# How Construction Technology Saves Time, Money and Jobs

**PROCORE**®

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**Employees once earned as they learned in construction, operating backhoes and deciphering blueprints on the fly.**

Even these days, workers on a construction site have to think on their feet; a quick-thinking employee is a good one to have. Still, employees don't want to run to the trailer to check plans, or carry a laptop around in order to verify they're working off of the latest information. Constantly revising, reprinting, and redistributing paper-based documentation is not only time-consuming and costly, but almost impossible to manage. Emailing with attached spreadsheets and documents isn't much better than a paper-based system; it slows communication and whittles profit. Until recently, the aversion for new technologies might have been holding the industry back, but not anymore. Contractors are seeing the immediate savings they can gain by upgrading.

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# Technology's Learning Curve

According to the 2014 Construction Technology Report & Survey by JBKnowledge, some construction professionals are using the cloud for their mobile solutions, but don't know they have data in the cloud. Many respondents said they don't store data in the cloud, but admitted later in the survey to using smart phones, tablets, web-based emails, and solutions like Dropbox or Google Drive for their work.

From 2013 to 2014, the digital tools that saw the greatest adoption were field data collection, building information modeling (BIM), and customer relationship management (CRM). In addition, since 2016, the United Kingdom has mandated contractors use BIM Level 2 for all large government projects, a directive that will necessarily ramp up adoption of that tool.

"Contractors over there are all in with BIM," says Carol Hagen, a Phoenix-based construction industry consultant who owns Hagen Business Systems. "Which means the expertise contractors gain on those government contracts will be marketed to private owners who will increasingly adopt BIM."

But the average construction industry decision-makers should concentrate on the primary cost-minimising tasks they want the software to accomplish, experts say. Technology in construction is not just about software, Hagen says. "It's about sustainability and increased efficiency."

Despite these adoption inroads, some industry leaders are still not taking advantage of the possibilities of mobile technology. "The construction industry is using the technology, but ignoring whole new approaches that could replace Excel spreadsheets, Word documents, and email chains," says Todd Dawalt, a Lexington, Kentucky-based leadership consultant who runs Construction Leading Edge.

Document and drawing collaboration platforms are widely used, but not universal, says Paul Wilkinson, a London, UK-based construction technology writer and analyst blogging for ExtranetEvolution.com. "Email still retains a strong hold in many organizations, and tools such as DropBox are sometimes used for simple file sharing. Version control and management of audit trails is not easy if companies rely on email and simple storage solutions," he adds.

"This (UK) mandate has hastened the industry adoption of BIM; some private sector clients are following the government line, too. It's now just a matter of time before BIM becomes a normal part of project delivery," Wilkinson says.

## 02

# Building Trust in Construction

**TODAY'S HIGH-TECH SOLUTIONS SEEM TO BE CREATING MORE TRUST AND EMPOWERMENT AMONG EMPLOYEES.**

The 2014 report showed an increase in firms willing to buy smart devices for their employees to use for work. Today, that practice seems to have paid off in spades.

It can be reliably described as an act of professional trust when a firm gives a tablet or smartphone to a worker with instructions to learn how to use it. In doing this, the firm is showing the employee can be trusted with arguably complex and expensive equipment, and that there is value and merit in teaching the employee new skills.

"When people trust their leaders, and they know that their leaders trust them, it's pretty amazing what happens," Dawalt says.

Smartphones and other hardware provided by firms aren't just for site managers anymore, says Rob McKinney, Atlanta-based main contractor known in the industry as the "Construction App Guru."

"I was in a meeting this morning and two of the tradesmen had their iPads out and were looking at plans," McKinney says.
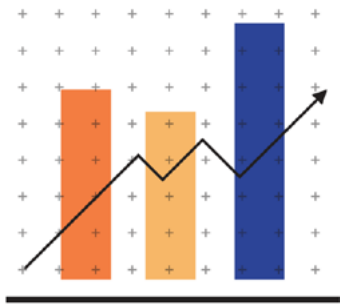
"Widespread adoption of smartphones and tablets across the construction supply chain has driven the development of new applications to help workers access project information anytime, anywhere," Wilkinson says.

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>
> **TODD DAWALT**
> CONSTRUCTION LEADING EDGE

The savings realized by contractors through digital productivity-assists— the elimination of design mistakes and rework, streamlined workflows, and better communication— mean there are extra resources available to invest in their IT departments. Those benefits should further accelerate adoption of new technologies. McKinney has seen foremen using smart devices updated with construction management apps on many work sites, and thinks pricing could have something to do with it. "Tablets are much cheaper to buy than laptops, and that is driving their increased use on work sites," he says.

It could also be that the writing is on the wall. Contractors know it's crucial to keep projects on schedule and on budget. Increasingly, the competitive construction space is seeing a more commonplace use of these new digital tools, fueling still more adoption by contractors wishing to avoid working at a competitive disadvantage.

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# Managing Risk

Mobile technology is increasing accountability and bettering risk management by providing more insight into the hourly tasks of workers, JBKnowledge co-found-er James Benham says. "Mobile tech provides tools to capture intricate data for review, safety, and accountability. Now everyone can operate from the same synchronous set of plans or the same 3D model without having to stop work and match hard copy versions. That's a first for many in the construction industry," Benham says.

Technology is being used to create safer working conditions, sometimes even before the project begins. "I've seen firms use a jobsite video stream equipped with Machine Learning to analyse safety and efficiency," Hagen says. "I see that done in the pre-construction phase, too, where they're identifying potential hazards."

Construction technology is all about working safer, and with greater efficiency. McKinney says he likes Procore's ability to consolidate project tasks. "Procore offers construction users a great platform to store, share, and manage plans. They also have a great mobile app for tablets and smartphones, with an intuitive a dashboard that shows team members items such as outstanding RFIs, who is sitting on submittals, and other critical real-time details" McKinney says.

Hagen says Procore's user interface is exceptional. "People in the field want ease of use. If you need more than three clicks to get to what you want out of a mobile app, it's too deep," she says.

Robbins | Reed, a CA-based contractor, found Procore for iPhone while looking for a tool to manage snag lists in the field. After a demonstration by a Procore rep, Robbins | Reed co-owner Grant Robbins was sold.

On one of the first projects managed with Procore, Robbins | Reed's

> **"We knew what the other programs could do, and they wanted more money and were harder to use."**
>
> **GRANT ROBBINS**
> ROBBINS | REED

project manager was amazed at how the software shortened the punch list completion time.

"Procore allowed the project manager to stay on top of the subs to get that work done without all the manual phone calls and emails. The subs got tired of getting the automatic reminder emails from Procore, and got their work done to stop the emails!" Robbins says. "We love the RFI process and the Submittals Tool—and adding subs doesn't cost us any additional money."

# PROCORE

Procore manages your projects, resources and financials from project planning to closeout. Our platform connects every project contributor to solutions we've built specifically for this industry—for the owner, for the main contractor, and for the site manager. Our App Marketplace has over 150 partner solutions that integrate seamlessly with our platform, giving you the freedom to connect with what works best for you, even if we don't build it. The ability to easily communicate across disparate teams makes it easier to work together by eliminating silos and establishing a single source of truth. It's how Procore gives your team access to everything they need to know to get their job done.

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