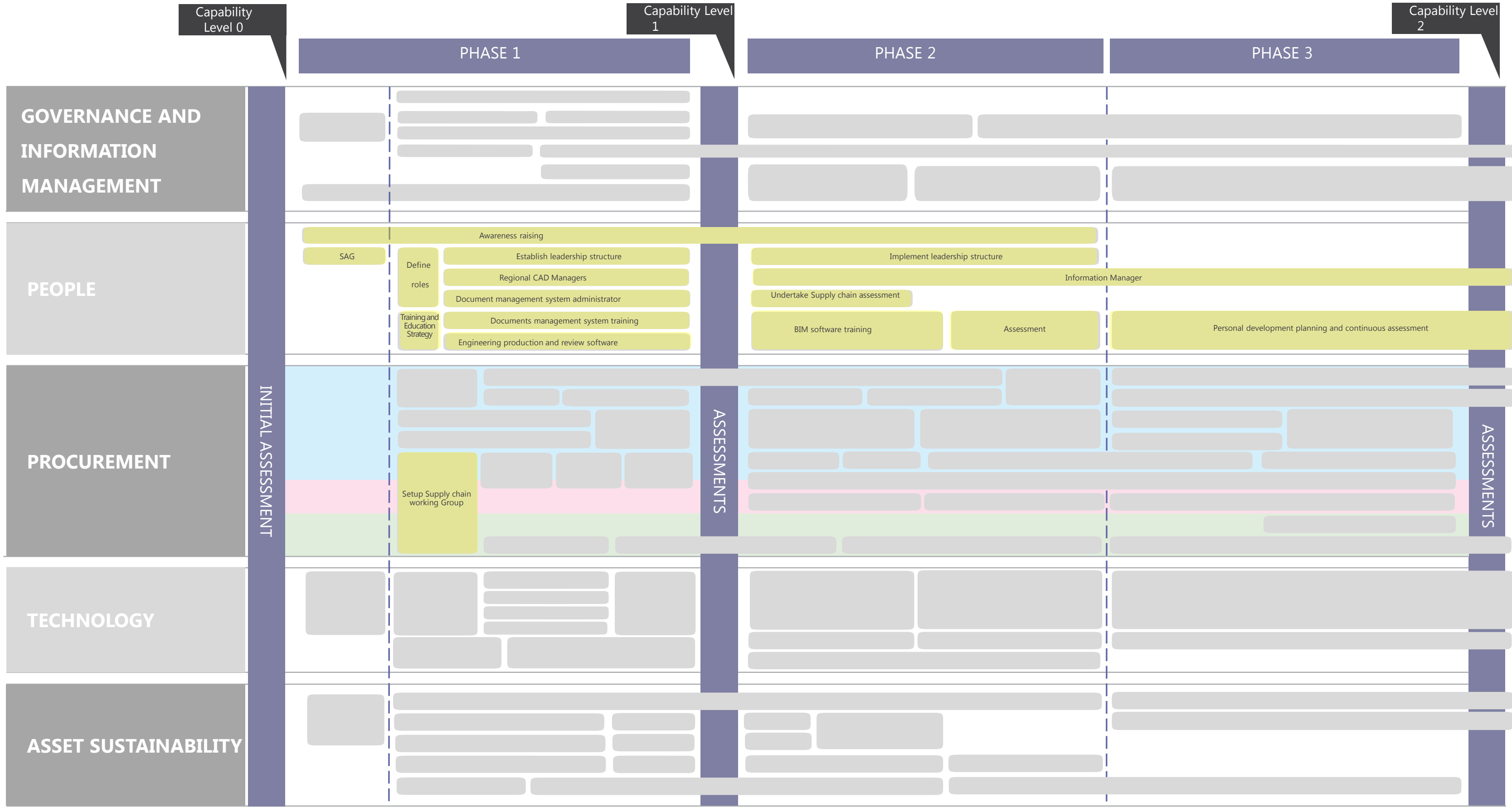
COLLABORATIVE WORKING



ASSET/NETWORK RECORDS MANAGEMENT

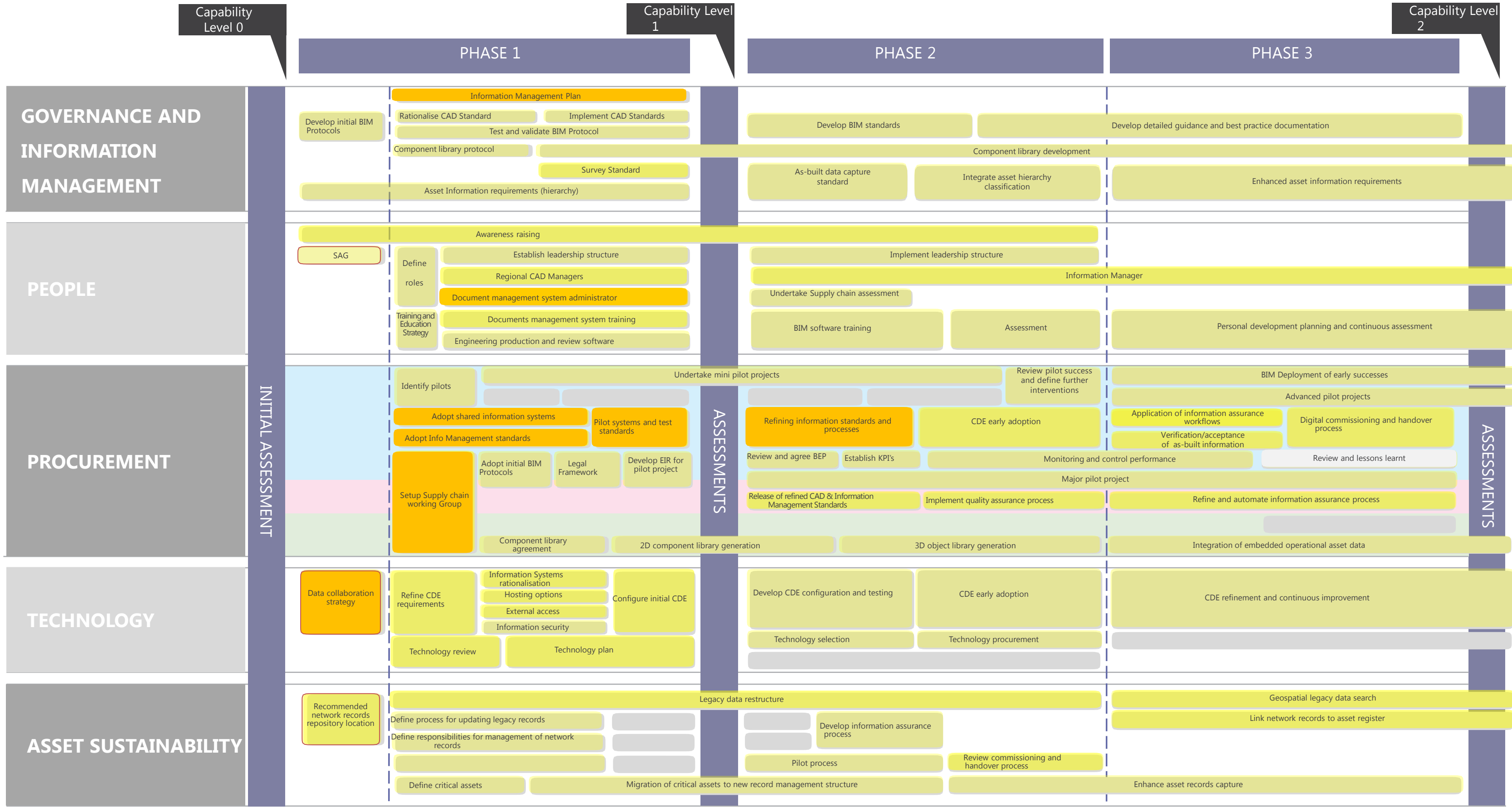






**COMMON UNDERSTANDING & KNOWLEDGE SHARING**





CONSOLIDATED BENEFITS

# The Mott MacDonald Approach

3

Implementation

## Key Services:

- Proof of concept development and testing
- Model production, training and co-ordination
- Pilot new interventions on select projects
- Communication with stakeholders
- Identifying technology needs and solutions
- Workflow development



