

BIM and its role in the construction industry

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Construction analysis: Has the take-up of building information modelling (BIM) in the construction industry matched the government's stated ambitions in this area? Jennifer Jones, barrister at Atkin Chambers, considers the issues.

With the sector becoming more accustomed to the use of BIM, has BIM exposed the potential of technology to reshape the construction industry?

There is no doubt that uptake of BIM is becoming more widespread. However, it is far from universal.

For example, the UK government set a target of April 2016 by which all public sector centrally procured construction projects were to be delivered using BIM Level 2 (collaborative working but no single shared model), the intention being both to improve standards and also more effectively to manage project costs and achieve savings. In its March 2016 Budget, the government affirmed its commitment to moving towards BIM Level 3 (fully collaborative working across all disciplines using a single shared model) in the future.

Despite these dates, the results of the recent BIM+ and Construction Manager survey, entitled 'BIM: What Clients Really Think' and freely available for download online, give a more nuanced picture. The authors surveyed about 100 construction clients across the sector and found that although BIM is being integrated into contracts, both uptake and confidence remain low. Indeed, almost half of respondents scored themselves as having limited confidence or below in using BIM.

As such, although there have been many predictions that BIM will reshape the industry, I would not say that we were there as yet. Rather, as uptake increases, and as users move towards BIM Level 3, we are likely to see an increase in digital collaboration altering the industry more slowly. I do not expect a complete re-shaping but more of a gradual process that will develop over time.

Is there still wariness when new technology comes on the scene? Could the increased reliance on technology expose users to risk?

Given that this technology is both relatively new (in terms of its uptake on construction projects) and that it is developing all the time, a degree of caution is to be expected. It is also justified. To take one example—by definition, an increase in collaborative working means that there is a risk that parties' respective obligations could be insufficiently clearly defined such that, in case of problems, the route to recovery is muddled and/or the intellectual property in work is unclear.

Pre-contract protocols such as the Construction Industry Council (CIC)/BIM protocol seek to manage these issues by clear contractual allocation of risk and by the concept of 'Permitted Purpose' licences. During the project, clear data tagging of any amendments to models (or indeed the single model if BIM Level 3 were being used) is essential so that any responsibilities can be tracked through. These sorts of safeguards would always be needed to deal with the risks inherent in any new technology.

Equally though, where BIM is properly implemented, it should in due course make clash control and design co-ordination easier to manage so as to decrease risks. In other words, there is risk in using BIM and that risk justifies caution. However, if properly dealt with there is no evidence that I am aware of that it is significant enough to inhibit use of BIM.

As big players like Google start developing in this area, could this challenge existing specialist construction/engineering software developers?

The software available is changing and developing all of the time. Google's Project Tango Development Kit is 3D mapping software intended to be used to map out rooms in 3D. Similarly, there has been recent press coverage of the University of Illinois' 'Flying Superintendent' project, which uses a combination of drones and BIM to monitor projects on site.

There is a wealth of software already available, however, and anecdotally one of the reasons that uptake of BIM can sometimes be slowed down is that if the different members of the team all use incompatible programmes then this can make collaboration more challenging.

Undoubtedly new software will challenge the pre-existing software developers and it is the market that will determine which programmes survive and thrive over the next few years.

Is technology changing the recruitment needs in the sector?

As noted above, uptake of and confidence in BIM is not yet as significant or developed as one might have expected. Recruiters already seek those with BIM expertise and filling in any knowledge gap and moving towards BIM Level 3 will require those working with BIM to be increasingly familiar with the technology. Given that uptake to date has been slow and steady rather than rushed, I would anticipate that developments in the training and recruitment of personnel will also happen over time rather than in one fell swoop. Over time, however, companies will need an increasingly IT-savvy workforce to manage the requirements of BIM.

Interviewed by Lucy Trevelyan.

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