

COVID-19 Spurs Construction's Use of Technology



The coronavirus pandemic has forced construction companies to adopt new and readily available technologies, and that adoption will continue both in the short term and post-pandemic long term.

In the long term, there will be increases in tech investments and the use of digitization, building modeling systems, off-site construction and sustainable building materials.

The pandemic has helped contractors to realize how efficient and fast online platforms can be, especially with the ongoing shortage of skilled labor and fewer workers being able to be on a jobsite at any given time.

The pandemic has essentially thrown contractors into the construction technology deep end and proven the effectiveness of digital workflow management software, progress tracking in real time and advanced schedule optimization, all of which are projected to increase in usage and investments.

Designers and engineers rely on digital collaboration tools like BIM even more now. Additionally, leading contractors are using 4D and 5D simulations to optimize scheduling of workers and shipments, while digital twins are being used increasingly early on projects and lasting through their commission.

Modular building is more than a speedy option for project delivery. Controlled environments for construction cannot be created onsite, so modular building will likely continue to make more sense in a world of restricted movement and interaction. Off-site construction allows for fewer workers as well as lower construction risks, and it feeds into BIM well. For these and other reasons, expect a gradual increase in off-site fabrication.

Since the pandemic began, technologies also have evolved. Technology companies have introduced products like tech wearables and AI sensors to detect when workers do not maintain social distancing practices or to limit a workspace to only a handful of workers. Other new practices, such as virtual site inspections, can enhance safety and shorten the time it takes to perform jobs.

Online communication and collaboration has been crucial during the pandemic, and as the efficiency of working from home has been proven, certain aspects may remain integrated in construction going forward.

United Rentals, the equipment rental company, developed virtual reality simulators to train heavy equipment operators. Now, according to UR's United Academy Director Bal Guerrero, the company has developed remote practical evaluations, and is in the process of validating them with industry associations. Instructors can view forklift operators through mounted cameras and remotely assess if they are prepped for the field. This will continue to be useful when contractors need certifications, but instructors are not available for in-person evaluations. Technology will continue to help the construction industry innovate and come out better, stronger, and more resilient than ever.