Face Masks Must Be Worn!

CONSTRUCTION SITE

8 steps to future-proof your construction firm

How construction firms can learn from the coronavirus crisis and future-proof their business

Produced by

Construction News
CN

In association with

Deltek

The shock of the lockdown

The construction sector had earned a reputation for slow adoption of digital technology well before the COVID-19 pandemic brought this tendency into sharp relief.

The sudden national lockdown of March 2020 came as a shock that forced most in the UK to embrace digital communication. The next immediate task was to roll out new operating procedures, to try to maintain productivity in the face of unexpected challenges.

While construction sites closed in Scotland, most projects either carried on or rapidly resumed across the rest of the UK, once it became clear that Whitehall expected building work to continue.

However, safeguarding employee health meant wide-ranging reassessments of what could and could not be done on site. The need for social distancing between individuals, and to keep teams coordinated, placed a strong new emphasis on organisation, collaboration and scheduling.

> "The dangers and drawbacks of obsolete working practices have been laid bare"

Companies that lacked the ability to efficiently share information, to assess progress in real time, or to manage their projects remotely, soon found their ability to operate severely curtailed.

To some, the above is a huge under-statement. "If people haven't got anywhere near doing their digital transformation then they haven't got a chance in hell," is the blunt assessment of Malcolm Clarke, managing director at regional contractor Baxall.

The dangers and drawbacks of obsolete working practices have been laid bare, while the benefits experienced by early adopters of modern digital processes have also been dramatically showcased by the COVID-19 pandemic.

> "Social distancing between individuals placed a new emphasis on organisation, collaboration and scheduling"

This whitepaper will assess how well prepared the industry was for the disruption brought by the pandemic, and how digital technologies helped firms continue working. It will also illustrate the steps firms in the sector should take to future-proof their business.

Deltek.

Step #1: Heed the wake-up call

It is a sad fact that the majority of construction firms went into the pandemic with outdated technology in place.

This was despite repeated wake-up calls citing the need for innovation and modernisation. These were delivered by 2016's Farmer Review, *Modernise or Die*; by the 1998 Egan Report, *Rethinking Construction*; and by 1994's Latham Report, *Constructing the Team*.

For years, *Construction News* has offered evidence of the industry's malaise. A host of industry figures have linked a lack of digitisation with construction's core ills, including skills shortages, cost and schedule overruns, and low profitability. We have heard horror stories of companies tackling highly complex projects armed only with paper, emails, spreadsheets and shared drives.

The failure to grasp the potential of digital technology, which can enforce accountable processes, flag missing items and detect impeding errors, left the construction industry particularly exposed as the pandemic unfolded.

This complacency is not limited to the UK. According to consulting firm McKinsey , construction is one of the least digitised sectors globally, trailing behind most other industries including media, finance, insurance, retail and manufacturing.

"Postponing the take-up of digital tech is no longer a reasonable response"

The pandemic has underscored the fact that continuing to postpone the take-up of digital technology is no longer a reasonable response.

Step #2: Get your data into the cloud

Baxall's Clarke says his business was lucky. It had put "pretty much everything you could think of" in place before the nation was thrown into lockdown.

The Kent-based contractor had rolled out Deltek's Project Information Management (PIM) system, as well as a building information management (BIM) system to coordinate its work. "We've got a common data environment, we're in the cloud, so all our systems are server-based," adds Clarke.

His observation highlights the distinction between cloud-based data, which is automatically backed up and shared, versus local data, kept on a laptop or smartphone. Isolated data is much harder to share effectively and is vulnerable to loss should the device itself be lost, stolen or damaged.

The cloud-based approach proved vital. "The office was basically closed and we had minimal staff on site," Clarke recalls. "But we can access the systems on laptops, phones and tablets, so we actually felt in control.

The way the system works means you've got a central database for everything. And therefore, whether it's people sending emails or downloading drawings or sending reports – whatever – it's all very accessible."

> **"We can access the systems on laptops, phones and tablets, so we actually felt in control"**

Step #3: Protect and share corporate knowledge

Like all construction firms, Baxall still faced challenges resulting from lockdown. Interruptions to supplies of vital products and materials became a common problem across the industry.

Shortages of plaster, plasterboard, cement and timber products quickly resulted from plant closures during lockdown, amplified by staff furloughing along the supply chain. Panic buying prolonged shortages even after production resumed.

Buyers at Baxall found the company's Deltek PIM system vital in sourcing materials, sometimes from suppliers it had not used for years. The system had kept details of prior orders across all the firm's projects, including contact details for every supplier and subcontractor. "[Our buyers] weren't scratching around looking on the internet," Clarke says. "They could ring up and say, 'You haven't done anything with us for the last couple of years, but do you know whether you can supply us with a load of plaster?' That database was really, really useful."

