# Brief Guide to Choosing *the* **Right Software** (And Reduce) Safety Issues

**HAMMERTECH**

## The Brief

**Construction has been going through a technological evolution.** Moving from paper to digital processes has enhanced construction's productivity and all the gathered data has the chance to transform planning, performance, and so much more.

As in most industries today, technology that supports the construction industry is expanding rapidly. Safety technology is one of the most useful technologies because of the wide range of benefits it provides. Beyond the most important goal of safety management, saving lives, safety technology has several key benefits from reducing risks through decreased gaps in processes, to making informed decisions because of insight gathered from thousands of data points, to improving productivity through streamlined, standardised, and collaborative operations that interweaves per-start, safety, quality, field and office operations.

As construction job sites become more complex, and labor continues to be in short supply, evolving your safety management will be paramount to ensuring a good company reputation, reducing costs on your projects, supporting sustainable business growth, and reducing your liabilities.

But to get the most from your software solution, we'd like to share three keys to choosing and implementing the right software:

1.  Make sure the software understands how construction works. It's process-based and not document management-based.

2.  Check to be sure you'll get enough data out of your system to make smart, informed, decisions in the field and the office.

3.  Get your team on board with evolving your safety practices through technology. Without buy in, don't buy anything!

## Process, not documents.

**Construction is more than documents, it's processes.** Yet, we're buying in to document management-focused software systems for key operations like safety and quality. And while the benefits of accessibility to data, paper-less job sites, and mobility are a good step up from paper, they're still holding back the operators on site from doing their job as well as they could be.

Document management-based systems follow the form (like a permit), and not the process the form must take in the field. When this happens, you have a digital replica of a form, where a user fills out the details, but it gets filed in a digital silo, not allowing it to integrate with other key functions, as they often must do in the field.

> " Construction is more than documents, it's processes. „

Process-based software systems follow the "how" and the "why" of the information and data that goes into the form. It takes the "document" out of the equation, and takes the key data inputs into a live stream where it can sync, integrate, and interact in real time with key processes that are being performed in the field.

When you ask yourself *"how does this process work in the field?"* you quickly see that digitising documents reduces paper weight, but still impedes operational efficiencies. Because forms and documents are inherently siloed, while data, when pulled from documents, can be woven into other functions seamlessly.
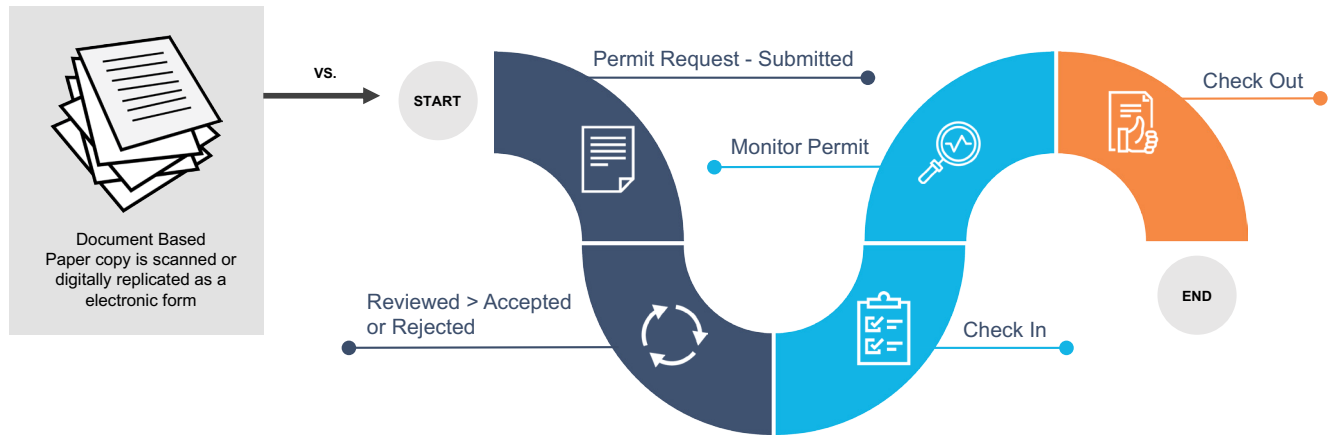
How many times have you opened up your document management app to fill in information for your permits, only to have to open another app to get the names of the workers who are performing those tasks *(are they certified and signed off on the SWMs?)*. Then have to walk over to a permit board in the shed or trailer to understand the permits currently scheduled, permit type, location, date, start time, finish time and description. Then open an inspections app to complete monitoring checks and capture key information throughout  the permit life cycle.

