

THE MOBILE OFFICE

Accurate, relevant data in the field is key to staying competitive

John Chaney

Imagine this scenario: a team of highly skilled electrical contractors are working feverishly to complete a new commercial building install when a conflict arises.

The site's project manager sees some electrical boxes that have been installed and says they are in the wrong place. The electrical contractor's onsite project manager assures him they are, in fact, in the correct place. Each side pulls their paperwork as work grinds to a halt. Each side's set of revised plans shows a different placement for the boxes and, all of a sudden, the entire electrical layout is in doubt. Calls are made, emails are sent, but the answers do not immediately come.

The electrical team's workers, unable to complete their assignments, are sent home. A day's work is wasted. When the answers do come, there is still doubt, and paper plans and change orders need to be looked at closely again. A second day's work is halted. Then a

third. Deadlines are missed and the overall project is significantly delayed before the problem is resolved.

For decades, this has been the accepted scenario under which construction projects have operated. Delays are expected; miscommunications and errors are par for the course. However, in today's competitive construction market, successful contractors have realized that this once-accepted scenario has to change. Projects need to run faster and more efficiently; data needs to be readily accessible; errors need to be minimized; and conflicts need to be hammered out quickly to keep the pace moving.

The most critical part of a construction project is the data. For the project managers and workers onsite, construction data needs to be accessible, relevant and timely. Everyone on the team—from project manager to subcontractors—needs to be working from the same set of data. It needs to be presented in ways that

make sense to different teams, departments or individuals, and the information needs to be available whenever and wherever it is needed.

Technology in the toolbox

Mobile technologies have played a large part in advancing this new approach to the jobsite. It really began more than a decade ago with push-to-talk devices and, today, has expanded to tablet devices, smartphones and mobile apps that allow those in the field to see, share, enter and update project information in real-time.

Many companies are moving into the cloud to accelerate and streamline workflow. With true cloud computing, the web is the platform that provides data processing and storage capabilities, all without the need for upgrades to workstation or third-party applications for remote access. Everything needed is accessed instantly from virtually any device that can launch a web browser.

For contractors, this means critical project data can be right at their fingertips, and this can give him a significant competitive advantage. One company may still depend on reams of paper plans and specs in the field, and email or even messenger to communicate, while the other company is seeing its projects progress at a faster clip, with fewer delays and errors, simply because it has immediate access to accurate information.

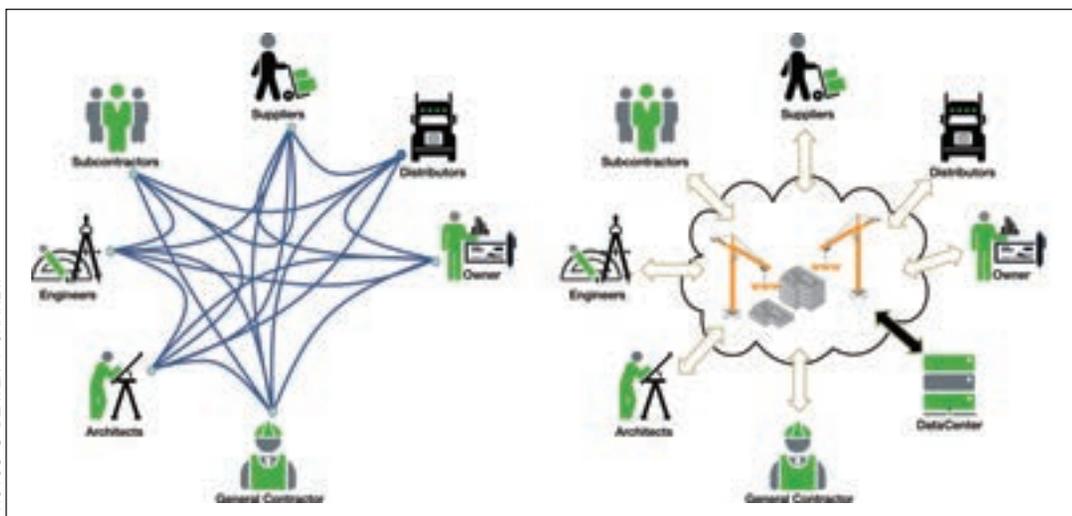
Workers in the field today can use a tablet to check the latest revisions to plans and specs online should a dispute arise.

Materials and equipment can be ordered when they're needed with a couple of taps of a mobile app. Detailed financial information can be accessed or updated by the project manager in the field using a browser, instantly connecting with the office to ensure that cash flow, project status and revenue projections are up-to-date and on track. Payroll and labour information can be entered in the field with a mobile device to ensure that hours are entered correctly, or employment issues resolved effectively.

