

Formulating a digital strategy for the construction industry

This white paper from Building, in association with Deltek, examines what approaches a business can take in implementing a digital strategy and the benefits expected

When Mark Farmer, chief executive of construction industry consultancy Cast, launched his now-famous Modernise Or Die document in 2016 there was much talk of challenging the existing way the sector worked.

At the time, Farmer made the urgent case – indeed he still argues fervently – for a change in the industry's thinking, whereby the need for increased productivity would only be brought about by the sector's willingness to overhaul a failed labour model, getting on-board with modern methods of construction, and

embracing digital technology.

Certainly the growing need for a “golden thread” to provide transparency and assurance around the quality of construction on any build, along with a welcome ability to identify accurately exactly “who did what”, suggests the day-to-day use of digital records will only increase over time.

Many construction firms have already embraced digital ways of working, profiting from advanced technology and the insights of “digital champions” within their ranks, and by being able to show those waverers the benefits of



such strategies. Time and effort saved, project accuracy, quality assurance; the advantages add up.

Recently such progress has been advanced due to necessity. The COVID pandemic has quickened the pace of digital take-up, says Nick Nieder, product management director at Deltek, which helps more than 12,000 architecture, engineering and construction businesses around the world.

“The speed of change for digital during the pandemic has been stellar because often it’s been the only way to work,” says Nieder. “Going forward, digital technology will increasingly support a workforce that is widely spread. We’ll see people vary their working habits between home, visiting sites, along with those who are on site all the time actually delivering the building.”

Attracting talent

There is another aspect to the workforce question, namely attracting talent. For some firms digital's role in this endeavour is already a given. Says Louisa Finlay, managing director at Kier Construction Southern: “Digital

Increased productivity was a large part of the initial impetus behind the drive to digital



working is expected amongst new entrants to the marketplace, and therefore we're making a priority to have the technology, resources and training to support them.

"We are committed to attracting new people to join the construction industry, whether their degrees or training are in construction, finance, IT or other fields, we want a diverse workforce, with varied skills to deliver the infrastructure of tomorrow."

Finbarr McMeel, technical director at contractor Gilbert Ash, a Deltek client, concurs. He goes further: "Actually the flipside to that is how to get your older staff, those who've still got an immense amount of experience, to be able to build projects using digital technology. Our core business is construction. We need those trained site managers to be able to do that. How do you keep them moving along and not feeling alienated? This is something we've worked on very actively in recent years."

It is indeed vital to avoid alienating older workers who may feel out of step with the advances being introduced into the business. Teresa Wilkins, head of IT at Beard Construction, says younger people can feel like they're playing their part because they're able to share their experiences of new technology and different ways of working with those people who've worked in industry for a long time.

Enhanced safety and security

Meanwhile digital can go a long way towards enhancing security and safety when working in the sector. On the safety side, use of mobile technology can act as a vital log – helping to record snagging issues, or materials stored inappropriately – at the touch of a button, says Andrew Gamblen, digital manager at Willmott Dixon.

"And when digital



Digital working can help attract talent, but it's not just about younger workers – the aim is to foster a partnership between generations

administrators are involved in projects they can approve access to a project's common data environment, so they can see what's going on. And if someone leaves the project, then their access is removed. And depending on certain projects, there might even be multi-factor authentication, particularly when working with certain government departments," he adds.

Over at Kier, Louisa Finlay says part of the group's digital focus has included monitoring the entry and movements of anyone visiting a particular construction site. "Once you start collecting data it allows you to compare with other information such as health and safety incidents to see if there are any trends to investigate further enabling proactive intervention."

Recently Kier has digitised permits to work on mobile devices, mandating standard checklists alongside photographic evidencing of the operative and location of work, with instant access to supporting documentation such as minimum standards.

Return on investment

Of course investing in digital technology is likely to be a significant commitment. Rolling out digital systems, or updating existing ones, requires effort, skill and of course, money.

So how can firms see a return from investment using digital technology that is by its very nature complex yet nuanced, involves bringing many disparate elements on board, and can take time to bed in and render effective? Beard Construction's Teresa Williams says firms considering investment in digital technology need first to fully understand why they are using it.

"What are the benefits going to be for your company? Don't just have it for the sake of it. You have to train people to use it and get their buy-in to help them understand why you're going down this particular road." Once it's in and everyone's using it, that's just the beginning.

"You've got to continually review it, continually look to improve it, get people involved all the time in looking at how bits of it can be used, making sure you're using 100% of it and not paying for a whole system, when in the actuality you might only be using half of it."

Willmott Dixon's Andrew Gamblen says the return on the investment in digital technology is pretty easy to assess. "For example, a reduction in number of latent defects, or ensuring that the project finishes on time. But it is the communication aspects which offer a greater return on the sort of money and effort that

people are prepared to put into this. If it's done right, improved communication across the whole business is the greatest outcome from investment in digital technology."

