Editorial

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In this issue, our legal briefing sees Agapiou (2018) championing the benefits mediation can bring to planning and environmental disputes in England and Wales. Already well established in Scotland, as well as other countries such as Australia and the USA, Agapiou argues that mediation is ideally suited to manage effectively the complexities, variety of interests and numbers of stakeholders potentially involved in such disputes, able as it is to support debate and discussion towards a negotiated outcome. Given that such disputes can often be a significant stalling point in development, the adoption of mediation over litigation has the potential to reduce the timescales surrounding such issues, whilst ensuring all key stakeholders are able to participate in the mediation process. As Agapiou (2018) notes, given the current debates that surround planning and environmental disputes in England and Wales, it is perhaps surprising that changes embracing mediation have not as yet been formally implemented, yet the continuing collection of exemplar case studies and ongoing support for mediation may well see this change in the future.

Our management briefing focuses on occupational safety and health (OS&H), through an examination of the regulatory framework, current position and ambitions for OS&H in Oman, undertaken by Umar *et al.* (2018). Outlining the current context, Umar *et al.* (2018) first note the significant size of the international migrant construction workforce in the country, something that can itself bring many challenges to OS&H management (Oswald *et al.*, 2017). A lack of detailed statistics and reporting systems mean numerical evaluation of the current situation is difficult. Umar *et al.* (2018) also note that the potentially significant numbers of small and medium-sized enterprises (SMEs) and micro-SMEs working in construction in Oman will also impact these reporting mechanisms and available data, as well as limit the financial and managerial capabilities available for OS&H within a large proportion of the industry. The current legislative position is set out, with suggestions that there is currently scope for development in the Oman legislative system, looking to countries with more mature OS&H systems to suggest the development of legislation, management systems and industry good practice to support the Oman construction industry in OS&H going forwards.

This issue also presents two papers, both of which provide insights and developments around technology and data management within the construction industry. Building information modelling (BIM) remains an ongoing subject of interest and debate, able as it is to provide both process and product, seeming able to recombine our fragmented project delivery teams whilst making effective use of technology. Here, Wong (2018) provides an update on practice from Hong Kong, focused on the methods of BIM execution

in projects there. Yet BIM has also been challenged for creating barriers within the industry, its cost and availability limiting uptake to large organisations able to maximise the use of the technologies. Here, Akinyemi *et al.* (2018) present a technological alternative, a data integration framework that uses open-source software and Semantic Web technologies to maximise the use of big data integration for decision support, something much more affordable.

In our first paper, Wong (2018) provides a status update on the execution methods of BIM in Hong Kong construction projects. Wong (2018) investigates the different implementation approaches currently in use, and how they contribute to BIM value realisation and the level of BIM participation by project members. Through interviews with experienced practitioners, the paper explores and reveals current practices at the four different levels of BIM generation within the Hong Kong construction industry, similar to the UK levels of BIM maturity. This reveals the relative importance of the project procurement strategy for effective BIM adoption, as different methods are adopted with different management philosophies, yet appropriate integration is needed to leverage the positive impacts of BIM. Most projects in Hong Kong are currently at level 1 BIM maturity using a one-sided management approach, demonstrating relatively limited uptake and revealing barriers to value realisation. Wong (2018) notes that non-traditional project-delivery methods potentially provide a way forwards, able as they are to secure early stakeholder involvement, partnering approaches and project team integration to maximise the potential benefits of BIM.

The popularity of BIM, in theory even if not practice, is in part a response to the potential for integrated data and technology to be a remedy to the fragmented nature of the construction industry, and improve poor productivity and efficiency within industry operations. There is undoubtedly a need for data integration in construction projects, a way to bring together big data in an effective way for decision support; yet in order to leverage improvements across all our industry supply chains, this should be more readily available and not restricted to only those able to make significant investments.

In our second paper, Akinyemi *et al.* (2018) present a proposed ontology-based data integration framework that uses open-source software that supports Semantic Web technologies. Although not a new approach, the way in which this has been researched and developed looks to counter directly one of the key barriers to technological adoption, including that of BIM: cost. For the majority of construction SMEs and micro-SMEs, there are often financial limitations in place, and they can lack the ability for capital investment in big data technology management tools. Akinyemi *et*

al. (2018) demonstrate, through the use of an empirical case study, the benefits this data integration approach can bring to construction in a low-cost approach. Furthermore, it is also able to bring significant time savings compared to manual data management, thereby enhancing productivity. Further research is ongoing, and we hope to be able to report on this project again in the future; however, at present this paper presents a significant step forward in making technology and data integration more readily available and accessible for more construction industry organisations.

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