



Digital tools maximize job site efficiency, productivity and safety

Most field personnel already have a smartphone or tablet. Mobile apps leverage those devices to provide instant access to manuals, diagrams, part numbers and more.

Executive summary

Eighty percent of electricians already carry a smartphone or tablet, according to a survey of *EC&M*, *Contractor* and *Contracting Business* subscribers. Electrical equipment manufacturers and software providers are increasingly providing digital tools that leverage those mobile devices to maximize job site efficiency, productivity and safety. One example is mobile apps that provide instant, one-touch access to manuals, diagrams, part numbers and other key information, so personnel don't have to waste time and money searching for the information online or speaking to someone on the phone. Another example is mobile apps that connect to Internet of Things (IoT) devices in electrical equipment, which enable remote diagnostics and adjustments.

Introduction

Eighty percent of electricians and other contracting professionals use a mobile device on the job, according to a July 2019 survey of *EC&M*, *Contractor* and *Contracting Business* subscribers. Smartphones are the most common, at 95%, followed by tablets (40%).

It's not hard to see why. Mobile devices enable field personnel to quickly access codes and standards, project documents and drawings, and other crucial information from anywhere, instead of wasting time — and money — by hunting for paper manuals or files. In fact, the survey found that manufacturer website tools and apps are used second only to codes and standards website tools and apps when it comes to the digital tools that field workers access from their mobile devices.

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Figure 1

Approximately what percentage of your company's field employees use mobile devices on the job?

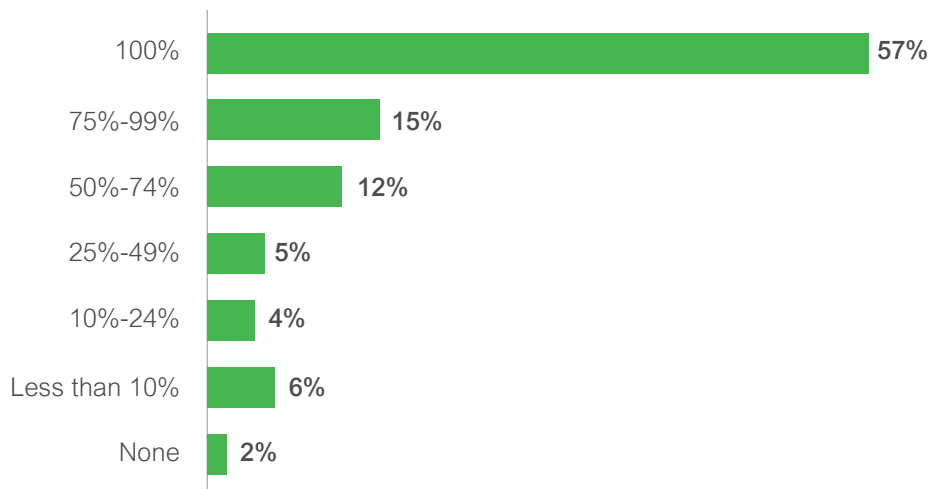


Figure 2

What type(s) of mobile devices do your company's field employees use to complete their job?

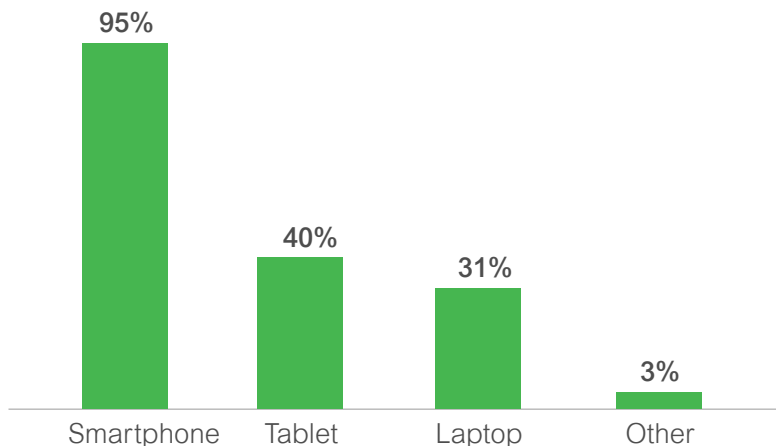
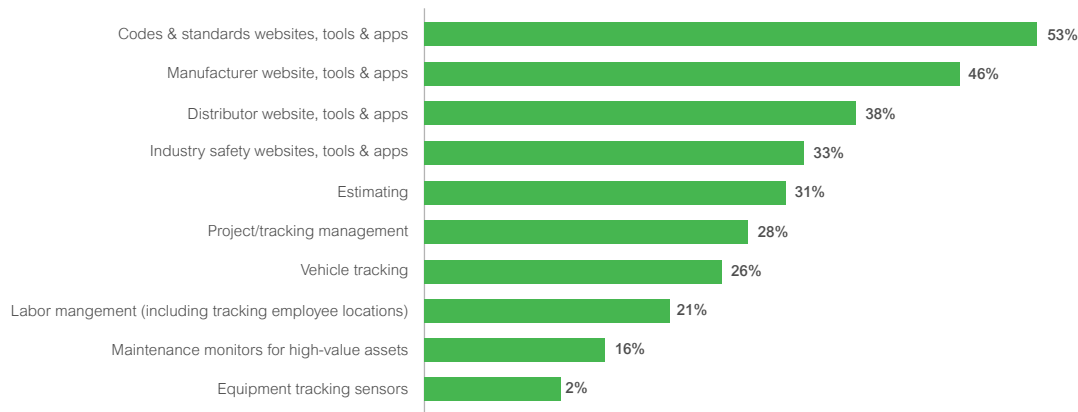


Figure 3

What types of digital tools do you use or require your field employees regularly?



