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Construction Quarterly by FORVIS

Jobsite Technologies Can Transform
Your Construction Business

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Construction leaders know just how important it is to have the right tools for the job. When you have the right machinery and your workers are equipped with the right gear, you become more efficient, and your jobs become more profitable. Are you thinking about artificial intelligence (AI) tools the same way?

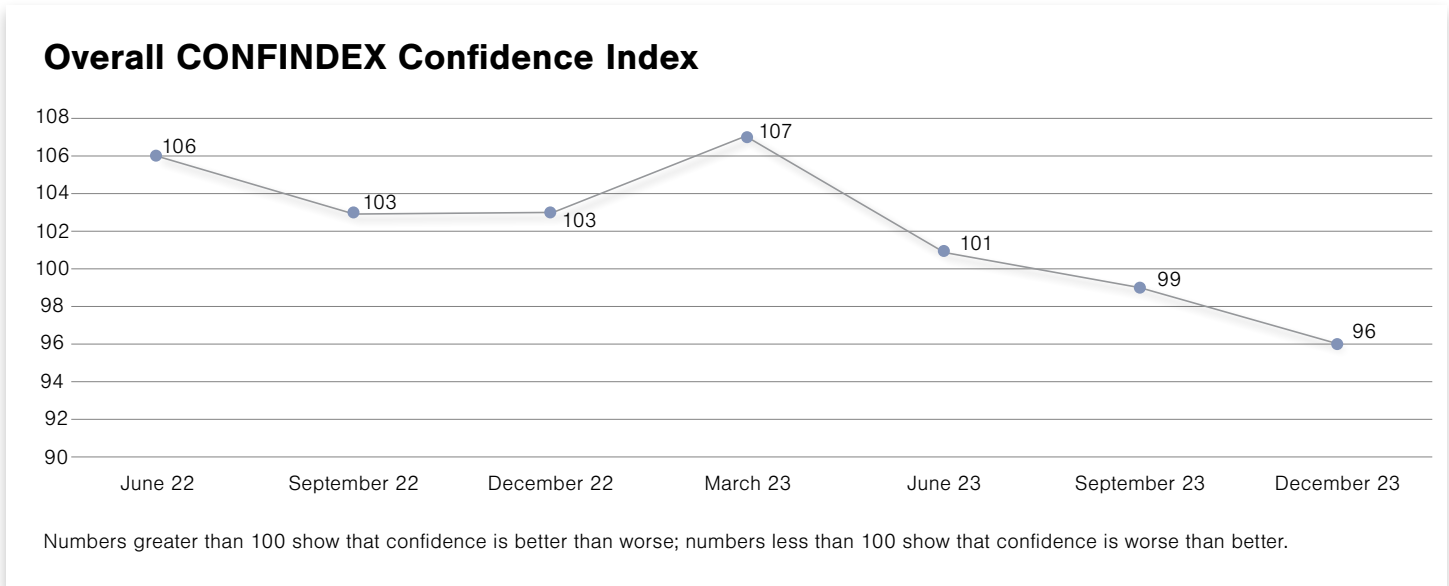
AI Technology Is Reinventing the Construction Industry

Whether you're ready for it or not, AI is the only path forward. AI and other advanced technologies like robotic process automation, drones, and virtual reality will soon be ubiquitous across the industry. Construction businesses that adopt these tools now can build efficiencies that will set themselves apart from the crowd.

We know that it can be difficult to implement new technology when you feel like you're barely treading water. But it's often during difficult times that making changes to your operations and processes is the most impactful. Before we dig into the specific technologies you can consider implementing at the jobsite, let's review where the industry is today so that you can visualize exactly how AI can play a role.

Industry Confidence Is Still Dropping

Each quarter, the Construction Financial Management Association (CFMA) asks construction CEOs and CFOs to rate their outlook on current and future business conditions. The December 2023 CONFINDEX survey shows that construction leaders' confidence has dropped yet again, for the third quarter in a row.



Survey respondents reported that their negative outlook is for some of the following reasons:

Recruiting qualified workers

Contractors are still finding it difficult to fill skilled labor positions. But in recent months, they've also found it difficult to hire non-contract labor like office staff and project managers.

Interest rates

High interest rates make everything more expensive. One of the survey respondents said that "high interest rates are significantly impacting developer's willingness to start new projects."

Acquiring affordable financing

Interest rates are affecting the cost of financing, but banks also are changing their risk tolerance. One survey respondent said that "banks are tightening their criteria for lending, which is making it harder ... to get financed for their project."

Public policy and the environment

Construction leaders see that there is more scrutiny on the environmental impact of construction processes, which creates administrative hurdles that are difficult to overcome.

