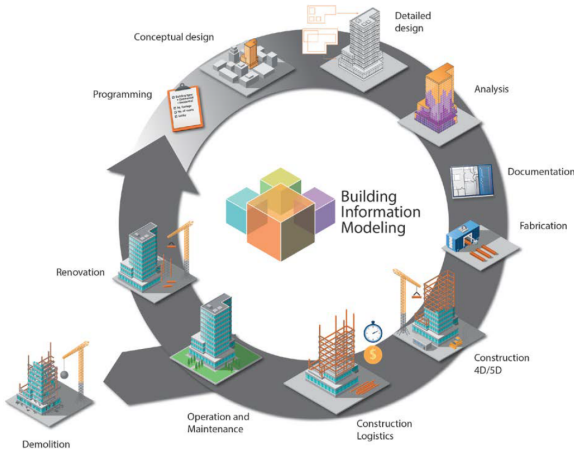


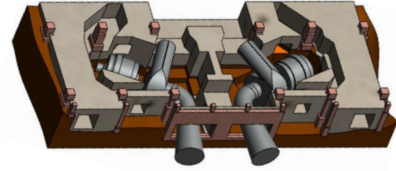
BIM Building Information Modelling

Collaborative Process

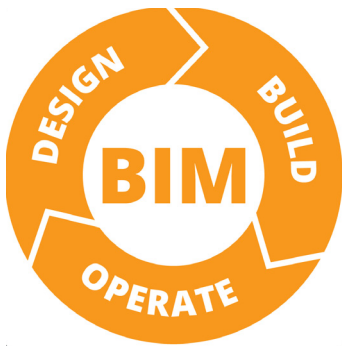


Virtual Build

Models with intelligent data and information allow identification and resolution of clashes and ensure construction methodology, logistics and co-ordination are correct before work commences. Component data enables quantity outputs.



Teams can quickly understand what they are building and resolve potential issues.



BIM is:

- A process for efficiently creating and managing project information
- About collaboration
- A single source of truth for information

BIM is not:

- A single piece of software
- Just a 3D model
- A flash in the pan
- Only for large or new projects

BIM by job function

All

- Access and sharing of current information
- Navigation of detailed 3D models
- Understanding the status of project information in the CDE (see over)

Design and Engineering Manager

- Collaboration with all project team members
- Identification of temporary works requirements
- Buildability and cost reviews around 3D model
- Improved management of design change

Estimator/QS/Commercial Manager

- Quantity readings from model to inform pricing and project knowledge
- Collation and tracking of sub-contract enquiries
- Coordination of supplier details with design team
- Accounting for client EIRs (see over) in pricing and for subcontractors

Site Manager/Engineer

- Planning of site logistics
- Understanding of site constraints
- Access to mobile app to collect records in the field

Works Supervisor

- Site briefings using 3D visualisation
- Using model to develop construction methods

Planner

- Working with design team to develop model with preferred construction sequence
- Running 4D sequences by linking programme activities to model

Designer

- Designing in 3D and cutting 2D drawings from model
- Ensuring modeled components have agreed information attached
- Design reviews around 3D model
- Generation of design schedules and associated specifications

BIM What you need to know

Benefits

Design Coordination

- 3D model ensures seamless design, saving time and money on site

Health and safety

- Virtual build ensures safe construction sequence
- Visualisation and method statements to familiarise team with site

Cost

- Quantity extraction from the model to assist pricing and quickly manage impact of design change

Planning

- Programme can be linked to model to ensure a buildable construction sequence

Logistics / Methodology

- Visualisation to ensure site layout, plant locations and temporary works are feasible

Procurement

- Efficient sharing of model data and project information with suppliers

Data capture

- Mobile apps linked to central database record site and contractual information

Definitions

PAS (Publicly Available Standard)

The PAS1192 suite of standards sets out how projects are to be delivered in BIM and what is required to meet Level 2 BIM requirements.

CDE (Common Data Environment)

A centralised data storage or document management system, usually cloud based, which is accompanied by a process that explains what and how information is shared in it. A single source of accurate information.

EIR (Employers Information Requirements)

Contractual document that a client must provide for a BIM Level 2 project. This will set responsibilities and explain what information is to be shared during the project and what is to be handed over on completion.

LOD (M) (Level of Model Detail)

On a scale of 1 to 7, this defines how much detail should be included for each modelled component and what data is associated with it. 7 = very detailed, 1 = very basic.

BEP (BIM Execution Plan)

A management plan that explains how BIM will be implemented on a project, including responsible personnel, software requirements and means of sharing information.

COBie (Construction Operations Building information exchange)

A common file format for sharing information about a finished product.

What is Level 2 BIM?

Level 2 BIM was mandated for government projects, but the associated processes and information management practices can also be of benefit to private sector clients and on maintenance frameworks.

BIM Level 2 practices include:

- Teams work and exchange information collaboratively to specification PAS1192-2
- Organisations across a project co-ordinate all Information and model centrally
- A common data environment provides a single source of accurate information
- An asset management model is provided for the client to operate and maintain

We're also keen to hear your feedback on using elements of the BIM process:

- Generating or using a 3D model
- Collaborating across designer, client and contractor teams to produce a solution
- Using a central cloud based storage system to share or obtain project information