Baxall's digital approach also helped bring new team members quickly up to speed. Remarkably, the company has recruited 14 new employees since March, and online learning resources helped them onboard. "It's better if you're sitting next to someone and can show them what to do, but it's not impossible [to do virtually]," Clarke says.

Step #4: Ensure safety and security

Even those companies that had a modernisation plan in place found that the pandemic required a step change in pace.

Digital transformation was well under way at tier-one contractor Costain when the virus struck, bringing with it a sudden need for greater speed. Chief digital officer Nathan Marsh says it took just six days to implement remote working across Costain after the national lockdown was announced. "There were people who weren't on any sort of video conferencing and had landlines on their desks," he recalls. "Within that time, we got an organisation of 4,000 people working remotely effectively."

> ## "Companies that had a modernisation plan in place found that the pandemic required a step change in pace"

Not least among that group was the executive board. It convened at the same time every day for four months during the emergency: "We went from four a month to five a week," Marsh recalls.

But Marsh was adamant that urgency should not trump safety or security.

The sensitive nature of key Costain projects meant digital security remained a major priority even as the organisation adapted. "We had to spend time making sure the network was secure and resilient," says Marsh. "When we're handling client data and data that relates to nationally critical infrastructure, the network has to be secure and robust."

Similarly, while Costain was highly focused on keeping major projects on track, it also recognised the duty of care owed to its workforce. As a result, it accelerated the rollout of wearable technology across its Highways England and HS2 sites, to monitor individual health while also helping to enforce distancing measures.

"You essentially have a network of sensors that will report back to the base station on an iPad," Marsh explains, adding that the vest-mounted array measures vital signs such as body temperature, heart rate and blood pressure, helping to spot those who are unwell. The vest also alerts the wearer if they stray too close to another worker or other risk zones.

"It was about protecting people," Marsh says. "The wearable tech helped us get back to work more quickly without just relying on behavioural change. It's a network of existing technology that is made in the UK, but we brought it all together in a distinctive format. The idea is that if you've got all your kit on before you come onto site, it's another check point where you can stop COVID-19 from getting onto the site.

> "The wearable tech helped us get back to work more quickly"

Step #5: Enable flexible working

The pandemic has led every business to question old assumptions about where people need to be to be productive. A shift away from offices into a more flexible pattern of remote working has been accelerated by the virus.

Hertfordshire-based contractor Ashe was lucky to have embarked on this particular journey prior to lockdown.

Business development director Andrew Morris explains that in

the months before the pandemic, Ashe had outgrown its offices and had considered building a new facility, at a cost of around £2m. Instead, it decided to spend £200,000 to upgrade its IT systems and enable remote working. By cutting ties to the office, it planned to free capacity at its headquarters.

"When the pandemic hit, we were getting towards the end of switching over from our server room based in the office to the cloud," says Morris. "I'd say we were probably 80 per cent ready for COVID. Most people had laptops and we had PIM software and other cloud-based solutions sorted. It's amazing how fast COVID finished off that last 20 per cent. We were probably 20 laptops off, but we got everyone off their desktops and onto a laptop."

Ashe also found that those who had struggled to embrace technology within the business were given the motivation needed to get on board. "Everything is now driven to the [Deltek PIM] system," Morris says. "In terms of compliance, we're now not accepting 'no' for an answer. If someone has done a site report, it might have been on their desktop before, whereas now we don't give them the opportunity. They have to [use] PIM. We can see that the process has been followed. It has definitely sharpened everyone up."

> "In terms of compliance, we're now not accepting 'no' for an answer"

Step #6: Tackle resistance to change

Initial reluctance to adopt new technology is a very common and natural reaction. Cultural barriers to change tend to be strong in the construction sector, where traditional methods are often deeply embedded.

This was one of the challenges faced by Lancashire-based specialist contractor Bowker in its digital transformation. Managing director Richard Bowker says that well before the pandemic, the company had invested in core technologies including PIM software and had rolled out Microsoft Teams and Zoom, but had found its digital tools were not used consistently.

"There were mixed levels of use across the business because we've got a workforce [aged] from 16 up to 78," Bowker says. "Some people don't like change and don't want to use new technology. So, they were using it when they had to, but we weren't using it to its full capacity."

The pandemic quickly brought such matters to a head. The company was already working on a series of NHS projects, but that aspect of its work "accelerated massively" during the crisis.

The urgency of this health-sector work enforced a change in attitude. "You're working 24 hours a day, seven days a week and designing on the hoof with the consultants and the design team," Bowker says. "When information is being issued from all different people at different times, and it's got to be the right information out on site." He adds that the firm's Deltek PIM system proved "ideal" because of its ability to deliver prompt notifications.

As the crisis helped to demonstrate, technology only works to its full potential when it is embraced. "We've had to be a lot stricter on how people are working, in order for the [project] documentation to improve," Bowker says. "If people don't tag stuff or label it, or say what they've been doing, it is quite difficult for people to just find information. We've improved consistency so when we're moving from job to job, everything's the same rather than people doing their own thing. Now, that information is not lost and our processes have improved."

