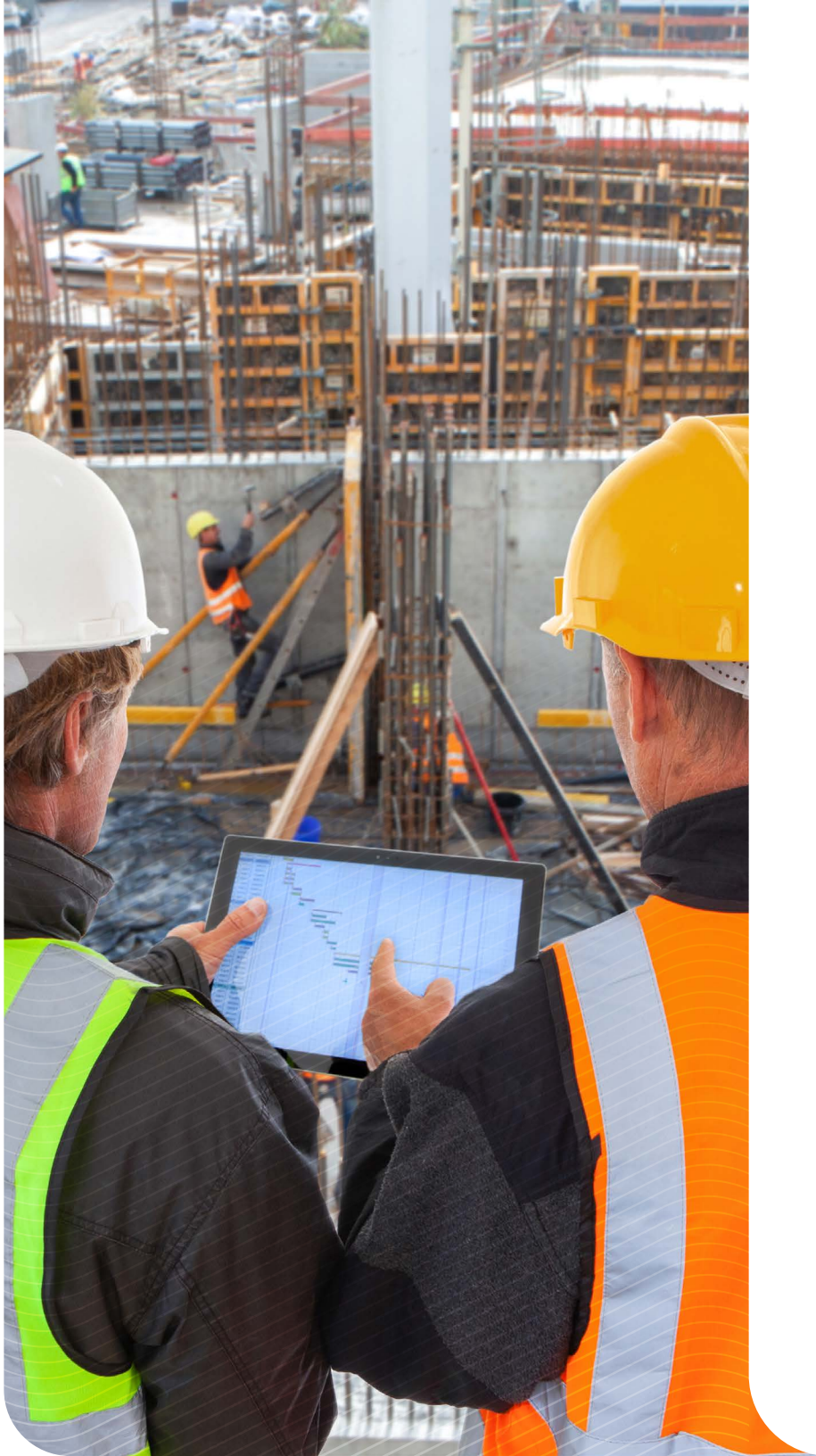




The Ultimate Guide to  
**Construction  
Document  
Management**





## For Construction Programs, Collaboration Is Critical.

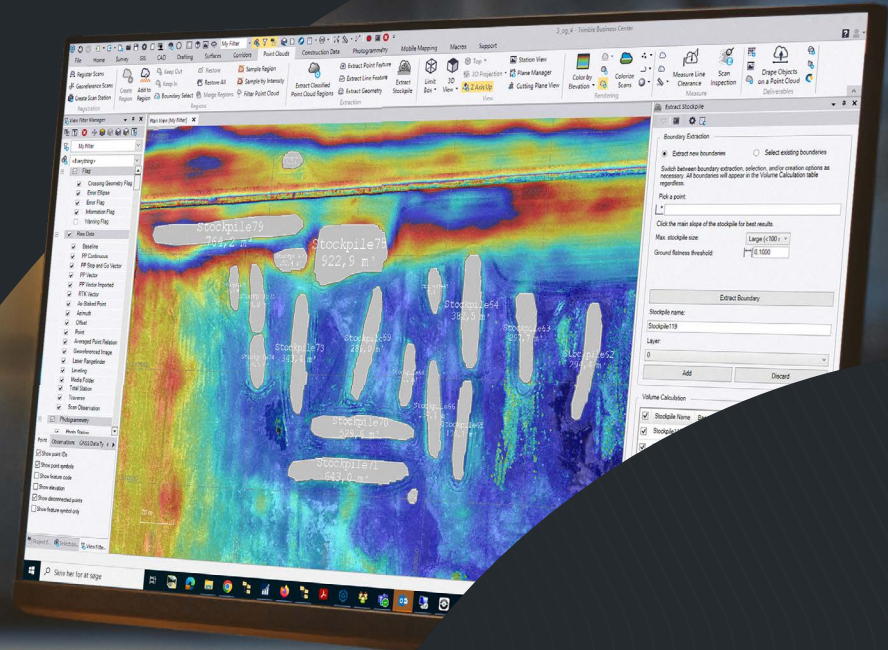
Today we'll talk about construction document management and why it is key for the survivability of your projects.



Historically speaking, the process of managing construction documents throughout a construction project is a nightmare for everyone involved.

In this definitive guide to construction document management, we'll cover four key reasons owners are rapidly migrating to a construction project management software for their construction project management needs:

- 01 Reduction of Risk
- 02 Accessible by Anyone, Anywhere
- 03 Reduce the Pain of an Audit
- 04 The Single Source of Truth







Not only are owners incurring significant risk by opting not to have an organized audit trail, but everyone who plays a role within the project lifecycle will inevitably end up confused, frustrated, and wasting their time searching for construction documents.

Let's paint a picture. **It's not uncommon for thousands of individuals to contribute to a single construction project.** Maybe it's modernizing an airport, maybe it's building a new sports arena, or maybe it's building a highly secured government building. Numerous unique contributors come together on a single project: owners, architects, construction managers, supervisors, engineers, project managers, contractors, sub-contractors, estimators, suppliers, administrative staff, and a whole lot more.

Before the emergence of construction software, managing construction documents was a nightmare for all involved. Project contributors typically relied on many offline storage areas to host and exchange information, whether it was filing cabinets, excel spreadsheets, external hard drives, desktops, and a bunch of other hard to reach locations. This convoluted, disorganized method of document control increased the risk for owners, prohibited collaboration, delayed project timelines, and ultimately cost owners billions of dollars.

But it doesn't have to be this way. There's a better option for document control...

A recent report from the **FMI Corporation** revealed that document and information accuracy issues cost the construction industry

over  
**\$31.3**  
billion

in 2018. That's a whole lot of money coming out of owner pockets.



# Where is that document stored?

I don't even know where to go or who to ask.

If you're wondering if your organization truly suffers from a poor construction project management system, consider reflecting on the following questions...

- Is this the most recent, updated version of this document?
- Has my supervisor already signed off on this document?
- Did we end up paying that contractor?
- Is this the most updated version of the drawing?
- Where is the spec sheet?

Chances are you've likely experienced something like this. And if so, you're likely suffering from a poor construction document management system.

Let's dive deeper into the four key reasons owners are migrating to construction project management software.



