



# Innovate or perish

WHETHER we look at political rhetoric or what we really think about the future, innovation ranks high among people's priorities. Competitive forces, and the growing pace of technology change, make this an imperative.

When thinking of innovation, it is easy to think purely of technical aspects: the better mousetraps. If the game is catching mice, significant other aspects enter the equation – where to site the trap and what to bait it with. A technically brilliant mousetrap that sits unused in the cupboard, or a trap baited with a celery stick, may fail the task.

This is something alluded to, using vastly different terminology, by the BRITE survey of innovation in the construction industry.

BRITE stands for Building Research, Innovation, Technology and Environment. The BRITE project is a research project of the Cooperative Research Centre for Construction Innovation, which operates out of the Queensland University of Technology.

The BRITE project has input from Arup Australia, CSIRO Manufacturing & Infrastructure Technology, Queensland's Main Roads, Public Works and State Development and Innovation departments, the University of Western Sydney and the QUT.

Dr Keith Hampson, chief executive officer of the CRC, describes the BRITE project as one of its flagship projects. "This CRC has the vision to lead the Australian property and construction industry in innovation and collaboration," Hampson said.

"BRITE complements this vision by planning to achieve a rolling program of case studies of innovation successes and nation-wide innovation surveys in alternating years. BRITE's industry, government and research partners are brought together through the CRC, the acknowledged centre of Australia's construction research."

The survey found innovation in business process ranks equally with technology innovation in terms of benefit to a company – something probably not appreciated by most companies.

The beauty of implementing changes to business processes is this: it is generally an easier path to follow, there are more precedents and examples to guide its implementation and assistance is more readily available because it is less business-specific. The returns should increase over time, as long as the processes are reviewed and refined with experience.

Since the research indicates a correlation between process and technical innovation, developing process innovation may well create a climate that fosters technical innovation.

While the results are encouraging, a number of findings indicate that

relatively small incremental investments of well-targeted effort could bring significant returns to a company.

Companies that have formal programs to evaluate their innovation endeavours achieve higher success and higher overall innovation – yet only 15% of surveyed companies had a formal evaluation process. Similarly, only 31.9% had programs in place to transfer the knowledge gained in projects to continuous business practices.

The nature of construction is such that a team brought together for one project will often not be together for the next. If the information is not captured and processed while it is fresh, its value will dissipate with time and imperfect memories.

A possible defence against the loss of knowledge is developing long-term collaborative relationships with other businesses (eg, developer/principal contractor and principal contractor/subcontractor) – 41% of respondents indicated they do this.



Formalised systems can encourage staff to seek out improvements and share ideas, but time and resources must be allocated and coordination set up to ensure proper sharing. Only 30.5% of those surveyed had a formal system, though others may pay lip service.

If there are recurring basic themes in the overall findings, they are the value of relationships over short-term, lowest-cost contractual ties and the value of looking beyond the "side fence" to other industries, organisations, institutions, business partners and suppliers for inspiration.

The focus on relationships is understandable. The traditional adversarial contracts give the supplier no encouragement to deliver anything more than the minimum contractual obligation. Short-term arrangements give the supplier no confidence to invest in capital equipment, research or training that could ultimately provide the client with lower costs or faster construction times.

The search for improved efficiency and productivity came out clearly as the main driving force for innovation, with improved technical performance and quality a distant if distinct second.

The construction industry will identify with the findings that lack of time and money are the major deterrents to innovation. Principal contractors also nominated the conservatism of stakeholders and clients as an inhibiting factor. The relatively low margins in the Australian construction industry are identified as a possible reason for the financial constraints on innovation.

People really need to read the BRITE report in full. In summary, businesses can adapt strategies to transfer project learnings into ongoing business processes, formally evaluate innovation activities, create formal systems to share ideas and invest in R&D.

Innovation success rates can be improved by valuing and developing employees; adopting advanced business practices; consulting a wide range of information sources; developing relationships with other businesses, research and industry bodies; employing new graduates; and focusing on reducing client costs.

The report recognises most construction businesses are small to medium enterprises with limited capacity to innovate in their own right. It recommends federal and state governments implement programs to assist skill development through industry associations and address resourcing of education and training programs.

It also suggests government review the value and accessibility of the R&D Tax Concession Scheme, given the low success level of SMEs.

However, the big recommendation for governments is to have nationally consistent regulation and to move from a prescriptive to a performance-based approach. Governments should hang their collective heads at their abysmal efforts to address these long-recognised issues.

Meanwhile, one of the biggest favours those in the construction industry could do for themselves is to monitor and participate in the activities of the Cooperative Research Centre for Construction Innovation ([www.construction-innovation.info](http://www.construction-innovation.info)) and the BRITE project ([www.brite.crcci.info](http://www.brite.crcci.info)).

The CRC for Construction Innovation has set itself up as a centre of excellence of world relevance for the construction industry and has developed relationships with leading international bodies that allow it to keep abreast of world developments.

However, it needs the active involvement of industry to ensure its surveys are meaningful and relevant, to direct research where it will provide most benefit and ultimately to ensure the next generation has the knowledge and skills to make Australia a world leader in construction proficiency – and a workplace that encourages them to apply those skills.