He adds that the result is not simply better communication but greater accountability, something that has convinced even Bowker's old guard. "Some of the people I thought would never like [PIM] are loving it, because they've got people accountable," Bowker says. "We can chase a consultant and give them a hard time because we've got the evidence in front of us: that we asked them for an answer; when [we] asked them; when they promised it; and so on. It's all there."

Step #7: Invest in your team

As Bowker's experience demonstrates, the advantages of digital adoption often become evident even to those who are initially opposed. But those firms that have already invested will know that transformation is a journey not a destination. The pandemic quickened the pace of adoption, but many innovations will remain in place for the long term. "The use of Teams, Zoom, and all the communication tools will definitely persist," says Baxall's Clarke. "It's pushed us into using them more effectively."

Ashe, meanwhile, has appointed a digital transformation lead to drive its future progress. "There's still lots to do, but we've now got a key individual within the business," Morris says. "He's got us really locked into the right thinking."

Morris adds that a key task is to ensure everyone in the business gains the skills to maximise return on technology investments. "There's so much on our systems [...] that we don't know how to utilise," he says. "The last bit of what we need to do is better training of our staff."

Employees at Ashe are now benefitting from "bite-sized lessons" rolled out by the firm's new digital champion. "We spent a lot of money and there's still a bit of money to spend [on digital transformation], but actually I think training is that final part of the jigsaw to make sure people feel comfortable with the systems that we've got," Morris says.

> "The pandemic quickened the pace of adoption, but many innovations will remain in place for the long term"

Deltek.

Step #8: Prepare for uncertainty

Construction companies willing to embrace digital working have seen a wide range of benefits during the pandemic. They are also better prepared to weather future disruption. However, Clarke notes that blinkered thinking remains widespread in the sector.

"The problem that the industry has is that they think the way they've always been doing things is the only way," he says. "You hear someone say: 'I don't do BIM because the client hasn't asked for it'. Well, [no], BIM actually makes *you* more efficient. You get better information and you get it right first time, reduce your costs, take the risk out."

Clarke says he hears similar arguments against PIM systems, from those content to muddle through with error-prone processes, where key knowledge is lost whenever an employee leaves. "They say [...] it sort of works. But we know it doesn't. People are losing bucketloads of money because they keep losing their information and don't have it in the right place at the right time."

As a result, Clarke warns that the lessons of the crisis may have come too late for some. Battered by twin challenges of COVID-19 and Brexit, ill-prepared firms face collapse. "That was going to happen over the next five or so years anyway, because people were falling further and further behind in a two-speed industry," he observes. "What's happening with COVID is it's just accelerating that. My fear is that we're going to have a massive cull."

Nick Nieder, director of product management at PIM provider Deltek, also predicts that the economic slump caused by COVID-19 will compound the problems faced by those yet to adapt. "As we come out of the pandemic and we roll into the economic stress that has been caused by this, organisations are going to look hard and fast at themselves, because not only are they going to have to be safe from a systems-of-work perspective, they're going to have to be more efficient," he predicts.

"Undoubtedly, there are organisations out there that are match-fit digitally, but I think that as a sector construction is less prepared," Nieder adds.

Of course, rolling out new technology comes at a cost and many may argue that today's economic pressure means investment should be postponed. For Costain's Marsh, that argument is flawed. "You can look at the counterfactual and ask, 'Can we afford not to do this?'," he says. "Costain has its heritage, but it doesn't have a right to be a leading UK infrastructure deliverer and operator. We have to earn it. So we and others have to keep on top of bringing in the latest technologies and ways of working, otherwise we won't survive."

Conclusion

The warning issued in 2016 by the Farmer review – *Modernise or Die* – is familiar to many within the construction industry. But for most, the message did not translate into galvanised action; it has proven too easy to procrastinate.

In 2020, the unexpected arrival of COVID-19 demonstrated that Farmer's warning was not an empty threat. The future is unpredictable and the need to become more flexible and resilient has been brought starkly to the fore.

Testing times offer harsh lessons, but the pointers offered by the pandemic are clear. Early adopters have shown that digital technology can protect and empower businesses, support their productivity, and brace them for future uncertainty. It would be foolish to ignore the many positive lessons of the pandemic.

> **"The need to become more resilient was brought starkly to the fore"**

Deltek.

Better software means better projects. Deltek is the leading global provider of enterprise software and information solutions for project-based businesses. More than 30,000 organisations and millions of users in over 80 countries around the world rely on Deltek for superior levels of project intelligence, management and collaboration. Our industry-focused expertise powers project success by helping firms achieve performance that maximises productivity and revenue.

If you want to learn more about how Deltek is helping construction firms improve efficiency, drive productivity and reduce risk, click here.