

Project 2.7

Leveraging R&D for the Australian Built Environment

RESEARCH PROGRAM 2: DEVELOPING INNOVATION AND SAFETY CULTURES

The overarching goal of this project is to better match funding strategies to industry needs to maximise the benefits of R&D to Australia's infrastructure and building industry.

Project partners are: Queensland Department of Public Works; Queensland Transport and Main Roads; Western Australia Department of Treasury and Finance; John Holland; Queensland University of Technology; Swinburne University of Technology; and VTT Technical Research Centre of Finland (Prof Göran Roos). This project has been endorsed by the Australian Built Environment Industry Innovation Council (BEIIC) with Council member Professor Catherin Bull serving on this project's Steering Committee.

This project seeks to: (i) maximise the value of R&D investment in this sector through improved understanding of future industry research needs; and (ii) address the perceived problem of a disproportionately low R&D investment in this sector, relative to the size and national importance of the sector.

This research will develop new theory built on open innovation, dynamic capabilities and absorptive capacity theories in the context of strategic foresighting and roadmapping activities.

Four project phases have been designed to address this research:

- 1 Audit and analysis of R&D investment in the Australian built environment since 1990 - of publically available data of investment by public and private organisations to understand past trends.
- 2 Examine diffusion mechanisms of research and innovation and its impact on public and private organisations – investigate specific R&D investments to determine the process of realising research support, direction-setting, project engagement, impacts and pathways to adoption.
- 3 Develop a strategic roadmap for the future of the Australian industry - assess the likely future landscapes that R&D investment will both respond to and anticipate.
- 4 Develop policy guidelines to maximise the value of R&D investments to public and private organisations – through translating project learnings into policy guidelines.

Project Outputs for 2011

- ARC Linkage Project grant won
- Thomas Barlow report "The built environment sector in Australia: R&D Investment Study 1992-2008"
- Three case studies completed on road construction safety; green buildings; Computer-aided Design and Drafting (CADD), Building Information Modeling (BIM) and IPD
- Foresighting workshops in Perth, Brisbane, Sydney and Melbourne
- CIB Task Group TG85 R&D Investment and Impact established – 21 members from 10 countries
- Hampson K.D., Kraatz J.A. "Leveraging R&D investment for the Australian built environment." 6th Nordic Conference on Construction Economics and Organisation.
- Hampson K.D., Kraatz J.A. "Leveraging R&D to advance digital modelling practice in Australian construction." Modern Methods and Advances in Structural Engineering and Construction, ISEC-6.
- Hampson K.D., Kraatz J.A. "Retrospective evaluation and prospective value-add: a review of R&D investment in Australia." SB11 World Sustainable Building Conference.
- Presentation to Australian Academy of Technological Sciences and Engineering Increasing the Innovation Dividend from Emerging Technologies forum.
- Paper accepted - Hampson, K.D., Kraatz J.A. R&D investment in green initiatives in Western Australia Healthy Building 2012
- Invitation to present at the International Workshop on Integrated Design and Delivery Solutions in Washington - April 2012.



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