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Editorial

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This issue presents two briefings and six papers, seven of which can be categorized under two main themes. Firstly, safety and risk reduction in a variety of contexts and secondly, improving designs for cost efficiency. In some ways these two themes reflect wider society and professional priorities for safer living, while achieving better value for money. These are important aims. However, the general process of cutting costs needs to be carefully managed if wider public benefits are to be achieved. The final paper examines a new Exe Estuary Trail cycling and walking route in the UK.

The two briefing papers are concerned with construction safety. Umar and Wamuziri (2017) present a briefing paper on the health and safety problems in construction. The focus is on safety performance improvement by using 'safety climate' factors, which relate to the culture of safety among project stakeholders. Construction organisations can assess their safety climate factors by use of a questionnaire to develop plans for improved safety performance. They advocate the use of a safety climate questionnaire developed by the National Research Centre for the Working Environment in Denmark. Survey outcomes can be used to address organisational safety weaknesses.

Next, Umar (2017) discusses the cost of accidents in the construction industry in Oman. The paper compares the costs of accidents with overall project costs for a number of sectors in Oman. A better understanding of the financial benefits of improved safety performance will encourage construction organisations in Oman to enhance their safety performance. The author highlights the fact that in countries such as the UK and USA they have improved their safety and health performance by establishing an organisation for making health and safety regulations, inspection and enforcement. The author advocates the establishment of similar institutions in other countries.

The next two articles consider risk reduction and improved resilience when dealing with earthquakes in Asia. Mukhopadhyay and Dutta's (2017) paper focuses on rapid visual screening of earthquake-susceptible buildings, based on research in India. The procedure is intended for non-engineered and semi-engineered buildings as a means of seismic vulnerability assessment. The scheme proposes visually identifiable parameters for nine building types. Buildings with lower 'structural scores' were identified as being severely vulnerable to eventual seismicity and in need of focused attention. Thus, the proposed scheme may be useful in prioritising buildings requiring retrofitting as part of disaster-resilience activities.

The paper by Akbari *et al.* (2017) discusses the lessons learned from earthquake reconstruction in a number of areas of Iran. On the basis of the previous Iranian experience of earthquake reconstruction, new lessons were learned. These disasters provided an opportunity to raise national and international awareness of the importance of effective implementation of a comprehensive disaster risk reduction programme in Iran. Post-earthquake performance indicators should be identified for important structures in every region. These indicators can be determined in three different phases such as emergency response, short-term recovery and long-term restoration.

The next three papers outlined are concerned with optimising designs and processes to achieve better cost efficiency. Yap *et al.* (2017) have analysed design parameters in Malaysian separate sewer systems. The aim of their study was to review the design parameters in the peak flow factor equation in the Malaysian Standard Code of Practice. The resultant analysis shows that the flow design parameters, per capita flow and design criteria, were unexpectedly considerably lower than the value of per capita flow and design criteria described in Malaysian design guides. This indicates that the separate sewer systems in Malaysia may be overdesigned. However, care is needed before making changes to design standards, when more extreme storm events can be expected with increased global warming.

Pradena and Diaz (2017) have analysed unsealed joints in urban concrete pavements for buses, which need to resist high traffic demands without regular invasive maintenance interventions that affect the pavement clients. Although jointed plain concrete pavements can provide these requirements, sealing the joints and keeping them sealed for 10 years costs up to 45% more than unsealed joints. Field measurements made after 8 years in-service (average) in 270 unsealed joints in Chile

show a small percentage of the bus corridors were affected due to the construction process and not due to the performance of the unsealed joints. These results confirm experiences in Wisconsin, USA. The authors argue that deficiencies of joint seals place unsealed joints as a cost-effective alternative to optimise urban pavements for buses.

The barriers to building information modelling (BIM) in the Chinese construction industry are analysed by Li *et al*. (2017). BIM has been introduced to improve the industry's efficiency, with strong commitment by the government. However, take up in China has been slow. This paper describes a survey of the perceptions of owners, designers and contractors aimed at systematically analysing the barriers. The results indicate that owners have limited understanding of BIM except for its three-dimensional visualisation and clash-detection capabilities. Designers are concerned about uncertain returns on investment in the technology, and contractors are worried about having to change their mode of operation. A key finding is the need for qualified BIM professionals capable of using the software to manage projects.

The final paper by Kanani and North (2017) discusses the development of the new 25 km Exe Estuary Trail cycling and walking route on the south coast of Devon, UK. The largely off-road facility links Exeter city centre to the coastal towns of Exmouth and Dawlish on either side of the Exe Estuary. This paper describes the design and construction of the route. Designed for both leisure and commuter use, sustainable development was a key driver of this project. The social and health benefits of this green infrastructure project are mirrored by the economic gains of new and existing businesses around the River Exe.

The Chairman would like to invite another person with an interest in one or more of the key themes of this journal to join the Editorial Panel. Anyone interested in taking on this challenge should contact the Journal Editor, Claire Robinson (claire.robinson@icepublishing.com).

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