

The civil
contractor's
guide to
syncing
office and
jobsite
workflows





Connect to greater productivity and profitability

In civil construction, connectivity is a hot topic. As earthmoving projects get larger and more complex, having technology to ensure that information flows seamlessly throughout the entire operation is critical. In fact, it's the difference between keeping projects on schedule and on budget and not.

What is connected construction?

Connected construction creates a single source of truth for your organization. It means everyone on your team has access to the information they need to make better decisions.

Your office and field workflows are connected to ensure smooth handoffs from one activity to another or from the day crew to the night crew. And you have the visibility and control you need to deliver projects successfully and profitably.





25-50%

increase in productivity¹

1. Severino Trucking Co. Inc. builds a streamlined technology-enabled ecosystem

Up to

80%

 faster time to completion²

2. Creative specialty contractor combines teamwork, technology and tenacity

Connecting the office and jobsite delivers quantifiable results

“

The cooperation between office and field has benefited tremendously in terms of dynamics and efficiency. The operators get to work with the latest designs every day, on machines calibrated by our geo team. The office can check progress in real time against the models. Eliminating rework saves time, travel and emissions and is a great first step towards operating in the most sustainable way.”

Jarno de Jong,
Engineering and surveying team manager,
Geo Infra



Connected construction can be compartmentalized into three manageable steps that coincide with key phases of site management within the construction lifecycle. When choosing connectivity solutions, it's important to think about your workflow and the areas where you could benefit from information-sharing, greater visibility and data syncing.





Tip: When choosing a site management solution, look for software that can become your pre-construction hub.

Step 01

Design and estimate

The ability to use 3D designs is becoming standard within construction, and the benefits of using these designs for machine control and site surveying are multifaceted. With design software, you can develop and create accurate, integrated 3D constructible models for any jobsite. Software should include capabilities such as estimating earthwork and

material quantities for bids and takeoff, preparing data and the site for construction and building 3D models to optimize machine control. By transforming field data into high-quality, actionable information, you can confidently estimate projects and efficiently accomplish tasks throughout the construction lifecycle.

Benefits of connecting the office and jobsites

- Create detailed designs for machine control and construction site surveying
- Perform accurate quantity estimates and takeoffs
- Optimize plans for efficient earthworks
- Confidently win more bids

Step 02

Manage

Once the design is complete, having the ability to remotely dispatch that information to the field is a huge time-saver. Historically, each tweak made to a design would need to be manually uploaded to machines, requiring personnel to travel to the site to deliver the update. In the meantime, crews either worked off outdated information, or machines and crews sat idle while waiting for updates. Neither option is good if you're trying to avoid rework and downtime.

Site management software also aids with troubleshooting or support. Accessing machines remotely and

providing training, troubleshooting or support on the fly saves time and mileage. Machine operators can be more confident using technology with remote assistance just a click away. They don't have to stop what they are doing to get the help they need or wait for someone to arrive to fix an issue. Keeping on schedule and budget is undoubtedly a main priority for construction operations. Time spent travelling between sites, fuel costs or machine idling impact the bottom line, as do rework and delays. Site management software alleviates these challenges by boosting productivity across the project lifecycle.

Benefits of connecting the office and jobsites

- Equip crews with current designs for machine control and field surveying
- Reduce travel time, idling machines and fuel costs
- Provide remote assistance and troubleshooting
- Prevent costly rework and downtime



Tip: Choosing site management solutions from a single supplier will simplify communication from the office application to the jobsite and offer the ability to automatically share the same dataset to all parties that need it.



Step 03

Check

Connectivity isn't one-sided. The flow of information must be bidirectional. Data can be automatically sent to machines and survey equipment in the field, and data can also come back to the office to provide timely insight into what's happening with the project. Capturing digital progress of the site is essential for understanding progress-to-plan and providing validation for the work completed. Data is automatically organized based on location, machine parameters and the date and time when activities occurred.

This type of feedback allows for progress tracking between and alongside traditional survey methods. A composite surface of all measured data provides an accurate timeline of what happened and gives an up-to-date visualization of current project progress. This information is essential for determining how much work has been completed on a project and how much remains. Connecting field and office teams within a single ecosystem provides a consistent place to store project data. Compiling all the information into one system turns the data into actionable insights that everyone can access to make better business decisions quickly.



Tip: Look for a solution that provides high-quality, granular data from the site, including device performance, site progress and equipment utilization, in a single dashboard so it's easy to analyze.

Benefits of connecting the office and jobsites

- Manage project-related data and track revisions
- Quickly respond to changes and issues that could jeopardize the schedule and budget
- Create a single source of information for your project
- Improve machine utilization and maximize uptime



When will synching your office and field pay off?

(Hint: From day one)

Typically, construction contractors get information from their jobsite from multiple sources. It's stored and managed on disparate systems and controlled by different roles or departments. This can result in time-consuming file management and many opportunities for error as the information passes from one system to another.

Connecting the workflows of your construction project, from design and estimating through tracking, allows data to flow seamlessly and increases transparency. Visibility into what's happening on site gives you confidence that everyone is working to the correct plan and helps avoid unpleasant and expensive surprises.

When changes occur, you can update designs and transfer them instantly to the machines. Action can be taken quickly to modify plans and coordinate with the on-site team from anywhere, avoiding costly mistakes where an outdated design or the wrong coordinate system is used. This keeps crews and machines up and running—a key step to delivering projects on time and on budget.

Insight into what is happening at the site, along with the ability to compare progress to the plan, enables the team to verify changes and take action to keep the schedule and budget on track.



Site management software

helps ready the project for success right from the start. Accurate information enables for better planning, scheduling and bidding. Retrospective analysis of the data improves strategic planning and future bids. Having access to progress data and as-built information from surveys and machines in near real-time enables you to bill, invoice and track costs reliably and accurately.

Turn obstacles into opportunities

The importance of maximizing the uptime of your jobsite is obvious; unplanned downtime is damaging. It means you're not progressing, and your revenue and profit are on hold.

Connecting workflows across the construction lifecycle with site management software enhances visibility and communication, increases efficiency, provides timely information to support informed decision-making and ensures quality work from start to finish.

The Trimble® site management software portfolio provides design management, progress tracking, data management, remote assistance, site visualization and conformance reporting—giving you the visibility and control to keep projects on track and on budget. This comprehensive portfolio of Trimble technology enables you to choose the solutions that best match your workflow today and scale as your needs evolve.

In a competitive industry, it could be your winning edge.

Contact an authorized Trimble dealer today to learn how the Trimble site management software portfolio can keep you connected to and in control of your projects.

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