DIGITAL DISRUPTION – BEYOND THE HYPE TO TANGIBLE ASSET MANAGEMENT IMPROVEMENT

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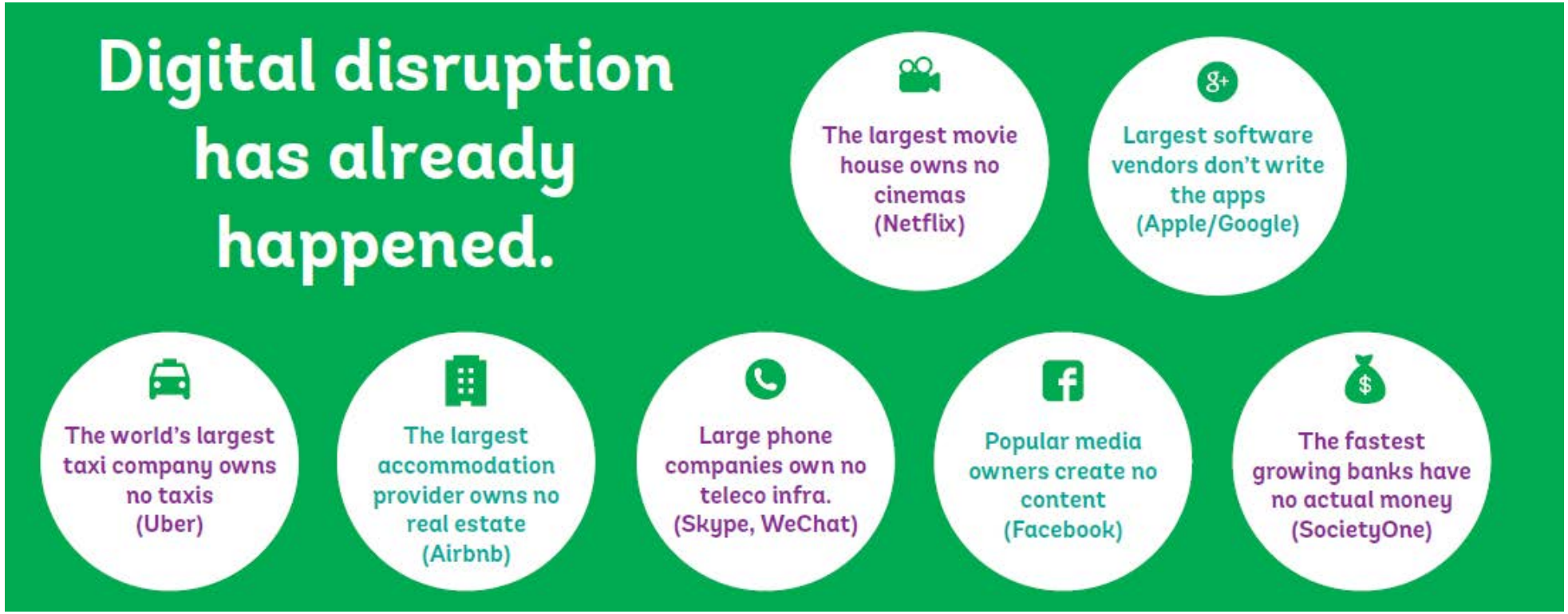
LEADING ASSET MANAGEMENT

AGENDA - FLOW

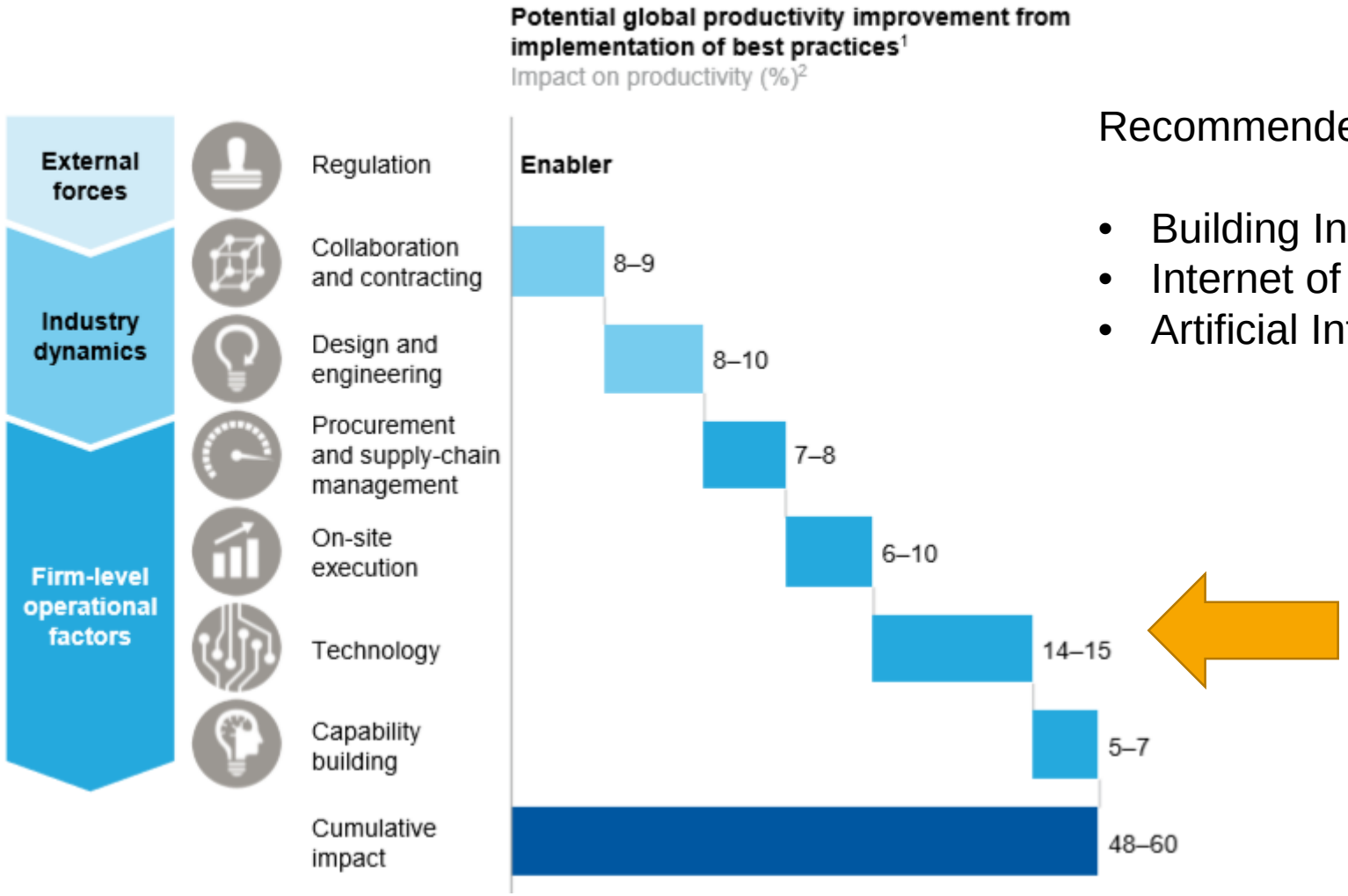
- What is Digital Disruption?
- What Digital trends are influencing Asset Management
- The Hype Cycle – risks and adoption points
- Digital case studies
- Maturity of organisation for digital
- Readying business capability for digital

