

Viewpoint

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Tunnelling should not be considered a last resort

Procurement processes and management must be right if disaster is to be avoided.

"When things go badly wrong on complex urban tunnelling projects then the effects tend to make for eye catching publicity. NCE has reported on a number of these recently including Gerrards Cross, Cologne and São Paulo's Pinheiros station. Add this to the collapse of subsurface construction in Hangzhou, China and ongoing ground issues affecting the construction of the Amsterdam metro and you have a perception that going underground attracts unwelcome news and that building underground infrastructure is a construction solution of last resort.

I often get asked to comment on the events such as the above examples, and in particular, the potential legacy and consequences. Specific issues apart, the International Tunnelling Association (ITA) and its member nation representatives, including the British Tunnelling Society (BTS), have to ensure that guidance is in place from lessons learned and that good practice

from adjacent industries is adopted. Innovation, technology, experience and skills, safety awareness and risk management processes are part of that guidance which ITA and BTS provides.

However, the cause of most unwelcome project incidents – tunnelling included – is human behaviour. Contracts and contractual interfaces, method of procurement and incentives, and selection of the supply chain are key to how parties engage and how the resultant collective or individual human behaviour is manifested.

More time should be devoted to these issues in the upstream formulation of the "rules of project engagement".

Perhaps the training and education of our engineers needs to evolve and focus on the collective; adherence to a consensus; blending and commonality of purpose; and managing interfaces to ensure that the right motivations for successful project delivery.

The worldwide tunnelling industry is

set to enjoy a growing future. Mainland Europe, London, the United States, Singapore, Hong Kong and mainland China will see a lot more infrastructure going underground for many diverse needs. Creative and affordable use of underground space, where surface space is at a premium, will encourage clients to follow this trend.

The tunnelling industry recognises that its role is to ensure that it has the resources to deliver safe, high quality, fit for purpose, sustainable and affordable underground infrastructure.

It is prepared to be accountable for those requirements provided that what it is being asked to manage is reflected in fair procurement; fair contracts, fair allocation of risk, responsibility and accountability; and with appropriate incentives in place. Responsible human behaviour will then be more aligned to those requirements.

● Martin Knights is president of the International Tunnelling Association