How Asset Information Management and value seeking drives the move to BIM

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Consultancy for the Built Environment

Asset Information Management

- The key to successful real estate management
- Optimising support to business
- Minimising whole-life cost
- Informing Facility Management
- Supporting the business case for investment
- Can be based on Asset Information Models

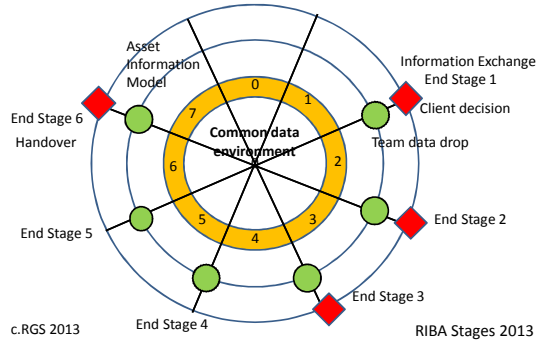
PAS 1192-3

- Asset Information Models are defined by this new standard;
- For new build, the product of a BIM;
- For existing assets, captured by laser survey into a BIM

So what is BIM?

- A way of working using digital tools and rigorous information protocols
- Process to ensure good client decisions
- 3D virtual models of the design intention, plus relational database of properties, providing:
- 4th dimension of construction sequence
- 5th dimension of cost information
- 6th dimension of asset information

The BIM asset lifecycle: PAS 1192-2



8 stage way of working

- 0: business case for a project
- 1: preparation: appointments and briefing
- 2: concept design; option selection
- 3: developed design; choosing technology
- 4: technical design, by trade contractors
- 5: construction and as-built data capture
- 6: handover of building and data
- 7: asset and information in use: support and feedback to future work

Stage 6: Handover information

- Native models from all designers, at required LOD
- PDFs from federated model
- O&M information suitable to load into CAFM system (COBie)

Stage O: the business case

- May be driven by asset strategy
- Will define what success looks like
- Will set out the information required from the project to form the Asset Information Model
- This defines the Employers' Information Requirements and the "Plain Language Questions" which determine the content of the BIM.

Employers Information Requirements

- Collaborative working requirements
- Information Exchange points and their LODs
- Model management processes: Info Mgr etc.
- Software and exchange formats and file sizes
- H & S, training and security requirements
- Guidance docs to use
- Tender assessment details, including competences

Client steps into BIM working

1. Conventional analogue working, with designers and/or contractor using 'lonely BIM' for their own reasons;
2. Supply team uses 'social BIM', but without client lead: 'supplier BIM' or 'Level 1.7';
3. Client adopts full digital working, using FM and Asset Management tools, and feedback to future business cases: 'client BIM' at L2.

Client abilities needed

- Ability to prepare the case for a project
- Ability to decide how to buy and from whom
- Provision of clear employer's requirements, including those for information
- Internal decision process to fit project need
- Ability to accept handover of data and to use it for facility and asset management
- Appraisal of outcomes to help future work

Key tools to use

- PAS 1192-2 (and BS 1192, 2007), for its process map, plus 1192-3 on asset info, 1192-4 on COBie
- RIBA Plan of Work 2013 and its guidance books, to plan the project and make appointments
- CPIx Protocol for supplier assessment tools
- CIC Project Protocol added to contracts to put them on a BIM basis
- Soft Landings (BSRIA) or GSL
- www.bimtaskgroup.org as a source
- Local CIC BIM Hub as a support group

Advanced Building Management Systems

- BIM provides 'static' information;
- ABMS provides streaming data on performance;
- Big Data analytics can show how asset supports business

Growth through BIM

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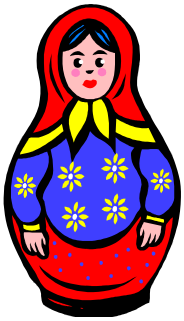
Your project plan is a Russian doll



- Project Execution Plan
- BIM Execution Plan (pre-contract)
- Scope of Services and Responsibility Matrix and
- Employers Information Requirements
- Plain Language Questions and
- Project Implementation Plan

Plain Language Questions

- 127 in the MoJ set, over 8 stages;
- Typical question at Stage 2 information exchange:

Q:"What is the outline proposal for structural design?"

A: "Design model sufficient for loading simulation; size and weight information; assessed temporary loads in construction."

Project Implementation Plan

- Project goals for collaboration and modelling
- Programme milestones
- BIM deliverables strategy
- Supplier assessment forms (CPIx templates)

to judge experience and capability of team, their IT and proposed people to work in BIM.

Scope for Advisers

- There is a major opportunity for Client Advisers and Project Managers to provide the client skills that are required to enable effective use of Level 2 BIM
- This especially true where the client is not a regular one or wishes to outsource tasks.

BIM benefits clients by:

- Reducing risk of delay, defect or claim
- Reducing project timescale
- Reducing project cost
- Increasing certainty of outcome
- Supporting whole-life effectiveness

It particularly benefits estate-holding, and repeater clients.

How does BIM do this?

- It provides a more rigorous way of working
- It makes design intent clearer to the client
- It allows easier use of client standards
- It provides all with a Single Source of Truth
- It allows tighter cost control and waste reduction
- It supports rehearsal of sitework
- It supports better information at handover
- It supports smoother asset operation