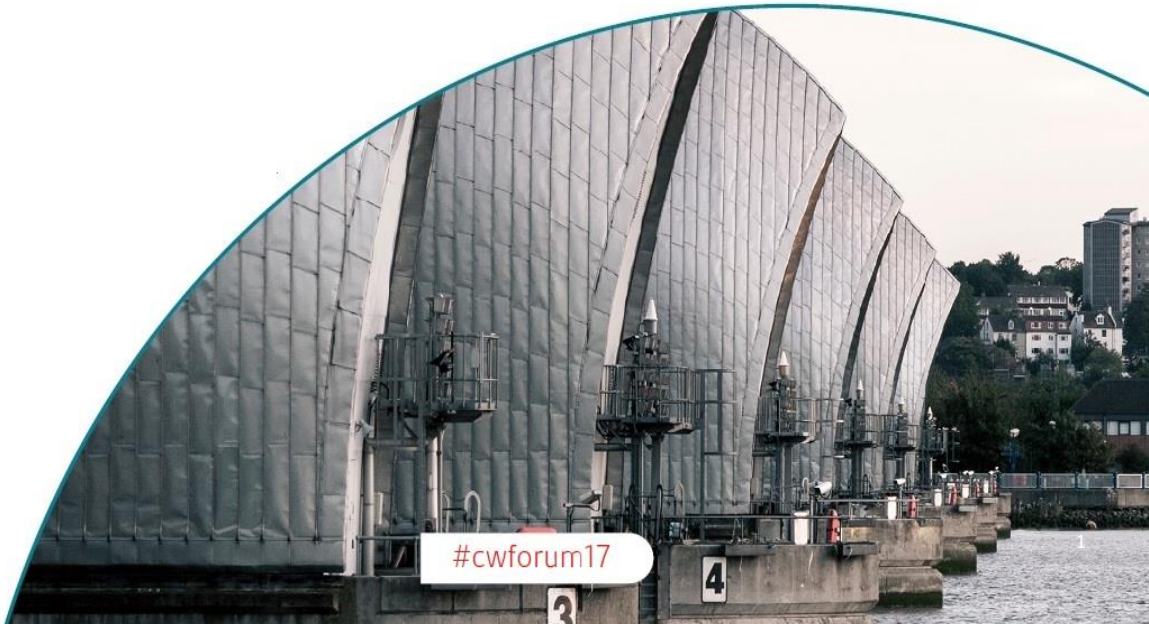
Digitization of the built environment

15.00-16.15

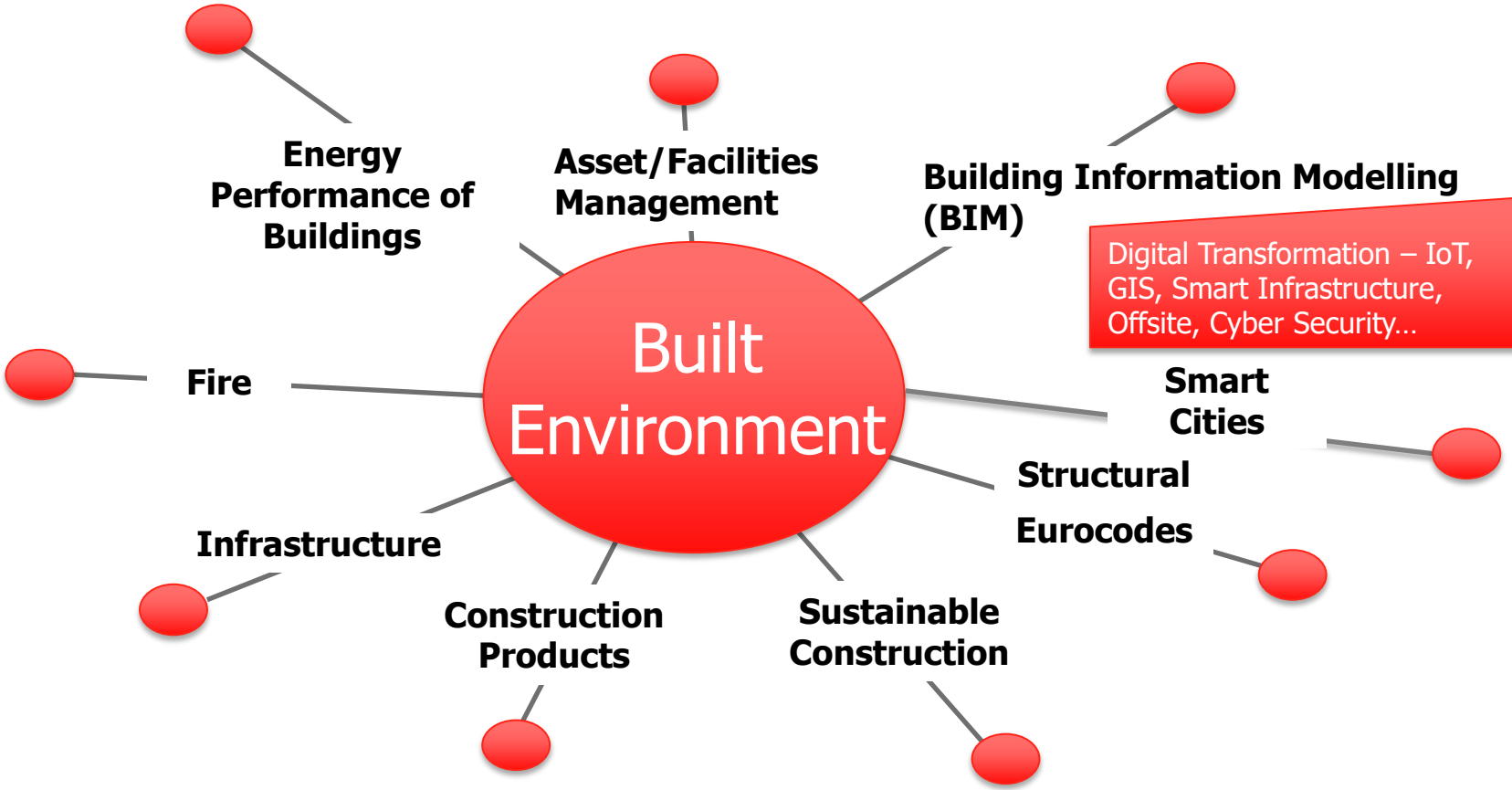
Chair: Kieran Parkinson, BSI

David Mudd, BSI
Gavin Summerson, BSI
Matt Crunden, Legrand



