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## BIM, a catalyst for change

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BIM (building information modelling), or as most practitioners prefer to call it, 'building information management', has driven a significant step change within the built environment over the last ten years. A large percentage of projects now call for an element of digitalisation as the norm, and all government-procured contracts since 2016 have dictated that BIM working methodologies are a mandatory requirement. The UK government's vision for construction, as communicated through GCS 2011, GCS 2016 and recently through the introduction of the international BIM standards (ISO 19650 series) and the construction playbook further define and reinforce this.



We are required to deliver two built assets, the physical and virtual, which need to mirror each other, and in addition we are also required to build these three times. Building digitally firstly we resolve all issues where practicable; secondly, we need to physically construct the built asset; and finally we update and connect the virtual and physical assets together to

allow us to operate built assets in a lean and efficient manner.

Despite all the requirements, the government mandate, the known benefits, and value-added elements that the BIM process and tooling offers, why are there still so many doubters? The answer is simple: it's change, and the continual challenges that any form of change brings. Although using BIM is becoming 'business as usual' for many companies within the UK construction industry, change is still preventing wholesale adoption. To understand this let us explore why.

Most stakeholders in the UK construction industry would probably agree that our industry is like a big old ship that takes a long time to turn. We do not like change, and we certainly are not as progressive as some would like to be, and new ways of working, including 'BIM' and 'digital', carry that cultural shift change, which can cause resistance and potential roadblocks to the change.

### Implementing change

Interestingly, Covid-19, for all its harm, is having a positive effect on our industry. Its huge impact on all of us has forced us to embrace digital working. The big old ship is turning much more quickly than most of us could have imagined! The industry is rising to the challenges we have been presented with and we no longer fear digitalisation. We have started to embrace technology and are now seeking to revolutionise how we work.

With the momentum of change present, we need to embrace this and grasp the opportunity, evaluating how we work and how we want to work. We have to consider how our roles need to change, the tools we use, and how we intend to evolve our working practices. Key to this is defining our digital working strategy, incorporating BIM at the core of this. We need to clearly identify our objectives, with the focus on the what, the why and the who. We need to be specific and recognise that digital transformation with information management is at the core of how we should work, and we need to understand the benefits change will bring.

The digital strategy can then be used to determine our information requirement drivers and potential future service offerings. Our information requirements will have defined deliverables that target organisational information needs for both business and project delivery. In turn, this will drive efficiencies, which will lead to more efficient delivery. In seeking to refocus our delivery mechanisms to align with information management working practices, we will improve processes and working methodologies. At the centre of this, the underlying drive should be how we leverage against the increased use, reuse and repurposing of data from a single source.

### **More than a 3D model**

Interestingly, the behaviours and the activities described above reflect the start of the BIM process and the journey that should be undertaken. The terminologies differ, but the concept is the same. BIM is the digital transformation of how we produce and use data in the built environment to drive efficiency, reduce risk, save time and enable improved project performance and delivery.

BIM is often misunderstood. The industry sees BIM only as something to do with 3D models. That is understandable when it is called building information ‘modelling’ rather than ‘management’. BIM is, though, all about the management and delivery of information. While the delivery mechanism is via the use of 3D models, the process of information management is delivered using a combination of people, process and technology.

