



How **Mobile-Based** Construction Software **Increases Productivity**



How Mobile-Based Construction Software Increases Productivity

Answered in this guide:

- What are the obstacles to productivity?
- What are different types of software available?
- What are the top five areas that mobile-based software increases productivity?
- What are some long-term benefits of mobile-based software?

Two of the major challenges in the construction industry go hand in hand: Productivity and Labor Shortage.

According to research by McKinsey & Company, construction productivity has increased only 1% over the past 20 years. Compare this with other industries where productivity in manufacturing, retail, and agriculture has grown by 1500%. Additionally, the Association of General Contractors reports that 80% of construction businesses are having a hard time finding qualified, skilled labor. This combination creates a dire situation.

Construction businesses need to leverage their labor as efficiently as possible and maximize their productivity. To improve labor productivity, many construction businesses are turning to technology so that their teams can work smarter, not harder. It may sound cliché. However, the availability of mobile devices and advances in construction software has opened the doors to significantly advancing productivity in the field.

Manual processes in the field and the disconnect between project team members are the biggest barriers to field productivity. This guide will walk you through how you can eliminate those barriers and see the promised land of project profitability.

Part One:

Obstacles to Construction Productivity

When we look at how automated our lives are today compared to 20 years ago, there are stark improvements. Think of how quickly items purchased online arrive on our doorstep. Or how online banking and automated payments has made paying bills quick and easy. Digitization and the adoption of technology have made improvements in many industries. Unfortunately, the construction industry has been slow towards the adoption of technology, which has hampered any efforts in making the same strides in productivity.



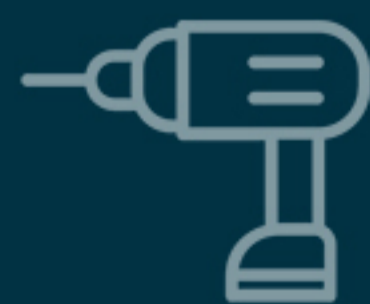
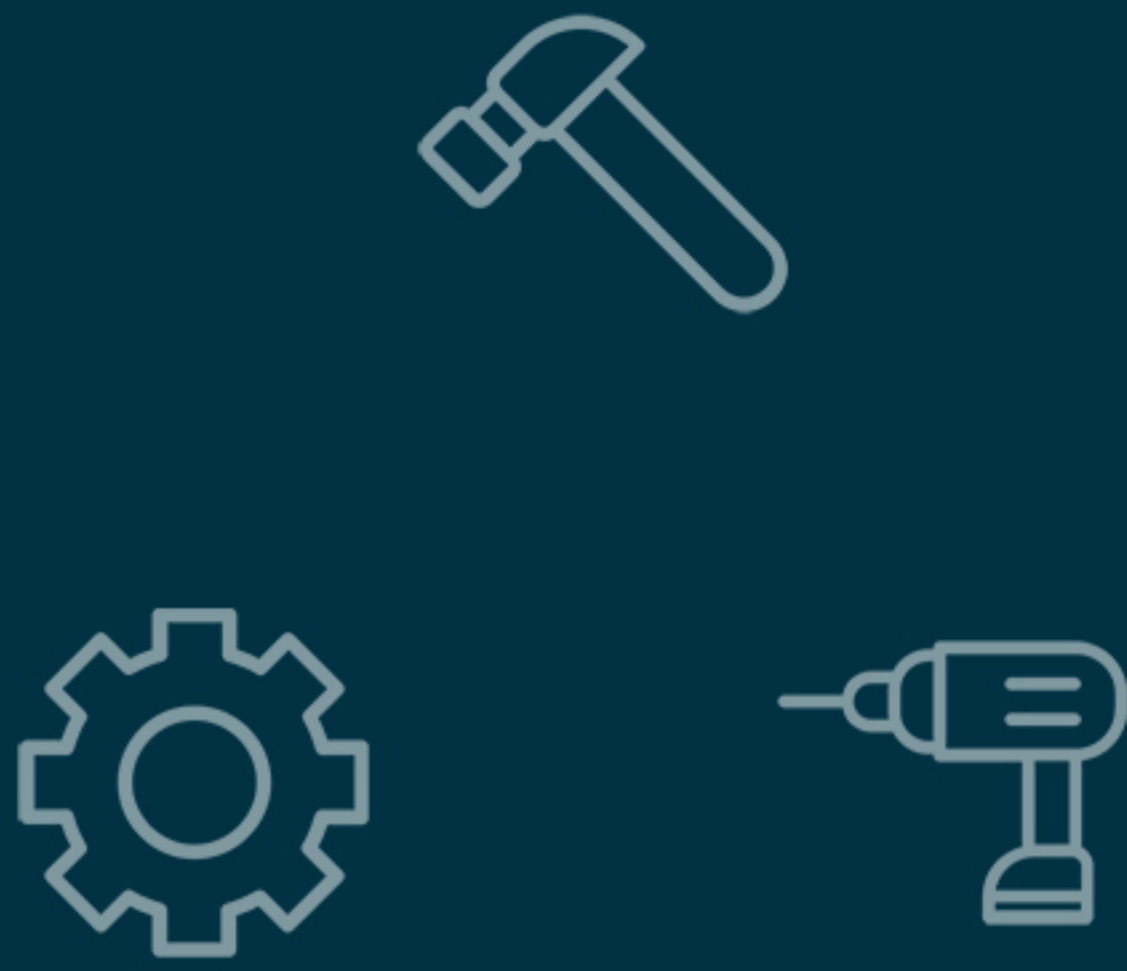
Working in Silos