Department for Business, Energy & Industrial Strategy

Standards in the Built Environment



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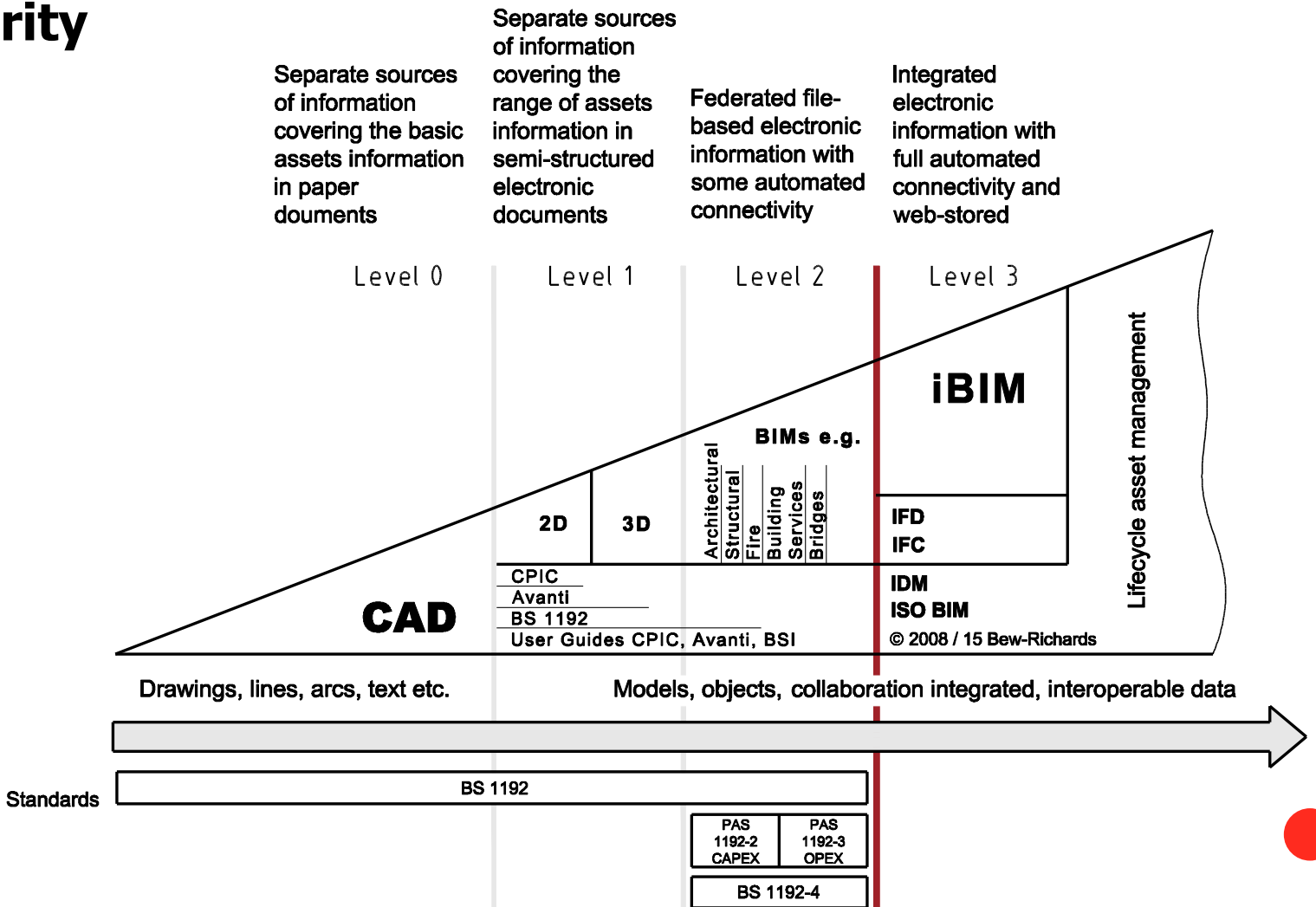
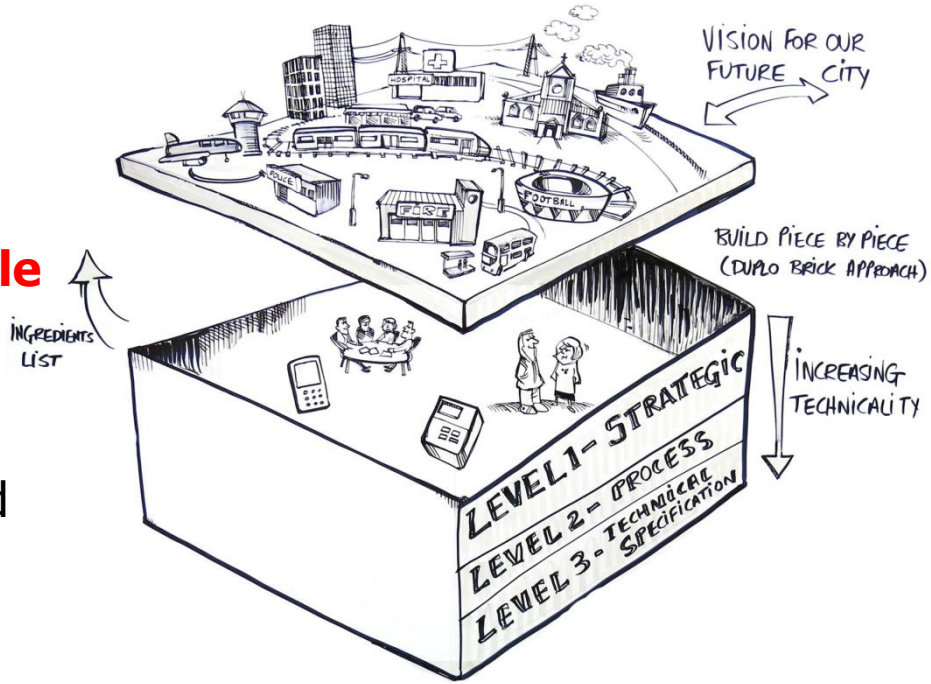
BIM Maturity Model