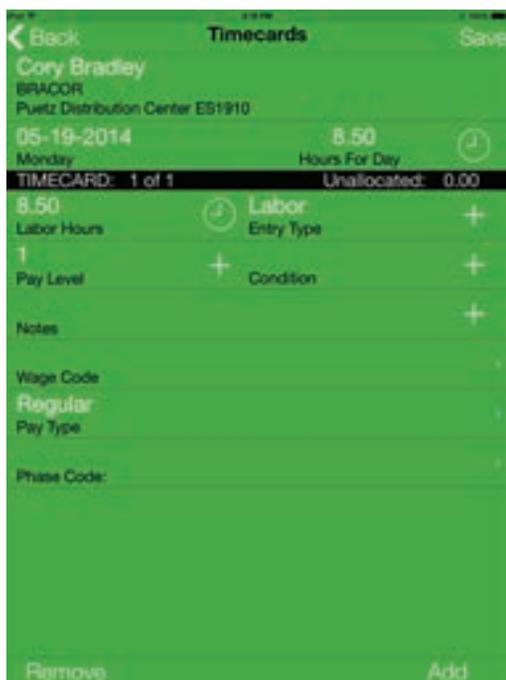
This 'mobile office' approach has helped provide contractors the tools they need to complete the work at the pace at which it

Continues page 12

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Mobile apps like this one simplify once-burdensome processes in the field, making projects run more efficiently.



With this mobile app, important construction documents and critical project data can be accessed instantly at the jobsite, ensuring the most accurate, up-to-date information is at workers' fingertips.

needs to be completed. It serves to tear down once-guarded walls between the field and the office, between vendors and subcontractors, bringing everyone together in a collaborative environment that benefits both the project and the contractors' bottom lines.

Too much data?

Yet how much data is too much in the field? Does having to access an electronic device, launching the appropriate software or mobile app, then seeking out the relevant information needed to complete a task or process just as cumbersome as paper? Not when the contractor takes the right approach when working in the cloud and making effective use of electronic data.

Construction data needs to be easy to access, easy to manipulate and easy to understand. Otherwise, it will not be embraced by workers in the field. For instance, implementing equipment tracking practices by forcing managers to access a particular software package via remote log-in, then having to click multiple menus to

access information buried deep in a report or a data screen before they can get the data they need... well, that's a bad approach. Even worse is having to access multiple software systems to come up with all the needed data.

Having a mobile app on a tablet that is designed to access only up-to-date equipment data in real-time with as few taps as possible does, indeed, streamline the process. Additionally, having summary alerts and dashboard views accessible to field staff that break down different sets of project information relevant to their work, then providing click-through access from these alerts and views to deeper data, also streamlines the workflow.

It is all a matter of how the information is presented to those in the field. When they have to work hard to get the information they need, when they have to navigate nearly as many screens as they would paper pages, then jobsite workers will abandon digital data in favour of the processes that are familiar to them and have worked (however inefficiently) in the past.

Choosing wisely

Selecting the right devices and software can make or break the transition toward a mobile office jobsite. Similarly, when the right software and devices are in place but there is no commitment or process in place to drive and guide their use, projects will suffer and there will be no ROI on these technologies.

Here are three key considerations when selecting the technologies behind a mobile office concept:

1. The software powering the processes should address all of a company's current needs and be scalable for future growth. Don't pick 20th-Century software for a 21st-Century operating environment. Make sure the software will continue to be supported and updated regularly. Make sure additional third-party functionality, like remote desktop or VPNs (virtual private networks), are not needed for the software to work on mobile devices.
2. For the mobile office to thrive, access to data has to be seamless. Determine how much processing power and data storage are needed, and whether the software vendor will provide these resources or leave it up to you. With cloud computing, there are options for publicly or privately hosting the data, and each comes with its own costs and benefits.
3. Manage mobile devices effectively. Determine whether it makes more sense to provide workers in the field with managed mobile devices or adopt a 'bring-your-own-device' philosophy where employees use their personal tablets or smartphones. With personal mobile devices, be sure to have well-defined policies in place that address data security, appropriate use of personal devices in field and compensation for this use.

The invisible tool

Mobile technology should be an 'invisible hand'—a tool that is a means to the end of completing work more efficiently. Creating an efficient mobile office environment for the jobsite and remote staff not only means making smart choices about technology, but also creating an environment where mobile technology dovetails into the flow of work at the jobsites.

As with every successful change to business operations, the more a contractor invests in planning, preparation and training, the better the ROI realized. Contractors who match their investment in new technology with an equal investment in improved processes are those who enjoy the competitive advantages that new technology can provide. **EB**

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