DIGITAL DISRUPTION



"The digital transformation, and technologies driving it, promises to disrupt 1/3 of the top 20 companies in every industry over the next 3 years" International Data Corp

SUPPLY CHAIN & GOVERNMENT BODIES PROMOTING DIGITAL



Recommended Technology options:

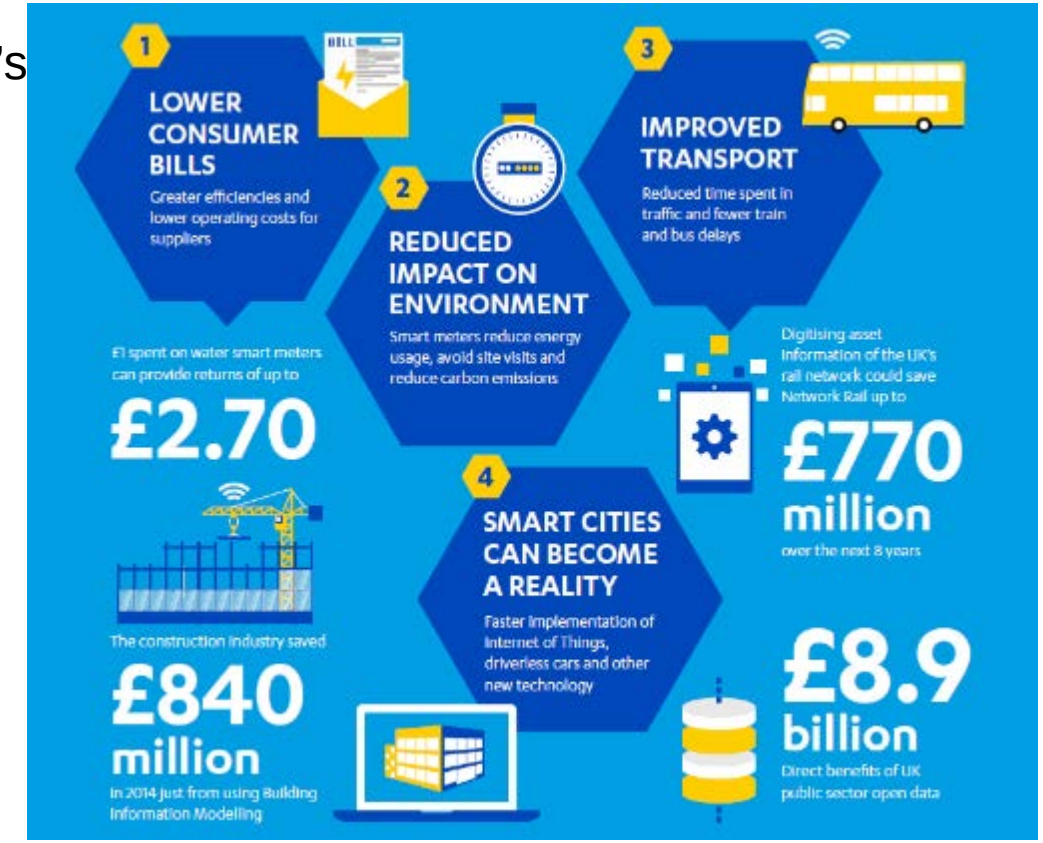
- Building Information Modelling (to 5D)
- Internet of Things
- Artificial Intelligence

Source: McKinsey Global Institute: Reinventing Construction, A Route to higher Productivity, February 2017

SUPPLY CHAIN & GOVERNMENT BODIES PROMOTING CHANGE

Increasing population, economic growth and climate change are putting significant pressure on infrastructure. To address this, the UK's existing infrastructure needs to become smarter:

- **Regulators, network operators and utilities providers to prioritise data**
- **A digital framework for infrastructure data (standards)**
- **Collaboration and data sharing across the infrastructure industry**
- **A roadmap towards a national digital twin**



Source: National Infrastructure Commission (UK), 'Data for the Public Good'

WHAT IS DIGITAL?