Standards for smart cities

- ✓ Provide good practice for **developing smart cities**
- ✓ Allow the development of **replicable solutions**
- ✓ Increase **confidence in procurement** of infrastructure and services



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Standards for smart cities

Free download available from
www.bsigroup.com/en-GB/smart-cities/

PAS 181 – Decision-making framework

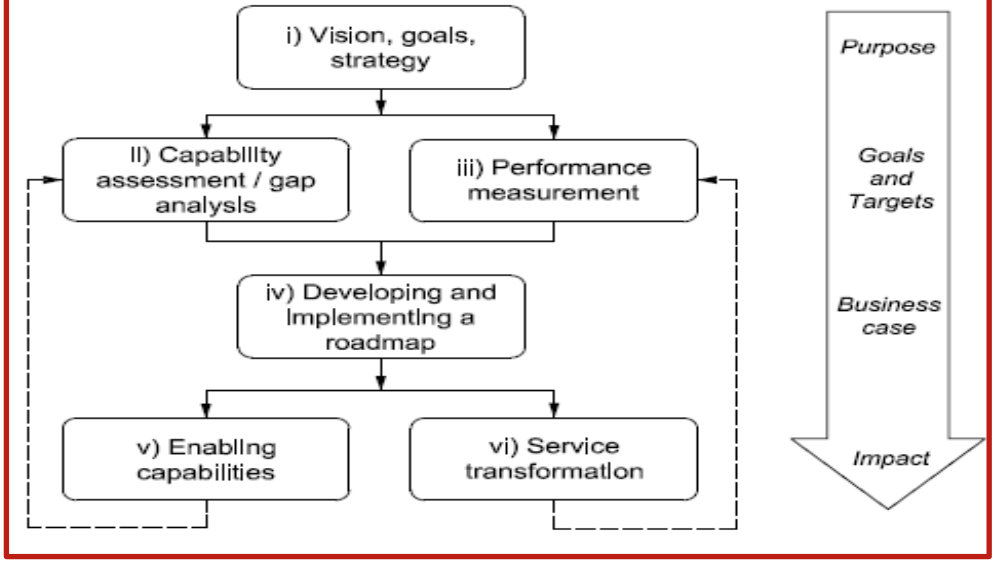
Smart city leadership programme

PAS 180 – Vocabulary

PD 8101 – Smart city planning guide

PAS 182 – Concept model for data interoperability

PD 8100 – Smart city overview



Use cases (Street lighting, Parking sensors,…)

Citizen engagement

BIM alignment

IoT alignment

PHASE 1 - Delivered

PHASE 2 - Future work

ISO work

City performance assessment

PAS 184 Smart city solutions – procurement and business case

PAS 183 Data sharing framework

PAS 185 Smart city data security

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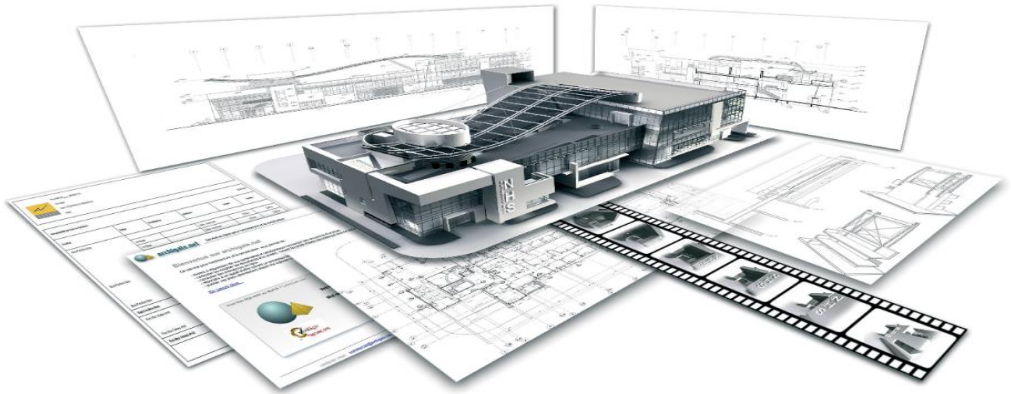

Digital Technology

Matt Crunden
Training and BIM Manager

By Royal Charter

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What is BIM ? – *Define*

'BIM is essentially **value creating collaboration** through the **entire life-cycle** of an asset, underpinned by the creation, collation and exchange of **shared 3D models** and intelligent, **structured data** attached to them'

BiM

Building Information Modelling (BIM) Task Group

What is BIM ? – *Define*

‘Don’t think about BIM on it’s own – instead consider BIM to be part of a wider change agenda ’

BIM =

- Building Information Model
- Building Information Modelling
- Building Information Management

