

Special report

BIM



The rise of digital engineering

With the deadline for use of Level 2 BIM set for April this year for public-sector contracts, industry experts give their opinion on how to make sure your business is fully prepared

At this point, everyone in the building services industry should be aware that companies tendering for public-sector contracts of more than £5m in value need to comply with Level 2 BIM by April, following the prolonged efforts of the government, industry bodies and regular announcements in *H&V News* and other trade titles.

Concern has been raised about whether there is a sufficient level of readiness, however, with SME organisations in particular singled out as failing to engage with the process. A survey conducted by the Electrical Contractors' Association last year found a worrying lack of preparation, indicating that many will miss out on government contracts because they are not Level 2 compliant. Headline figures from the survey

included the revelation that 54% of companies with less than £1m turnover were not ready for BIM Level 2, with 30% of businesses turning over between £1m and £20m also not prepared.

Higher levels of work in general will hopefully mean that companies not engaging in BIM will be able to replace their public-sector contracts with others in different sectors. With companies such as Skanska (see our report on The Monument building, *H&V News*, 18 November, page 23) demonstrating real benefits from their use of the process, however, there is growing evidence that those investing in BIM can adopt a wider focus for its use than just within the public sector.

With terms such as "digital engineering" becoming more

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Julie Maguire, Merriot

widely used, there are increasing numbers of examples of how the adoption of new technology and process is proving beneficial on a number of levels, including increased efficiency in project delivery and in attracting new recruits into the industry.

Art of procrastination

With the April deadline rapidly approaching, however, industry commentators are continuing to express their worries about levels of compliance and are encouraging businesses to engage with BIM as a matter of urgency – but Merriott BIM coordinator Julie Maguire believes many companies are continuing to delay their adoption of the process.

She says that her company is on track to reach Level 2 BIM ►

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► compliancy before the April deadline, but “the reality is that many other businesses haven’t yet achieved Level 1 status – and, in some cases, are still somewhat undecided about BIM as a whole. This is partly because of some companies biding their time and waiting for BIM to become mandatory before they commit to investing.”

She adds: “Those taking this approach run the risk of being left behind. We’re seeing growing numbers of contracts for government projects stipulating Level 2 BIM as a mandatory requirement of the tendering process, and we’re expecting this to become the norm across the board in 2016.”

“What’s more, given that the deadline for attaining Level 2 has already been extended from January to April, it makes sense to use this time wisely and get BIM-ready to get ahead.”

Ms Maguire advises companies that the first step towards achieving BIM readiness is to trust that the initial investment will be worth it and to take the plunge.

“My advice would be to invest in the resource you need to bring your business up to speed – whether that’s updating software and hardware, training existing staff or employing new people with experience in this area,” she says.

She also recommends that when creating BIM models, these should be as streamlined, specific and compact as possible.

“In our experience, models that are less than 500KB in size, while still incorporating all the necessary COBie data, are the most popular among specifiers,” says Ms Maguire.

Demonstrating readiness

Questioning whether the building services sector will see a different proposition from 4 April, when the public-sector Level 2 BIM requirement comes into force, Sitedesk chairman Michael McCullen says that this is likely to be the case for

those working on centrally-funded government contracts.

“The same type of projects will come up from the same departments, tendered for by the same contractors you are used to dealing with. At first it might seem as though nothing has changed – until you receive tender documentation or a questionnaire from a main contractor asking for confirmation that your organisation supports BIM,” he says.

The answer is very unlikely to be a simple “yes” or “no,” he adds, as companies may be asked if they are capable of working with a Common Data Environment (CDE) and what experience they have in this area.

“You’ll be asked what processes and procedures you have implemented in order to meet Level 2 BIM and what BIM training your company has undergone,” Mr McCullen says.

“You will almost certainly be asked what design software you use and if you can work with the IFC data standard and COBie. You might even be asked what BIM project experience you have. You must be able to answer these questions – or you could lose out.”

Those who are ahead of the game will be able to answer easily that staff have been trained and new BIM systems have been introduced.

“You will have your own CDE to import clients’ models alongside your firm’s designs, and this will be capable of sharing information with your workforce during the design phase and later on site. This means your firm can support BIM without being dependent on main contractors for software tools,” Mr McCullen says.

“If you are not BIM-ready, now really is the time to act. Get some BIM training under your belt and choose a software system that will allow you to retain and build upon your organisation’s best practice while improving workflows to comply.”



Remeha Commercial’s James Porter believes BIM is being widely adopted by both the public and private sectors because of its long-term benefits

Wider application

Those investing in BIM should not see this as restricted for use in the public sector alone, which is regarded as helping to convince more companies that this is a worthwhile exercise.

Remeha Commercial sales director James Porter says his company has noticed that BIM is also being widely adopted ahead of the deadline in both the public and the private sectors.

He believes this is because of “the benefits that this collaborative, common information platform brings, both at the initial design phase and throughout the life of the building, structure or facility”.

He adds: “The UK’s construction industry offers huge scope for efficiency measures, with research indicating that 90% of a building’s costs are due to its design, construction and how it is operated.”

“For BIM to be able to achieve the estimated annual £2bn efficiency savings for UK construction and its clients, there needs

to be widespread availability of BIM objects from manufacturers in formats that meet industry-wide standards.”

He believes that one of the initial challenges for manufacturers has been the absence of any uniform software, templates or established accepted standards.

The situation has improved, however, with clearer guidance in the form of increasing numbers of standardised product data templates now in place, further supported by the proposed CIBSE BIM framework.

“This will greatly simplify the process for manufacturers preparing to become BIM ready,” Mr Porter says.

“And for those of us who have already embraced BIM, the minor challenge of adjusting our data in line with the new templates will produce major results: by simplifying, accelerating and standardising the introduction of manufacturer product data into BIM environments, we can help provide competitive advantage and effect positive change.”