# 01 Reduction of Risk

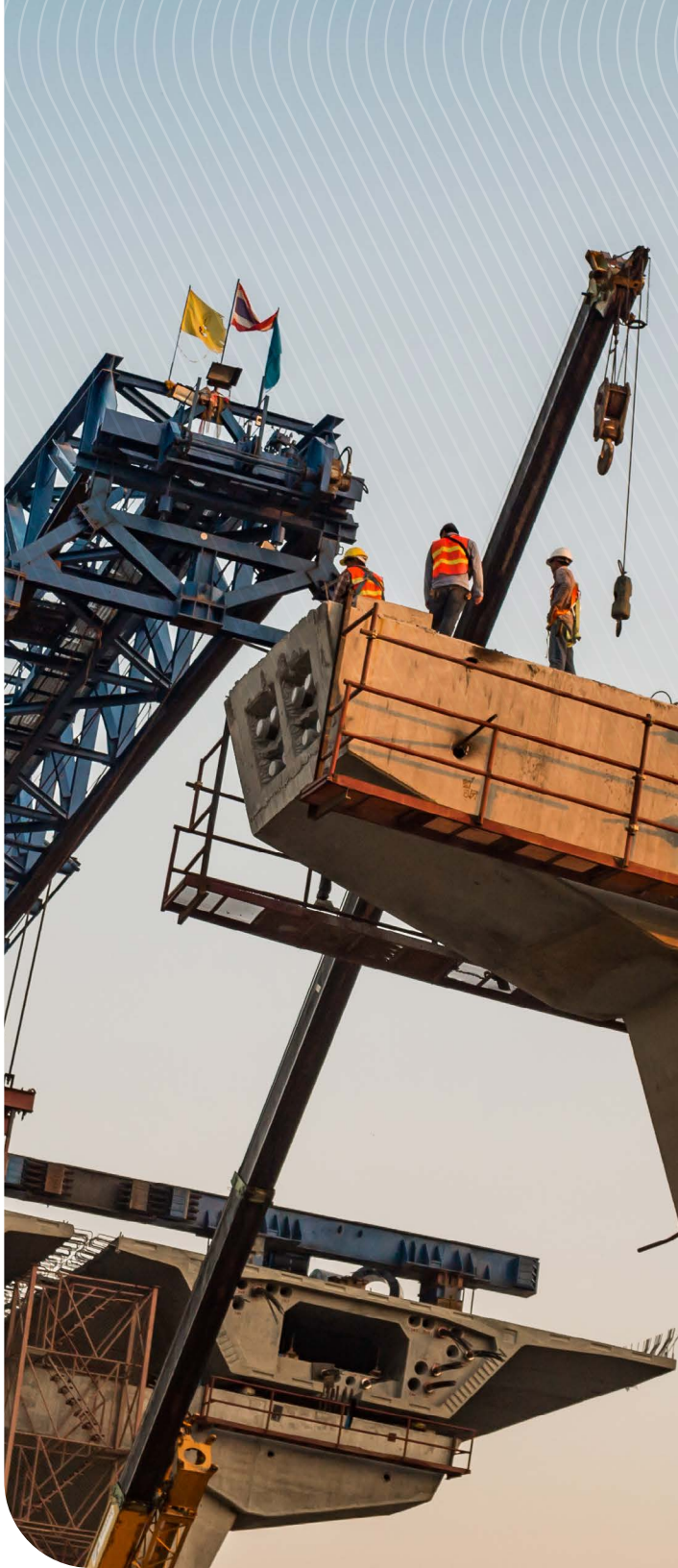
There are three questions always at the top of every owner's mind:

- Am I projected to complete my project within budget?
- Is my project on schedule?
- Am I reducing my risk as much as possible?

Many owners don't realize it until a disaster occurs — like a lawsuit, claim, or major construction defect — but a proper construction document management system reduces significant legal risk for an owner. Workers comp claims, disputes over a project's construction, and the cost of claims & litigation are expensive hazards for an owner. Anyone who's ever worked in the construction industry knows that everyone is trying to cover their own butt. A proper construction project management system limits the likelihood of a successful claim against an owner. The impacts of these legal junctures are far beyond expensive financial implications, they can sometimes delay projects by months and even years.

For example, let's say a contractor installs a steel beam two feet away from the required placement in a room. It ends up blocking required AC ventilation, delaying the HVAC contractor from completing his work. An owner with an outdated construction document management system would have to spend hours searching across multiple systems to find the documentation needed to determine the best way to install the HVAC within the new parameters. Whether it's searching in an old file cabinet, looking on desks, or in random storage drives, it's like searching for a needle in a haystack. It's almost impossible.





A proper document control system will easily aid the owner (or project manager) in answering the following questions:

- What did the original spec sheet and drawing say?
- Were there any change orders to the installment?
- Was the document modified?
- Did the contractor agree in writing and confirm the updated spec?

Answers to these questions are immediately available within seconds in a construction project management software like Trimble Unity Construct. Proper document control not only saves the owner's time, but it also saves the application money. Instead of a resulting lawsuit, an owner can point directly to the document within Trimble Unity Construct and determine if it was modified and/or accepted. A proper construction document management system enforces accountability and transparency to all involved parties.

