

Tech firms that embrace construction will reap the rewards

Construction firms are under acute pressure from external market forces, with some only just keeping their heads above the water. As well as traditional market solutions, tech startups could provide a way to stay afloat.

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Over 4000 construction firms in the UK have already gone under this year (*Construction Europe*). At this point, the consultant's advice would be to restructure: Cut jobs, remove nonessential services and batten down the hatches. But, there is an opportunity here for the tech industry to step in and throw these firms a lifeline.

The problems facing construction are not of its own making. Persistent inflation has increased the cost of raw materials and labour. High interest rates have choked large infrastructure and residential projects. House building has been declining at its sharpest rate since 2008-9 (*Reuters*), and remote working means the need for more office space is declining.

Construction has often failed to capitalise on emerging technologies. But the industry can modernise itself. It can do this by embracing emerging tech and forming strategic partnerships with startups to drive innovation. Instead of cutting jobs, construction can then cut the time spent on administrative and repetitive tasks, stabilising balance sheets.

A historically strong sector

As well as the benefits for construction, there is also an opportunity for tech. The construction sector has historically been resistant to innovation, ranking at the bottom of 10 surveyed sectors in Yooz's *Technology in the Workplace Survey*. This means that the industry is a fresh pasture for ambitious tech firms to come into and reap the rewards.

Specifically, I'm thinking about Artificial Intelligence (AI) and Machine Learning (ML). These technologies have the potential to reduce workloads and increase productivity across the various stages of construction.

During tendering, the technology can review plans, measure up drawings and apply rates for costing. In design they can produce drawings which are repetitive such as steel frame systems (SFS). AI could complete 20-60% of the work. Humans can then step in and provide the finishing touches. AI systems can also streamline and accelerate procurement processes by identifying the most competitive prices on the market. In health and safety, they can identify and flag risks before plans are put in place.

To get there though, tech startups must proactively throw themselves at the construction industry and capitalise on the sector's downturn. For those who get there first, the potential returns are large. Construction is a massive industry; the EU's construction revenue amounted to roughly 1.7 trillion euros in 2020 (*Statista*). If your startup provides the AI system that's used for supply chain management across the EU, then that's a serious cash cow.

A future proof sector

Understandably, construction workers might read this and think, "it's time for a career change because AI's coming for my job." But construction will

always need core human skills, like relationship building, and taking the temperature of stakeholders to react to problems quickly.

In fact, there are countless examples where human based interaction is still absolutely essential in construction projects. In tendering and procurement, you need face-to-face negotiating and relationship building skills. On site companies are in constant coordination with other contractors to ensure works are programmed and sequenced in the right order. These are fundamental skills that are required in construction, and AI still has a long way to go before it masters them.

Instead, AI should be a tool for construction workers – not a replacement. Augmented reality improves coordination between trades on site to visualise workspaces before construction begins. The workers on site can then inspect the digital building, look for flaws and make recommendations before beginning work.

The human site team is still at the centre of the process to make key decisions and tweaks to the work. AI just gives them the capability to identify and flag problems more effectively. This can drastically improve sequencing, programme durations, quality, and health & safety. All of which, when done correctly, drastically reduces costs.

For the company accountants, the kneejerk reaction is that onboarding new technologies will increase the costs. They will need to train employees, pay for software developers, and redesign established processes. With prices rising and customers declining, investing in emerging tech is less and less appealing.

Forming strategic partnerships with startups can provide the long-term sustainable growth that they need. Tech startups need to market themselves to the construction industry. And construction needs to embrace the technologies they're offering. If executives from both sides

think of the long-term benefits, then both industries will reap the rewards.

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