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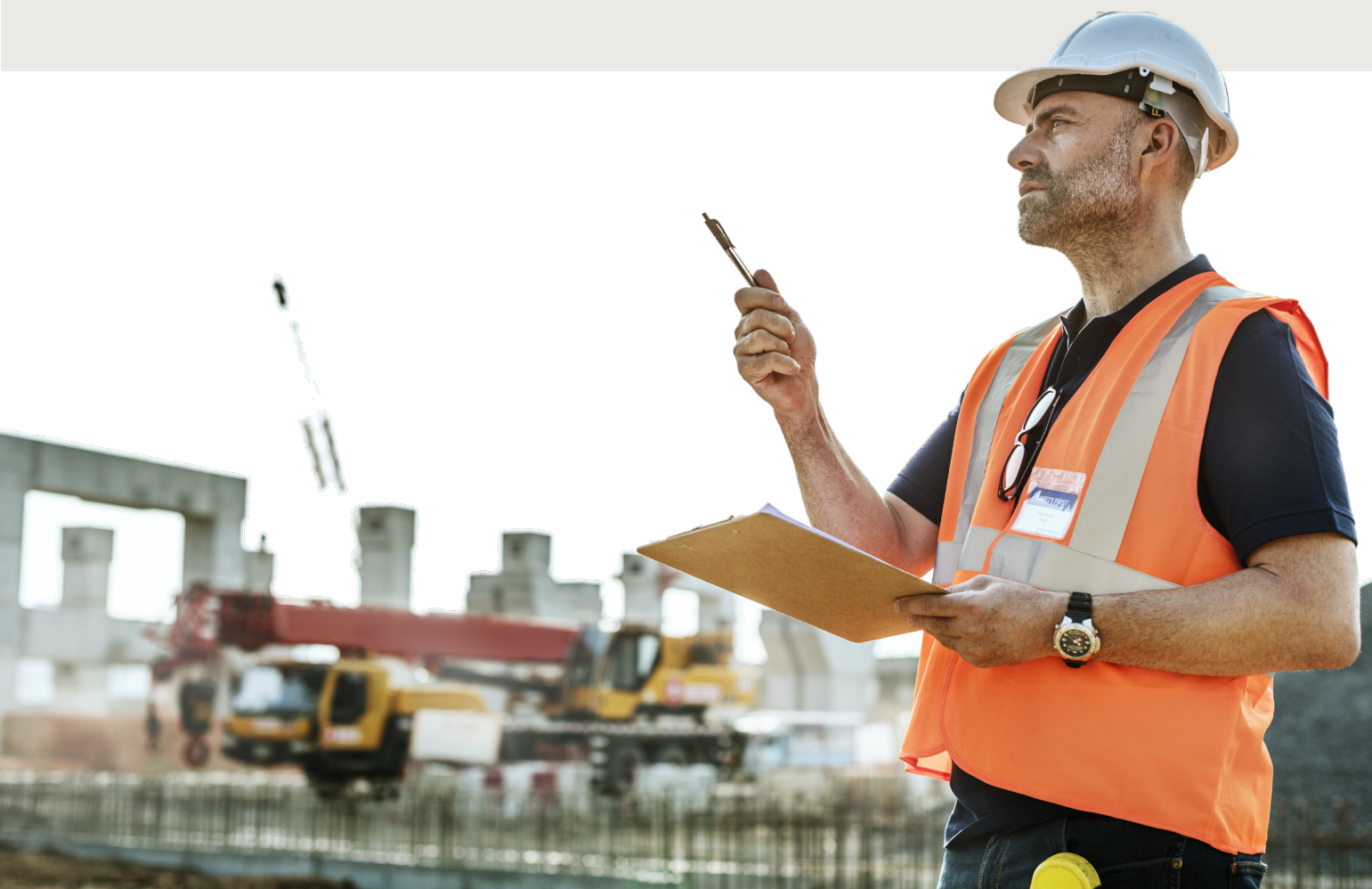
# How process-based software handles tasks...

