B.I.M. – A Contractors Perspective

Jason A Smith - FInstCES
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An industry response to B.I.M.

Through 3 Lenses
A perspective on Productivity

20% Productivity

The Application of Digital Toolsets
20% Productivity

- Safety
- Optimised solution
- Exploring the construction technology process and methodology
- Remove waste

- Quality
- Integrated Supply Chain
- Off-site and factory construction
- Engaged Client

The B.I.M. Window of opportunity

Digital Construction
To break out of our silos

Integrate the supply chain
The B.I.M. Window of opportunity

Re-move the waste

To be more efficient
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Balfour Beatty

The B.I.M. Window of opportunity

Safe by design (D.C+O)

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Balfour Beatty

The B.I.M. Window of opportunity

Data – Supply Chain Mgt
The B.I.M. Window of opportunity

Optimise solutions
Throughout the project life-cycle

The BIG BIM Opportunity

Optimisation of total solution:
• For Client
• For Construction
• For O & M

Build it Once Right!

One Data Set
Lessons from other industries

Use the digital tool set to drive fundamental re-thinking of productivity in our sector

B.I.M.? We do!
Value Creation: Beyond delivery

- Develop
- Operate
- Deliver
- BIM
- Stable Brief
- Co-ordinated Design
- Lean Production
- Integrated Delivery

Ability to do things differently
Growing capabilities. From...

SR 99 Bored Tunnel, Seattle WA, USA
- Tunnel Cross Section co-ordinated model (500 ft)
- Colour coded by discipline
- Design validation for the RFP Cross Section report
- Attribute loaded 4D model (nD)

To this...
To M25 Widening – Infrastructure BIM Model

- Visualisations & Clash Detection
- Linear model
- Used for logistics & traffic management
- Close involvement with design suppliers and application vendors
- Mobile mapping system 3D GIS SIM
- Looking at future development

To Fully co-ordinated 3D Bids
(Cross Rail – South East Section)
Using the 4D models

- Interactive workshops and planning meetings
- Review of site access, lay-down area availability, exclusion zone requirements and plant positions
- Visual identification of overlapping working zones
- Sequencing snapshots (any viewpoint, any time) and animations
- Visual gateway to construction sequence, project/logistics information and As-Built records
- Time/Space conflict reports

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Complementary BIM Workflows

- 3D Laser Scanning
- G.S.A.: first laser scanning project caught an error that saved enough money to fund the entire 10 building BIM pilot program
- Asset Validation and Performance Optimisation

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“keep doing what you always do and you will get what you always got”