

BRITE Project removes barriers to innovation

By KAREN MANLEY

BUSINESSES become more profitable if they innovate. The BRITE survey found that innovation had a positive effect on profitability for 90 per cent of businesses. The survey also found that clients are becoming more willing to consider innovative solutions or are demanding that their contractors have a track-record of innovating.

The Building, Research, Innovation, Technology and Environment (BRITE) Project's aim is to improve the rate and quality of innovation in the Australian building and construction industry.

Several BRITE case studies show how contractors played a role in creating substantial savings and better project outcomes for their clients.

Firstly, at the National Gallery of Victoria's Australian Art Building in Federation Square, the managing contractor, Multiplex, initiated a change in the building design, from the intended concrete and masonry to steel.

There were doubts about the capacity of a concrete deck to withstand the proposed construction loads, and Multiplex were familiar with the benefits of steel. Multiplex's decision prompted the design team to investigate using unprotected steel, which delivered time and cost savings, including:

- not spending the \$1 million for propping and temporary structural support costs for a concrete structure
- \$3 million saved – no need to apply fire protection finishes to the steel because of fire engineering innovation.

Secondly, the contractor in the Port of Brisbane Motorway Alliance (PoBMA), Leighton Contractors, proposed some new technologies, including slip-formed reinforced bridge barriers. The client had some reservations at first which, under other types of contracts, might kill off the innovation. However the alliance contract gave the parties the incentive to test the innovations.

A concrete paving machine was used instead of form workers, with benefits in safety, labour costs and time. "The PoBMA is proof that alliancing is a great way to do business," says Laurie Voyer, Leighton Contractors general manager northern region. "Everyone benefits and is rewarded for delivering excellent outcomes."

Innovation Spending

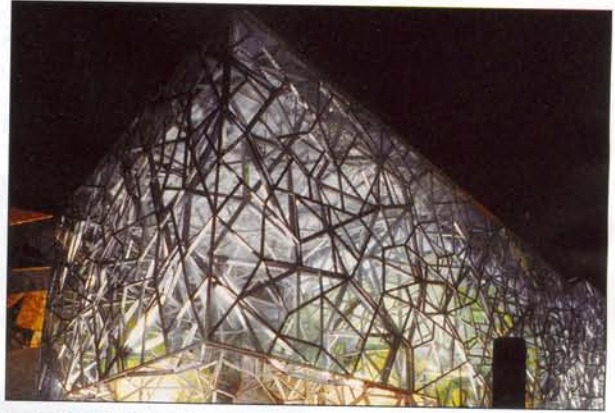
Before we reap the benefits of innovation, we need to invest in it. The ABS data show that the construction industry spends less than most industries on innovation.

The most significant barrier for contractors was "direct costs too high". The BRITE survey showed (below) that cost and time were the biggest obstacles to construction innovation.

"Lack of skilled staff" was the second most common barrier in the ABS survey. However, this problem was more widespread in other industries.

Market dominance, finance, regulation, risk and customers were all much more of a problem in other industries.

So, fewer construction contractors have problems than innovators in other industries. The only exception is "lack of skilled staff" which effects everyone equally. In fact, one-third of



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contractors said they had no barriers to innovation, while only one-quarter of businesses in other industries had no barriers.

If fewer contractors have problems with innovation, why does our industry spend less on innovation? Is it actually because our industry lacks innovation drivers?

Innovation Drivers

Although the most common innovation drivers in construction were "improving productivity" and "reducing costs", the proportion was lower than the "leading industries" – mining and utilities (see chart below).

The results for mining and utilities, which are also service-oriented industries, are a benchmark for contractors. It seems we are not as keen as other key industries to reduce costs and improve productivity. But perhaps we should be, given the relationship between innovation and business profits.

The Solution

We can all use innovation drivers and work around the barriers. Even small local or regional firms can drive innovation because of their knowledge of local conditions. All it takes is a sufficiently enthusiastic innovation champion.

This information is based on:

- Innovation Survey of the Building & Construction Industry, 2004, BRITE Research Project
 - Australian Bureau of Statistics data about construction innovation, released in February 2005 (general and trade contractors)
 - BRITE Project Innovation Case Studies conducted in 2003.
- Dr Karen Manley from Queensland University of Technology is leader of the BRITE Project.*

Industry	Improving productivity	Reducing costs
Construction	52%	52%
Mining	70%	81%
Electricity, Gas & Water Utilities	72%	80%

Innovation Barriers

direct costs too high

lack of skilled staff

government regulations or standards

potential market already dominated by established businesses

economic risk too high

lack of customer demand for new goods or services

cost or availability of finance

no barriers

Construction

30%

27%

16%

16%

14%

11%

7%

33%

All Industries

36%

26%

28%

30%

24%

18%

19%

25%