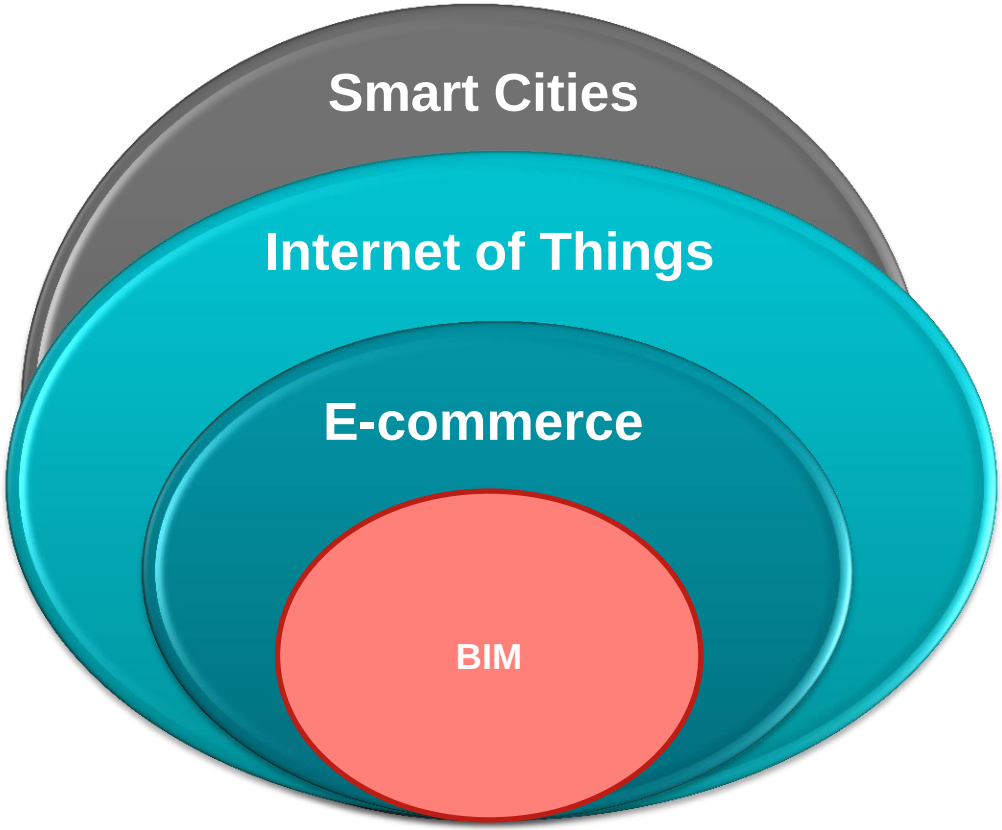
- **Digital Engineering**

What is BIM ? – *Define*

Laser scanning
Internet of Things
Collaboration
Remote health monitoring
Energy management
Smart home
Smart metering
CCTV
Broadband
Cloud
Connectivity
Smart city
User-friendly
Technological revolution
Standards
Communication
Home automation
Digitisation
Structured data
Control
Heating control
Smart
Smarteverythi
Security
Lighting cont
E-commerce
Point cloud data
Immediacy
Wifi

What is BIM ? – *Digitisation & Digitalisation*

A digital economy



Smart Cities Strategy

Information Economy Strategy

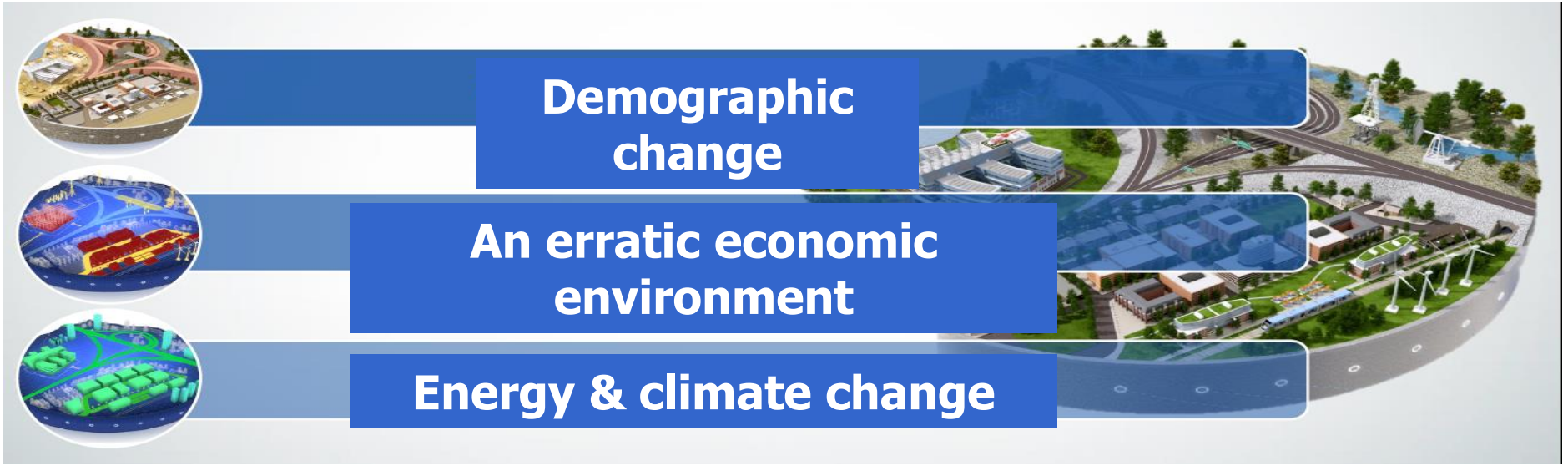
Business & Professional Services Strategy