Continuing on with the example of permits, let's follow the permit processes and how software that understands your field needs, tackles your issues.



Document Based
Paper copy is scanned or
digitally replicated as a
electronic form

VS.

START

Permit Request - Submitted

Monitor Permit

Reviewed > Accepted or Rejected

Check In

Check Out

END

**1.** **Subcontractors need to submit permits for review by either the GC or the facility manager.**

HammerTech, a process-based system, provides a portal for subcontractors on a job to submit permits, view revision history, receive notifications of acceptance or rejection, and the ability to check in or out of the permit (more on this later).

- Additionally, HammerTech provides a dashboard specifically for permit management where reviewers can easily view outstanding permits awaiting review and track existing permits.
- Sends an SMS notification to permit reviewers when a permit comes within one hour of its proposed request start time and the permit hasn't been reviewed.
- Plus, the system provides cut off times for submissions restricting overnight requests for AM permits.
- And also provides the ability to track all of this information via BI tools through reporting APIs.

**2.** **You need to determine the identity and capabilities of the workers who are performing the tasks stated in the permit.**

Forms require you to enter in the names of the workers performing the tasks for each permit. That requires double, triple, quadruple data entry. No thank you.

With process-based systems like HammerTech, worker information has already been gathered in the system during enrollment and orientation, and certifications are tracked as well. So eligible workers can simply be selected from a list. This allows the reviewers to also know which SWMs have been assigned to workers and the company undertaking the permit so this can be quickly selected from the accepted list of SWMs on site.

**3.** **You need to see permit locations or permit zones, usually found on site in a trailer or shed.**

Say goodbye to the extra foot traffic. While point solutions allow you to enter in the location or permit zone, you usually still need to find a physical map of the booked zones. Not with a process-based system. With HammerTech you can configure zones by permit type (you can have different zones for Hot Work permit vs a Confined Space permit vs an Elevator Work permit). You can upload one or more site maps and draw the permit zones on the map in their physical location, provide a title for the zone and even assign it a color. These are then shown to the user as a digital map on their mobile phone or tablet that they can select from when applying for a permit. Making cumbersome processes a bit easier.

**4.** **You need to create and manage exclusion zones to keep people safe.**

This is a big one. Right now, exclusion zones are generally managed manually using keys or tags for check in and check out. A process that is prone to error and inherent risks.

Within HammerTech's system, the GC or facility management team can configure the permit zones as exclusive or not, and configure a digital check in/check out process. For example, once a permit is approved, work cannot begin until a worker "starts" the permit, fills in any required or requested information (users can use a checklist or take photos for proof of "all clear") and then  sign off on the process so it can become an audit record.

The "finish" process is similar, requiring info to be filled out and signed off. As the user(s) checks in and out, the permit updates status from "scheduled" to "in process" to "finalised." Workers will also get a SMS reminder within a zone if they have not checked out by the end of the stipulated time on the approved permit.