Industry 4.0


Internet of Things


Big Data


Cognitive Technology


Artificial Intelligence / Machine Learning


Predictive / Prescriptive Analytics


Simulation / Virtual Reality


Survey Drones


Cloud


Cyber Security


System Integration / APIs


Blockchain


Mobility / User Experience


Agile Scrum Development

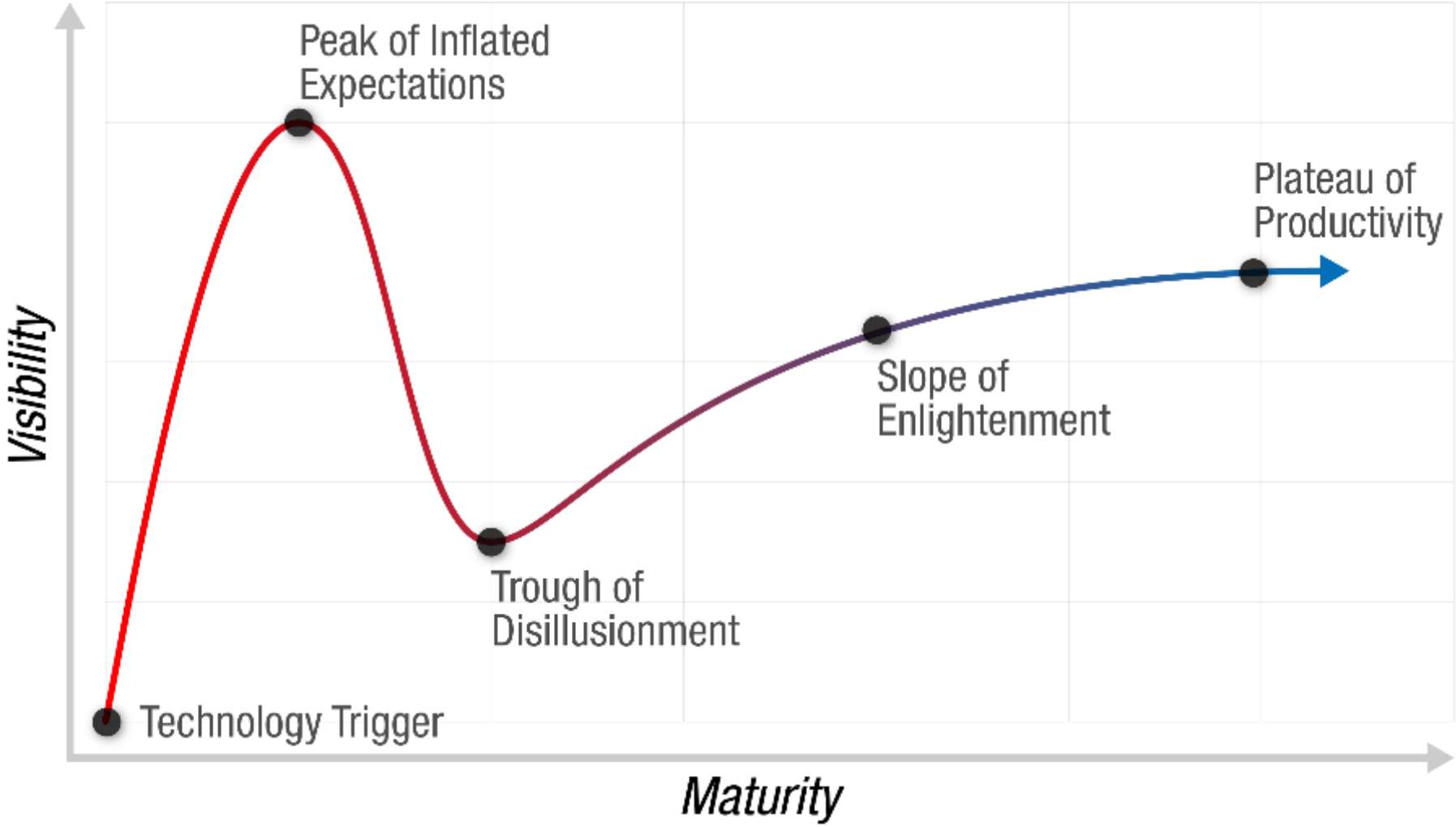

Software as a Service

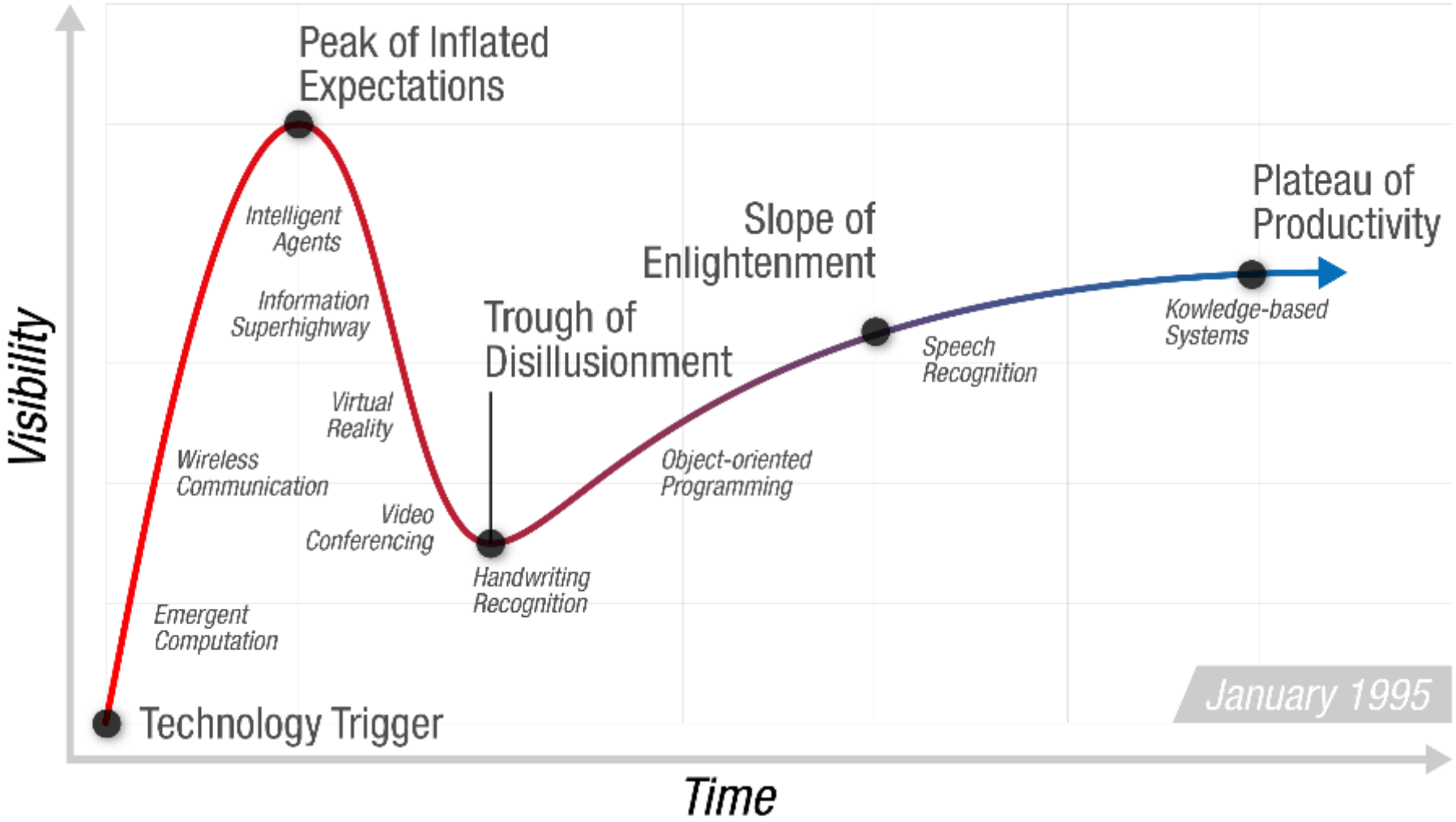

Data Lake

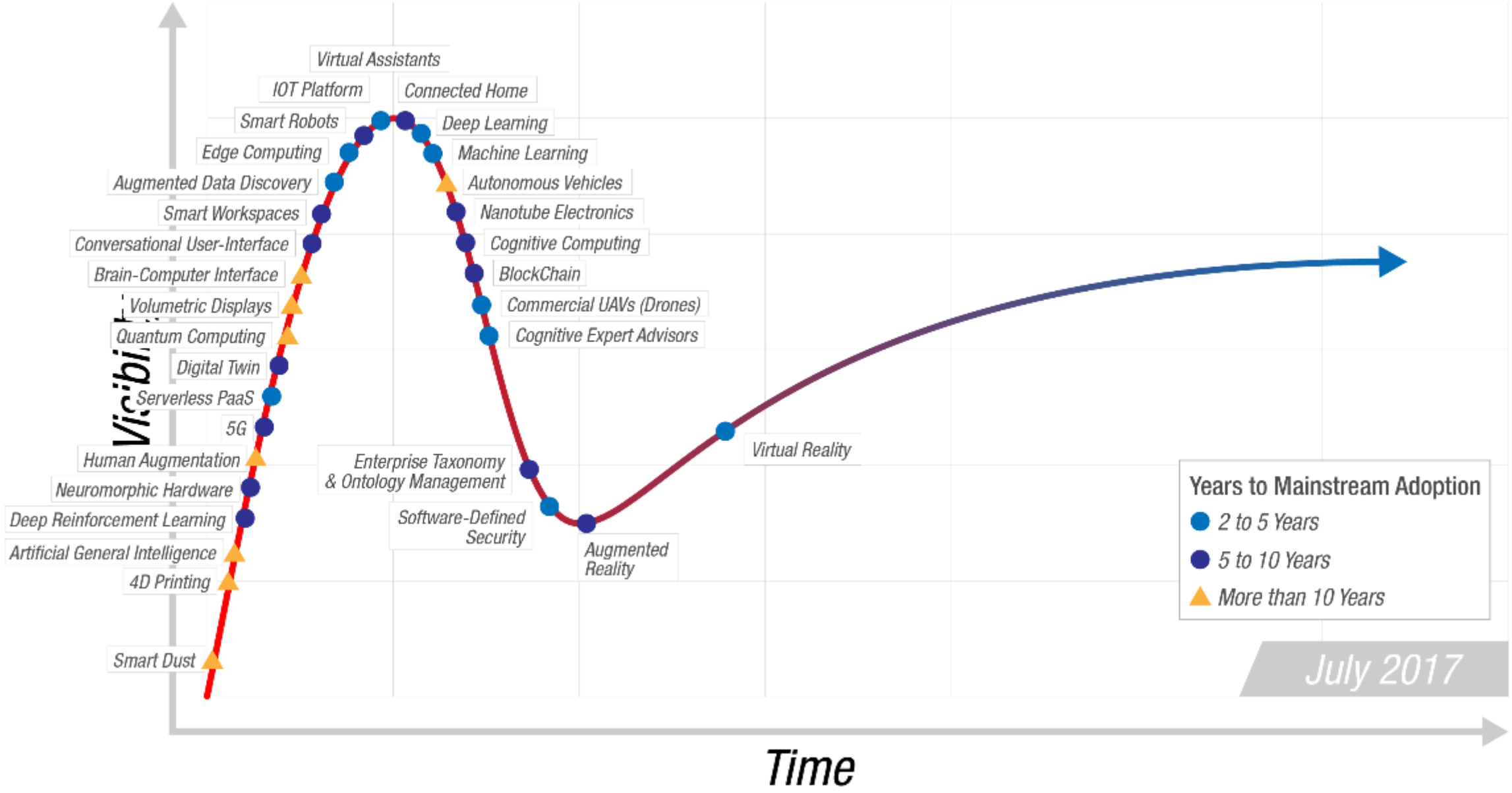

BIM


