

**Building Information Modelling (BIM) can be defined as a 3 dimensional database designed specifically for built facilities. BIM integrates a digital description of a building with all the elements that contribute to its on-going function such as air conditioning, maintenance, cleaning or refurbishment and describes the relationship between each element.**

Generic benefits of the modelling system include:

- a single repository for all facility management functions that ensures consistent, accurate and easily accessible data
- 'whole-of-life cycle' documentation that can include design and construction information as well as information required for the building to function efficiently
- objects and elements of the model hold more information than purely physical representation i.e. a building component such as a lift can include location, vertical transport route as well as manufacturers code, last date of service and maintenance history

The key benefit of BIM is that it is an accurate geometrical representation of all parts of a building into a single integrated data environment.

### Why does Sydney Opera House need a Building Information Model?

Sydney Opera House currently has seven different and incompatible digital information systems that manage functions as diverse as building maintenance, accounting, building presentation and asset value management. In addition the services are separated into four main technical groups; electrical, mechanical, building and CAVS (communications and audio visual services). The four areas are serviced by different contractors, each with independent digital systems, that Sydney Opera House must manually transfer information from to their own systems.

Specific benefits of BIM to Sydney Opera House include:

- faster and more effective facilities management where information can easily be shared and re-used by the variety of contractor and staff employed
- design proposals for upgrades and refurbishments can be rigorously analysed and simulations performed easily
- production of building documentation is of high quality and highly flexible
- controlled whole-of-life costs and environmental data leads to predictable building performance and tighter budget planning
- government, industry and manufacturers all have a single common language to describe elements of the building (common protocol)

**For more information:**

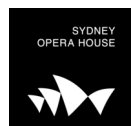
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**or go to [www.construction-innovation.info](http://www.construction-innovation.info) and follow the links to the Project pages**

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### Project Participants



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