In addition, users have a calendar view for any exclusive permit/zone combination showing days and times that are completely booked or partly booked to help with managing permit requests, also helping to reduce or avoid clashes.
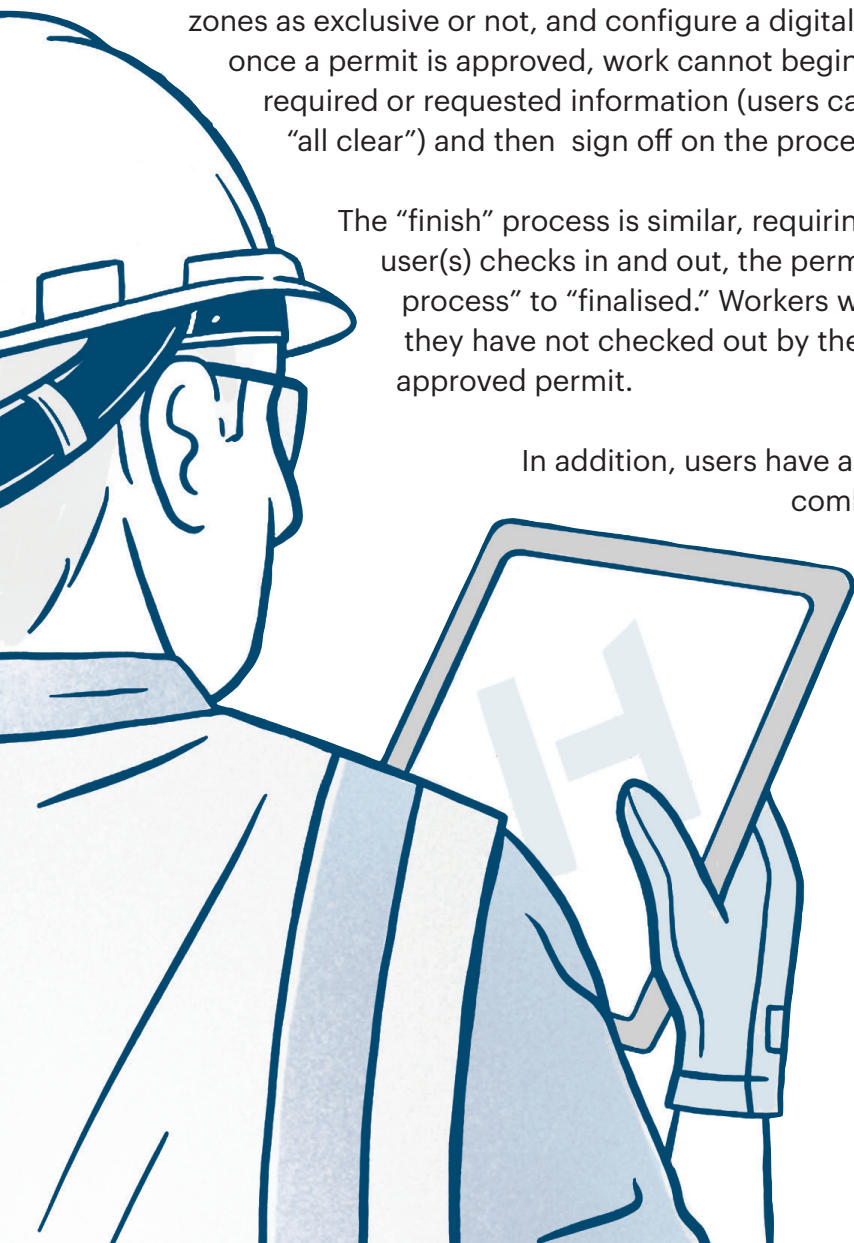
## 5. You need to monitor and do checks throughout the permit life cycle.

Document-based systems will generally provide tables with space for a worker or user to complete monitoring checks and capture key information throughout the permit life cycle. But the data captured and the ease of capturing can be frustrating because the information lives within different apps or forms.

HammerTech integrates the "inspection module" with the "permit management module" to allow an inspection to be configured based on the monitoring requirements. From there, it's a one click process for workers or users to undertake an associated inspection on the permit and capture key data. They even provide a QR code that can be filled in and left around the permit entry zone for ease of accessibility and use. All in one system, with one log in, and right in the palm of your hand.

