


HOW TO SELECT THE RIGHT TAKEOFF & ESTIMATING SOFTWARE FOR YOUR BUSINESS



Great estimators, project managers and site superintendents can do their jobs with nothing more than a pencil, a set of blueprints, a calculator, and a phone. In fact, anyone who works in the construction contract administration, estimating and site management field should be trained to do just that.

But with so much technology out there, there's no reason to do things the hard way anymore.

Construction software and technology can make projects more profitable, improve productivity and deliver better results for clients.

We've come a long way from the early days too, and with cloud-based solutions, it's possible to connect every aspect of every project and every department in your organization, anytime and anywhere.

Better construction management and project outcomes are just a click away, and this guide will help you to find the right suite of solutions for your business.

A WORD ON INTEGRATION AND AUTOMATION

Before we get into specifics, and before you consider a patchwork of solutions from different software companies, there are some important things to consider about integration and automation.

There are many software solutions that tackle niche aspects of the preconstruction and construction management process. But even in today's hyper connected world, it can be difficult to integrate all those different products from all those different tech companies.

With a professional developer and the time to create missing integrations, you could build your own construction specific enterprise management solution – but it's always easier to go with an end-to-end product from day one.

While you're researching your options, be sure to keep integration and automation close to the top of the list. Because whether we like to admit it or not, every time we must do something manually, there's an opportunity for human error. Think ahead too, because you might need additional tools in future, so you should choose a system that already has them in place. Which means when you do need them, you can add them with no additional effort.

Whenever possible, choose construction software that has a variety of pre-integrated modules, platforms and addons, so you can skip the development and integration phase, choose what you need, and get started right out of the box. Because in construction, perhaps more than any other industry, time really is money.

START RIGHT WITH ACCURATE TAKEOFFS



TAKEOFF MUST HAVES:

Everything starts with an accurate picture of the scope of your project.

Without detailed, precise measurement of all the tasks and quantities required to get to final completion and hand over your project, there's no way to calculate, plan or manage successfully.

GPS, survey equipment and on-screen takeoffs help, but combining them all with 3D modelling capabilities, takeoffs from PDF or CAD and advanced data cleanup tools takes digital takeoffs to the next level.

When you're looking for a digital takeoff tool for civil construction, roadworks, and earthworks, look for tools that maximize options and automation. When hardware, software and equipment work together seamlessly, it's easier to keep your projects on track.

- **Accurate measurement and calibration tools**
- **Calculate earthwork and material quantities and generate takeoff reports**
- **Ability to do takeoffs from CAD or PDF**
- **Data cleanup tools**
- **Customizable color coding and mapping**

BUILD ESTIMATING SYSTEMS THAT MATCH YOUR METHODOLOGY

There are a lot of estimating tools out there, but many of them are rigid and limited. When you're forced to work within the limits of someone else's vision, it's easy to run out of options – and customizing readymade estimating software is difficult at best.

Next generation estimating technology allows you to build estimates based on your vision, from first principles.

Import schedules of quantities or create your own tasks and units. Divide work into categories of your choice. Build a pricing library of commonly priced items for fast and accurate estimates.

