

Guest Blog

How Construction is Becoming an Increasingly Data Driven Business

We are living in the digital revolution and yet while other companies have evolved into streamlined and efficient data-driven businesses, [the construction sector has been somewhat lagging behind](#). In fact, the McKinsey Global Institute Industry Digitization Index places the [construction industry among the least digitised](#) – just marginally ahead of agriculture and hunting.

But that's not to say things aren't moving in the right direction. Already construction companies are making efforts to collect data. The next step is ensuring that the data is being used to bring about greater efficiencies and cost savings.

As we head towards 2020 it's fair to say that the construction sector is on the cusp of a new era – one that embraces the digital evolution. McKinsey reports that [construction-technology companies garnered an impressive \\$10billion in investment funding between 2011 and early 2017](#). It may be a drop in the ocean for tech companies – but it's an impressive figure for the construction figure as it shakes off its traditional, manual reputation.

How Data-Driven Are you?

The [New Vantage Partners' Big Data Executive Survey 2019](#) reveals that only 39 per cent of companies say they have a data-driven organisation, and just 28 per cent who say they have a data culture. Though the results are not specific to the construction sector you can assume that they paint a picture of industry as a whole.

However, while you may still have a way to go before you're collecting and analysing data to its full potential, it's encouraging to hear that the topic of data collection is becoming big business. The Big Data Executive Survey also reveals that 62 per cent have already seen results that are measurable from investments in big data and AI, and an overwhelming 92 per cent of respondents said they were increasing their pace of investment in these areas.

The Key to Data

When we talk about the benefits of data what we're really talking about is the benefits of the *right* data. The data needs to be relevant to the outcome you're trying to achieve (there's little point in collecting data about the precision of certain tools, if what you want to achieve is improved working conditions, for example.) The information collected must be timely, accurate and importantly it must be unbiased – otherwise you're only fooling yourself with a set of figures that may not be painting an accurate picture.

Data also needs to be able to be understood by multiple people who may access it in order to carry out their work tasks. Part of the challenge may be around improving data literacy in staff and ensuring that a culture that is data-led is embedded in an organisation. But it's also vital to provide data in a clear format that is easily accessed.

There's little point in collection data just because your competitors are. You need to be able to extrapolate the data in to useable chunks of information that have the power to shape a company going forwards.

The Digital Maturity Ladder

The [Construction Digital Maturity Ladder](#)™ is an online assessment that allows construction companies to measure their digital maturity and benchmark it globally and locally. Doing so will give you a sense of how competitive you are within the sector. The questions highlight just how varied and important data can be. When asked how often do you report progress on site, just 13 per cent revealed that this happened in real time – the majority (39%) said it was a weekly action, while 26 per cent said it happened monthly. Technology now enables data collection to happen in real time and be transmitted to those who need to see it in the same time frame. Not only does this improve communications but it also ensures smoother decision making based on actual, current situations.

The Data of the Future

There are a number of next-generation digital trends that will shape the future of the construction sector and help separate those who are leading it, from those who are lagging behind.

Higher Definition Surveying

The biggest disruptor to construction projects is geological surprises, which can cause delays and see budgets spiral. New technology is already in place that integrates high def photography, 3-D laser scanning and geographic information systems through drone technology.

5-D BIM

This integrates the spatial elements of 3-D, with a project's cost and schedule, plus details such as aesthetics, thermal and acoustic properties. Using a 5-D BIM platform will enable the construction industry to better detect any potential issues early on, and make better decisions based on a wide range of information.

Digital Collaboration and Mobility

The construction industry still relies on paper – but moving to a paperless way of working and ensuring everyone has access to information will ensure that decisions can be made in a timely manner without delays of a paper trail. It also ensures the most up-to-date versions are being worked on at all times. Only [three per cent of the construction sector say they store data in a common data environment \(CDE\)](#), while six per cent say they store it on paper, and a worrying 12 per cent say they don't keep data at all.

Future-Proof Design and Materials

Innovation within the construction industry is gathering pace – with self-healing concrete, topmix permeable and nanomaterials all making their presence felt. The development of these is all down to understanding what the industry needs through effective data collection. As we become ever-more data-driven we should see another wave of future-friendly innovations.

Bio: Jeremy Milbank

“Jeremy ‘Jim’ Milbank joined [Milbank Concrete Products](#) (then known as Milbank Floors) in 1978 and has been instrumental in helping our customers succeed. As a fully qualified engineer working as our resident Technical Consultant and all-round precast concrete expert, Jim has spent his long career nurturing a team that is now a respected sounding board for many external engineers and consultants across the precast industry. Our clients benefit from being able to use his extensive knowledge to short cut their own design processes and his experience has enabled us to spot potential savings for our customers based on previously proven solutions.”

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