Construction Strategy

What is BIM ? – *Digitisation & Digitalisation*

A digital economy

Why digitise ? – *Changing markets / trends*

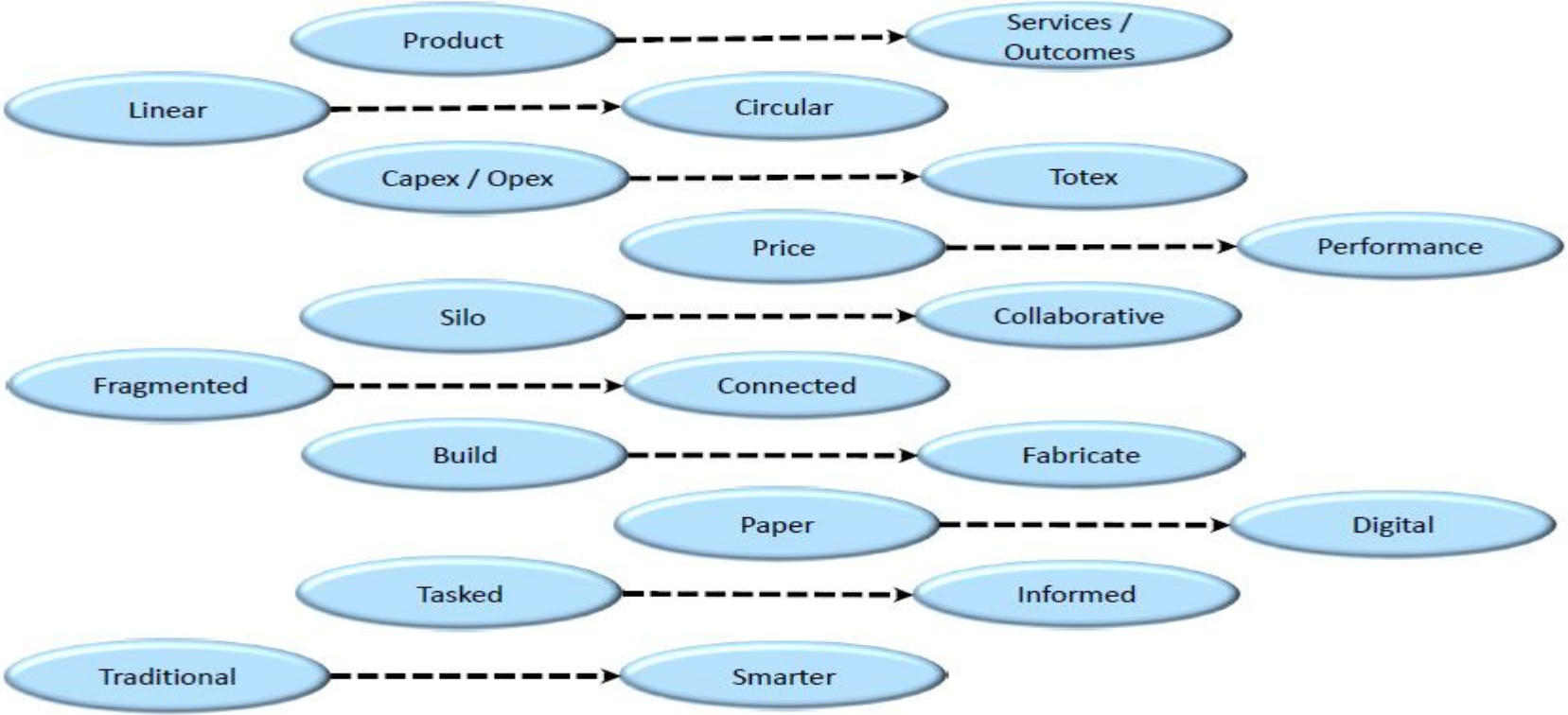


Mega-trends: environment challenges

Why digitise ? – *Changing markets / trends*

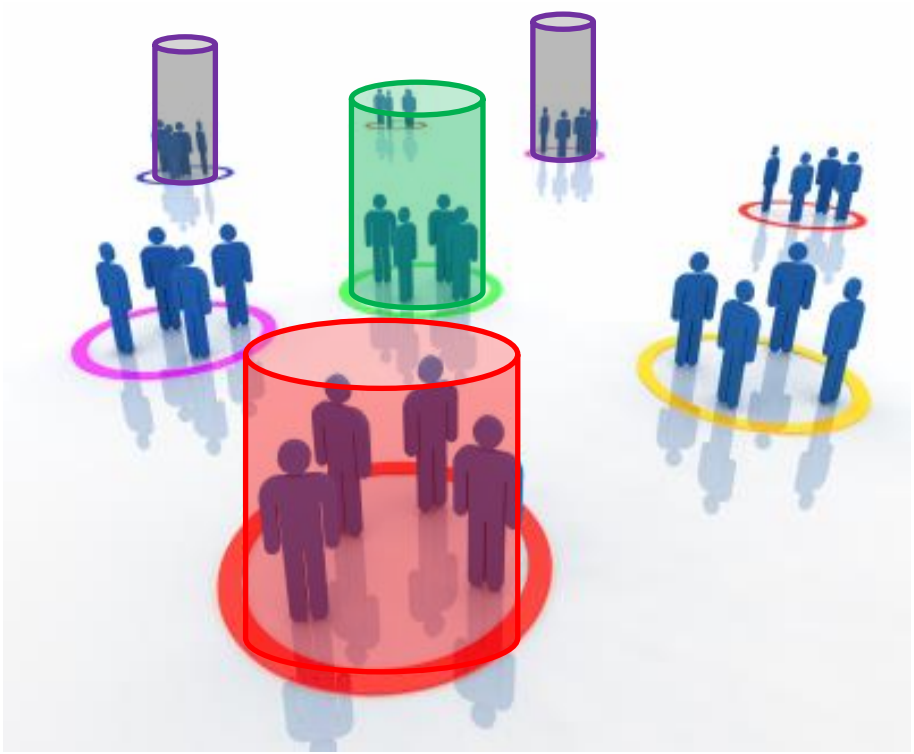
Mega-trends: company challenges

Why digitise ? – *Changing markets / trends*

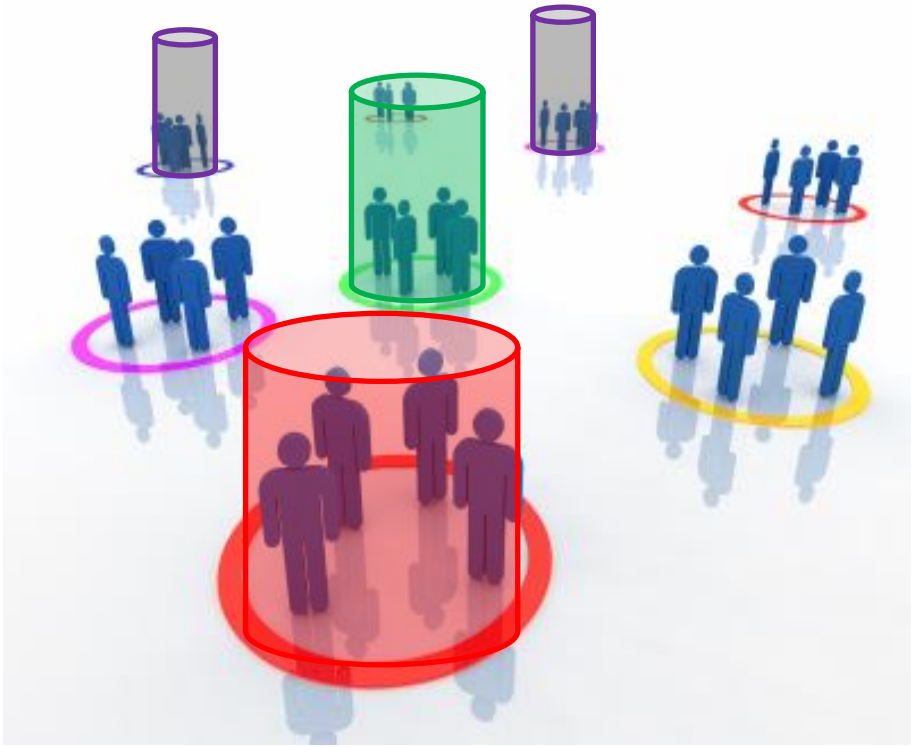


Mega-trends = a paradigm shift

Why digitise ? – *Changing markets / trends*



Why digitise ? – *Changing markets / trends*



COLLABORATION:
Two or more people working together towards shared goals

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File Edit View Tools Window Addins Help
11 m/s
ReviewShare
3D Destination
ReviewShare Viewer
Attach ZGL...
Current File:
Created
Modified
Area
Discipline
Reference
Status
Unapproved
These are the pumps that need replacing
ReviewShareViewer
Home
Markup
Navigation
Dimensions
Clipping
Model Tree
Click and drag to slide the objects.

Government targets & the Construction Industry – *Strategic Plans & Standards*

"This Government's four year strategy for BIM implementation will change the dynamics and behaviours of the construction supply chain, unlocking new, more efficient and collaborative ways of working. This whole sector adoption of BIM will put us at the vanguard of a new digital construction era and position the UK to become the world leaders in BIM."

Francis Maude
Minister for the Cabinet Office

www.bimtaskgroup.org

Lower costs
33%
reduction in the initial cost of construction and the whole life cost of built assets

Faster delivery
50%
reduction in the overall time, from inception to completion, for newbuild and refurbished assets

Lower emissions
50%
reduction in greenhouse gas emissions in the built environment

Improvement in exports
50%
reduction in the trade gap between total exports and total imports for construction products and materials

2.32 Government will require **fully collaborative 3D BIM** (with all project and asset information, documentation and data being electronic) as a minimum by 2016. A staged plan will be published with mandated milestones showing measurable progress at the end of each year.

Source - Government Construction Strategy
Source - Construction 2025

Government targets & the Construction Industry – *Working Groups & Certification*

For the UK construction product manufacturing sector to be recognised as a world leader in the integration of BIM and manufacturing technologies to supply the products and solutions for a sustainable built environment

