BIM – the UK experience

Richard Waterhouse  Chief Executive
A digital transformation
The problem....
Irresistible force meets immovable object
Problems to be solved:

10% of construction claims caused by incorrect or incomplete data

£2bn of construction re-work each year

Data re-created multiple times with process breaks with over-design at many stages
"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
UK Government Strategy
UK Government Strategy
UK Government Strategy

Plan for Growth
March 2011

Low Carbon Action Plan
June 2011

BIM Strategy
June 2011
Simple objectives and requirements:

- 3D collaborative environment by 2016
- COBie output at key stages including handover
- 20% capital cost reduction for construction phase

This could only be done with major industry change
Changing an industry

- Sustainability
- Growth
- Smart
- People
Supporting change
The Bew:Richards wedge

Maturity

Level 0

Level 1

Level 2

Level 3

Data

Lifecycle Management

Processes

iBIM

2D

3D

AIM

SIM

IFM

BIM

BIMs

CPIC

AVANTI

BS 1192 2007

User Guides CPIC, Avanti, BSI

IDM – Common Dictionary

IFC – Common Data

IFD – Common Processes

ISO BIM

Drawings, lines, arcs, text etc

Models, objects, collaboration

Integrated, Interoperable Data

Tools

Paper

File Based Collaboration

File Based Collaboration & Library Management

Integrated Web Services

BIM Hub

© 2008 Bew - Richards
Resources – the BIM standards set

PAS 1192-2 (2013) Information during capital phase
PAS 1192-3 (2014) Information during operational phase
BS 1192- 4 (2014) COBie
BIM Protocol
Government Soft Landings
Classification
Digital Plans of Work
Resources – Standards

BS8541-1 to BS8541-4
Library objects for architecture, engineering and construction

BS8541-5 Assemblies
Draft in July

BS8541-6 Product declarations
Draft in August
Managing the whole process
BIM : BAM : BOOM

Savings have always been targeted at design and construction costs.
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So how are we doing?
Pilot projects
Pilot projects

- Implementation Plan
- EIR
- Tender Documents
- Scoring Process
- Framework Training
- Framework Support

Justice

HM Government
Pilot projects

Currently over £1bn of live projects

Needs to be £20bn in less than two years…

We need to change the industry and that change will also be cultural….
Changing relationships - work streams

Project bank accounts
Project insurance and contracts
Revised plan of works
RIBA Plan of Work
### RIBA Plan of Work

#### Design Responsibility Matrix

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<tr>
<th>Aspect of design</th>
<th>Design responsibility</th>
<th>Level of design</th>
<th>Information exchange</th>
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Global recognition

‘The UK programme based on the BIS BIM Strategy is currently the most ambitious and advanced centrally driven programme in the world.’

Patrick MacLeamy
Chief Executive Officer of HOK
Global recognition

‘The understanding and endorsement of building information modelling in the United Kingdom construction industry is as rapid as it is impressive…BIM is now key to the Construction Strategy and has catapulted UK construction to the forefront in BIM standards and adoption worldwide’

Phillip G. Bernstein FAIA RIBA
Vice President, Autodesk Strategic Industry Relations
BIM Level 3
Government Construction Strategy 2025

**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
The problem
The solution
Changing an industry – level 3
Changing an industry – level 3

Sustainability

Growth

Smart

People
Summary
Summary

Digital Built Britain

Potential Market

Commercial

Technical

Cultural

buildingSMART International Home of openBIM

HM Government
Summary
Summary

By April 2016, all Government projects will use BIM

There are ambitious targets for 2025 on time, cost, carbon and exports - revolution not evolution

Structural change will occur

Global standardisation is happening

Adapt and adopt or be part of history
Thank you

www.thenBS.com