Digital Delivery Discussion

Beale & Company recently hosted a Digital Discussion event as part of its Digital Network, the first in a series of events to explore the impact of a digitally driven approach on the construction industry. Speakers included Alan Newbold of Arup and Dale Sinclair of AECOM with both encouraging lively discussions on the future of the construction industry. This is a snapshot of some of the main points discussed.

Digitisation Generally

A more intelligent use of technology is fundamentally altering how we go about our business. This is both in terms of how technology and the data it collects is used to understand the Client’s needs and how work and services are provided. This is already changing business models in a range of different industries.

For example, we are more connected than ever, generating huge amounts of data and using new methods to access it. The increased connectivity and the emergence of new approaches has also resulted in “digital disruption” across a range of industries, with organisations such as AirBnB and Uber providing services traditionally provided by and established marketplace.

How Does This Impact Construction?

In the context of construction, digitisation will change fundamentally (and already is changing to some extent): 1) how projects are approached; 2) the design process; 3) construction activities and 4) business models.

1) How Project Are Approached

As a result of the increased connectivity described above, Clients and their consultants are able to monitor usage and pick up trends which would otherwise go unnoticed. Examples include using data 1) on smart motorways to manage traffic; 2) in airports to manage passengers and reduce queuing times; and 3) by retailers to market goods in the most effective way.

This enables specifications to be prepared which really focus on the intended use of a project, rather than the physical dimensions. In addition the production of 3D models of a project which a client can “walk though” before construction enables the client to get a clearer idea of what it actually wants.

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2) Design Process

The design process will change profoundly due to technological advances and a move towards a more process focussed approach. This is already happening as a result of the use of BIM. The UK government’s Level 2 BIM mandate is in force and BIM is increasingly becoming “what we do” in the industry. This is by no means the end of the industry’s progress regarding BIM, with further changes expected as it is taken forward towards Level 3.

Beyond BIM, the use of technology makes it easier for designs to be standardised and purchased “off the shelf”. Further there is already technology which can be used to automate design if certain initial information is provided. One would think that it will be some time before the tacit knowledge gained from significant experience can be replicated by technology but these developments are providing some exciting opportunities.

3) Construction Activities

Technology is also changing how projects are managed and constructed. The use of 3D printers and on site “flying factories” (which remove the potential effects of on-site hazards) make the process more efficient. Digital (point cloud) surveys and greater monitoring also increase the accuracy and speed of feedback to clients.

4) Business Models

Business models have already changed to embrace the digitisation of the industry, with some setting themselves out as leaders in respect of digital innovation. This is only a first step; more fundamental change is inevitable given the significant digital developments and associated opportunities.

Comment

This is a very exciting time for the construction industry; the potential effect of digitisation and the pace of change is tremendous. It will be a real challenge to keep up with the pace of change and there is the risk of a disconnect between how businesses operate and existing business models. As William Gibson put it “the future is already here, it is just not very evenly distributed”. Those who can innovate and are flexible enough to take advantage of the changing environment are likely to make the most of the opportunities available.

August 2016

To join the Digital Network, be kept up to date with digital developments and further events and share your experiences please email diginet@beale-law.com

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