



Innovation underpinning Australia's
built environment industry



Sustainable
Built Environment
National Research Centre

Australia's built environment industry

- The Australian built environment industry is a significant sector of the economy undertaking more than \$120 billion worth of work annually and accounting for 16% of Australia's GDP. It also employs around one million people through 250,000 firms – the vast majority of which are small-to-medium enterprises (SMEs) – and contributes significantly to the rest of the Australian economy as an enabler. It delivers vital infrastructure and buildings that provide the foundation to our nation's communities.
- The building sector alone accounts for 30-40% of energy use. Studies have shown that green buildings have lower operating costs, higher building values and higher return on investment. They also allow buildings to cope better in extreme conditions and bring health and productivity benefits for occupants.
- Workplace fatalities in Australia's construction industry cost the nation \$3.6 billion each year. Research also shows that 20-24 year olds in the building and construction industry are four times more likely to have a fatal accident than those in other industries. An improved approach to safety needs to be a priority.
- Poor quality design and documentation is estimated to cost 7% of total construction costs.
- It is estimated that the direct cost of resolving disputes is \$700 million per year, which increases to a total waste of \$7 billion per year when the avoidable costs are included. This represents a major loss to the Australian community in the lost opportunity to deliver real value through improved health, transport and education facilities and services.
- An estimated construction productivity improvement of 0.3% annually results in an improvement in GDP of \$6.5 billion and is at least double that of any other sector.
- The Australian Bureau of Statistics estimates that from an initial \$1 million extra output in construction, a possible \$2.9 million in output would be generated in the economy as a whole. This would create nine jobs in the construction industry and 37 jobs in the rest of the economy.
- Traditionally the building and construction industry has been slow to research and innovate.

Sustainable Built Environment National Research Centre

The Sustainable Built Environment National Research Centre (SBEnc) is the successor to the CRC for Construction Innovation. Established on 1 January 2010, the SBEnc is a key research broker between industry, government and research organisations servicing the built environment industry.

The three research streams focus on environmental, social and economic sustainability, areas identified by national industry stakeholders as the key areas that will drive productivity and industry development in the built environment industry.

Benefits from SBEnc activities will be realised through targeted national, industry and firm-level collaboration; market premiums through engagement in the collaborative research and development process; and early adoption of centre outputs.

The vision for the SBEnc is:

to be a world-class research and knowledge broker in sustainable infrastructure and building design, construction and management to enhance the performance of Australia's built environment industry.

The SBEnc's objectives are to:

- implement a unique collaborative and strategic approach to built environment research in Australia, capitalising on members' regional and national advantage and leveraging regional learnings and benefits nationally
- collaborate across organisational, state and national boundaries to develop a strong network of built environment research stakeholders (clients, regulators, industry professionals and researchers) building on the relationships and history of achievement delivered through its predecessor, the CRC for *Construction Innovation* (2001-2009)
- establish members as national and international leaders in sustainable built environment research and practice
- attract new research students to study at member universities and provide research training and linkage opportunities for industry members
- attract fresh research funding to improve the industry's performance.

"Australia's built environment industry is realising a greater level of competitiveness thanks to its engagement in collaborative research - this is due largely to the approach that the SBEnc is adopting with its partners and the industry as a whole."

John V. McCarthy AO Chairman, Sustainable Built Environment National Research Centre



Our research

The SBEnrc directly applies cross-disciplinary approaches to improve the environmental, social and economic performance of the built environment, focusing on commercial and public investment in infrastructure and buildings, across three research programs:

Program 1: Greening the Built Environment will deliver improved environmental performance by the built environment through enhanced ecological efficiencies, including carbon emission reductions and climate change adaptation of new and existing infrastructure and buildings.

Program 2: People, Processes and Procurement will deliver improved operational, functional and business outcomes for the built environment. Social outcomes for workers will be delivered through increased uptake of sustainable work practices and minimising environmental health and safety risks; new process models will capture benefits from future technologies, off-site fabrication and mobile construction management, and business will see the benefits of a more integrated project environment.

Program 3: Productivity through Innovation will deliver economic as well as social and environmental benefits to the built environment industry through reductions in risks and costs and improved productivity associated with complex information management and production processes on infrastructure and building projects.



“The SBEnrc’s collaboration with national and international industry, government and research leaders is adding significant value to the effectiveness and long-term sustainability of Australia’s built environment industry.”

Dr Keith Hampson CEO, *Sustainable Built Environment* National Research Centre





Core Partners:

aurecon

BGC

Roads & Maritime

Queensland Government

WESTERN AUSTRALIA

Curtin University

Griffith UNIVERSITY

RMIT UNIVERSITY

For further information or to find out how your organisation can collaborate in the Sustainable Built Environment National Research Centre please contact:

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