

"When projects have something special about them, it tends to drive innovation."

Being the best

The benefits of innovation are well-documented. For all industries, including the construction industry, innovation in goods and services, in process and management, can provide a valuable competitive edge and can lead to improved business performance.

Case studies have shown construction innovations resulting in time-savings, cost-savings and unique solutions to difficult problems. Often these innovation examples feature large contractors due to their involvement with high-profile projects. It is true that large contractors have higher innovation rates (percentage of businesses innovating) than small contractors (ABS 8158.0, 2006), however; it would be a mistake to assume that innovation is a luxury that only large contractors can afford.

The BRITE project, of the CRC *Construction Innovation*, interviewed 20 contractors across Australia, of various sizes, who are featured in the National Innovative Contractors Database, to discover and share the management practices of Australia's most highly innovative construction contractors.

The results demonstrated that rather than relying on vast resources, these companies have developed organisational systems designed to promote innovation, which are supported by effective communication strategies and high levels of support and encouragement of employees.

From ideas to innovation

An innovative idea can be the result of searching for a solution to an unforeseen



problem or a challenge posed by a demanding client. Ideas can be gathered from competitors, industry associations and universities.

The contractors interviewed for this study cited employees as a major source of new ideas. Long-term employees have a wealth of background knowledge on which to base new ideas, and new employees have the opportunity to introduce ideas from another context, business or industry. Highly innovative companies tap into this resource by greatly encouraging communication at many levels and stages of a project.

Developing a culture of exchange and discussion provides the forum for employees to present new ideas. Many of the companies interviewed use meetings such as the daily toolbox or pre-start meetings, to provide open and frequent opportunities for discussion, and to encourage an innovative approach to the project. Another useful strategy is a 'blame-free autopsy' which some companies hold at the end of each project to officially collate advances from successful innovations and learnings from mistakes.

Large companies obviously have a greater resource to tap in terms of employee numbers, but the loyal, long-term workforce and immediate and inclusive communication that often exists in small companies is highly valuable for developing innovative ideas. Large companies need to work harder to set up effective communication channels among large numbers of employees and disparate groups.

A major challenge facing each company is how to assess, progress and store new ideas. Large

"Once a project is won, there is a determined effort to get on site and get started, rather than pausing to think of clever ideas."

companies encouraging employees to contribute ideas need to allot resources for careful assessment of all proposals, in order to both capitalise from proposals and to acknowledge staff effort, thereby maintaining company interest and enthusiasm for innovation.

To facilitate communication and adoption of new practices, many companies have developed an ideas database which the employees are encouraged to use as a resource for every project. One large company in this study employed a highly tailored ideas database that also linked the innovation experience with in-house experts on the topic.

Even when good ideas become apparent, their application is not always straightforward due to time and risk constraints and the coordination of all project participants involved.

An ideal time to consider introducing innovation strategies is during the initial development of the proposal. Preparing a tender with built-in innovation avoids the many implementation

■ What's New

difficulties associated with altering established plans, and the estimator's overall view and planning position is ideal for assessing new strategies.

Innovation is achievable – an 'Innovation Gallery 2007' case study

Tight time scheduling and the need to limit OH&S risks led this small contracting company to devise an innovative partial prefabrication approach for four two-storey townhouses in Warrnambool, Victoria.



Site space was limited and the proximity of boundaries created problems with the placement of scaffolding and working at height to construct the upper storeys of the townhouses. This could have resulted in safety risks for workers and problematic disruption to neighbouring properties.

Some lateral thinking resulted in an innovative solution to the problem. The structural designs and construction procedures were altered to allow the upper storeys to be built on the ground and then craned into position. The completed upper storey module included steel and timber floor framing, braced wall frames, trussed roof and steel roof sheeting, thereby eliminating the need to work on the second floor roof.

The solution, devised solely for this project, resulted in time and cost savings, greatly reduced risks from working at height, a stronger structure and a great boost to team morale. The company has developed a process that can be beneficially applied on many projects,

even without the limitations that inspired its conception.

Innovation culture

The common factor among the companies interviewed for 'Being the Best' is not their size or turnover, but a strong culture of innovation that results in creating innovation opportunities and taking advantage of innovation opportunities as they arise.

Results of the interviews with highly innovative contractors are presented in detail in 'Being the Best', with a collection of case studies in the companion brochure 'Innovation Gallery 2007'. The reports are available for free download from the BRITE Project website www.brite.crci.info or contact Lindy Spindler ph (07) 3138 9146, email l.spindler@qut.edu.au.



Applying innovations

- Put considerable effort into understanding client needs, as early as possible, as a means of enhancing innovation opportunities.
- Search widely for ideas.
- Allow generous time in handover from estimators to constructors.
- Build innovation processes and time for innovation development into the project plan.

Certificate of confidence

Recommending robust, durable building materials that can withstand Australia's erratic weather conditions and varied environments has become a priority for architects and builders, who seek the peace of mind afforded by products tested by a third party to meet Australian Standards. For powder coated aluminium windows, doors and facades, Qualicoat is the only independent compliance system in Australia.

Guy Vissell, Qualicoat member and supporter, comments, "Developed for 20 years and accepted in as many countries, Qualicoat is an international benchmark of quality that sets strict standards for the powder coating materials and processes of its members. The Qualicoat system guarantees quality and compliance with AS3715, the Australian Standard for metal finishing as set in the Building Code of Australia (BCA). Under the BCA, all suppliers to the building industry are required to provide a seven year guarantee of products."

Hiring a Qualicoat member will promote the long term viability of powder coated aluminium finishes in Australia, as all Qualicoat members provide a seven year warranty. Zel Medak, general manager, Akzo Nobel Australasia, said "Akzo Nobel has supported the Qualicoat certification scheme globally for many years. The Qualicoat scheme compliments our strict quality requirements by the approval of powder coatings, pre-treatment systems and the application process. The outcome of this collaboration between Akzo Nobel and Qualicoat is a high quality powder coated aluminium product which provides the consumer with confidence and satisfaction."

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