Editorial

Charles Egbu

Dean, School of the Built Environment and Architecture, London South Bank University, London, UK

Edward Ochieng

Senior Lecturer in Project Management, School of the Built Environment, Liverpool John Moores University, Liverpool, UK

Today's construction projects, which are becoming increasingly complex as a result of the growing number of technical and social interfaces that need to be considered, continue to add to our existing knowledge of how to deal with complexity and increase efficiency. They also need to adapt the knowledge and experience gleaned from daily operation and organisation and past projects.

Much of the research and many of the publications in the area of knowledge management (KM) take an organisational perspective. However, relatively little attention has been given to the application of KM on complex building and construction projects. This themed issue considers the impact of KM implementation on innovations and cutting-edge practices in complex building and construction projects. Researchers from different institutions share best practice, challenge current theory and identify new research directions and approaches to managing knowledge in complex project environments.

The five papers are varied and include topics of KM for sustainable value creation, use of information technology (IT) in KM, and application of KM tools at project and corporate levels. The research methodologies include case studies, interviews, participant observation, surveys and literature reviews. One paper has a co-author from industry and the other four manuscripts are multi-institutional.

Leblanc *et al.* (2015) examine the development of a structured strategy to improve the capture, storage, retrieval and exchange of sustainability-related knowledge within housing association planned works. Knowledge-mapping exercises based on semi-structured interviews were carried out within four different-sized Scottish housing associations. Sustainability-related knowledge maps were developed for each activity focusing on managerial, economic, social, environmental aspects and overall flow of knowledge providing the basis for recommendations to improve the management of sustainability-related knowledge during planned works. The strategy promotes a structured approach enabling housing associations the opportunity to tailor the strategy to reflect their context and requirements. Practitioners from the case studies confirmed its usefulness especially for housing associations committed to sustainability but struggling to engage with high-level policy and strategies.

Renukappa *et al.* (2015) identify key drivers for managing sustainability-related knowledge in the UK industrial sectors. In this study, four industry sectors – energy and utilities, transportation, construction and not-for-profit organisations – were considered, based on the environmental, social and economic impact on UK society. A semi-structured interview method was used to collect industry perception which was then analysed at both aggregate and sector levels using content analysis for inference and conclusion. According to the authors the four key drivers that fuelled the need for managing sustainability-related knowledge are: to improve access to knowledge associated with sustainability initiatives, to identify knowledge assets associated with sustainability initiatives, to improve the flow of knowledge associated with sustainability initiatives, and to capture key knowledge associated with sustainability initiatives.

Perreira and Rankin (2015) explore KM in construction non-profit volunteer organisations (Convos). As illustrated in this paper, few researchers have investigated the use and effectiveness of the adoption of KM tools in Convos. The study contributes to the construction engineering management sphere in academia and industry by exploring the KM theme through the application of action research methods. It is worth noting that this is ongoing research. Preliminary results in this study indicate reference towards a combination of IT and non-IT tools for both affiliates; barriers included inadequate technical capability, time and financial constraints; and improved efficacy of organisational KM practices.

According to Zuofa *et al.* (2015) the fragmented project-based and task oriented nature of most construction activities has often made KM implementation unfeasible within the construction industry. One major challenge to KM implementation in construction organisations is the lack of systematic procedures that support the development and application of KM. In this paper, the authors examined the perceptions of KM among practitioners within the Nigerian construction industry. As established in this study, practitioners in the Nigerian construction industry may be aware of KM and its benefits; however, in practice its systematic application still remains largely uncommon. The authors highlight the need for shifts in organisational culture as a means of facilitating a more KM-conscious construction industry in Nigeria.

In the final paper, Wilkinson *et al.* (2015) aim to develop insight at the micro or site level, to help inform KM decisions made at corporate levels. The study reports the findings of a case study that examined KM in operation on a small civil engineering project in north-west England. The authors employed qualitative research methods to collect and analyse the raw data. From their analysis, complex relationships existed between explicit and tacit knowledge, while predicted and unpredicted knowledge gains could also be identified alongside 'aspirational' knowledge. A reliance on 'pending' knowledge to make decisions that influence project performance suggested improved KM within a more integrated project team would be beneficial. In addition, KM was found to be limited by the tacit nature of much of the knowledge generated on the project, and the lack of formal feedback into an organisational KM system.

REFERENCES

- Leblanc H, Thomson C and Cameron I (2015) Developing a sustainability KM strategy for HA planned works. *Proceedings of the Institution of Civil Engineers – Management, Procurement and Law* **168**(2): 49–66, <http://dx.doi.org/10.1680/mpal.14.00024>
- Perreira A and Rankin JH (2015) Adoption of knowledge management by Canadian housing charities. *Proceedings of the Institution of Civil Engineers – Management, Procurement and Law* **168**(2): 77–89, <http://dx.doi.org/10.1680/mpal.14.00023>
- Renukappa S, Egbu C, Suresh S and Mushatat S (2015) Drivers for managing sustainability-related knowledge. *Proceedings of the Institution of Civil Engineers – Management, Procurement and Law* **168**(2): 67–76, <http://dx.doi.org/10.1680/mpal.14.00029>
- Wilkinson R, Sherratt F and Farrell P (2015) Knowledge management on site: a case study project. *Proceedings of the Institution of Civil Engineers – Management, Procurement and Law* **168**(2): 99–109, <http://dx.doi.org/10.1680/mpal.14.00022>
- Zuofa T, Ochieng E and Burns A (2015) Appraising knowledge management perceptions among construction practitioners. *Proceedings of the Institution of Civil Engineers – Management, Procurement and Law* **168**(2): 90–98, <http://dx.doi.org/10.1680/mpal.14.00048>