On a project, there are many different stakeholders managing competing priorities. Foremen spend the majority of their time on the jobsite managing the tasks of their crew. Project managers are responsible for project success and profitability. They split their time between the office and the field. The Accounting team manages all billings and payments. Those are just the project stakeholders within one company. There are other stakeholders including owners, architects, general contractor, other subcontractors, and suppliers. Each one works in their own silo, and struggles severely to obtain information.



Manual Processes

Completing paperwork or updating spreadsheets are tried and true processes that many construction companies are built on. These manual processes are riddled with inefficiencies. It causes delays in communication, lost paperwork, or re-entry of information. More alarming than the lack of productivity is the negative impact to revenue and increase in costs due to lack of documentation or inaccurate information.



Lack of Technology Investment

In line with the construction industry being the least digitized industry, is the fact that construction companies budget the least on IT expenditures compared to other industries. In the 2017 Construction Technology survey by JBKnowledge, the majority of respondents indicate spend of 1% or less of its annual sales volume on IT. There's a deeply entrenched mindset that technology is viewed as a cost.



Corporate Culture

Construction is one of the oldest industries, and many construction companies have experienced tremendous growth and success without the use of technology. Because of that culture, those in leadership positions are hesitant to implement new workflows or make investments in technology. Contractors are very busy building. If their corporate culture does not prioritize professional training, there will be no time or resources available to learn new technology or processes.



Part Two:

Advancement of Construction Software and Mobile Technology

The advent of smartphones has opened the floodgates for field productivity. Mobile devices now allow foremen to capture details on jobsite activity from the field. But, where does that information go once it is captured? The information is of value when it is shared with the office team—and made actionable. To ensure that your field team can send and share that information with the back office, it is important that you have the right software in place.



On Premise Software

Traditional software deployments utilized a client-server model in which the main processing and storage of information utilized a local server. Users had to download the software onto their workstations, which were the “clients,” to communicate with the server. The software was limited in that it could only be accessed from the workstations at the office. In addition to limits on accessibility, on-premise software required expensive hardware as well as individuals with the expertise to install, configure, and maintain the software and hardware.



Cloud Computing

The development of internet allowed for the transition from on-premise servers to remote servers. Users are now able to access the software regardless of their location through the internet. The management of the servers and software is the responsibility of the vendor. Cloud computing relieves construction companies from many of the challenges from on-premise software. Since the work of construction occurs at the jobsite, the mobility of cloud computing is more ideal. This model saves companies thousands of dollars annually.