When searching for systems to alleviate problem areas in your daily operations, safety ,and quality, it's important to search for software that understands the entire scope of the process you undergo, and creates solutions that ensure more efficiency throughout. Simply digitising forms and centralising them within a mobile application isn't enough anymore. Technology needs to help you do more. While the first step towards embracing new technology was crucial, it's more imperative now (as the industry expands looking for ways to close gaps, reduce risks, and increase performance and productivity) that construction companies begin looking deeper into their technology solutions and determine if their software needs require more thorough solutions to ensure operational efficiencies.

# When data flows, your business grows.

If you think about all the day to day processes on your job sites, you can start to see that there are tens of thousands of data points that can be gathered. And here's why that's a good thing.

**You can't see everything in real time.** You can't know how you're really doing when it comes to operational efficiencies, or keeping your sites safe or even clean. Subjectively, you can think everything is fine and you're operating at an 80 out of 100. But you can't see every team member or follow them around everyday to ensure their taking the correct actions to ensure safety and quality. You can't be sure that you're hitting your KPIs if you don't have enough data to benchmark your performance or show you where and why you might be missing them.

**Technology is helping you see more through data.**

Data insights tell you an objective, more complete story. And you can make safer predictions, test impacts by comparing historical data to time-bound data to understand if changes in protocols enhance or delay performance or productivity. You can even correlate key human factors, like overtime, to performance and safety.

By using technology, you can see data in real time and shift operationally or functionally to ensure better outcomes. You can become more agile, using a more complete knowledge base versus just "gut feel". (Although your gut is important too!)
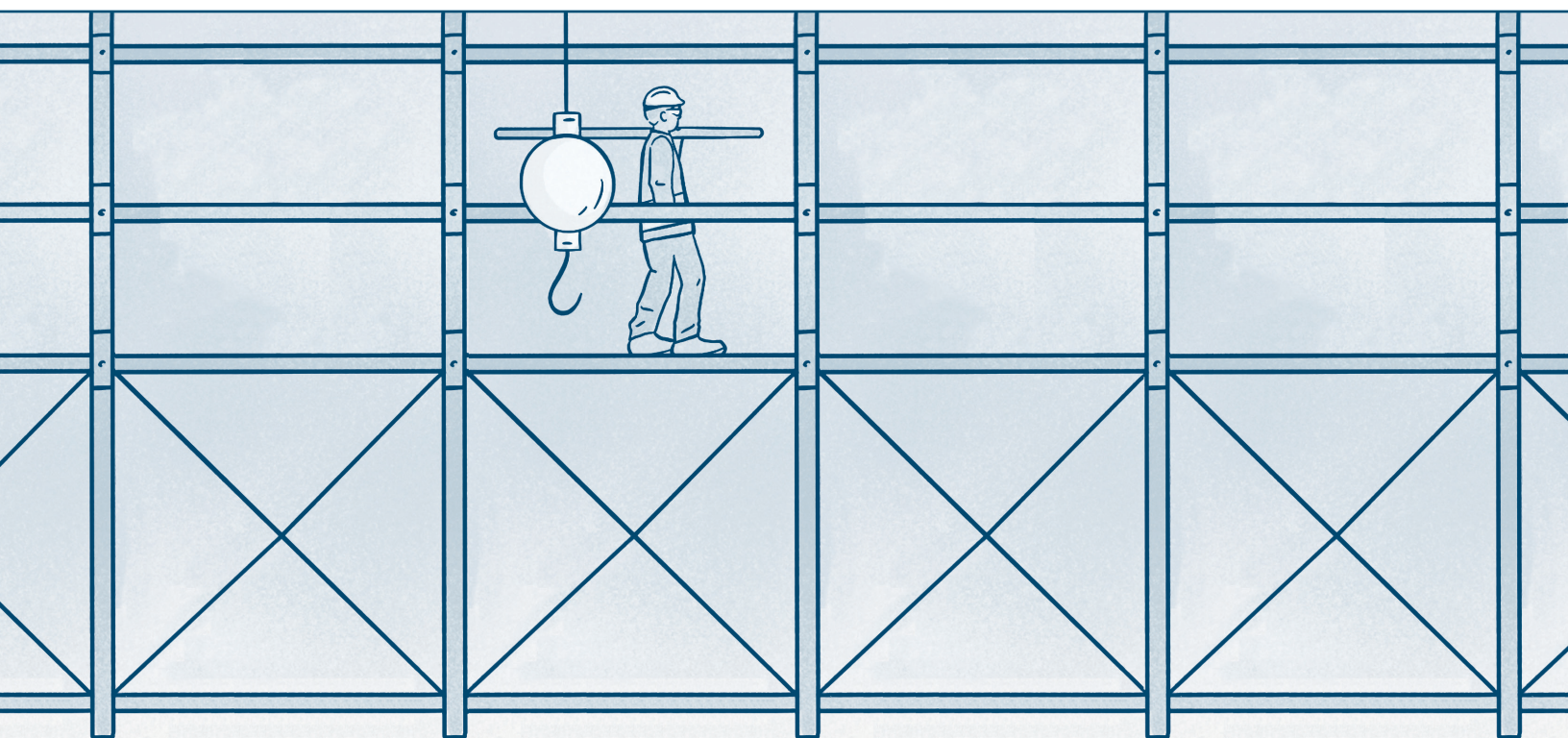
**Paper is a problem. But so are singular function apps.**