## **Project**

Framework Services

## **Client**

Yorkshire Water

## **Sector**

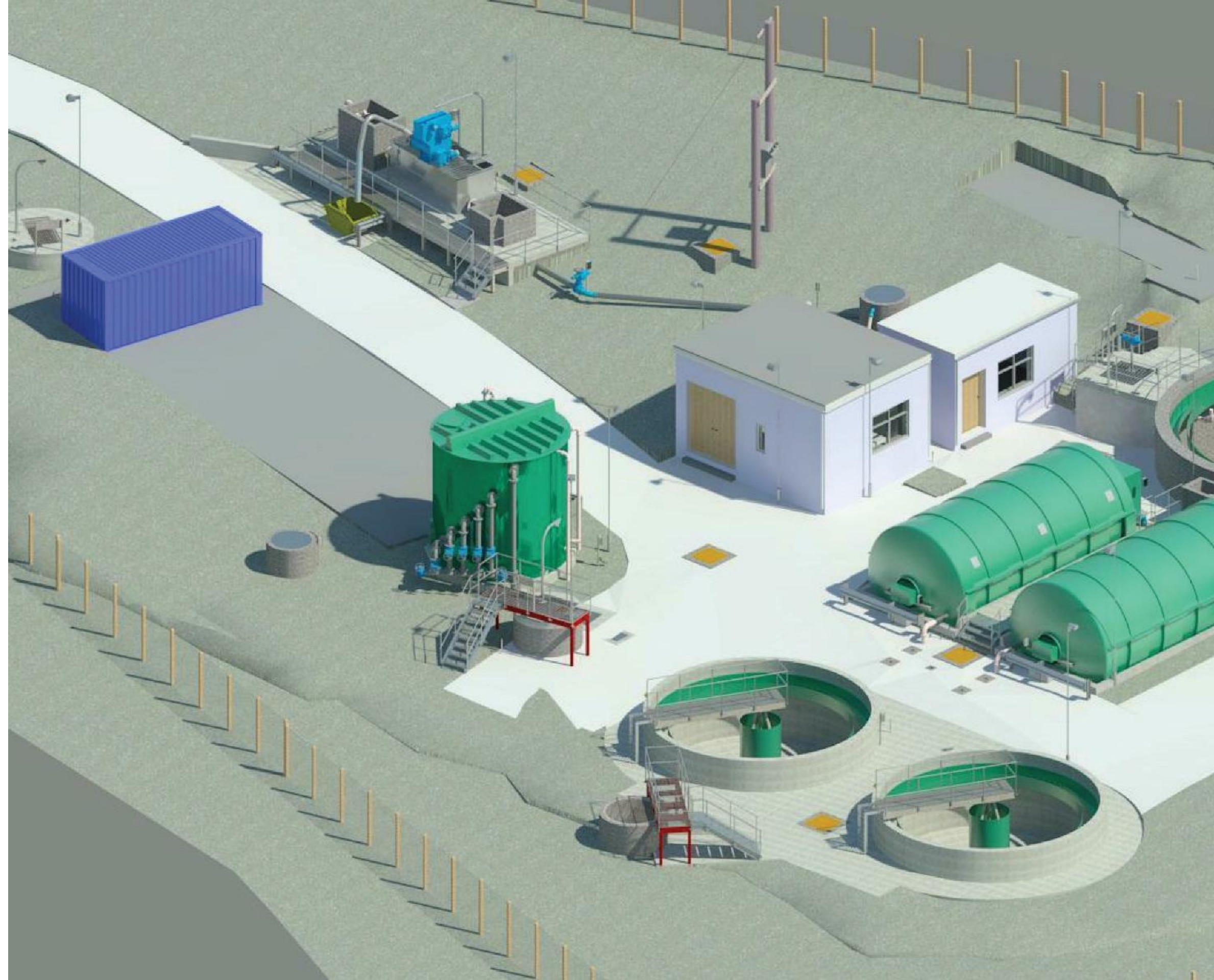
Water

## **Location**

Yorkshire, UK

## **Expertise**

BIM strategy,  
protocols and pilot  
project delivery





# The Mott MacDonald Approach

3

Implementation



## Key Project: Yorkshire Water – Benefits

- Collaborative working using common working methods
- Openness and honesty through accurate data
- Maximise already close existing relationships
- Flexible but controlled environment
- Increased visibility and transparency to all
- Share learning with others – externally and internally



# The Mott MacDonald Approach

4

Information  
Management

## Key Services:

- Project controls and reporting
- Creation of object libraries
- Data management
- Assurance workflows
- Design capture

# The Mott MacDonald Approach

4

Information  
Management



## Key Project: Thames Tideway

- Design to support sectional delivery towards construction programme
- Integration of 12 disciplines across various locations
- Design delivery across 5 gates prior to construction start
- Project controls to support Client's WBS
- Thousands of deliverables, assured through multiple reviews

# The Mott MacDonald Approach

5

Asset Sustainability

## Key Services:

- Asset Management and Facilities Management Advisory
- Focus on asset handover and registration
- Integration with Smart Infrastructure and Data Science practices
- Alignment with and application of BS1192 and ISO 55000



*“Hospitals are complicated buildings. I want the best design, and information and control during operations”*

**Dennis O’Keeffe**

**Project**

Enterprise BIM

**Client**

Velindre Cancer  
Centre

**Sector**

Buildings

**Location**

Cardiff, UK

**Expertise**

Procurement  
strategy and BIM  
advisory





# The Mott MacDonald Approach

5

Asset Sustainability



## Key Project: Velindre Cancer Centre – Benefits

- Receive strongest tender responses through differentiation
- Ensure a clear and manageable audit trail of decisions
- Demonstrate compliance with healthcare regulations
- Develop metrics to monitor ProjectCo performance
- Enable live monitoring of the facility's performance and equipment within it

# Typical Cross-Sector Client Issues/Needs

- “Need a BIM Strategy to help implement the **2020 vision for asset management**”
- “How do we access **model information** from suppliers”
- “Need BIM Level 2 **to secure funding** for future capital projects”
- “Need a **better information management** system”
- “No **in-house ability** or resource available”
- “How will this affect **our business goals/bottom line?**”



# Key Learnings – Is this Your Experience?

- Clients **don't always know** what they want, or what they are able to ask for
- Understanding of **culture and behaviours** is critical
- Ability to **align information strategy** to key business goals is essential
- Consider the supply chain – **they will help** make much of it happen
- Implementation must include **training and education** to embed changes
- **Expectations** – what is realistic now and what should wait?

# Continue the conversation with me...

- NBS Panel Debate – 6.30pm at Stand LG-013
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SUPPORTING YOU ON YOUR  
**BIM JOURNEY**