Unlike a physical paper trail that could get lost, hosting construction documents in a digital environment with advanced tracking/collaborative properties allows owners to shift responsibility to the general contractor or supplier, hence reducing their risk.

Another way to look at this is that Trimble Unity Construct holds the project management group accountable for the day to day actions within the project. A construction software tracks tasks that add potential risk to the project, and more importantly, a program's true costs. Owners benefit from the transparency that Trimble Unity Construct can dashboard and report at the application process, project, and program level. When commitments, budgets, and invoices are added or changed, Trimble Unity Construct performs cost validations. The additions and modifications are checked against the Contract and/or the Budget to make sure amounts do not exceed contract or budget amounts.

For owners, determining which projects have the highest likelihood of profitability is of top priority. This is where a proper construction document management system is critical. In a traditional construction setting, information silos between contractors, sub-contractors, and architects make it nearly impossible to accurately evaluate and forecast the profitability timeline of a project.

Project forecasting is really the core of any business plan. You must be able to identify the destination before determining a path forward. A forecast is not 100% accurate, but accurate enough to identify possible risks. The earlier you know about a possible risk, the better off you are in eliminating it. Forecasting allows you to be as proactive as possible, to mitigate potential risks.



Risk mitigation doesn't  
happen without a proper  
**document  
control system**





## 02 Accessible by Anyone, Anywhere

The pain of traditional, paper-based construction document management is not a new one. For owners who have yet to transition to a modern document management system like Trimble Unity Construct, the use of paper is likely delaying their projects, adding to the confusion, and costing them money.

Unlike a document that is stored and backed up in the cloud, paper construction documents get lost in the shuffle. When dealing with paper, project contributors have to rely on physical signatures for change orders, updated spec sheets, funding approvals, invoice payments, and more. All of this physical work equals delayed project timelines, employee frustration, and decreased productivity on the job site. A contractor could be waiting to install a wall for weeks due to waiting on a physical signature of someone who might be on vacation. Frankly, it's inefficient and will delay your project.

One of Trimble's Unity Construct's top advocates is Susan Medeiros of Cumberland Farms, who described the pain of managing documents offline:

"Like probably most people on the call, pre-Trimble Unity Construct, Cumberland Farms had a major need to centralize our documents. We had plans stored on OneDrive, photos on another, correspondence in yet another area, contracts someplace else still, some papers, some electronic. You get the picture."

— **Susan Medeiros**, Manager of Capital Projects,  
Budgeting, Compliance and Administration Cumberland Farms

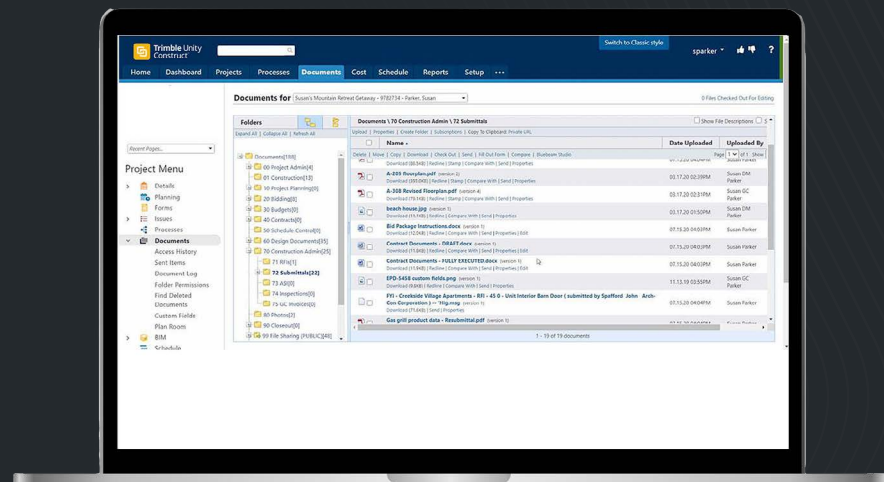


A new element to the paper versus digital conversation is the reality of the COVID-19 pandemic. As more and more workers transitioned to remote (likely concluding as a permanent change), the reliance on paper documents and processes becomes a major prohibitor for any construction project. Whether it's due to a lack of time or a concern over their health, employees with the option of working remotely will not be coming into the office to sign construction documents or open the office up so a contractor can access an updated document.