When you start incorporating more tech onto your job sites, you're starting to gather key data points that are easier to capture than using Excel or pen and paper. That's an important start to stepping into the data world. But there's one major obstacle to these "point solutions" and it's called data siloes. While it's great you're gathering data and starting to see some cool things, that data is siloed in a solution that requires an operator to extract it, and then aggregate it, and then analyse it alongside data points that may not match.

When you use single function apps alongside a complex operational journey, you lose data within the gaps. You lose data from the double-entry chaos. You lose data from mismatched protocols (lack of standardisation). You lose data from in-operability between apps. So you can't see the whole picture.

" Your data has functional dependencies required to tell you the whole picture of what's happening on your job site. "

**Platforms and data. This is where your data thrives.**

Platform software pulls together key operational functions that match how data and operations should flow on a job site. It's an integrated tech hub that unifies key processes to ensure information flow, collaboration, and communication. Platforms break down the siloes of singular functions because that's NOT how job sites work. You don't have one person for each activity. You can't segment operations so cleanly. You have to combine everything and know everything because of all the functional dependencies on each site, within each build.

Data is the same. Your data has functional dependencies required to tell you the whole picture of what's happening on your job site. How do you know if you're crane operator has worked too many hours and may start becoming unsafe, compared to performance from operators who have worked less? And how does that correlate to your safety indicators, poor quality, equipment operations, or incidents on site?

Can you gain insights on your subcontractors, capture their business health scores or compare trade partners by safe or unsafe observations, and cross reference that with their number and type of inspections and issues?

That's the power of data gained from using a platform. You can see more and do more when your data points are living and working together.
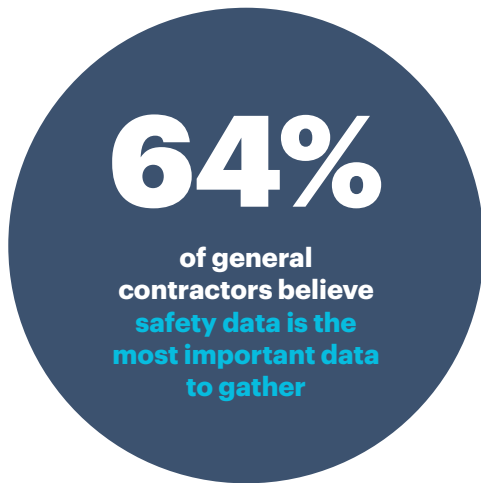
## Data points are great, but stories are better.

With the thousands of data points you can gather from a software platform, you can quickly become overwhelmed. It's like going to Costco for a loaf of bread. We totally get that.

