

News

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The future of contractors and how new construction methods will revolutionise the industry

By Lee Ramsey – design management and BIM director, Morgan Sindall Construction

Construction has not significantly changed in the last 100 plus years but we are now on the edge of a sea change that will radically alter the industry and how those within it operate. After farming, construction is the second largest industry with the biggest scope for improvement in productivity, therefore there are lots of opportunities to adopt more modern approaches to construction.

This will naturally result in significant changes to the role of the construction professional. While technological advances can sometimes be daunting, the utilisation of new and cutting edge ways of working will allow projects to be delivered quicker and with better outcomes. Crucially, this will be achieved using less resource.

To ensure these benefits are realised, contractors will have to develop an increasingly dynamic mind-set that is open for change, as technology is enabling disruptive opportunities that will make historic, tried and tested methods of delivering projects obsolete.

Schemes will be designed and built in augmented and virtually reality environments prior to being sent to be manufactured offsite. This process will utilise technologies such as 3D printing for building components and these components will be erected by robots.

The decision making process that is so key to any development will be boosted by a sort of Alexa for the construction industry, where the facts, data and 'what if' scenarios are readily available and can provide immediate answers to queries.

Construction professionals will harness the benefits of a data rich environment, with data analytics becoming a core skill for all contractors. This could take graphical (3D) or non-graphical form, allowing professionals improved confidence and certainty in decisions.

Artificial intelligence and generative design will also become increasingly important. Artificial intelligence creates real time insight and identifies trends that we would not have spotted previously.

Generative design enables all available designs to be created in seconds, evaluated based on parameters and constraints, meaning the most optimum design is produced in a much shorter timeframe. This means the final design can be produced with significantly less iterations. This will bring benefits to our project partners, as lengthy design processes and time spent on non-viable options can sometimes frustrate non-construction professionals.

The use of digital construction methods will allow us to optimise designs virtually and will ensure the right information goes to the right stakeholder at the right time. At Morgan Sindall Construction, the use of digital construction has enabled 26% of projects to be ahead of programme and reduced variations by 4%.

Digital construction helps us achieve improved customer outcomes and complements our Perfect Delivery philosophy which is to exceed our customers' expectations. While there may be some adjustment to new ways of working, this will ultimately make what contractors do much more

efficient and effective

I personally see the tipping point of industry adoption of these practices coming in the next three to five years. Over this period the technology will mature and will be at a critical mass, meaning seamless and bidirectional transaction of data across platforms.

The winners of this technological revolution will be those who embrace change and actively explore opportunities, in a manner similar to how Uber and Deliveroo have in other sectors. By changing the way we do things and challenging the status quo through the use of technology, contractors will be able to deliver projects quicker and with less resource but with better outcomes for customers.

Design and build contractors who don't adapt will find it hard to compete, as their projects will be less efficient and of a lower quality, and they will not be able to deliver the customer experience that others can. That's why at Morgan Sindall Construction we are determined to remain at the vanguard of change, ensuring we continue to deliver continually improving services to our clients.

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