



June 2011

Around the Commissions

TG85 - R&D Investment and Impact

Introducing a New Task Group

The CIB Board established a new Task Group TG85 on R&D Investment and Impact and appointed Prof. Keith Hampson, Sustainable Built Environment National Research Centre, Australia, Prof. Aminah Robinson Fayek, University of Alberta, Canada and Dr. Judy Kraatz, QUT, Australia as its Joint Coordinators.

Background

The development effective R&D investment strategies is critical as the building and construction industry strives to respond to increasing demands exemplified by changing community and industry expectations that amongst other things, drive productivity improvements through IT integration (i.e. digital modelling and integrated project delivery), environmental protection and enhancement, improved safety performance, increasing demand for packaged services and moves towards private-sector funding of public infrastructure and services.

Effectively leveraging R&D investment to deliver industry improvement is a major challenge in industries like construction-characterised by disaggregation, intense competition, limited investment in R&D and new community expectations and technologies. Performance is further constrained by a focus on short-term business cycles and a project-based culture. Innovation and innovative behaviour are seen as key opportunities to raise performance and meet emerging challenges for new business drivers.

This proposed CIB Task Group would provide a avenue for dialogue focussed on improving the interaction between researchers and industry (both public and private), and thereby further leveraging R&D investment and increasing the likelihood of uptake of R&D outcomes in private and public organisations.

Objective

This Task Group will focus on building better understandings of R&D investment practice globally, including retrospective analysis of past investments and their impact; and building prospective considerations for improved mechanisms for dissemination and uptake of R&D. This will lead to an enhanced understanding of how public and private sector policy and practice can be enhanced to better leverage investments.

The objectives of this Task Group include:

- to establish an international network to exchange knowledge and contribute to new understandings and knowledge related to leveraging R&D investment in the building and construction industry. A key aspect of this focussing on collaboration between private sector organisations and public sector agencies to maximise outcomes.
- to establish an international group of researchers to undertake an agreed research agenda across several countries to further facilitate discussion and debate (based upon comparable data, where and as possible). The intent being to further develop the knowledge-base and academic theory relevant to this field.
- to potentially build a consensus of metrics to better enable the on-going exchange of knowledge and findings relating to R&D investment.
- to establish a formal forum for the exchange of information and knowledge specifically related to R&D investment (with a focus on dissemination and maximising impacts).
- to promote publication in this field to enable greater global dialogue regarding R&D investment and its impacts (both academic knowledge-base and industry outcomes).
- to strengthen collaboration between private firms, government agencies and research institutions to deliver better policy and

programmes aimed at achieving enhanced investment outcomes.

Scope

The scope of this proposed Task Group is limited to the building and construction sectors though relevance may be derived for other sectors with like characteristics. The potential to translate findings into other sectors will be of particular interest to government agencies making significant investments in R&D.

Work Programme and Deliverables

The work programme of the Task Group includes:

- conduct case studies and R&D Road-mapping in Australia and in other countries
- develop R&D investment policy guidelines.

This will result in the following deliverables:

- conference papers and proceedings
- 2011: launch of the Task Group website
- 2013: publication of a CIB report with a description of R&D road-mapping initiatives
- 2013: publication of a CIB report on R&D investment strategies

Meetings

The Task Group will have meetings in conjunction with:

- 2011:** SB11 Helsinki World Sustainable Building Conference, 18 October 2011
- 2012:** Annual Canadian Construction Research Forum, Edmonton, Alberta, Canada, May, 2012
- 2013:** CIB World Building Congress, Brisbane, Australia, 6-10 May 2013

Introducing the Coordinators

Keith Hampson



Professor Keith Hampson has over 30 years of industry, government and research leadership. He has international experience and scholarship, operating in multi-disciplinary environments in design, construction and maintenance functions in infrastructure and

building. Keith has a Bachelor of Civil Engineering with Honours, an MBA, and a PhD from Stanford University focusing on innovation and competitive performance in the design and construction process. He is also an acknowledged national and international leader in construction research, and is committed to building a more internationally competitive industry by promoting better education, applied technology and innovative practices. He has been recognised by awards of Fellow Institution of Engineers Aust, Fellow Australia institute of Company Directors and Fellow Australia Institute of Management.