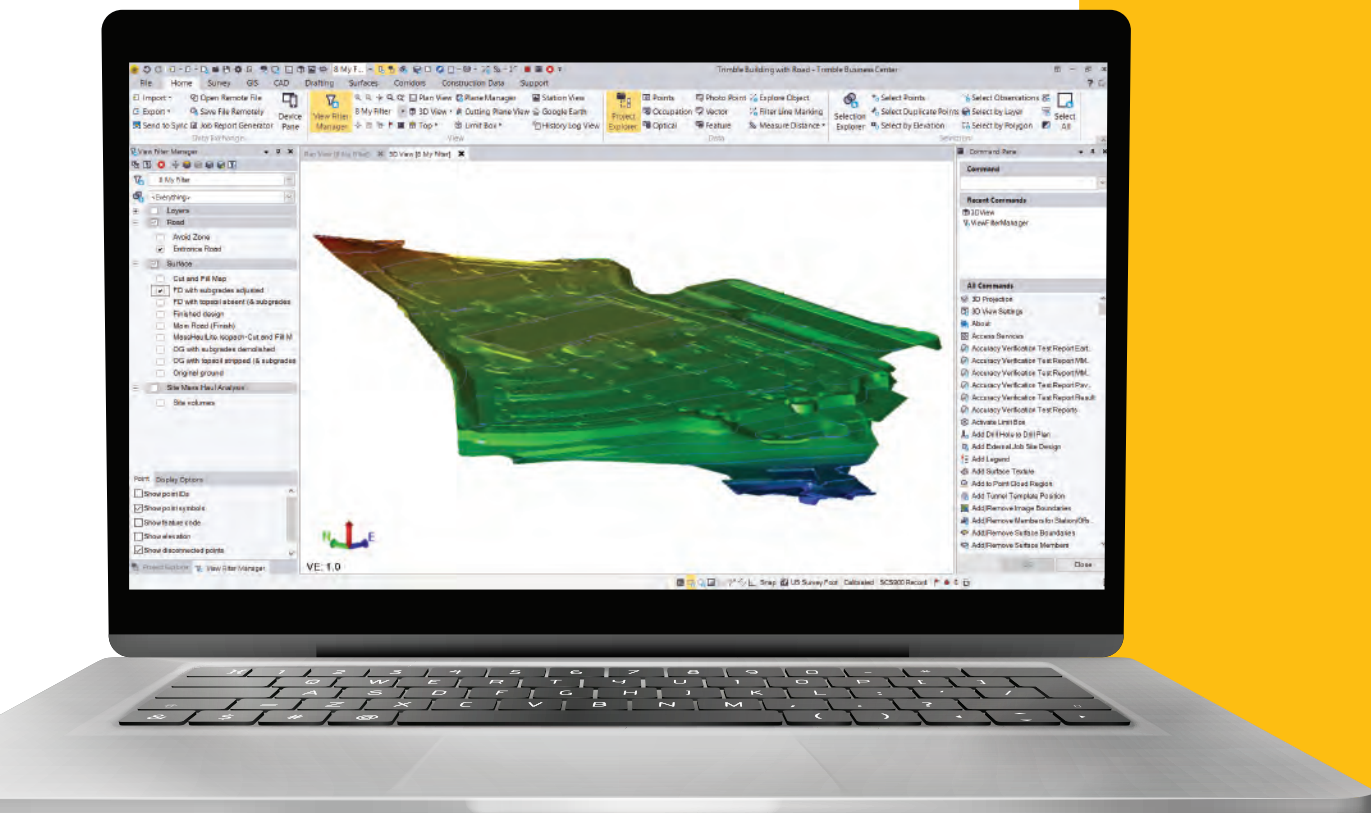
Great estimating software doesn't dictate how you price your projects. It gives you control, and allows you to create your own pricing systems, use your own proven historical rates and calculations, and set up sample projects and workgroups that work best for your company.

While you're reviewing estimating software options, be sure to look for systems that are cloud based and include options to add users. By bringing your whole team on board, you can get real time feedback and approval from all stakeholders, so you can finalize bids, price change orders and update quotes quickly – even when you're working from different locations.



ESTIMATING MUST HAVES:

- **Save, access, and manipulate historical bid and project data**
- **Flexibility to create tasks, items and units based on your own estimating methodology**
- **Cloud based for easy access, with multiuser access for seamless collaboration**
- **Easy reporting and project life cycle management tools**



SOFTWARE AND HARDWARE COMPATIBILITY AND MODELLING



When the bid is won and the contract is signed, there's still a lot to be done before you can get boots on the ground and machines to work.

Choosing a construction software suite that includes 3D modelling allows you to create, process and deliver complex surface models for field devices and machine control systems.