Digital Twin

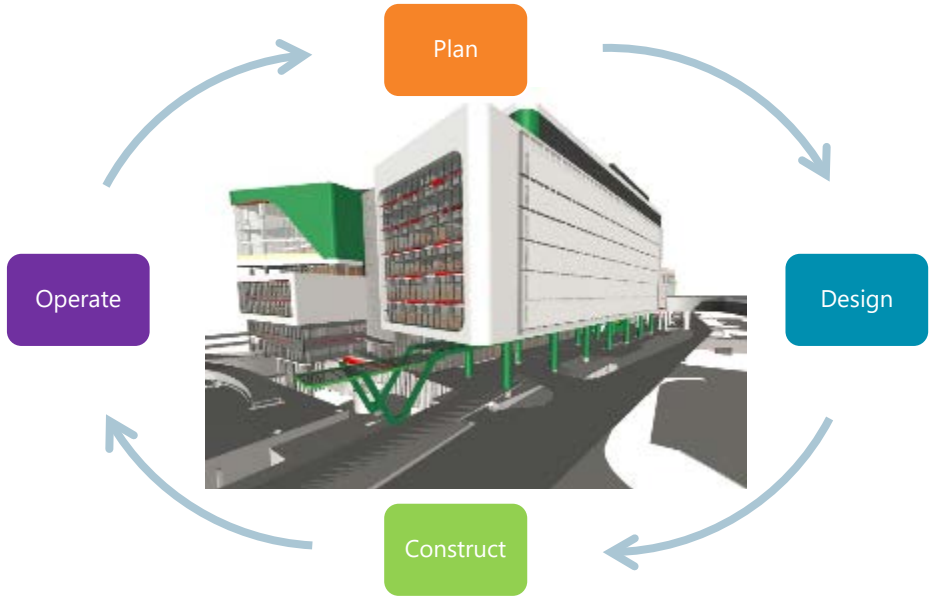
For some executives, it's about technology. For others, digital is a new way of engaging with customers and partners. And for others still, it represents an entirely new way of doing business.