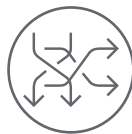
These concerns are nothing new. Contractors are almost always citing labor, interest rates, and policy changes as their top concerns, and we don't expect this to change anytime soon. Fortunately, there may be a solution. If you lean into the AI technologies available to you, you may be able to improve efficiencies in each of these areas.

Automation Technologies on the Jobsite

Of all the concerns our clients have faced over the last decade, access to labor easily ranks number one. You can raise wages, invest in recruiting, and boost benefits, but if the workers simply aren't there, your efforts will be in vain. Instead of looking for ways to reel in more workers, think about how you can get more out of your existing workforce. Automation is the simplest answer. Automation technology is the low-hanging fruit because it is simple and cheap to implement and will almost instantaneously reduce labor costs. Just look at the stats:



Across all occupations—not just construction—**60%** of businesses are able to automate at least **30%** of their existing processes



On average, companies lose **20–30%** of revenue each year due to inefficient processes



Workers spend **520** hours annually on tasks that could be automated

One of the most common automation tools is **robotic process automation** (RPA). RPA is technology that emulates human keystrokes by interacting with other systems and technology automatically. The user establishes a set of protocols that the RPA executes once a trigger is activated. On the jobsite, RPA can help you in the following ways:

- Requesting new materials when quantities get below a certain threshold.
- Tracking equipment in use and equipment available for use.
- Laying bricks in predefined patterns.
- Determining the most efficient way to cut raw materials.
- Updating project calendars when tasks are completed.
- Generating progress reports.
- Scheduling tasks.
- Notifying workers if there has been a change order.

By automating these processes, your workers will know exactly what they need to do, and they can do so as soon as the materials and approvals are ready.

Another tool that can help reduce the strain on your workforce is **generative AI**. Generative AI is technology that builds text, images, or other media using information that it's given. On the jobsite, generative AI can perform repetitive and time-consuming tasks so that your workers can spend time on strategy or on projects that require customization or finesse.

For example, generative AI can be used for real-time monitoring and inspection of construction sites. AI technology that's trained to identify common construction objects—like workers, equipment, and movement patterns—can scan video footage and photos for safety concerns. If workers aren't wearing hard hats or locking safety mechanisms on heavy equipment, AI can send a report to management. Generative AI also can track progress toward job completion; it can make suggestions for improving productivity, generate an overlay on a site plan to show current and anticipated progress, and so much more.

Kathryn Schneider, director of Business Technology Solutions at **FORVIS**, educates contractors on AI solutions and helps them incorporate new technology into their operations.



“ Think of AI like your personal assistant that never hits snooze—it's the caffeine-fueled robot that's always on the go, tackling your to-do list, prioritizing tasks, and automating repetitive work so you can focus on what really matters—keeping your jobsites safe, your workers productive, and your projects financially sound.”

– Kathryn Schneider, Director, [Business Technology Solutions](#)

Where to Begin – Baby Steps

AI can be intimidating, but it doesn't have to be. Automation technology can be implemented more quickly than you think. But before you adopt a full-fledged AI strategy on the jobsite, you can take steps in that direction to make the transition even easier.



Drones

Drones are simple tools with a big impact. Drones can help you perform site analyses and surveys, inventory your assets and machinery, monitor your workforce, and visualize site progress.



Jobsite Cameras

You're likely already using fixed jobsite cameras, but have you considered mobile robots? Mobile robots can stealthily move around the jobsite to monitor activity and collect data. With the information they collect, management can take measurements, monitor progress on jobs, and confirm safety protocols are being followed, all without requiring a human to take a single picture or video.



Bluetooth-Enabled Equipment

Bluetooth devices can cut spending costs on lost or misplaced tools and equipment. Bluetooth tags can be placed on nearly any tool or equipment and can give management a bird's-eye view of where all your assets are at any given time. Not only does this help reduce time wasted when tools are misplaced, but you can verify those tools are being used by workers qualified to do so.



“It seems one constant in construction is change. Organizations that embrace change are better equipped to not only survive through difficult times but thrive during them. One option to navigate these challenges is leaning on technology to make up for shortages the industry is facing.”

– Joel Dzedzic, Assurance Partner, [Construction and Real Estate](#)

AI, machine learning, augmented reality; there are a multitude of technologies that can be implemented on the jobsite. Knowing where to start is half the battle. Reach out to members of our consulting team to chat about your specific needs. Our construction professionals at FORVIS pay close attention to industry advancements and continually look for ways to add more AI technology into the mix to help our clients.

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