The best construction software options allow you to import data directly from your takeoff, or from CAD, PDF, or other compatible files. Plan your project in detail throughout the full project lifecycle, with real time, dynamic updates as work progresses.

Look for detailed construction modelling tools too. These help crews on site to visualize and plan the work that needs to be done and gives project and contract managers digital eyes on site every step of the way.

When everyone has a detailed understanding of the project and real time updates along the way, it's easier to make the right decisions. Better communications and decisions mean faster reactions, improved productivity, and increased profits.

MODELLING MUST HAVES:

- Accurate measurement and calibration tools
- Create, process, and deliver complex surface models for field devices and machine control systems
- Create surfaces that dynamically update when surface members are added or modified
- Create Roadway Corridors by defining horizontal and vertical alignments and cross section templates
- Import, cleanup, and organize CAD and PDF data with Project Cleanup
- Elevate 2D contours, points, and lines into 3D models

CLOSE COMMUNICATION GAPS BETWEEN FIELD AND OFFICE

Even when construction companies have their administrative processes dialed in, there can still be a disconnect between estimators, contract managers, accountants, and the field.

Sometimes, there are conflicting priorities, or there might just be a communication gap. But when information doesn't filter from planning and management teams to site superintendents and foremen, there are going to be unnecessary costs, delays, and problems.

Which is why, when you're choosing a construction software suite, you need to choose one that not only includes the field but is user friendly and fast to use. Because the number one problem getting field staff buy in to processes and procedures is making sure there's minimal interruption.

Construction software should make less work for crews and allow them to focus on getting the job done.

Look for tools that allow you to export data and surfaces directly to field devices and machines. When you can push important information rather than requiring login, you save time and keep everyone up to date with zero extra time. Good construction software systems can export alignments, linework, surfaces, work orders, pile plans, calibrations and more, so you can have a nearly paperless site office.

Find systems that have granular permission and security options, so you can create different user groups with varying levels of access, read, write, and edit permissions. Then set your crews up to access and update production data digitally.

When estimators and project managers can import production data directly from field reports, it's faster and easier to create accurate, up to date production reports and progress billing. So, you can spot problems faster, and keep a careful eye on project cash flow versus expenses.

Finally, choose a system that sends up to date project information directly from the estimating and project management offices to the field. Which means everyone is working with the latest quantities and scope of work at all times.

COMMUNICATION MUST HAVES:

- **Cloud access so tools are accessible from any device with internet connection**
- **Real time collaboration and information sharing**
- **Granular permissions and access system**
- **Single data storage and access point**

REVISION AND CHANGE MANAGEMENT



REVISION AND CHANGE MUST HAVES:

Construction projects change often. The quantities, tasks, and design that you deliver to your client will never be exactly the same as the project you bid.

Ensuring that changes are communicated effectively to every department and level is one of the key factors to construction success. When you're relying on emails, phone calls and text messages to keep everyone in the loop, it's far too easy for something to fall through the cracks.

One missed change order or client instruction. One failure to schedule a delivery or reschedule a subtrade can add unnecessary costs and delays to your project.

Great construction software takes phone tag and missed emails out of the equation. As soon as your project administration team updates project information, everyone in operations, logistics and on site will know. With a single daily login, everyone on your team is on the same page.

So, look for platforms that are built to handle revisions and changes along the way.

- **Quick and easy tools to model and view various scenarios**
- **Easy project update and analysis tools**
- **Push information securely to all relevant team members**

MANAGEMENT, REPORTING, AND SINGLE SOURCE OF DATA

Getting construction projects done on time, to specification and within budget is hard. Making them profitable is even harder. Every completed project requires the focus, attention, and expertise of many different employees in several different departments.

