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A new technology ecosystem has emerged to streamline and automate manual processes - by Peter Schermerhorn

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Few other industries are as ready for digital transformation as construction. According to a recent McKinsey study, construction remains one of the least digitized industries in the United States, second only to agriculture and hunting. This fact is even more staggering when you stop to consider how infrastructure affects every aspect of our daily lives – from the spaces we live in, to the offices we work in, to the buildings we shop in and the roads we drive on.

This lack of digitization is most clearly reflected in construction's declining productivity. According to the same McKinsey study, globally, construction sector labor productivity growth has averaged 1% per year over the last two years, versus 2.8% for the total world economy, and 3.6% for manufacturing. The inability of contractors to quickly and accurately determine how many workers are on a jobsite and where they're located and to communicate with them in a timely manner represents a substantial inefficiency that can impact productivity, not to mention safety of workers. Most construction companies still use pencil and paper to track attendance, man-hours and safety incidents – crucial, costly information that later must be manually entered for processing and analysis.

A 2016 PWC poll found that the majority of CEOs believe that technology will transform stakeholder expectations of their business in the next five years, with 51% of CEOs making significant changes in this area. Yet compared to other industries, construction has been sorely overlooked by technology providers. Construction sites today look remarkably like the jobsites from 20 years ago – albeit with fancier tools and improved regulations – relying on manual headcounts, visual safety checks and air horns to signal an emergency. This is even more astounding when you pause to consider the incredible innovations that have been achieved inside the structures the construction industry has built.

Unfortunately, the inherent challenges of the construction environment with difficult materials, heavy machinery and equipment, trade activities, and schedules is a big reason the industry hasn't received the attention it deserves from technology providers.

The good news, however, is that a handful of dedicated individuals, general contractors, and organizations are working to bring much needed change to the industry. A new ecosystem has emerged around Building Information Modeling (BIM), mobile applications, project management software, increasingly smart tools, telematics-equipped machinery and wearable technology to streamline and automate manual processes.

Wearable technology, such as Triax's spot-r solution, taps into construction's most valuable resource – the workers – to convert activity into actionable insights. Tools to notify in real-time if a safety incident has occurred and to record who is on a jobsite and where they are located are no longer a pipe dream, but a reality. This is only the first step in the vision of a connected jobsite. Imagine knowing in real-time where your workers, equipment, machinery, materials and tools are onsite and how they're interacting with each other. Construction is beginning to embrace new technologies that prioritize collaboration, communication and the timely transfer of information to build smarter, safer and more productively than ever before.

To reach critical mass, however, and to become fully embraced by the construction industry, technology must be developed with its needs in mind. Building contractors are regularly operating on 1-3% profit margins, demanding schedules and tight competition, so the technology must be practical, scalable and easy-to-use. Solutions that require exponential hardware accessories or that require constant charging or other maintenance activities are simply not practical.

So, how do you make the most out of these new solutions? Invest in basic research. Ask to pilot the product for yourself – if it's not readily available, look for other solutions in the marketplace. Demand technology that is intuitive and provides actionable insights; it's not about adding more data, but getting more from your data.

Finally, technology providers must develop their products with this emerging ecosystem in mind. Contractors don't have the time to flip between 18 different platforms or solutions, and all this hard work will be in vain if solutions don't work together.

It's time to give construction the attention it deserves. Join the revolution.

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