Managing construction documents becomes significantly easier when everything is organized and stored digitally in a construction software like Trimble Unity Construct. Here's a sample screenshot of what document storage looks like in the application. Note the custom file structure, access history, and the option to edit a document within the application itself. No more downloading to your desktop, editing in a third party software, and re-uploading.

No more unnecessary visits to the office, no more waiting on a physical signature, and no more ruffling through a file cabinet of 40-year-old change order forms. With a construction project management system like Trimble Unity Construct, every contributor to a construction project can digitally access a document wherever they are. Whether it's on a computer, a tablet, or a phone or if they are on the job site or halfway across the world, they can access the construction documents they're looking for.

For commercial organizations, this change can be more quickly implemented than an owner in the government space. In fact, many state governments — like New Jersey for example — require paper-based, physical signature type processes to track and conduct business. As a result, local governing bodies are now considering a more rapid acceptance of construction technology, even if it's as basic as agreeing to recognize an electronic signature as an official signature for a change order. It will be interesting to watch how governments embrace technology in response to the Coronavirus, as some might not have a choice if they want to make progress in their day to day operations and projects.



## 03 Reduce the Pain of an Audit

The mere sound of the word “audit” inflicts fear in the eyes of a government contractor.

For owners in the government and education spaces, paper trails especially relating to financial records become even more crucial. Government owners know that when public funding and financing is involved, the microscope around the project is much larger. Proper documentation could be the deciding factor in whether or not your supervisor allows you to keep your job. [That's how critical proper document control is.](#)

Because you're working with the government, compliance with federal, state, and local regulations require that owners and project managers take an especially diligent approach to construction document management. Whether it's a quality control issue on the project, a labor rights complaint, or a contract claim, tracking communication and modifications in a centralized construction project management system will save you lots of time and worry.

Especially when it comes to closing out a project, verification of compliance to local regulations can be a major pain if a contractor and/or owner hasn't documented their work. To [prove compliance with a governing body](#), proper document management is the most important step you can take.

Proper documentation could be the deciding factor in whether or not your supervisor allows you to keep your job.





# 04 The Single Source of Truth

For all construction projects, collaboration across key stakeholders is critical.

Traditionally construction has been a very fragmented process involving many different contributors across many different systems. The goal of construction software is to consolidate these systems into a single source of truth, or a place where everyone collaborates and stores critical project information.

Project managers have [historically used paper documents, random excel spreadsheets, and emails to track modifications throughout the project lifecycle](#). Whether it's a change order, spec sheet, or a drawing — information silos are dangerous to a project's success. Project managers, contractors, engineers, architects, and suppliers all need visibility into the progress of a project.

When you're using a system like Trimble Unity Construct, project contributors can trust that the document they're seeing in-app is the most recent and accurate version. Users can track version history and determine what has changed over time.

Having a "single source of truth" with a proper construction document management system will provide the owner with accurate visibility into how a project is tracking. It gives the owner the ability to make accurate, informed decisions — whether it's reallocating budget, informing the board of updates, or making project additions.