BIM4M2

BEAMA

BIM4BEAMA

CIBSE DE

cpa construction products association

Digitisation, BIM and Sustainability

bsi. BIM Objects KITEMARK™

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CEN

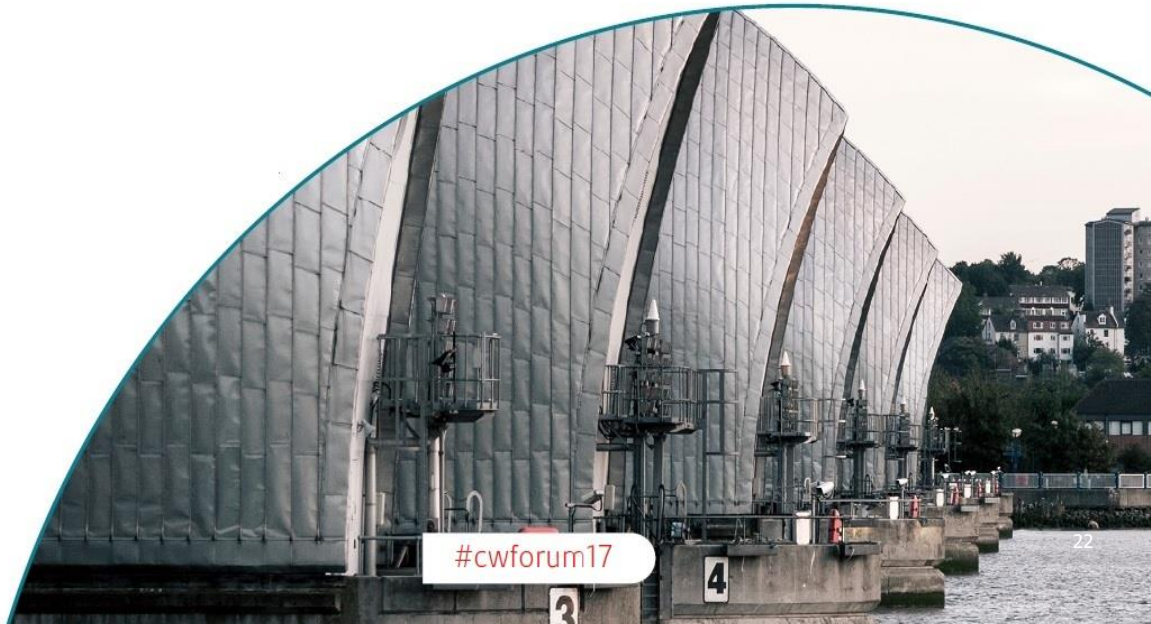
CEN/TC 442

What is seen – *The 'Iceberg'*

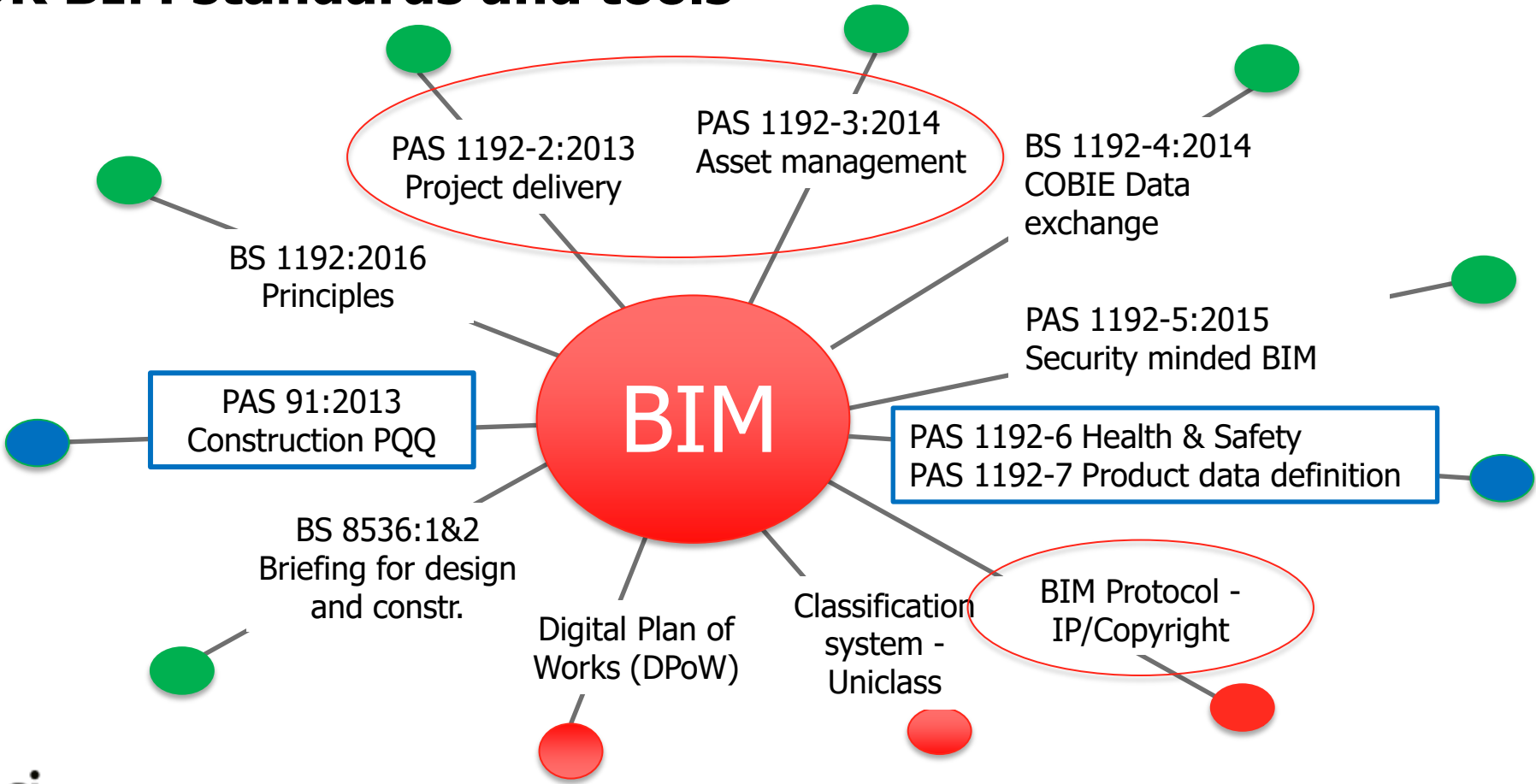
Thanks for listening...