Increasing engagement

What else should firms consider when driving forward their digital strategies? Engagement within the business is critical, says Dean Averies, director of Beard Construction's Oxford operations. "Colleagues need to accept that some are more intuitive with digital, others less so. But everything we do involves wider stakeholders, our customers, our supply chain, consultants. You've got to do it in the round."

This is important, Averies believes, since the industry is often in danger of slipping into a siloed approach, where people try to fix problems in isolation without actually understanding the full implications of doing so. "Don't be scared of engagement. Communicate well, launch it properly, provide the training, but don't be afraid about it evolving, indeed encourage it to evolve. Because very rarely do you get everything absolutely perfect first time."

This approach is another area where there appears to be industry consensus. Implementing a top-down methodology is

unlikely to prove effective, says Gilbert Ash's Finbarr McMeel. "We implemented a working group incorporating five work streams. On those workstreams were people from our buying departments, design managers from our technical staff, construction staff, estimating and commercial people.

"It was across the board. So too in terms of demographics; we had all ages. These groups generated a great range of ideas, the best four or five of which we decided to back and they eventually went to the board for approval."

Kier operates a similar workstreams approach. Says Louisa Finlay: "We have a strategy which has developed into a 'digital by default' programme with a number of workstreams delivering agreed requirements with stakeholder input from across the group. To really drive change having a top down approach doesn't cut it, you have to facilitate representation from all different levels and disciplines to generate the right outcome and level of 'buy-in'".

Indeed, those businesses that struggle to drive change are likely to be highly entrepreneurial outfits that want to be dynamic, autonomous and flexible, says Deltek's Nick Nieder, "and may struggle as a wider business to get a consensus in their organisation

as to how best to do this".

The priority, says Nieder, is to identify somebody at a leadership level in the business and empower them to advance the digital cause. "Someone who will say, 'Yes, we're going to take this on, and we're going to do a good job of it.' Those individuals need to be involved in supporting the message across all areas of the business to get consistency on the approach, working with and progressing digital technology." It's not about having a policy imposed from senior management, Nieder says, rather it's having commitment from the top that can be communicated and worked out through the organisation.

Getting started

So what should be on businesses' 'shopping list' when it comes to a digital working strategy? Kier's Louisa Finlay puts it bluntly: "To quote Mark Farmer; 'modernise or die'. If you don't, you'll get left behind. If your customers aren't yet asking for some form of digital approach or deliverables, they soon will be, so the time to act is now. And it's just as important to look at how this can help improvements, efficiency and productivity internally to help make employee's experiences better, reduce risk and improve margin.

"My tips would be: programme this out as a short, medium and

long term vision – don't boil the ocean. Don't throw software at problems as this won't fix anything but it will be expensive. Start examining information management and keep this core to any digital transformation. And get buy in at all levels; this needs appropriate resourcing but it also needs to be driven by the right individuals," she adds.

Willmott Dixon's Andrew Gamblen says a business should target what it wants digital working practices to do for them. "They should ask themselves, what is our number one issue? What is the one thing that we really want to understand better? Identify that and then try and digitise that process, those steps.

"You may not need to digitise the whole thing, but if you can implement technology where it counts, where it makes it more efficient, that's great. And as momentum starts growing from a successful implementation of something small and simple, all of a sudden, things will open up, and you'll be able to then cross pollinate to other parts within the business," he adds.

If a firm can identify a couple of benefits to different groups of people within an organisation, they will soon get the message, says Beard's Teresa Wilkins. "And then you can build on that. There are always going to be some

things they don't like, not least because they've always done something in a particular way and at first it looks as if the digital way takes longer.

"But by harnessing digital, potentially 75% of the other part of their job can be done much quicker. It's about finding those little benefits, those small wins, that will lead people to think, 'Oh, that's a big improvement.' And then you've got them hooked and you can build on that."

Seamless working

For Deltek's Nick Nieder, getting technologies to talk to each other, getting them to integrate, is key. "This will enable you to work more seamlessly. It can lead to the more mundane jobs being automated, allowing people to concentrate on more technical and strategic aspects of the job. Tech integration is also critical for supporting disparate workforces and driving collaboration. We truly need to understand and embrace this new norm and this new hybrid working pattern."

He further argues that if a business can openly demonstrate traceability, they are much more likely to become a trusted partner, and more quickly. "If a firm has limited traceability, and gets asked difficult questions, they will look far less favourable than another contractor, who is able to say, 'Look, here are my records, feel free to inspect them.'"

And if there were to be a tablet of stone created, upon which the rules of good digital practice could be carved, what would those rules be? Nieder is adamant: "Understand the problem you're trying to fix. Understand where your information is. And get the right people behind it."

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It can work best to start with small steps, implementing technology where it makes most initial impact on the business's efficiency