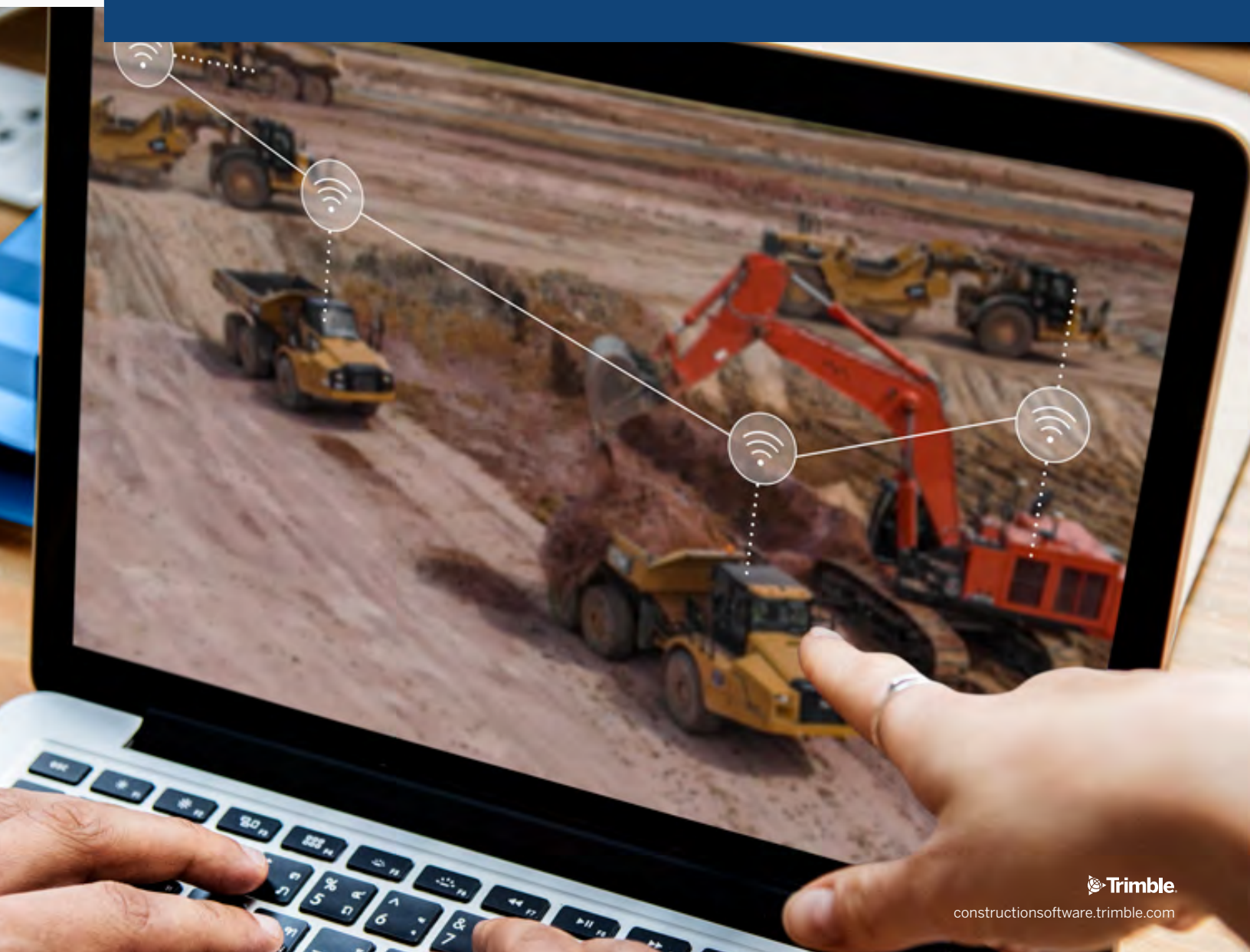
- Estimators and proposal specialists must analyze bids, ask the right questions, and present an offer that the client loves.
- Project managers, logistics specialists, supply chain and procurement departments and operations managers need to get materials, site services, equipment and crews mobilized on time and with the right information, preconstruction documentation and skills to kick off the job.
- Field crews and foremen need up to date project information, instructions, drawings, and specifications to ensure that work meets client expectations and to limit costly remediation and reworking.
- Management across all departments need to track production progress, changes, omissions and alterations to the scope and specification, and make constant adjustments to the project plan.
- Finance professionals and accountants use project data to analyze productivity and profits, and often raise the red flag when delays threaten the bottom line.
- With so many people and priorities involved in delivering successful construction projects, it's no wonder that a patchwork of software and processes doesn't get the job done right.

