

industry comment

SYDNEY OPERA HOUSE GOES DIGITAL

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Over the past two years, the Cooperative Research Centre for *Construction Innovation* has collaborated with Australia's facilities management (FM) leaders in a project that will help bring management of Australia's most iconic facility, the Sydney Opera House, into the digital age. The Sydney Opera House FM Exemplar project involved investigating and highlighting FM practice, using one of Australia's most unique buildings as a model.

One component of this research was the development of a "rich" digital model of a section of the Sydney Opera House.

The Sydney Opera House was designed and constructed well before the advent of today's CAD systems. The building is now 30 years old and is one of the busiest performing arts centres in the world. A functional upgrade of the facility is due which will require accurate information for new developments and operations.

This will require sharing building information data, so building proposals can be integrated and coordinated, and information about the whole life of the building, energy, cost, operations and other data can be understood and managed.

A digital model of a section of the Opera House was developed that provides a 3-D visual representation of the building which incorporates servicing, maintenance and costing information. The model maps objects within a building, such as lifts, ventilation and fire systems, and provides information on the relationship between them.

The integrated FM model brings into one central location all the built facility data of the building: structure, engineering services and fabric. There is potential to store a wide range of assets and FM data that support operation, maintenance and strategic functions.

For example, the model enables functions such as condition reporting, energy consumption and diary bookings.

Clearly there are many management benefits for incorporating information about buildings into a consistent, single data source.

The Sydney Opera House FM Exemplar project was undertaken by a *Construction Innovation* project team comprising the Facilities Management Association of Australia, Transfield Services, Rider Hunt, Woods Bagot, Sydney Opera House, Brisbane City Council, Queensland Department of Public Works, CSIRO, the University of Sydney and Queensland University of Technology.

The project was developed as a result of the Federal Government's FM Action Agenda and supported by the Department of Industry, Tourism and Resources.