

Guest Editorial: Innovation and SMEs in the AEC sector

Graham Brewer

School of Architecture and Built Environment, University of Newcastle, Australia

At school I had a geography teacher with whom I did not see eye to eye. Whenever I did not understand something he would simply repeat his earlier explanation more slowly and loudly. In the intervening years I have come to recognise that he was a very clever man, teaching material that would not be out of place in the second year of an undergraduate program, however I have never admired his communication skills from that day to this.

There are times when I wonder if I sound like my nemesis when speaking with industry practitioners in regard to innovation, perhaps even omitting to slow down. So it was with a mixture of pleasure and trepidation that I set out to source the best and latest research on innovation within the SME sector of the construction and allied industries from the great and the good, with the intention of identifying the state-of-the-art in relation to this topic.

Before introducing the four papers that make up this special section – in the end I was unable to source enough papers in a timely fashion to warrant a special edition – it is perhaps instructive to touch upon the characteristics of some good papers that nevertheless did not get included. Firstly there were those that referred solely to BIM adoption/integration without explaining the connection to innovation; secondly there were those describing novelty within single projects. In relation to the former, whilst I do not disagree that some firms are capable of using advanced ICT tools in order to create competitive advantage it is equally the case that other firms using exactly the same tools may fail in that same quest, which begs the question "is it the tool or what you do with it that is innovative?" In relation to the latter I would simply observe that an "innovation" whose life is restricted to a single project cannot be said to deliver anything that could be described as sustainable.

If the previous paragraph appears snippy or superior it is not meant so. Rather it illuminates an issue that I believe pervades the innovation discourse as to the nature of innovation itself, namely that industry improvement, business efficiency, and novelty are all often conflated with the catchall moniker of innovation. Our politicians do it, many of our research funding sources encourage it, and in the end, our most important audience – the industry we serve – might care not to differentiate between them except to speculate as to their profitability when applied to their own firm. This does not mean that the distinctions are not important, because from an academic perspective they most certainly are. Rather it suggests, to me at least, that we need to be more nuanced in communicating our carefully crafted research findings to those who might ultimately be influenced by it.

It therefore gives me pleasure to introduce four carefully crafted papers that analyse the nuances variously of barriers to innovation, enablers of innovation, vectors to innovation and the reflections of innovators themselves:

Hosseini, Banihashemi, Chileshe, Namzadi, Udejaja, Rameezdeen and McCuen take a technology-specific (BIM) perspective of innovation adoption in SMEs. This survey enables them to argue that, contrary to popular belief, SMEs are able to engage with – and even lead –

Copyright: Construction Economics and Building 2016. © 2016 Graham Brewer. This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 Unported (CC BY 4.0) License (<https://creativecommons.org/licenses/by/4.0/>), allowing third parties to copy and redistribute the material in any medium or format and to remix, transform, and build upon the material for any purpose, even commercially, provided the original work is properly cited and states its license.

Citation: Brewer, G. 2016. Guest editorial: innovation and SMEs in the AEC sector, *Construction Economics and Building*, 16(3), 57-58. DOI: <http://dx.doi.org/10.5130/AJCEB.v16i3.5181>

Corresponding author: Graham Brewer; Email - graham.brewer@newcastle.edu.au

Publisher: University of Technology Sydney (UTS) ePress

innovation, if they see the business benefit. Having fewer uncommitted resources to devote to innovation experimentation SMEs are perhaps more acutely tuned in to the nuances of competitive advantage over the longer term in industry where they are constantly changing dance partners.

Hardie challenges the notion of SME innovation as merely the adoption of new processes and products, suggesting that small firm size is a positive benefit in terms of agility to the development of technology innovation. Invoking a concept redolent of viral infection she suggests that different vectors of innovation may result in clearly defined technical innovations, and that perhaps more importantly these solutions may spawn the search for – and indeed solution to – other, often unrelated business challenges.

Ishak and Newton also address the issue of technology adoption (online project management coordination) by inverting the argument – or at least the conceptual lens – by integrating innovation theory, technology acceptance and social networking to then identify innovation resistance factors. By this means they confirm the centrality of absence of buy-in from both business leaders and the workforce, technological complexity, incompatibility with current business processes and absence of adequate pre-testing before full-scale deployment as critical barriers to technological innovation. Crucially they argue that their model is equally applicable to firms of all sizes across the industry.

Davis, Gajendran, Vaughn and Owi address the vexed issue of innovating within a project-based industry, suggesting that there is a disconnection between the academic perspective of innovation and the industrial reality of the concept as articulated through the works and deeds of practitioners. Using a rigorous qualitative approach to deconstruct and interrogate construction practitioners' accounts of innovation in practice they conclude that refinements to firms' organisational and business processes are where most beneficial change occurs on a project by project basis, and that by implication innovation – sustained competitive advantage – follows where these improvements in due to the benefit of the firm over the longer term.

Taken together as a body of work these four papers offer a more optimistic view of the state of innovation in SMEs than naysayers would have us believe, offering genuine insight and advice to those wise enough to grasp their significance. These authors are to be commended for their diligence to the task at hand particularly given the challenging conditions under which such studies must necessarily be conducted, and in doing so they have demonstrated both conceptual and methodological innovation of their own. However I am convinced that the quality of the outcomes are due in no small part to the band of tireless and diligent reviewers whose wise insights served to sharpen the authors' messages. This happy few consistently received the thanks of the authors and it now simply falls to me to offer my thanks as well: ladies and gentlemen you know who you are.