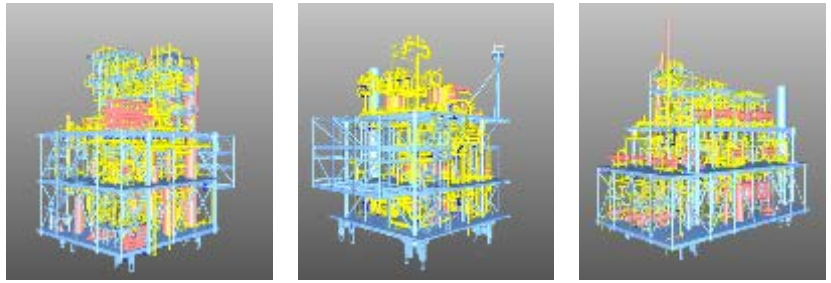






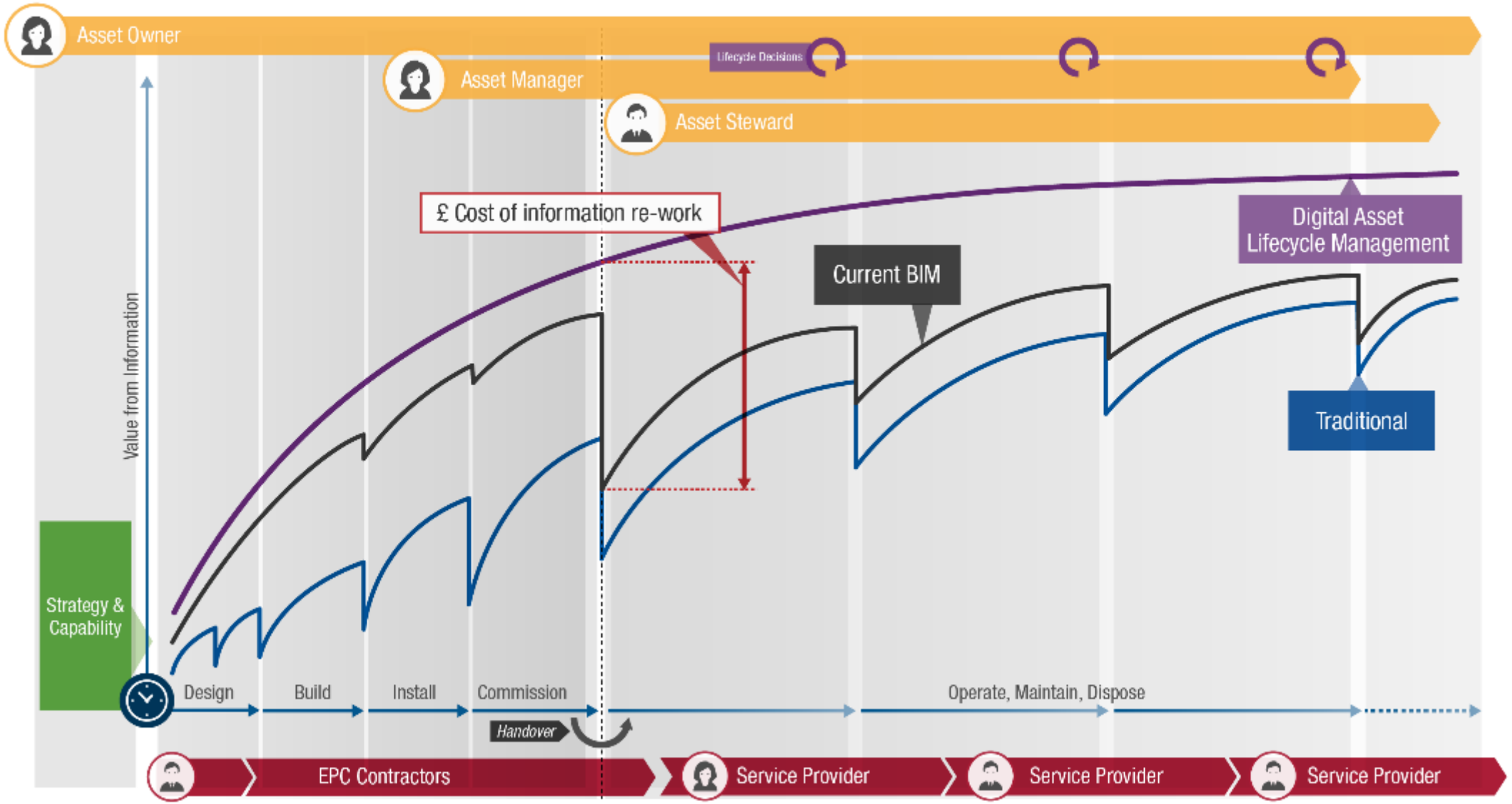
DIGITAL CASE STUDY 1 – BUILDING INFORMATION MODELLING





Feasibility → Detailed Design → Execution

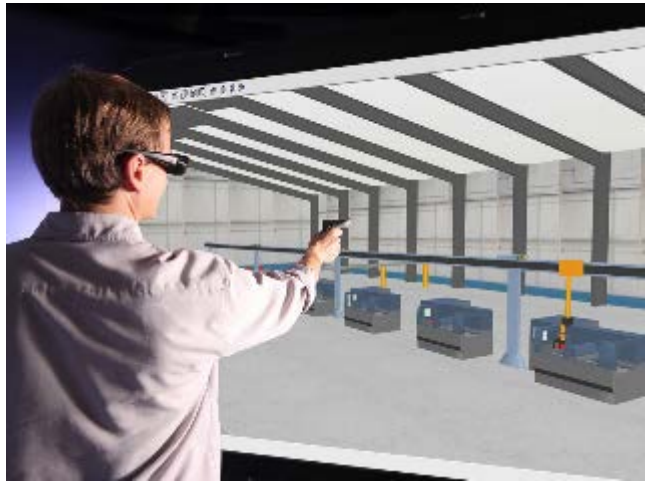
- Organisational information requirements (OIR)
- Asset information requirements (AIR)
- Employers information requirements (EIR)
- CIC Protocols / Contract wording and reference
- BIM capability assessment
- BIM Execution plan (BEP)



DIGITAL CASE STUDY 2 – VIRTUAL REALITY

The **Digital Twin** harnesses visual information from BIM models, LIDAR surveys and GIS, as well as other rich data stored within your Enterprise Asset Management System, such as work, operations and maintenance information. By utilising Virtual Reality in the Digital Twin it will enable safety briefings, scoping, planning, exercises and training to all be completed virtually.

- Key decision makers have the ability to step into critical situations, utilising their expertise to resolve complex scenarios
- New levels of safety awareness
- Reduce site visits
- Enhanced training capabilities



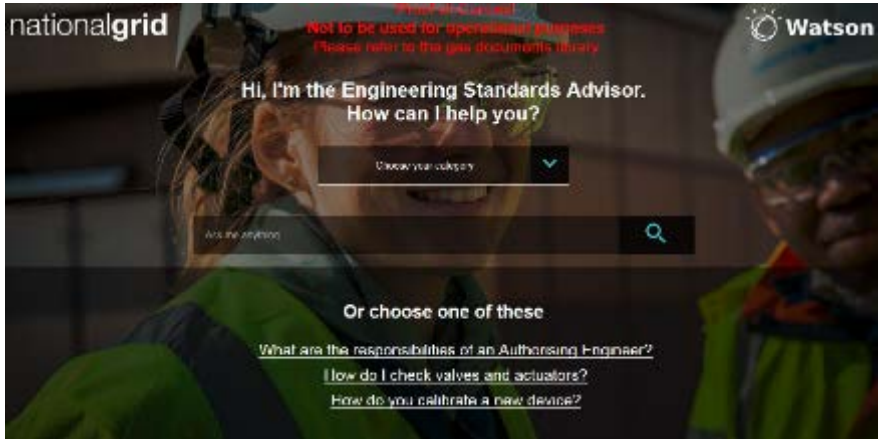
EAMS and Virtalis Group – Virtual Reality Solution Overview