What you need to understand is the story that data is telling you. That's where data visualisation plays a key role. Third party plug ins like  Tableau or Power BI pull your data in real time to show you your stories, creating pictures, graphs, charts, that help you see what's happening. You can see spikes, drops, compare lines on a chart. These visual aids help you understand your leading or lagging indicators. They help you benchmark performance over time so you can see how your teams are performing against expectations. And who you might need to spend more time with based on their performance or productivity charts.



And the great thing about these plug ins... once they are set up, you don't have to do the dirty job of pulling data yourself. They move data through automatically, reducing double-entry errors like duplication, inverting numbers, incomplete inputs, or worse: accidental deletions!

**64%**

of general contractors believe **safety data is the most important data to gather**

**34%**

of contractors think **"Increased safety on Projects" is one of the top three benefits of improved data gathering.**

## Benefits of using a cloud based system:

**71%**
Ability to access data from the field while working in the office

**70%**
Ability to access data from the office while on the jobsite

**61%**
Ability for disparate locations to input and access data

**55%**
More extensive data storage

**43%**
Less expensive than on-premise or third-party hosting

**41%**
Security concerns are adequately addressed

→ **Contractors selected the most important** ←
## capabilities to improve over the next three years
in order to help them continue to advance in data gathering and analysis:

**54%**
Ability to gather accurate data from the field

**45%**
Ability to do trend analysis across projects

**44%**
Ability to gather data that is comparable across projects

**42%**
Ability to gather prompt data from the field
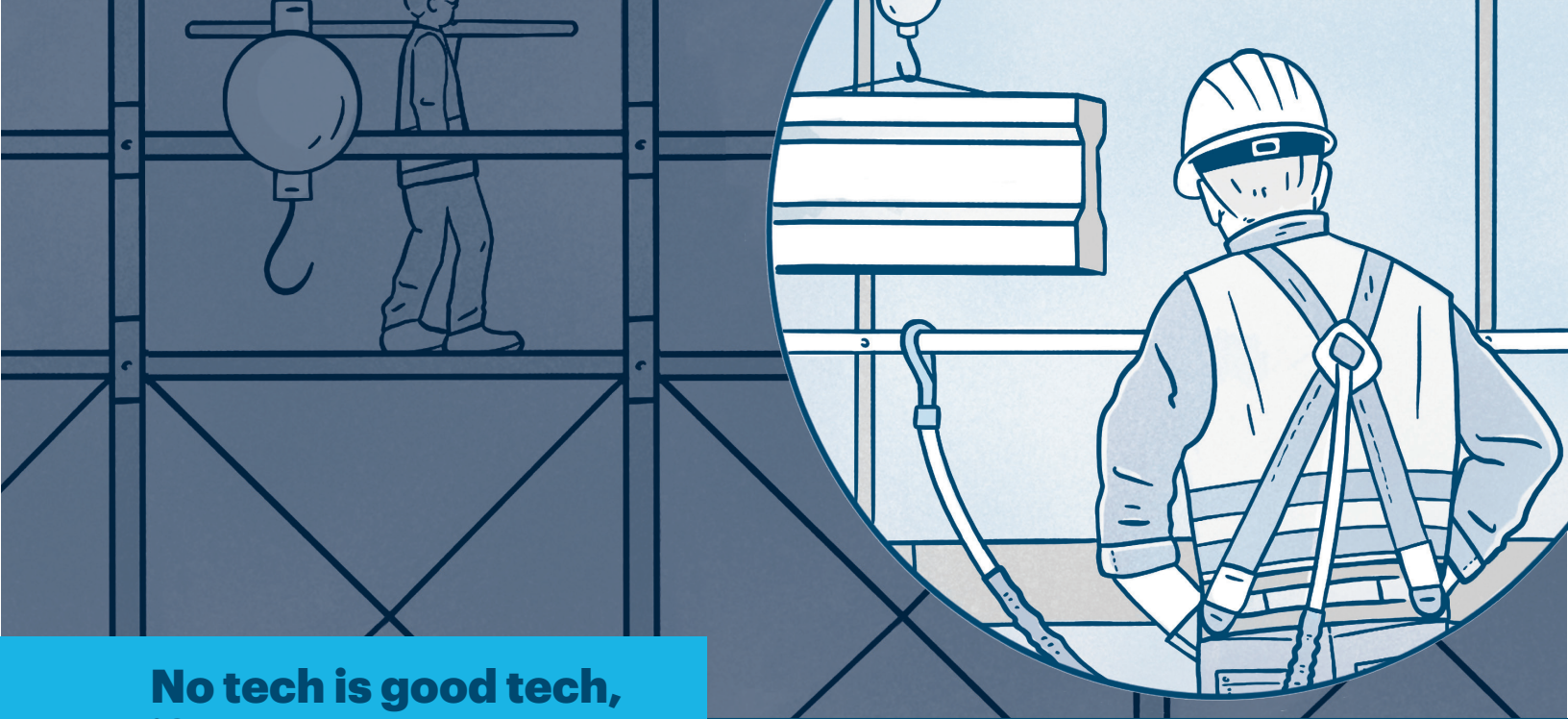
**38%**
Ability to conduct analysis across different types of data

