




BEST PRACTICES

RISK! It's not a game for contractors

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SUMMARY

Understand the importance of risk management in construction and how to implement effective frameworks to minimize project uncertainties. Using a cloud-based system like Trimble Construction One can help manage and reduce these risks.

6 of the most common construction risks contractors face and how to get ahead of them

Construction is one of the most complex professions around. No two construction projects are alike and managing the process — from design and engineering to estimating and bidding, to construction processes and project closeouts — can be a significant challenge. To be successful, contractors need to navigate through many different building phases; collaborate with owners, architects, engineers, subcontractors, laborers and more in real time; track productivity and costs throughout the project lifecycle; acquire materials and schedule timelines; and much more. Construction is one of the most complex professions around. No two construction projects are alike and managing the process — from design and engineering to estimating and bidding, to construction processes and project closeouts — can be a significant challenge. To be successful, contractors need to navigate through many different building phases; collaborate with owners, architects, engineers, subcontractors, laborers and more in real time; track productivity and costs throughout the project lifecycle; acquire materials and schedule timelines; and much more.

Risk management in construction projects

Because of these complex workflows, construction is ripe for errors, mistakes and other risks that can add onto already challenging construction project management responsibilities. In fact, contractors have among the slimmest profit margins of any business, as they're on the hook for costs up front in most construction contracts, typically being paid in installments as work progresses. That means the more things that go wrong, the more potential profit contractors might have to eat.



So, what goes wrong on construction projects? The actual construction contract itself can make or break a contractor's bottom line right from the start. Today's contracts are often very detailed and can involve multiple rounds of legal review and revision before final agreements on the scope of work. Most successful contractors today have good processes in place to ensure their interests are protected. However, sometimes contracts themselves can come back to bite them if not scrutinized well enough.

The scope of work is just one challenge. Here's a look at six more common construction risks that contractors can incur, as well as the one thing that can help prevent all of them:

Construction risk #1: unnecessary project rework

One of the givens in any construction project is that mistakes will occur along the way. Whenever you're collaborating with multiple stakeholders and dozens, sometimes hundreds of laborers, keeping everyone on the same page at all times is difficult. When changes are made to projects, everyone needs to be informed right away. This is especially true in managing multiple subcontractors — each with their own needs and goals.



Yet, traditional construction processes and workflows have meant that financial data like job costs, progress reports and other vital information isn't able to be fully gathered and analyzed for days, weeks or even months after work is done. That means by the time mistakes or miscommunications are spotted, work is already complete. To correct this means undoing that work and amending the problem — a costly step that the lead contractor likely has to swallow to ensure building is done according to the latest plans.

Construction risk #2: unknown/uncorrected mistakes

Even worse than having to eat costs and perform costly rework to correct project errors are mistakes that slip through into the finished product unchecked. The deadly [2017 Grenfell Tower fire](#) in London was caused by poor cladding materials used during an insulation renovation. The 2021 collapse of the [Champlain Towers South condo building](#) in Surfside, Fla is now believed to be partially caused by poor design and construction of structural columns when it was originally built in 1981. Also in Florida, the [collapse of a just-completed pedestrian bridge at Florida International University](#) was blamed on both design errors and failure to notice and address cracking in the structure during construction.



Not only do these make headlines, sullying contractors' reputations for quality building, these unchecked errors and quality assurance oversights can lead to extremely costly litigation. In some cases, these disasters can put contractors out of business for good.

Construction risk #3: equipment breakdowns

The lifeblood for most contractors — aside from the skilled workers they employ — is the equipment used to get their jobs done. In most cases, equipment — from heavy machines to vehicle fleets to even power tools — accounts for the most expensive capital assets contractors have. So to protect these investments and keep them working on the jobsite, these machines need to be serviced regularly and their usage diligently tracked.



Since the cost of equipment is so high, it's not like contractors can simply purchase or lease new machinery at will. Equipment managers have become one of the most critical roles within the construction organization. Their job is to ensure machines are being used correctly; that they're not over or under used; that regular maintenance is carried out; and to determine the "equipment sweet spot" — balancing equipment usage to maximize their lifecycles and understanding when the best time to retire assets and purchase or lease new equipment is. Trying to do all of these things with outdated or incomplete data presents a significant challenge, and if the machines break down, the projects break down.

Construction risk #4: data breaches

Contractors have proven they can brave the elements of all types of weather. They can overcome unique environmental challenges. They can work through recessions and pandemics. But the one thing that can stop contractors cold (and most other businesses as well) is a data breach or cyber attack. Unfortunately, this is sort of the new normal for business in general as cyber criminals look for any holes in data security and use this as an in for ransomware attacks where data and workflows are hijacked until a demanded payment is made.



Contractors are prime targets for these attacks, as well as phishing schemes, wire and payment fraud and more. Many contractors still utilizing on-premise servers to house and process data can find themselves more vulnerable to attacks as the latest data security protections are being designed more for cloud-based applications. Adding costly data breach insurance, ramping up in-house IT processes and hiring third-party security consultants can all help, but rest assured these eat into contractors' bottom lines as well.

Prior to the attack, E.R. Snell had approximately 90% of its software system on-premises with the other 10% in the cloud. Both the cloud and on-premise servers were backed up daily.