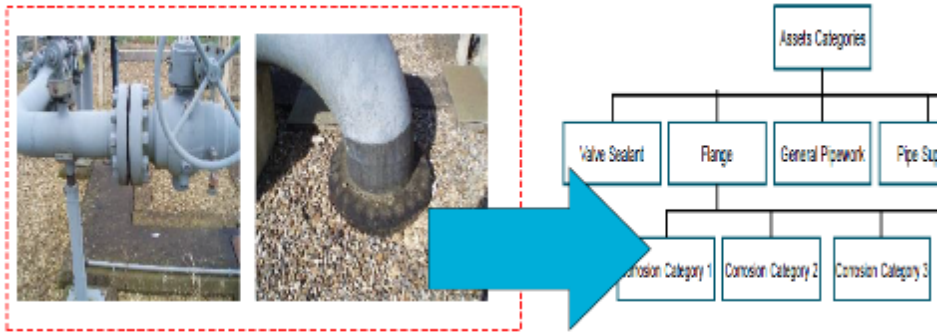
DIGITAL CASE STUDY 3 – COGNITIVE TECHNOLOGY

nationalgrid

What we did:

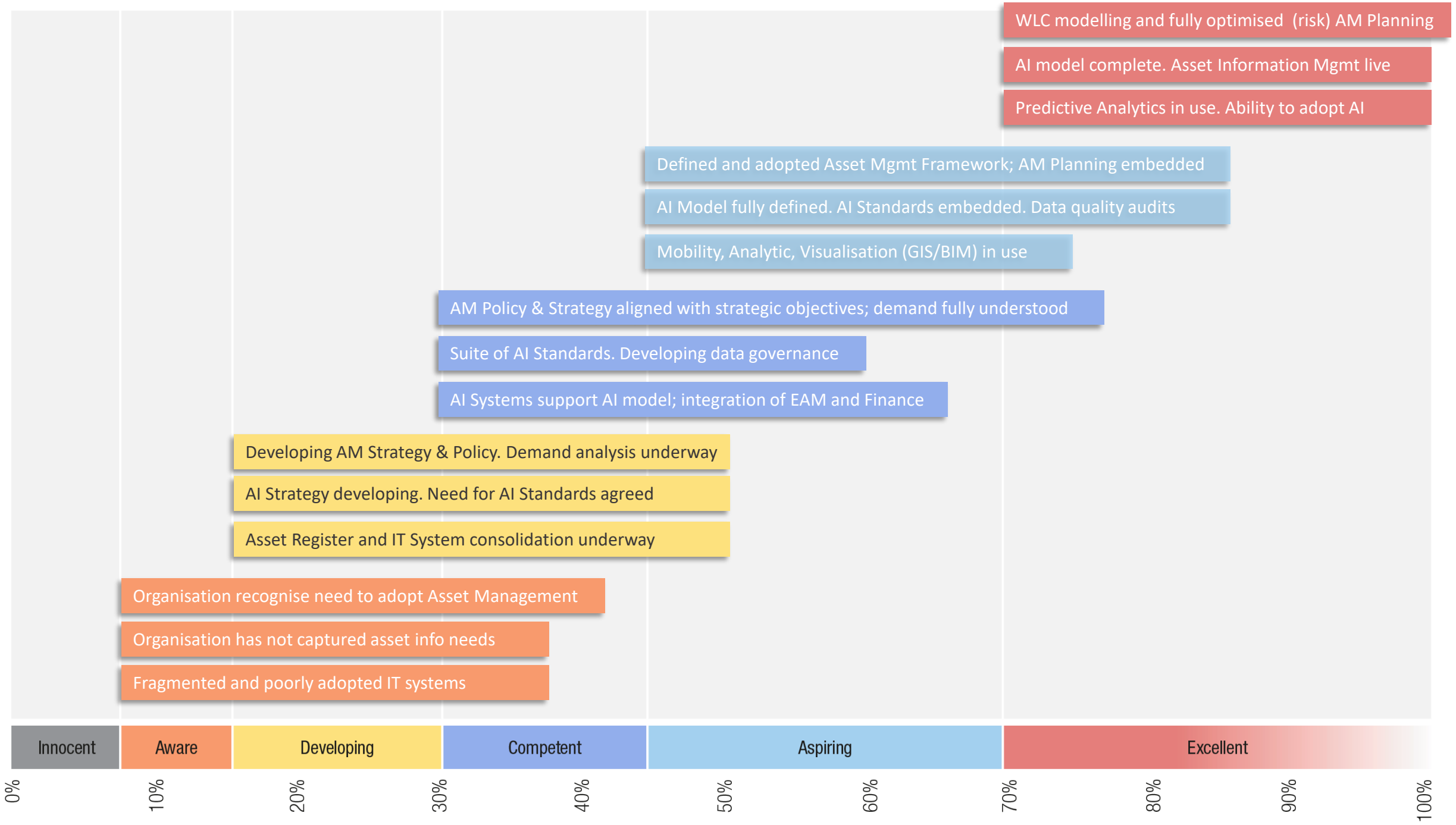
Engineering Cognitive Standards Advisor	• Making engineering standards more accessible • Enabling the asset managers of the future
Cognitive Conversation Bot	• Reducing the risk around Critical National Infrastructure • Engaging proactively with stakeholders
Machine Vision Inspection	• Prioritising asset health investments • Retaining expert knowledge