For example, one major electrical equipment manufacturer provides an app for Android and iOS devices that gives field personnel instant access to:

- The manufacturer's entire product catalog, including answers to FAQs, support documents, public prices and more.
- On-the-spot product information by using the app's built-in barcode/QR code scanner.
- The location and contact information of the nearest distributor, so it's easy to order the right product no matter which geographic area you are working in.

Field workers are also drawn to apps that let them customize their experience, such as the information they automatically receive. For example, they should be able to configure the app to provide real-time push notifications about delivery status of critical equipment, updated technical documents, product news and other key information they need to perform their job.

Use Mobile Apps to Leverage the Internet of Things

Apps are also helping contractors who work in plants/facilities be more productive, efficient and safe by leveraging the Internet of Things (IoT). For example, electrical equipment manufacturers are increasingly building sensors, actuators and other IoT devices into their products. Those devices communicate with a smartphone or tablet app so personnel can take readings and adjust equipment settings.

Some of these IoT devices use Zigbee short-range wireless technology. In the case of a motor control center, for instance, personnel can safely review internal component temperatures from well outside the arc flash zone, which minimizes the need to wear bulky personal protective equipment (PPE) suits.

Other IoT devices use Wi-Fi or cellular technology, enabling diagnostics from hundreds of feet or tens of miles away. These provide additional productivity benefits for contractors by eliminating the need for field personnel to visit each site. Instead, they can remotely and quickly determine exactly which equipment needs manual adjustment or repair.

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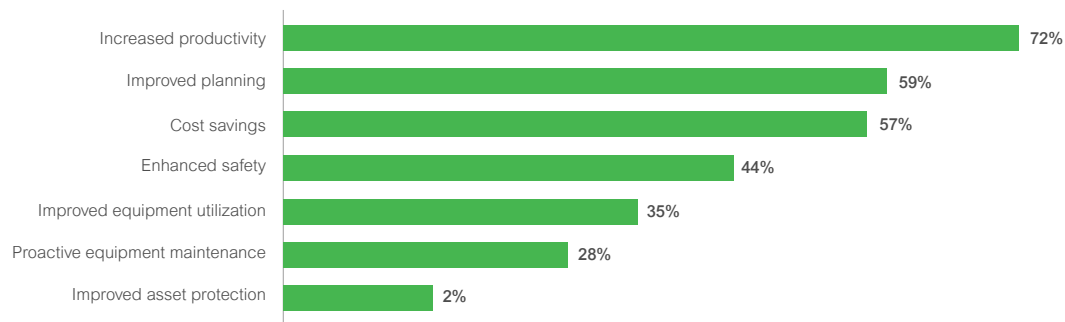
Depending on the manufacturer, some of those adjustments can also be done remotely from an app, potentially saving hours of highly skilled labor that otherwise would be wasted driving to and from those job sites.

Additional Operations & Maintenance Applications

Some apps use the smartphone's camera to scan a QR code label on the outside of a piece of equipment and get instant access to a wealth of information, such as the serial number of a replacement part, installation and maintenance guides, and wiring diagrams. Additionally, maintenance teams can create a collaborative environment to capture maintenance records and service technicians' notes, and generate a service report for the owner. This information helps with tasks such as proactive equipment maintenance, which 28% of *EC&M*, *Contractor* and *Contracting Business* subscribers said is a top business benefit for mobile digital tools.

Figure 4

What are the business benefits of these digital tools?



Apps can also be configured to automatically receive information based on location, eliminating the need for scanning QR codes. For instance, when an electrician arrives at a customer's factory, her app automatically receives information such as terms of a service-level agreement. Having that kind of information at her fingertips helps her work more efficiently, which also maximizes customer satisfaction by minimizing equipment downtime.

This type of location-enabled app could also provide a list of the types of readings to collect at each customer job site, such as and electrical usage. This information is key for understanding energy consumption — and opportunities to optimize it.

Mobile apps will get even better with the rollout of fifth-generation (5G) cellular technology, which is capable of multi-gigabit downloads. That additional speed will enable even faster access to high-resolution documents such as CAD files and blueprints, wiring diagrams and more.

Finally, digital tools provide employers with additional ways to create and enforce safety policies. For example, mobile device management (MDM) software lets contractors remotely disable distracting apps such as social media and personal email accounts when employees are working. These parameters can be based on time, such as when employees are on the clock, or by location, such as the GPS coordinates for a customer's job site. MDM software can typically be used for both company-issued smartphones and personal phones that employers allow under a bring-your-own-device (BYOD) policy.

How to Get Started

To start leveraging the power of mobile digital tools, consider [Schneider Electric's EcoStruxure Facility Expert](#). This cloud-based building management software and app helps optimize operational efficiency and expand your business with preventative maintenance and enhanced energy service offerings. *EC&M* group editorial director Mike Eby recently named Facility Expert as [one of his top picks for mobile apps and software](#).

Another good choice is the [mySchneider app](#), which provides anytime, anywhere access to the complete Schneider Electric catalog and the location of the closest Schneider Electric distributor. The app also makes it quick and easy to find product information by using the built-in barcode/QR code scanner.

Electrical professionals say mySchneider maximizes productivity and efficiency. For instance, in the Google Play store, users says it's "readable, and very informative," with "everything in just one app, incredible," and "Awesome app. Finds you a lot of information and documents" that's the "Best way to connect with Customer care and services."

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