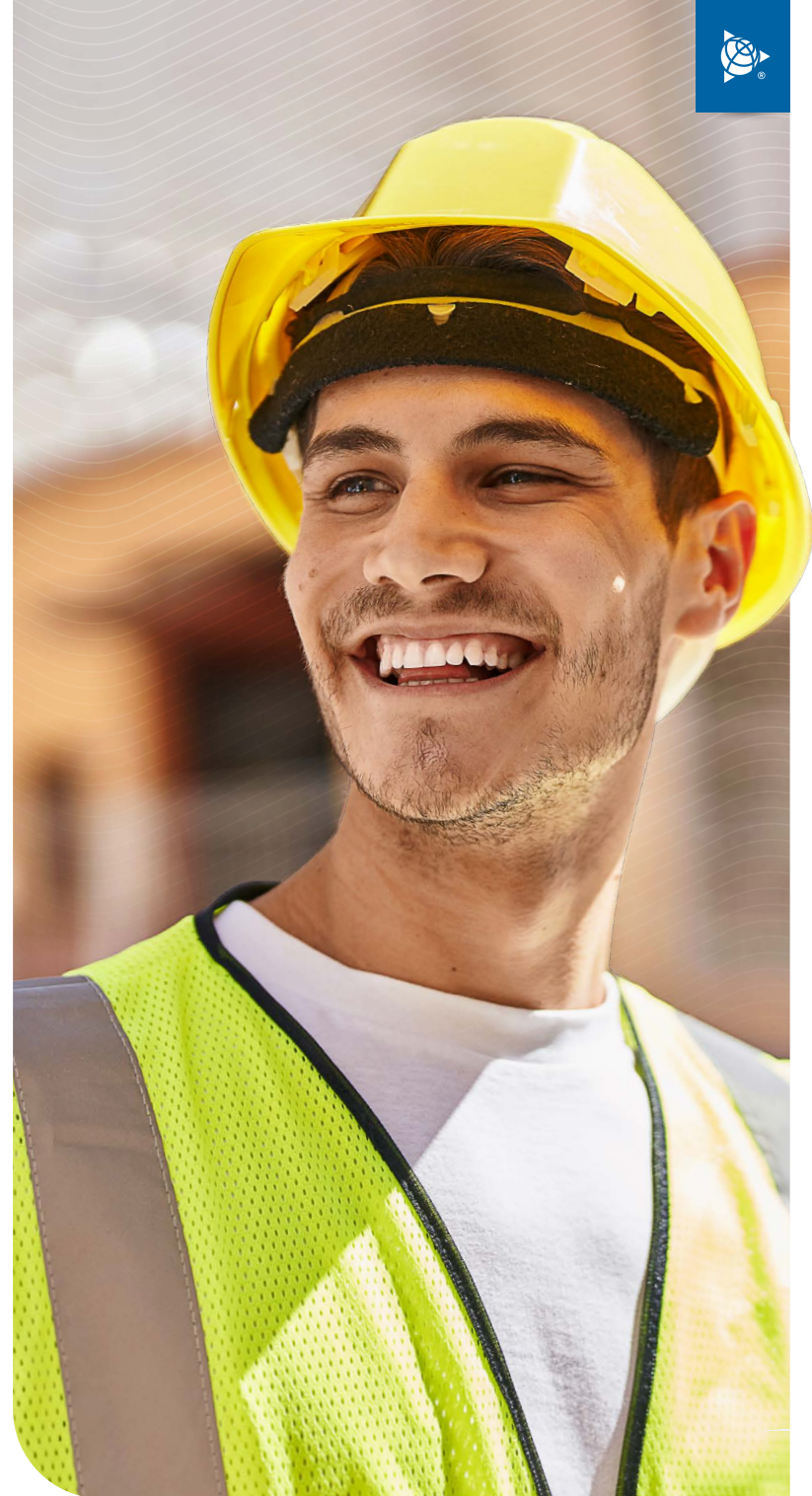


## Closing Thoughts

What it comes down to is that a paper-based construction document management is no longer acceptable. It's not a matter of "if" the remaining owners change, it's a matter of "when".

In a world where health precautions are taking priority and the emergence of technology is providing for more efficient means to do business, there is simply no excuse not to make an investment in a document control solution.

The thousands of hours wasted, millions of dollars unnecessarily spent, and delayed project timelines far outweigh the cost of Trimble Unity Construct.





If you're still on the fence of whether you need to invest in a proper construction project management system, consider asking yourself the following questions:

- Do I have trouble finding construction documents and tracking their historical changes?
- Are my construction documents stored across multiple systems, devices, and locations?
- Do my employees have trouble with collaboration?
- If I was audited tomorrow, would I feel concerned about my company's construction document management procedures?
- Do I feel, as an owner, that I take on too much risk and responsibility for my contractor's actions?

If the answer is **"yes"** to any of the above, an overhaul to your construction document management system is vital for the survivability of your projects. For owners concerned about the data migration process, don't fret. The Trimble Unity Construct team provides you with a personal advisor who will walk you through prioritizing content to migrate and upload.

Welcome to the modern revolution of owners covering their butts with proper construction document management. Paper is dead.

# Start Your Free Demo Tour.

Interested in learning how Trimble Unity Construct can revolutionize your document management?

Visit [assetlifecycle.trimble.com](https://assetlifecycle.trimble.com) or call 800.580.9322

**START YOUR FREE DEMO**

## About Trimble

Dedicated to the world's tomorrow, Trimble is a technology company delivering solutions that enable our customers to work in new ways to measure, build, grow and move goods for a better quality of life. Core technologies in positioning, modeling, connectivity and data analytics connect the digital and physical worlds to improve productivity, quality, safety, transparency and sustainability. From purpose-built products and enterprise lifecycle solutions to industry cloud services, Trimble is transforming critical industries such as construction, geospatial, agriculture and transportation to power an interconnected world of work.

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