Cite this article

Hare B (2019)

Editorial.

Proceedings of the Institution of Civil Engineers – Management, Procurement and Law **172**(6): 225–226, <https://doi.org/10.1680/jmapl.2019.172.6.225>

Editorial

ICE Publishing: All rights reserved

Editorial

Billy Hare PhD, BSc (Hon), BA, MCIOB

Deputy Director BEAM Research Centre | Construction & Surveying / SCEBE,
Glasgow Caledonian University, Glasgow, UK

The risk of failure is never far from a civil engineer's mind. But the quest to 'derisk', rather than 'manage' such risks, can result in manipulative techniques and contracts (Thompson and Perry, 1992), which invariably does not end well for one or more parties. In this issue, our authors investigate some critical risk-related issues for construction management, procurement and law. These range from the mega to the micro level, dealing with topics such as project risk analysis, the consequences of procurement strategies and how contracts can either aid collaboration or lead to disputes. And, of course, the ubiquitous building information modelling (BIM) is never far away from their thoughts.

Project risks are countless, and never happen in isolation. The headache for project client teams is to consider significant project risks in a holistic way to allow informed decision making. In the first full-length paper of this issue Chen *et al.* (2019) apply a dynamic systems approach to quantitative risk assessment. Their 'SDANP' method hardly rolls off the tongue, but is the product of using the analytic network process (ANP) (Saaty, 2013) to initially screen and prioritise risk data, before the application of system dynamics (SD) (Duggan, 2016) to predict consequences for megaproject delivery. Maybe the authors could have named the method something slightly easier to pronounce (e.g. 'Anpasd') but notwithstanding this, the complexity of megaprojects makes them susceptible to a multitude of risks and any attempt to successfully manage them should be welcomed.

Chen *et al.* use a (relatively) local megaproject (for me) to test their method: the Edinburgh Tram Network project. This was a high-profile public sector project in Scotland, plagued with disruptions, delays, disputes and a funding crisis. This is in itself a shining example of how not to run an infrastructure project, and let's face it, there are many other examples. Retro-fitting a model with hindsight is easier than getting it right first time, however, but the (not so far away from Edinburgh) Queensferry Crossing bridge project over the river Forth makes for an excellent case study (Climie and Shackman, 2019) for any engineer looking to compare the good with the bad.

At the other end of the spectrum – and a world away from Scottish megaprojects – is South Africa, where Windapo *et al.* (2019) compare procurement strategies and their influence on small

and medium-sized enterprise (SME) contractors. Procurement strategies can influence risk on construction projects (Osipova and Eriksson, 2011) and given the prevalence of SMEs in the construction industry, no matter where they are located, they have a substantial bearing on project outcomes. Despite the move away from traditional procurement strategies in most developed economies, SMEs in South Africa believe these can highly impact their profitability and turnover, which makes interesting reading for sceptics of, for example, design-and-build.

Regardless of procurement type, the role of mutual understanding, trust and participation from project teams is a must for successful projects (Ceric, 2015). Darya Bahram is Secretary General of the Association of Consultant Architects, and her briefing on alliance contracts (Bahram, 2019) explores their importance to one of the main perceived benefits of BIM: collaborative working. Alliancing and partnering got off to a good start post Egan (1998), but when it was 'recession tested', from 2008 onwards, clients clambered to see the (short-term) savings of retendering projects to lowest bidders, which led to somewhat of a reversal in thinking. It is therefore a welcome sight to see the strategy back on the up. Some would say it never went away, but the industry could have been in a better place to see a greater uptake of BIM than that reported by Bahram, if more clients remained firm on alliancing and partnering. Bahram's paper cites more recent reports, for example by Farmer (2016), and as before – post Egan – the method proposed to achieve 'collaboration' is the use of contracts. The mind-set is that a contract is the way forward, to 'compel' individuals to collaborate, and increase the use of BIM. However, contracts can of course be the source of conflict as well.

The issue rounds off with a book review by Joel Gilmour of *NEC4 Resolving and Avoiding Disputes* (Gerrard and Waterhouse, 2019). The notion that construction contracts can be used as a tool to avoid and resolve disputes follows the same line of thinking presented by Bahram. But if such contracts are used as a means of risk 'transfer', trust can be lost and replaced with a false sense of security that everything is being managed further down the supply chain. This is exactly the type of thinking that can lead to projects succumbing to the same trappings as the Edinburgh Tram Network.

REFERENCES

- Bahram D (2019) Briefing: Can alliance contracts provide a delivery platform for greater collaboration with building information modelling? *Proceedings of the Institution of Civil Engineers – Management, Procurement and Law* **172(6)**: 227–231, <https://doi.org/10.1680/jmapl.19.00036>.
- Ceric A (2015) *Trust in Construction Projects*. Routledge, Abingdon, UK.
- Chen Z, Boateng P and Ogunlana SO (2019) A dynamic system approach to risk analysis for megaproject delivery. *Proceedings of the Institution of Civil Engineers – Management, Procurement and Law* **172(6)**: 232–252, <https://doi.org/10.1680/jmapl.18.00041>.
- Climie D and Shackman L (2019) Construction of the Queensferry Crossing and approach roads in Scotland (part 1). *Proceedings of the Institution of Civil Engineers – Civil Engineering* **172(2)**: 61–68.
- Duggan J (2016) *System Dynamics Modeling with R*. Springer, Cham, Switzerland.
- Egan J (1998) *Rethinking Construction: Report of the Construction Task Force*. Her Majesty's Stationery Office, London, UK.
- Farmer M (2016) *Modernise or Die: Time to Decide the Industry's Future*. Construction Industry Council, London, UK.
- Gerrard RA and Waterhouse P (2019) *NEC4 Resolving and Avoiding Disputes*. ICE Publishing, London, UK.
- Osipova E and Eriksson PE (2011) How procurement options influence risk management in construction projects. *Construction Management and Economics* **29(11)**: 1149–1158.
- Saaty TL (2013) Analytic network process. In *Encyclopedia of Operations Research and Management Science* (Gass SI and Fu MC (eds)). Springer, Boston, MA, USA, https://doi.org/10.1007/978-1-4419-1153-7_32.
- Thompson PA and Perry JG (eds) (1992) *Engineering Construction Risks: A Guide to Project Risk Analysis and Risk Management*. Thomas Telford, London, UK.
- Windapo A, Olugboyega O and Adediran A (2019) Procurement strategies influencing small and medium contractor development in South Africa. *Proceedings of the Institution of Civil Engineers – Management, Procurement and Law* **172(6)**: 253–263, <https://doi.org/10.1680/jmapl.19.00021>.