Software-as-a-Service

With the ease of accessibility of cloud-based applications, many construction technology vendors are delivering software as a service. Compared to on-premise software, the initial investment for software-as-a-service applications for construction firms is low. Construction firms do not need to purchase software licenses or servers. For a monthly or annual fee, vendors provide their customers access to the software from any location or device with an internet connection.



Web-based Application

Web-based applications are accessible from an internet browser. Microsoft Word is a desktop word processing application in which the software is downloaded onto the computer for the user to access. On the other hand, Google Docs is a web-based word processing application access for the web browser without needing to install software onto the computer. The application is device agnostic and provides the same user experience across all devices. Because access is from an internet browser, an internet connection is required for usage.



Native Mobile Application

Native mobile applications are downloaded from the app store of your mobile devices such as Google Play for Android or the App Store for Apple devices. The user experience for a native mobile app is optimized for the device. Most importantly, mobile apps provide availability to users offline or with limited internet availability. The user can enter and capture information. When the internet connection is reconnected, the information is synced to the cloud.

Part Three:

Construction Software Must-Haves for Field Productivity

Now that we have broken down the different types of software that is available to field workers, let us look at how the software can improve productivity. These are all activities on the jobsite that are drastically improved with construction software:



Photos

Many construction workers take photos as visual documentation of work progression. However, what happens to the photos after is a complete mess. Many photos stay on the phone or are uploaded into a project folder with no notes. It would take hours to search for any relevant photos for internal or external documentation for claims processing. To improve productivity, construction firms should look for a software that allows users to capture photos from the field and enter comments to provide a context or reference. The office team has access to the photos and can search comments for **#RFIs**, **#Delay**, or **#Change Orders**. This provides real value so that the Project Manager can access the photo in real-time to immediately communicate with the General Contractor, Architect or Owner and quickly resolve any issues.



Daily Reports

Many foremen believe the daily report is a necessary evil. It takes them hours to assemble the notes and images at the end of the day to write and submit. They would rather spend their time doing work rather than the paperwork. However, daily reports are a critical piece of project documentation as it captures crew information, material and equipment used, work completed, and other pertinent information from the day. Construction software makes completing daily reports from the field quick and easy. Similar to photos, daily reports are stored in the cloud-based central repository. Without having to travel to the jobsite or incessantly micromanaging the foreman, project managers have instant updates regarding jobsite activity and progress to proactively resolve issues before they escalate.



Time Cards

To improve productivity, you need to track activities related to productivity. However, paper time cards do not accurately reflect hours worked as employees generally round their hours or document their tasks inaccurately. Construction time card software makes tracking time simple as employees can easily clock in, switch tasks, and take breaks from their mobile device. With this information, construction time card software provides managers and workers insights into their progress and efficiency. They can analyze the information to determine the number of hours spent on productive work and non-productive work and the consistent bottlenecks to make any necessary changes. This is also a great way to see which crews are high performing and reward them accordingly.



Project Files

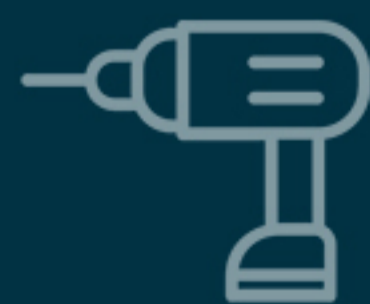
Documentation is central to a construction project. Work cannot proceed without an approved contract, request for information, purchase order, change order and updated plans. Without construction software, the field team is calling and searching for approvals or worse may be working off outdated documents. With construction software, the foreman can easily log into the cloud-based application for quick and easy access to this information to put his crews to work and move projects forward. Because multiple versions of documents arise during a project, it is critical that the field team is able to track revisions accordingly to manage the changes and differences. Having all project data and files in a single cloud-based location will improve the productivity of the field team. No more time wasted in transporting, searching and retrieving critical information.



Task Management

Construction software provides a high level of visibility on tasks and assignments to make employees accountable. Project managers can create tasks along with priorities and due dates in the application. The field team receives the task assignments from the mobile app to increase the team's productivity. With centralized construction management software, everyone can view what tasks are completed, what tasks are not completed, and whom the tasks are assigned to keep everyone accountable.