Human error missed connections and poor communication can derail any project quickly, and it can be hard or even impossible to get it back on track to profitability. Just one badly run project can put even stable companies at financial risk – and do irreparable damage to their reputation.

Choosing a construction software suite that is a single source of data and communication for everyone involved limits mistakes and missed opportunities. It helps to eliminate human error and data entry mistakes and ensures that there are checks and balances built in every step of the way.

MANAGEMENT AND ANALYSIS MUST HAVES:

- **Advanced reporting tools**
- **Built in progress tracking capabilities**
- **Easy information sharing across all affected departments**



BUILD PROCESSES THAT WORK



Whether we like it or not, defined processes are what keep construction projects on track.

You could stick to paperwork, pencils, and calculators, but they're slow, time-consuming, and easy to misplace or overlook. Companies that still do things offline spend more on project management and administration costs, make more avoidable mistakes, and tend to make less profit on each project.

Or you could choose to upgrade your systems, bring everything into one easy-to-use, integrated construction software suite, and bring your processes online.

Companies that use well-designed, flexible, accessible, and user-friendly construction software suites communicate better, are nimbler, and better able to adjust planning and execution when needed and improve profits on every job they do.

Even if you already have systems and workflows in place, take them into the cloud. Because when everyone is working with the same information at the same time, everyone gets better results.

PROCESS MUST HAVES:

- **Standardize processes and procedures across all projects**
- **Build workflows to suit your company and teams**
- **Near paperless process to avoid information backlogs and data loss**

SUPPORT AND ONBOARDING



Even when software systems and platforms are designed with user experience in mind, there's usually a learning curve.

When you're weighing the pros and cons of your shortlisted software, make sure you factor support, training, and onboarding into the mix. Reliable, on demand technical support while you get up to speed can make all the difference in the successful implementation of any new system.

Make sure that you evaluate the track record of the software company behind the system too.

While startups might offer great deals and make big promises, there's no guarantee that they'll be around for the long haul. Established companies have stable tech teams, regular product updates and patches, and the means to provide the support you need, when you need it.

SUPPORT MUST HAVES:

- **On demand support when you need it**
- **Established provider that will be there when you need them in two years, ten years, or twenty years**
- **In depth training and user-friendly software interface**

PRICE **AND** VALUE

When it comes to evaluating the price of any construction software suite or package, it's important to remember that both price and value are important.

Sometimes, the package you thought would solve all your problems does not meet the challenge, so you're forced to upgrade again within a few years. Other times, the deal you thought was all inclusive turns out to exclude many crucial addons and components, and to access the full package, you need to purchase additional modules separately.

Easy to access demos and walkthroughs are a must when shopping for any construction software. If the software company you're considering doesn't give you all the information you need upfront, they might not be the right fit for your business.

The value of a complete, end to end construction software package that works out of the box and is intuitive and easier to implement cannot be overstated. So be sure to read the fine print before you make any decisions.



PRICE MUST HAVES:

- Value for money solutions
- Proven track record of improving client productivity and profitability
- No hidden costs or fine print



ABOUT TRIMBLE



Trimble has been making innovative tools and technologies for the construction industry since 1978. We are a global leader in connected construction and have branches and offices in dozens of countries around the world.

Some of our core software packages and platforms include Trimble Business Center, Trimble Quest, Trimble Worksmanger, and Trimble WorksOS. The right combination of these platforms helps thousands of customers to manage every step of the construction process.

Contact us to find out what we can do for you.