



sydney opera house
facilities management
exemplar project

SYDNEY OPERA HOUSE GOES DIGITAL

Research from the CRC for Construction Innovation *Sydney Opera House Facilities Management Exemplar Project* provides evidence that a 3D digital model of Sydney Opera House will save time while improving the operation of the facility through consistent, accurate and current data that enables faster and more effective management.

In a digital age when nearly every architect, engineer and consultant is using Computer Aided Drafting to document the design and construction of buildings it might be surprising to know that such an innovative building as Sydney Opera House was completed without the assistance of even the most basic two-dimensional digital drawings.

Like the great cathedrals of medieval Europe where design issues were often resolved on site, and with the continued evolution of the facility's technical needs over the last 35 years, Sydney Opera house is different building than that portrayed in Utzon's original drawings. Consequently, there is no definitive set of plans for Sydney Opera House nor integrated documentation incorporating the many services changes that have been made over the years.

The lack of consistent data in a single source has become an on-going issue to the management of the facility, one that the Sydney Opera House Facilities Management Exemplar Project (SOH FM Exemplar Project) aims to resolve.

Since launching this promising two-year research project in April 2005 the SOH FM Exemplar Project researchers have been developing strategies that will best respond to the direct needs of SOH while gaining knowledge about some of the most up to date FM systems available today.

The three main research areas of the project are:

1. *Building Information Modelling*
2. Benchmarking
3. Procurement

The Building Information Modelling (BIM) section of the project is well underway with the first stage of the research now complete. This research has already brought to light a number of significant opportunities for SOH and has highlighted the possibilities that BIM holds for the broader construction and FM industries.

A BIM of SOH will do more than record simply the physical structure of the facility it will also incorporate huge amounts of servicing, maintenance and costing information. This type of digital modelling is called a rich model as it includes all information about objects within a building such as lifts, ventilation and fire systems and importantly the relationship between them in a single repository ensuring consistency, accuracy and access to up to date.

A multi-million dollar annual budget for maintenance, 40-50 maintenance technicians, additional external contractors and around 200 jobs a week all demand an excellent management system. A BIM system that shares information, saves time and makes cost planning a reality is one Sydney Opera House is enthusiastic to implement.

For more information:

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or go to www.construction-innovation.info and follow the links to the Project pages