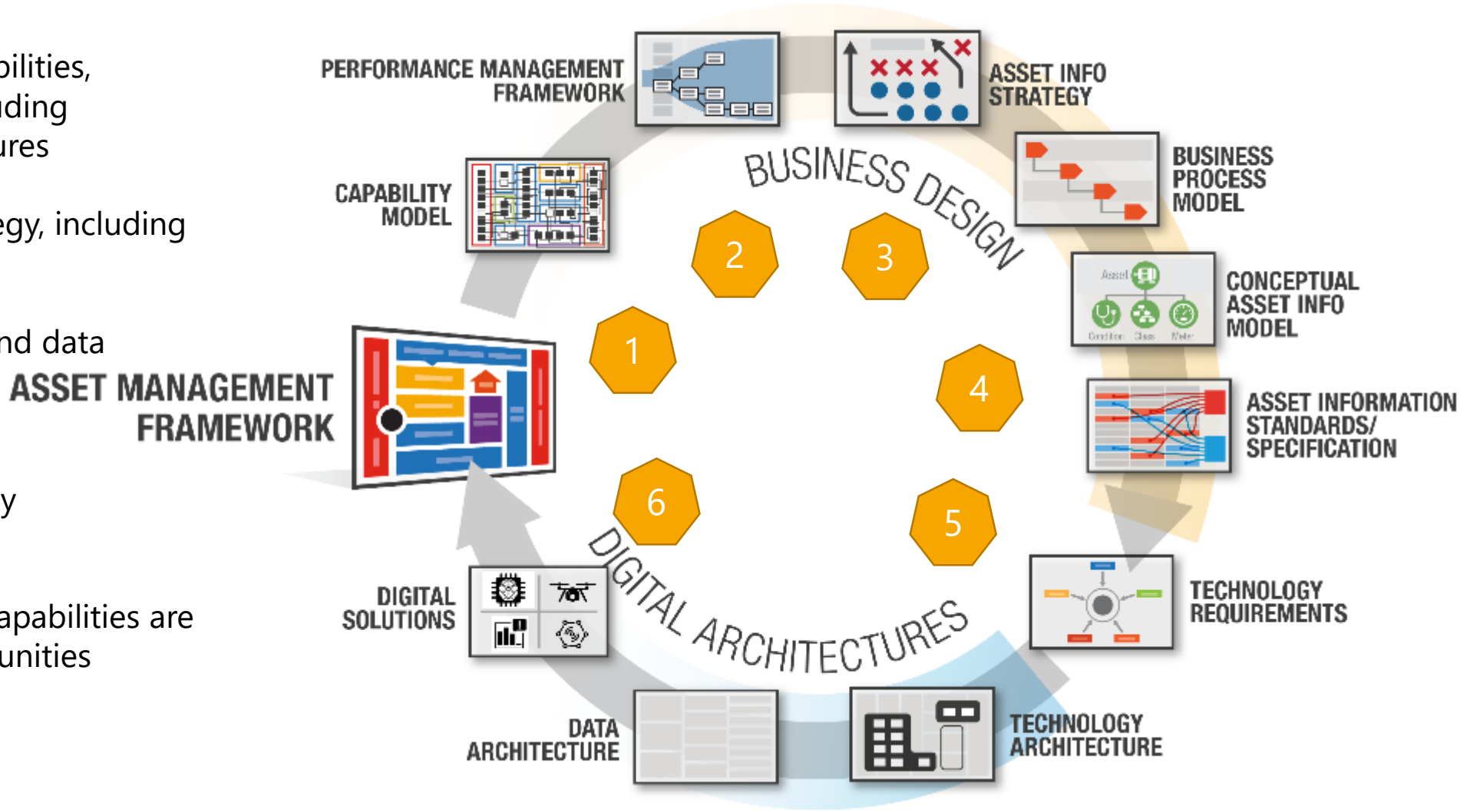
Source: IAM November 2017 Conference – National Grid - Cognitive Technology – Collecting knowledge assets from the past to enable the future


Asset Management Maturity
Asset Information Maturity
Digital Adoption Ability
Innocent
Aware
Developing
Competent
Aspiring
Excellent
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%


WLC modelling and fully optimised (risk) AM Planning
AI model complete. Asset Information Mgmt live
Predictive Analytics in use. Ability to adopt AI
Defined and adopted Asset Mgmt Framework; AM Planning embedded
AI Model fully defined. AI Standards embedded. Data quality audits
Mobility, Analytic, Visualisation (GIS/BIM) in use
AM Policy & Strategy aligned with strategic objectives; demand fully understood
Suite of AI Standards. Developing data governance
AI Systems support AI model; integration of EAM and Finance
Developing AM Strategy & Policy. Demand analysis underway
AI Strategy developing. Need for AI Standards agreed
Asset Register and IT System consolidation underway
Organisation recognise need to adopt Asset Management
Organisation has not captured asset info needs
Fragmented and poorly adopted IT systems
Innocent
Aware
Developing
Competent
Aspiring
Excellent
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

PREPARING AND REDUCING DIGITAL ADOPTION RISK

1. Understand maturity
2. Clearly define business capabilities, priorities and decisions, including business performance measures
3. Develop a clear Digital Strategy, including benefits case
4. Specify information model and data specification,
5. Clear business led technology requirements
6. Ensure traditional business capabilities are challenged by digital opportunities




QUESTIONS?
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