

MANAGING THE RISKS AND REWARDS OF A MORE DIGITALISED CONSTRUCTION INDUSTRY

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The construction industry is becoming increasingly digitised: we are seeing drones used to assist with surveys of difficult or dangerous terrain; robotics being implemented onto building sites; and even blockchain and smart contracts slowly working their way in to modernise outdated ways of contracting and procurement. Building Information Modelling (BIM) is, in particular, a main tech driver in this industry's movement toward collaborative behaviours and information sharing across the whole lifecycle of construction projects.

If the construction industry is to continue to utilise digitalisation to transform the delivery of construction projects, in addition to reviewing the benefits the associated risks need to be evaluated. So what are some of these risks and how can they be minimised?

External cyber attack

Greater use of online platforms, such as the common data environment (CDE) used on BIM enabled projects, provide a single source of information to be used by the project team. This enables a unified forum for collecting, managing and disseminating documentation, models and other project data, which can reduce design clashes and reduce costs. It also means that all of the project's data and valuable information is collated in one single space.

Keeping all of the project's vital records together in this way is useful for locating pieces of information, however, there is also the risk that such platforms can be breached by hostile third parties; such as by merely obtaining misplaced access codes or through the more sinister deployment of malware. Other risks in this area are the ways in which the valuable data held on the CDE could potentially be exploited or confidential information

inadvertently or deliberately exposed.

Highly sensitive/valuable data

The days of rooms full of operation and maintenance manuals and files full of hard copy drawings are already numbered, as technology is increasingly used in the management of built assets. BIM will inevitably take this further, revolutionising the facilities management industry through allowing all of the previously held hard copy information to be added digitally to 3D models. This allows the entire asset to be managed virtually, almost as if the built asset has a digital twin.

While developments of this kind will enhance the efficiency of facilities management, potentially reducing costs and increasing sustainability, data aggregation of this type could lead to the safety and security of built assets being compromised. For example, if such detailed information about the design, layout and operation of a built asset falls into the wrong hands, facilities managers and building owners could be held to ransom and the potential for the asset to be at risk of malicious, targeted acts is obvious.

Lack of sufficient technical and business knowledge amongst employees

Smooth running of the digital construction and maintenance of built assets and the prevention of situations such as those discussed above from arising are intrinsically linked to the people operating the relevant systems. More specifically, it depends on their fully understanding the technology, its capabilities and potential failings, as well as the virtual and real security systems in place (or which should be in place).

Those engaging with the CDE and other platforms need to not only understand the technology and new processes but also the new security policies in place. However, these policies themselves, be they physical-focussed or tech-focussed, need to be effective, efficient and thought through to cover as many areas of potential risk as possible.

Further areas which developers, contractors, consultants and built asset owners and users might like to consider include identity theft cloning - whether a digital clone of a built asset could breach intellectual property rights. Also, lack of sufficient technical and business knowledge amongst employees - is training up-to-date, is data being handled correctly and are your hardware and software capable of handling these new advanced technologies?

While digitalisation offers a fantastic number of advantages, it does bring with it some obvious risks. [Gowling WLG's digital risk calculator](#) can be used as a step in the process of analysing these risks and ensuring that you, your data and your business are protected.

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