Professor Hampson is currently CEO of the Sustainable Built Environment National Research Centre (SBEnc), successor to the CRC for Construction Innovation, of which he was CEO for its nine years of operation. In this role Keith had overall responsibility for crafting a blend of commercial and public-good outcomes on behalf of 28 industry, government and research partners nationally. He led the team that secured a A\$14 million commitment over seven years by the Australian Government, complementing industry partners' A\$50 million commitment – the largest single investment in construction R&D in Australia's history. The CRC comprised 400 people around Australia, had key international links and fundamentally changed the way Australia's construction industry operates.

Keith Hampson was a former Joint Coordinator of CIB TG58 on Clients and Construction Innovation.

Aminah Robinson Fayek



Professor Aminah Robinson Fayek is a Professor in the Department of Civil and Environmental Engineering at the University of Alberta, and holds an NSERC Associate Industrial Research Chair in Construction Engineering and Management, funded jointly by the Natural Sciences and Engineering Research Council of Canada (NSERC), a consortium of over 25 companies in the Alberta construction industry, and the University of Alberta. The mandate of the Chair is to carry out industrially relevant research to help solve problems and to deliver innovation to the Canadian construction industry in the form of technology transfer, research, education, and training. Dr. Robinson Fayek also holds the Ledcor Professorship in Construction Engineering at the University of Alberta, with the goal of promoting scholarship, research and learning. Dr. Robinson Fayek's core research program focuses on the

development and application of fuzzy logic techniques for use in intelligent decision support systems, to help construction stakeholders improve the cost, schedule, and productivity performance of their projects. Her Research has found numerous practical applications with leading members of the construction industry, and she has contributed to the development of a number of construction industry best practices related to construction workforce training, rework, megaproject performance, supervisory training and skills development, and workforce absenteeism.

Aminah Robinson Fayek was a former Joint Coordinator of CIB TG58 on Clients and Construction Innovation.

Judy Kraatz



Dr Judy Kraatz is a Senior Research Fellow at the Queensland University of Technology (Australia), with over twenty-five years of professional activity in the built environment. As a Registered Architect, Judy was a design architect on award-winning public buildings in Australia; led teams of professionals delivering city-wide solutions for public buildings and open space; and worked to integrate sustainability into community endeavours in regional Australia. The focus was on early adoption of innovative environmental design practices with associated integration into business processes to ensure lasting benefit. As a Group Manager in Brisbane City Council (2001-05) she led a team of 40 design professionals delivering urban and social infrastructure across the city. As Program Director of Building at Central Queensland University she embedded sustainability principals into curricula and oversaw the delivery of building design, project management, construction management and building surveying courses in Australia, Singapore and Malaysia. Prior to this, Judy performed a number of roles in the Australian Commonwealth Government's building procurement groups, as design architect, change agent, and senior manager. Judy has completed a PhD (Urban Development) at the Queensland University of Technology (Australia) addressing issues of corporate responsibility in the delivery major economic infrastructure projects.

Personal Statement Keith Hampson, Aminah Robinson Fayek and Judy Kraatz

Enhanced understanding of the diffusion mechanisms and impacts of R&D in construction will more effectively target future investment.

Retrospective evaluations of impact can be derived through rigorous analysis of past investments, and prospective roadmapping can be informed through methodologies such as strategic foresighting to align industry needs with researchers' efforts.

The networking through CIB TG85 will provide international insights into better leveraging R&D investments to inform and provide leadership to national research agendas.

We welcome your involvement in this Task Group, to share knowledge and methods and build stronger international understanding in this field.

More effective investment can enhance industry productivity, and environmental and social impacts for our industry to better contribute to our communities.

Additional Information

For additional information about the CIB TG85 contact the Coordinators: Keith Hampson k.hampson@qut.edu.au Aminah Robinson Fayek aminah.robinson@ualberta.ca and Judy Kraatz j.kraatz@qut.edu.au.

You can find more information on the activities of CIB TG85 in the CIB online Database "Commissions": see [here](#). In the shown search engine type "TG85" in the field "Commission number" and press "Find records".