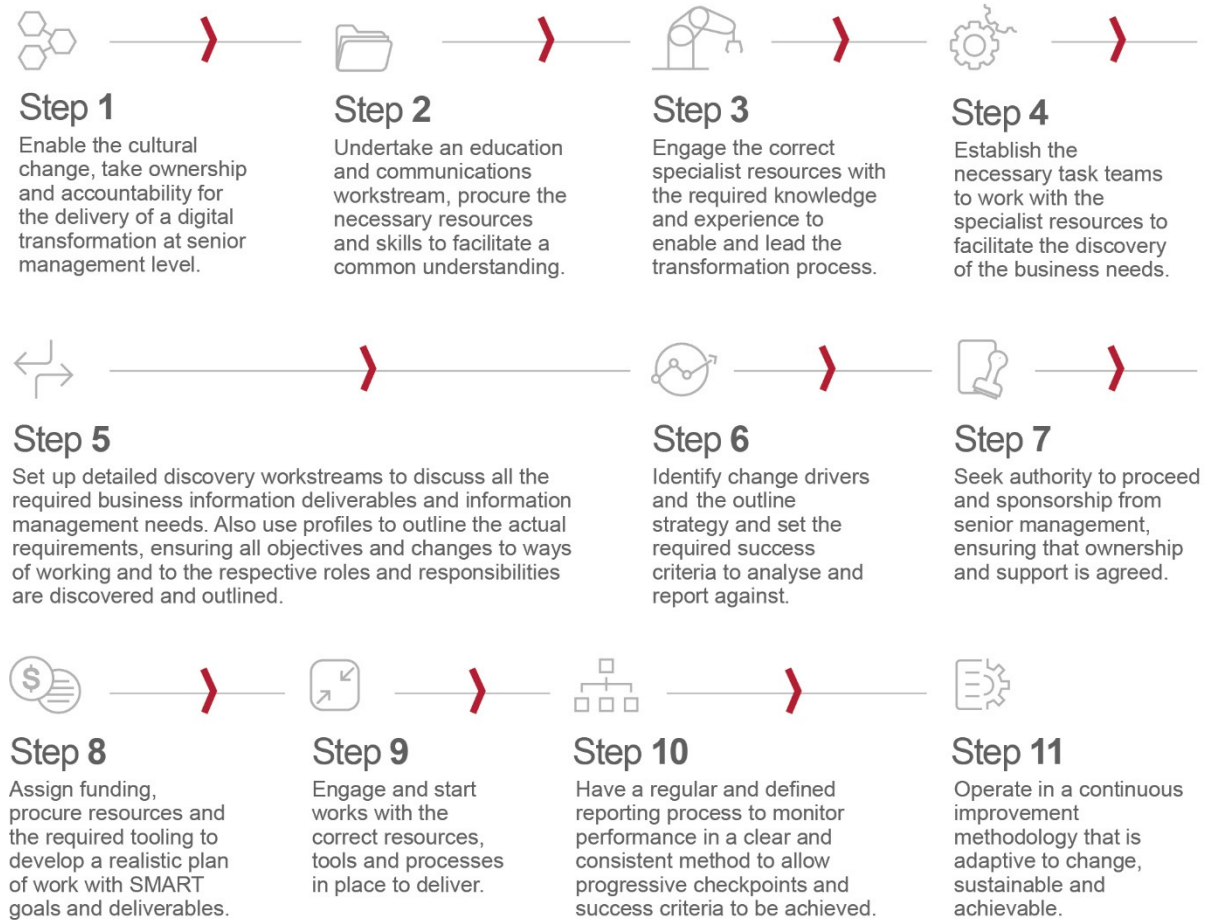
For successful information management delivery, it is very important to have the right people defining, implementing and delivering the change. Without the correct processes in place, however, even the best information management practitioners will achieve only limited success. These processes need to fully align with the business and project requirements and required deliverables. They need to be SMART (specific, measurable, achievable, realistic, timely) and need to be developed with all stakeholders. Key to this is to fundamentally understand that BIM is not just for the design and construction phases of a project, it is for the whole lifecycle. To realise the return on investment it must be developed with this concept at the centre. Then, with this understanding in place, and with the correct technologies applied to deliver against the defined process, success will be guaranteed, if it is also managed by the right people.

All too often, information management delivery and BIM look very different. This happens when the focus is mainly on the building information model elements, combined with numerous factors that limit success, namely the wrong culture and behaviours, the wrong requirements, a lack of buy-in and support from senior leaders, and most importantly the wrong people tasked to deliver the project.

### **Starting the BIM journey**

Frequently, the journey begins with the simple premise of doing ‘BIM’ and considering the modelled elements only. When this is the only goal, the wider ‘why we need to use the process’ is not considered. Strategies are drafted with limited thought, and the benefits are not fully explored and defined. Resources are appointed to deliver the limited requirements with ill-conceived targets. Early success will be achieved, but this is usually short-lived. As time progresses, the initial success diminishes as more abortive and additional works are required, driven by teams beginning to understand that the initial goals and strategies were incorrectly defined. This leads to direction being lost, and increasing costs and delays become a frequent occurrence. As a result, the benefits of BIM are not achieved, which often results in the working methodology being reset and changed by removing the BIM process.

So how do we avoid this happening, and how do we mitigate it? The following indicative steps help to guide and to map out the successful implementation of digital transformation utilising BIM process, tooling and management techniques.



In conclusion, and returning to the earlier defined points, with the right people, using the right processes with the right tools in place, the use of BIM as part of the wider information management transformation can help to deliver business-level change, in turn facilitating improved productivity, with less risk and greater certainty.