

# Building Information Modelling



## What is BIM?

Building Information Modelling (BIM) is the creation of a building in the virtual world. By generating 3D models of buildings that do not exist, it allows us to understand the complexities surrounding the project and learn from those before they happen. The data created within the model is then used positively for the build of the actual project in the real world.

Described as a shared knowledge resource, the model of the building can be utilised as a reliable source of information throughout the lifecycle of the project, i.e. from the project conception to its demolition many years from now. Whilst the idea of using one resource throughout the life of a building is a new concept, the potential of this change will lead to savings through the lifecycle of the building.

## What does BIM do?

By creating a single resource point of data it allows any user to input or extract information relevant to their activity. So, in the construction process it allows contractors to take off and visualise the spaces in advance of the build and for facilities managers it allows them to manage their maintenance programmes more efficiently.

The ability to view a fully detailed space in advance of the end product should allow savings to be made on abortive works or design issues. BIM will also collate product information on the various components of the fabric and internal elements of the model. This can then be transposed into electronic worksheets to allow accurate quantity take-offs and specifications to be produced through the one model. This is where BIM meets COBie.

## COBie and the Data

In simplistic terms, if BIM is the skeleton of the project then COBie is the flesh surrounding it. Therefore, the information produced within the model and extracting this into a spreadsheet is managed under COBie.

COBie stands for Construction Operations Building Information Exchange and this is the raw data format for how the individual elements of the building are collated together in their independent format. A COBie schedule is likely to be extensive as this is the detail within the model, in the same vein that an NBS specification and Bills of Quantities are extensive within a traditional project but they sit within the background of a project, used when required for certain knowledge and resource elements of the facility.





## How does this affect you?

The government have stated collaborative 3D BIM (with all project and asset information, documentation and data being electronic) must be used on all its projects by 2016. That means that schools, hospitals any form of government project will use BIM, meaning the private sector project teams will follow suit and many have already started making inroads into investing in the technology.

There are levels of technology involvement and this will depend on your role within the project team. Architects, engineers and specialist subcontractors will have a greater responsibility for design than a client or subcontractor, therefore the level of software will vary dramatically.

If you are only viewing the BIM model, a number of free software viewing packages have been created by the software houses to allow you to do this. Designers obviously need full working capability and will spend money updating their systems to the requirements of their workload.

There is also an intermediate package which allows some design functionality at a reduced value of the full version. Therefore you will pitch your requirement to suit you input in the supply chain.

## Adopting a "Road map to BIM Competence"

Whilst change is a daunting experience, having people alongside you to help and guide you through the maze of something new can be invaluable. As well as design consultants who specialise in the creation of BIM Models, there are also project managers, such as Logic PM, who specialise in managing and leading the BIM process to ensure your project overcomes the challenges that the use of a pioneering technology presents.

## Moving forward

There are a number of guides and papers written on the subject of BIM and its implementation. The government website is a useful starting point and the National Specialist Contractors Council (NSCC) and the Specialist Engineering Contractors (SEC) Group have written a joint paper which is available at <http://www.nsc.org.uk/documents/BIMGuideforSpecialists-2013.pdf>



To find out more about managing a project through BIM contact Logic PM. We will be happy to discuss your project answer any questions you may have about the use of this new technology.

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