Construction software improves the collaboration between the teams in the office and the field to improve productivity for all. The office team shares important project approvals, plans, and specs to direct the field team toward value-added activities. While the field team is empowered with a quick and easy way to capture and share jobsite activity in real time to let the office team manage communications with external stakeholders and process billings. Everyone is in sync and collaboratively working together to move project activities forward.



Key Things to Look for in a Construction Management Mobile App:

Easy to Use

The field team is busy and the most resistant to stopping their work to document it. Therefore, it is important the application enable the foreman to capture and enter data quickly. Voice-to-text entry or drop-down menus enable the foreman to enter information quickly. The easier that something is to use the more likely teams are to use the application.

Native Mobile App

Internet service at the jobsite is non-existent or spotty at best. Native mobile apps are important as they provide offline capabilities. They allow the foreman to view project files and capture information without requiring internet connectivity. This provides richer information as the foreman can document the activity, as it happens, to ensure that it is not forgotten. When left at the end of the day or whenever internet connectivity resumes, the user runs the risk of forgetting important details or forgetting to complete the daily report at all.

Syncs with Project Management System

Some great solutions focus solely on field activity. Because the field activity is key to managing a project, to be of any real value, the data must be available to view and analyze by the project manager. The information captured in the field can be used to gauge productivity by units and labor to determine if the project will hit target deadlines and budgets. Software for the field should be part of or integrated into a project management system. The last thing that is needed is for Project Managers to spend their time gathering information and performing data entry.

Part Four:

Long-Term Benefits of Mobile-based Construction Software

Construction software can only provide value when it is used. Therefore, to reap the benefits from construction software, you need to ensure that your team uses the application consistently. Keys to long-term adoption of process change and software implementation is communicating the value to the team.



Collaboration

While construction activity happens on the jobsite, the business of construction happens in the office. It is important for these two critical components of a project to be harmoniously in sync. Mobile-based construction software is a critical piece to ensure the field team has the tools they need to collect, share information, and communicate with the office. Software that bridges the information and communication gap between the office and the field enables real-time collaboration. This pulls everyone out of their departmental silos to prevent any confusion and provide for better coordination of activities. This brings the team together into a culture of collaboration where everyone can work together for the betterment of the project and overall company morale.



Transparency

Let's face it. No one likes to be micromanaged. While this software may seem like a "big brother" solution trying to collect detailed information on what is going on in the field, the purpose is, in fact, the opposite. The software serves as a central repository for all documentation and jobsite activity to loosen the reins and make the field team more empowered than ever. The real-time access to updated project files and task assignments provides clear direction for the Foreman. Similarly, when the Foreman collects detailed information on the field, project managers no longer need to call and email for project updates incessantly. The transparency delivers greater autonomy so that everyone can focus on their assignments versus searching for documents or calling for updates.



Risk Mitigation

In total understanding that the Foreman and the team are very busy in the field, documentation builds the best defense to mitigate risk. Construction software makes documenting and sharing issues quick and simple. Capturing photos, identifying issues, and tracking lost hours and delays delivers, the necessary information to manage projects proactively. With the amount of litigation that occurs in construction and the number of claims that go unpaid in projects, comprehensive and detailed documentation ensures that your company mitigates risk to avoid claims and get paid accurately.



Profit Protection

Most importantly, tracking information and productivity will ensure profitability in projects. Reviewing actuals (labor hours, material usage, etc.) against the budgeted estimates allows for gauging the project progress. Keeping a close eye on this information will enable project managers and executives to make any necessary adjustments to ensure profitability. When we can consistently maintain or improve profitability, this will allow the company to grow and reward employees accordingly.



Conclusion

Mobile-based software improves productivity to set your team up for success. It becomes an important tool in their toolbox. Your field team will be able to automate manual processes to share information with the office team. Improving productivity in the field spills over to improved productivity in the office. All of this sets the stage for being able to deliver projects on time and within budget, which is the promised land for all construction owners.



contact@esub.com
800.493.3782