



CRC Construction Innovation

BUILDING OUR FUTURE

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Sydney Opera House digital modelling receives Project of the Year award

A groundbreaking project using benchmark computerised modelling that will help maintain and protect the Sydney Opera House has been crowned at the 2007 Association of Consulting Engineers Australia (ACEA) Awards for Excellence held in Melbourne on 30 November 2007.

The Sydney Opera House FM Exemplar Project was declared Project of the Year and received the Gold Award of Special Merit in the Information and Communication Technology (ICT) Projects category.

It is a joint undertaking of the Cooperative Research Centre (CRC) for *Construction Innovation* and consulting engineering firm Arup in collaboration with various other partners from industry, research organisations and government.

The project – a collaborative research effort between industry, research organisations and government – focused on three research themes: Business Information Modelling (BIM or digital modelling), service procurements and performance benchmarking.

Construction Innovation CEO Dr Keith Hampson said the Innovation award from the ACEA was credit to the efforts of the whole project team.

"The Opera House is a large and very complex structure comprising seven theatres, 37 plant rooms, 12 lifts and over 1000 rooms. Staging some 1500 performances per year, it is one of the world's busiest performing arts centres," Dr Hampson said.

"Most patrons of the Opera House visiting it to enjoy a live performance have little idea of the enormous requirements it takes to coordinate and optimise the performance of each of its business elements.

"Our research has demonstrated that a digital model that also provides the relationship of objects such as lifts, ventilation and fire systems within the building can also integrate Facility Management (FM) functions like condition reporting, energy consumption and room bookings.

"FM practices support an organisation's business objectives and FM is one of Australia's fastest-growing and dynamic industries, contributing \$8.6 billion to the Australian economy and employing 135,000 people."

The findings of the Exemplar Project not only improve FM processes at the Sydney Opera House but also act as a case study for buildings in Australia and internationally.

The project complements a number of Federal Government recommendations including showcasing the innovative nature of the FM industry. It used the jointly developed BIM technology to integrate the disparate systems of Sydney's iconic cultural landmark into one.

It has already received several industry accolades, including the Facility Management Association of Australia – Rider Hunt Terotech Industry Achievement Award for facility management strategy and practice, presented at the FMA Australia ideaction 2007 conference in May 2007.

BIM integrates diverse elements such as structural, architectural, services, plant, facilities, furnishings and equipment information into a comprehensive 3D visual model, for complete interoperability of data sharing and full engagement of coordinated core business activities.

This integrated platform provides improved management of whole-of-life costs and environmental data as well as more accurate and rigorous analysis of existing and future building design, modification and maintenance.

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The CRC for *Construction Innovation* brings together 27 industry, government and research partners in a collaboration to find innovative solutions to improve the economic, environmental and social benefit of the design, property, construction and facility management sectors as well as the Australian community. Website: <http://www.construction-innovation.info>

The ACEA Awards for Excellence are a unique opportunity for industry and community recognition of the outstanding achievements of ACEA member firms. They cover a broad range of engineering and related disciplines, and are well representative of small, medium and large consulting firms.

The awards demonstrate the design skills and technical excellence of member firms' professional staff in project and service delivery, and the exceptional quality of their work to clients and industry.

The Sydney Opera House FM Exemplar project was undertaken by *Construction Innovation* in collaboration with Rider Levett Bucknall, Woods Bagot, Transfield Services Australia, Sydney Opera House, FMA Australia, Brisbane City Council, Queensland Department of Public Works, CSIRO, QUT and University of Sydney. The project was led by Stephen Ballesty, Director of Rider Hunt and Immediate Past Chairman of FMA Australia.

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