Editorial

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This Editorial marks the completion of three years of the journal of *Infrastructure Asset Management*. It reviews the papers appearing in the final edition and presents an overview of papers in 2016.

Darroch *et al.* (2016) proposes a conceptual framework for land use and metro infrastructure interfaces. The paper focuses on the interfaces between private property and surface and sub-surface interfaces. It introduces perspectives on the three principle interfaces; presence, property and protection. The framework provides a mechanism to determine these interfaces. A proof of concept case study is also carried out. The three principle interfaces are likely to be present in any metro system but some of the sub-interfaces may not be. This paper makes a contribution to the wider need for knowledge development in relation to place and infrastructure in the urban context. Place and infrastructure will be a future theme of importance for the subject area.

The development of effective asset management decision-making is dependent on sound data and performance indicators. Performance data exists at all levels within organisations but asset management thinking is increasingly focussed on strategic performance issues. ‘Top down’ approaches to asset management focus on strategic outcomes for organisations and require performance indicators to reflect this. Dolan *et al.* (2016) proposes a conceptual approach to strategic infrastructure performance indicators in different sectors. It has a future-focussed approach, supports the development of suitable indicators and provides a framework for decision-making. The framework is attempting to provide a holistic approach to decision-making and performance indicators. The development of suitable indicators to measure infrastructure performance is an ongoing challenge as performance is well developed at operational level but not as widely developed at strategic levels. This paper will be of interest to asset owners and regulators.

Carhart *et al.* (2016) is the follow-up (proof of concept) paper from the development of the conceptual approach to strategic infrastructure performance indicators mentioned in the previous paragraph. This paper demonstrates the conceptual process for developing outcome-related performance indicators using the case of UK rail and water sectors. The case studies demonstrate an industry-specific picture of desired performance outcomes. They also highlight shortfall in sector driven approach to arrive at outcome-orientated strategic performance indicators. The work also indicates gaps in providing a holistic picture as envisaged in Dolan *et al.* (2016). The gaps in the cases suggest that further development work is needed. These papers are outcomes of a broader ongoing research programme and further development can be expected as they seek to deliver industrial impact.

2016 marked the first time the journal collaborated with the Royal Institute of Chartered Surveyors (RICS) in the area of infrastructure asset management. The RICS has a long and established history in the development of guidance and thinking in the areas of infrastructure and facilities management. Amanda Clack, President of the RICS, provided an Editorial for the themed issue outlining the collaboration and the importance of infrastructure asset management in the wider socio-economic context (Clack, 2016). Graham (2016) provided an insight from the RICS roundtable on sustainable supply chains in asset delivery. Krystallis *et al.* (2016) examined challenges associated with building information modelling (BIM) and asset management. Findings from this study showed that improvements can be achieved if the concept of future-proofing of assets as a structured approach against uncertainty becomes more explicitly defined. Future-proofing is the holistic process of taking security measures against uncertainty and being proactive throughout the organisation and its assets. In combination with information management, it ensures that asset management strategies will become responsive to a number of future changes in requirements. In this context, it is asserted that both future-proofing and BIM suffer from a dearth of identification in the context of asset management. These needed to be developed. Both of these papers provide additional insight into sustainable supply chains and the future challenges within asset management. This was the first collaborative themed issue with RICS – a feature that will become a regular part of the journal.

The theme of future-proofing continued during the year. Masood *et al.* (2016) provided an insight into future-proofing of UK infrastructure. The paper indicated future-proofing of key infrastructure involves addressing two broad issues: (i) resilience to unexpected or uncontrollable events (e.g., extreme weather events); (ii) adaptability to required changes in structure and/or operations of the infrastructure in the future. Increasingly, infrastructure owners, designers, builders, governments and operators are being required to consider possible future challenges as part of the life-cycle planning for assets and systems that make up key infrastructure. This paper explored the following questions related to infrastructure (systems): what does ‘future-proofing’ of infrastructural assets mean? Why and when should critical infrastructure be future-proofed? How can infrastructure assets (systems) be prepared for uncertain future events? How can future-proofing considerations be incorporated into infrastructure asset management practices?

Hay (2016) focussed on the area of resilience and continuity in future-proofing. This paper presented a resilience planning framework that relates the time–performance relationship of an incident to the component-enabling functions of the operation,

resource demand at each phase of operation restoration after the incident and both risk criteria and risk context. The framework allows the user to determine simply financial and operational tolerances and performance thresholds for resilience planning. This paper focusses on one of the areas identified by Masood *et al.* (2016). The theme of future-proofing was also present in the work of Dolan *et al.* (2016), Carhart *et al.* (2016) and Krystallis *et al.* (2016). Future-proofing is a theme that will continue to be important for both infrastructure researchers and professionals.

The journal continued to receive papers from specialist sectors. Papers on highways infrastructure asset management were received from Adetola and Goulding (2016), Hussain *et al.* (2016) and Okoh *et al.* (2016). These papers ranged in subject from collaborative relationships, stakeholder management to asset management systems. The challenges within highways asset management remain varied and challenging. Tully and Yates (2016) and Langdon *et al.* (2016) focussed on the railway sector and examined the rail projects assurance process and sustainability of rail assets, respectively. As part of widening the scope of the journal, Ingham *et al.* (2016) looked at chemical analysis on concrete infrastructure and its implications for asset decision-making. These papers provide an overview of the variety and scope of papers received in 2016.

The end of 2016 marks the end of three years of publication of the journal. A great deal of what we achieved has been a result of the hard work of the authors, reviewers and editorial board. The team at ICE Publishing have been exemplary in their support and we would not get to production without them. I would like to thank everyone for their support and best wishes for 2017.

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