Infrastructure Insights / We are shaping the future of infrastructure delivery

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Man versus machine Why project teams need to stop hiding behind technology and use their minds instead

In work, as in life, we must make decisions at the right time to ensure a good outcome. The same is true of construction projects. But the growing digitalisation of the construction sector, though a positive development in many ways, has made it easier for project leaders to hide behind the software and rely on technology instead of basic common sense.

We have also witnessed the delays and overspend that occur when the decision-makers follow a process-first approach and hide behind the process instead of making decisions in a timely way.

A process-first approach can lead to a failure to make decisions

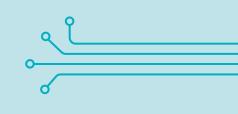
We can use a project information and process management tool like Aconex to go through the motions of, for example, making a decision on a project without actually doing so. Project leaders can use such a tool to volley ideas and concerns back and forth without ever arriving at a decision. The result? The project programme slips incrementally further behind even though everyone seems to be doing their job blamelessly.

Instead, we should rely on the human element in making decisions. By doing so, it is more likely we would go to the construction site and look at the physical problem in question. We would debate whether it is, in fact, a problem and if so, for whom? And, finally, we would ask how we could help each other solve it.

But project leaders, site managers and QSE systems are not entirely to blame. It is rational to try and avoid making an important decision when the potential downside is so clear and it is the group, not we, who will benefit from the upside. Instead, it is the tickbox culture - the need to follow a procedure or process at the expense of efficiency or common sense - that gets in the way.

Should 'respond to an early warning' really be a KPI? Or should it be, 'conclude variation requests within a week'? Senior management and project teams need to decide what is most important to achieve and by when, and commit to the quickest way to solve issues, using our minds and mouths. It is this which should be prioritised before and during the design and build process, not software systems.

And there is nothing new about all this. Franz Kafka wrote about bureaucracy for its own sake and the madness that can ensue in The Trial, published in 1925. Only now, paper forms are being replaced by digital documents, checkboxes, and toggle buttons.



Technology - the great enabler?

On balance, technology streamlines operations and makes processes more efficient. We don't need to manually enter or copy and paste data to and from spreadsheets to reports and emails; we can collaborate remotely and input data into shared online documents.

For Gleeds, the use of building information modelling (BIM) can streamline the design and build process. On one project, BIM functionality has allowed our teams to take a more modular approach to applying layout designs across a collection of different buildings, which speeds up delivery. In addition, Gleeds' development of a Digital Project Management Office means there is one central database for sharing information, improving access to data for all and facilitating reporting.

This has also made knowledge transfer easier, especially in remote working environments, reduced procurement cycle times and made it easier to onboard teams, contractors, and consultants.

Furthermore, when used correctly, digital systems can force senior managers to make decisions early, and this is usually a positive in the world of construction infrastructure.

But technology doesn't always make things easier. It can even overwhelm project teams and make them less productive. Mike Penny, Peru Country Manager at Gleeds has noticed that some teams struggle with common data environments and the use of project management systems like Aconex as people speak different digital languages.

He said: "Aconex doesn't solve the problems that may arise, but it should streamline the process so that we, as humans, have more time to solve these problems. The same is true with decision-making – technology should be the enabler that gives us more time to make decisions, even though technology can assist in making decisions."

Mike also highlights the importance of training construction leaders and project managers to be better at making decisions, to develop the necessary soft skills, and be creative in the way they approach problems: "technology can result in a processfirst approach, meaning that projects become too process-driven and the need to make decisions appears less important – but the human value is important if the best decisions are to be made."

But technology is not to blame for the way we use it, which can be to dodge decisions, to waste time, or avoid anxiety. We can misuse any technology. Sometimes a phone call is more appropriate than a Zoom meeting for a quick project update but using a phone call to go through a Google Doc instead of parties making changes on their own can also prove a waste of time.

What is often forgotten is that technology only adds value if we use the time it saves us to solve more problems.

We should also recognise where technology can and should serve us better. For example, why does so little software help us make decisions in addition to displaying data? PCs should be as functional and easy to use as smartphones, and we shouldn't have to use long strings of letters and numbers to fit with a filing system. Mike says simply: "software should fit with our now, not vice versa."

Despite the introduction of BIM and modern methods of construction, the industry is still chiefly comprised of people digging holes and assembling building materials. And while nearly everyone is trained to use Primavera P6, few are taught how to run a meeting or presentation. Construction is a human business, one that should focus on people and training those people in how to develop infrastructure to solve problems for other people.

Harnessing the power of the human mind – and technology – for project success

In the debate of human versus digital or man versus machine, we could express our view as an equation: human + digital = a greater sum. One shouldn't necessarily be pitched against the other as both are necessary to achieve the best results. But to achieve the best results, both must be utilised efficiently.

At Gleeds, we train our people to use technology effectively to drive project success for our clients. For example, we're adept at building remote teams. But we still see our value primarily from a human perspective. We train our consultants to think independently and never deploy a one-size-fits-all solution.

Systems are there to serve us, to help set and meet KPIs, rather than becoming an end in themselves. We understand the limitations of software and remember the strength of the human mind.

Senior managers and team leaders must prioritise communication, collaboration, problem-solving and decision-making over box ticking.



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