A man with a beard and glasses, wearing a dark shirt, is sitting at a desk in what appears to be a server room or data center. He is looking down at a smartphone in his hands. A laptop is open on the desk in front of him. In the background, there are rows of server racks with various cables and equipment.

What happened when E.R. Snell suffered a cyber attack and how it took action

Construction risk #5: Disorganized workforce management

For more than a decade now, dating back to the mid-2000s recession, the construction industry has endured a shortage of skilled workers. This has led to significant pressure on construction HR professionals to not just find trained trade professionals, but get them onboarded and trained quickly to meet modern demands and quicker project deadlines. When single projects can involve dozens, even hundreds of workers, contractors and subcontractors alike can struggle to efficiently manage their revolving workforces.



Legacy processes like paper forms, disconnected software systems and HR workflows, email and phone generated requests to HR departments for all employee needs and more only exacerbate this burden. Unfortunately, these processes are what many contractors today are still dealing with, forcing them to add more HR staff to facilitate requests and enduring project delays while all compliance, training and safety needs are addressed for each new hire or returning worker.

Construction risk #6: Worker safety issues

Another one of the most commonly associated risks with construction is that of worker safety. Also headline makers, accidents or deaths on construction jobsites negatively impact projects in a multitude of ways — from pain and suffering of workers and their families to costly litigation to project delays and negative perceptions of contractors' safety practices. And, post-COVID, there are still health and safety considerations that must be addressed for at-risk workers.



While most contractors strive for the safest working environments imaginable, sometimes checks and balances are not consistently carried out. Health and safety compliance tracking can also be a heavy lift when trying to manage projects and crews with scores of workers. Manual tracking workflows, paper forms and other cumbersome processes don't help.

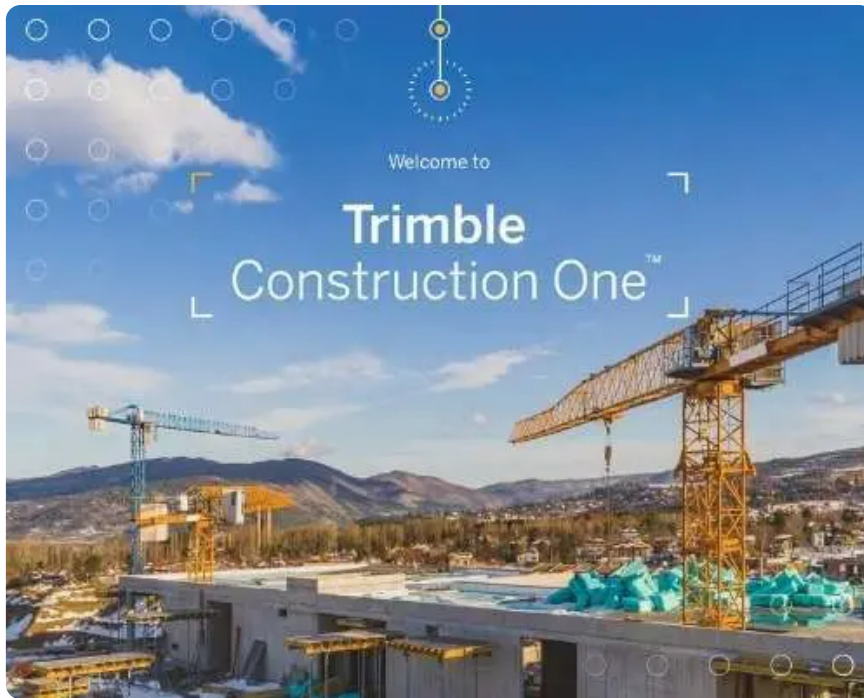


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Trimble Construction One: A better risk management tool for Construction

What one thing can help contractors significantly mitigate all of these common construction risks? A connected, cloud-based construction management solution.



Technology is transforming the way contractors work. Today's leading-edge construction companies are modernizing their operations — digitizing data and workflows by moving operations into controlled, secure cloud environments. By replacing manual processes and multiple disconnected software with a single cloud-based suite of construction management solutions, contractors are leveraging real-time data, workflows and business protections that allow them to stay ahead of the construction risks that once plagued their everyday projects.

- A connected, cloud suite like Trimble Construction One empowers contractors to make actionable decisions when they matter most. Here are just some of the ways it minimizes construction risks:
- Delivers a single source of data and up-to-date reporting to stay on top of all construction workflows to reduce need for expensive rework
- Streamlines workflows and tasks to boost productivity, giving each project team the full resources and information they need when they need it
- Boosts real-time communication and collaboration across all project stakeholders, ensuring everyone is working from the same data and toward the same deliverables
- Tracks and identifies potential issues before they become big problems down the line

- Facilitates real-time equipment tracking and maintenance, protecting machines and optimizing their usage and performance
- Provides the latest data security safeguards to keep critical information and business processes protected
- Digitizes and automates construction safety and workforce management processes to ensure compliance at all levels, remove opportunities for human error and free up valuable time to focus on other areas of need
- Creates fluid, real-time job costing, reporting, billing, invoicing and payment cycles to keep cash flow steady and contractors financial health solid

And the best part? Upgrading to a modern cloud platform can reduce the costs of managing disparate systems and workflows by as much as four times. Watch this video to see how Trimble Construction One is a game changer for today's contractors.

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Cloud Technology

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Onboarding & Workforce Management

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- Increased Efficiency
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