BIM standards update

Kieran Parkinson, BSI



UK BIM standards and tools



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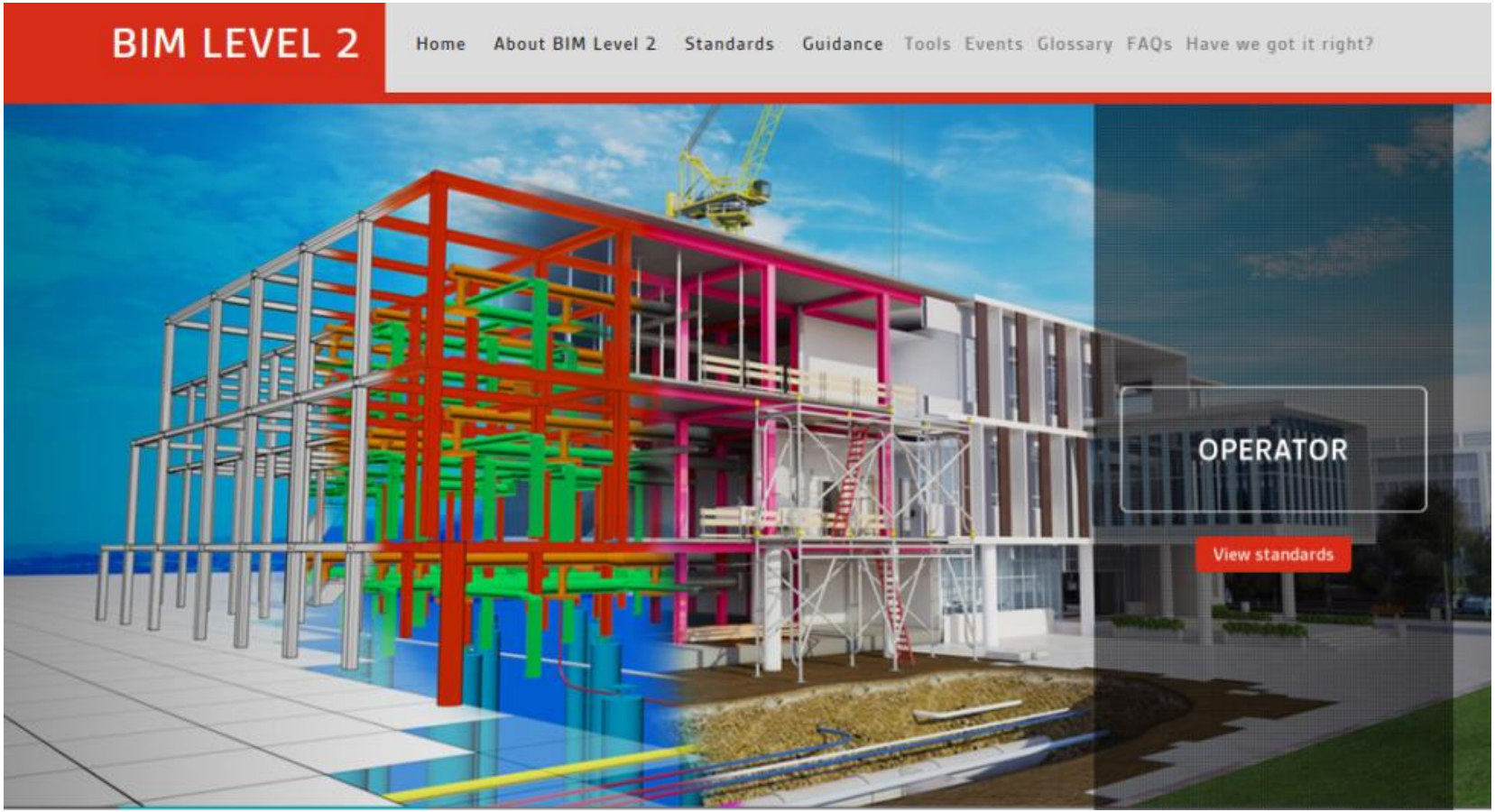
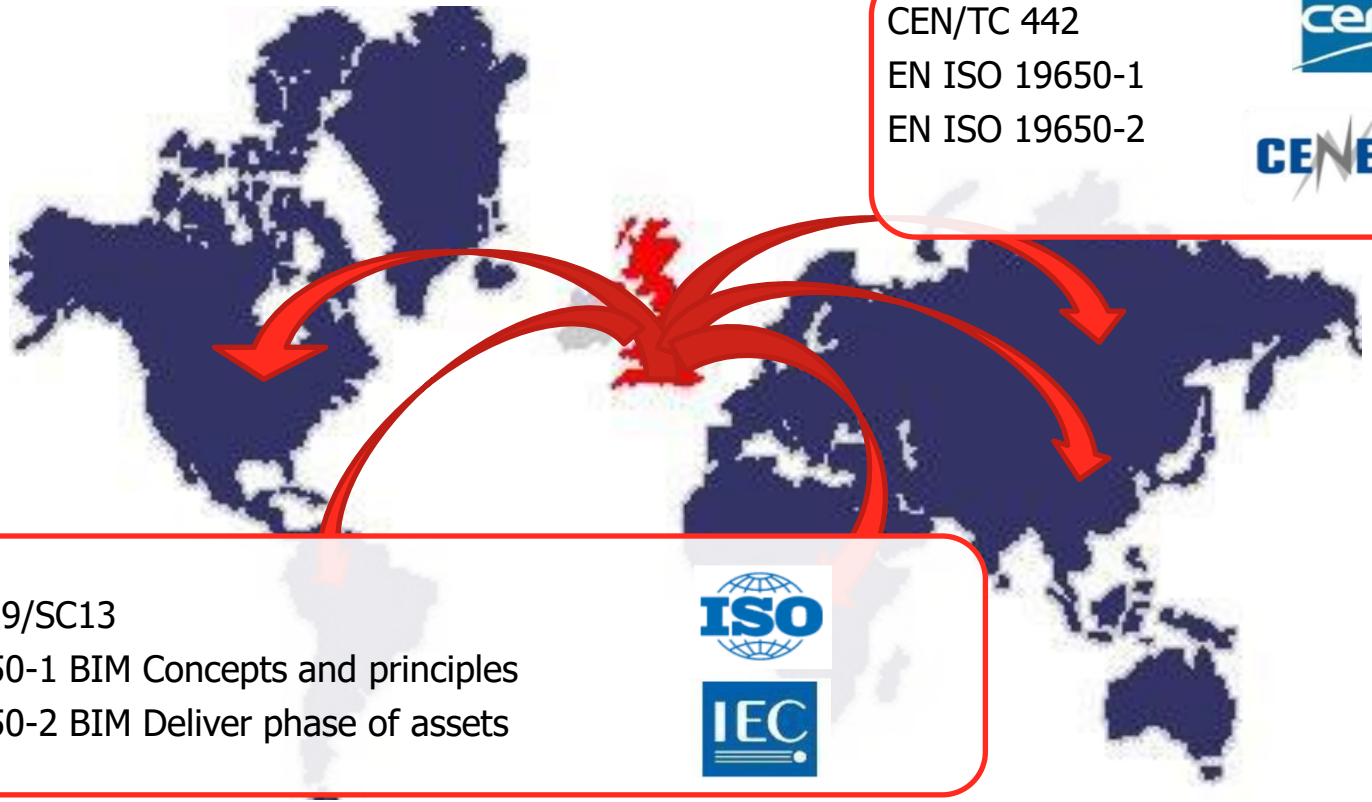

BIM LEVEL 2
Home
About BIM Level 2
Standards
Guidance
Tools
Events
Glossary
FAQs
Have we got it right?
OPERATOR
View standards

International BIM standards



CEN/TC 442
EN ISO 19650-1
EN ISO 19650-2

ISO/TC 59/SC13
ISO 19650-1 BIM Concepts and principles
ISO 19650-2 BIM Deliver phase of assets

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