**32%**
Ability to store data in an easily managed way

**30%**
Ability to create custom reports

*Dodge Data and Analytics Smart Market Report: Improving Performance with Project Data*

## No tech is good tech, if no one uses the tech.

There are three major barriers to tech implementation in your company, and not one of them are the old school "tech challenged" workers out in the field you think don't want progress (or won't be able to keep up). Technology fails because of bad communication, lack of collaboration and support, and poorly developed technology.

If your teams can use a mobile phone to access things like Facebook and Sportsbet, they can use technology in the field. Chances are, they just don't want to or haven't been shown how to. So if you're hitting a brick wall trying to get tech adoption in your company, you may need to push reset and consider changing your approach.

### Your teams are talking, and you want to listen.

Every day teams are talking to each other, either complaining about outdated processes, how things could be more efficient if we did it this way, or complimenting an idea or process because it made their day easier. These are conversations you want to be involved in. They will help you increase adoption of new ideas or technology.

All those people stepping on and off your job sites have the day-to-day experiences you could use to improve your operations, to make sites safer, and create more efficiencies. Engagement with your site teams and subbies asking for feedback on processes or tech being used can help you gain immense insight into ways to promote healthy changes and increase adoption of new processes or technology.

Walking the site at the coalface with workers and asking pointed questions on specific tasks can highlight ways to make more effective and productive decisions.

**Without input, expect your changes to have negative output.**

Changes from the top are hard to manage. It's not as easy as dictating changes be done and expecting they will flow downhill without barriers. To make any change successful, especially when implementing great tech, you need buy-in from your teams. And more than that, you need their feedback and collaboration before making any changes. Without that, technology that "should" save teams thousands of hours, could end up costing you thousands of dollars.

Before moving forward with any technology get your teams to evaluate what it does. Your great ideas to help your company's progress can only be enhanced by the input from your teams out in the field.

**Tech doesn't solve problems, people do. Tech just makes things easier.**

Technology won't succeed if it isn't implemented with good communication and collaboration from the people who will use it most. But more than that, if the technology isn't built to suit your needs and easy to use, it won't work under the best of circumstances. Technology's job is to match, and eventually exceed your needs, fill in your gaps, and enhance your processes. Technology's job isn't to make you fit your processes into theirs (or require a PhD to understand how to use it).

Tech to improve processes is important, but without being field-tested and designed by people who know the pains they are trying to solve, it won't be worth much.

To the companies who want to see progress and innovation on their job sites, people are the solution. Technology is what opens people up to new abilities, enhanced capabilities, and easier task management. Get your people together first. Evaluate your combined goals together, and then work to implement the best technology that fits your company's needs and goals, and find a product and provider whose values are aligned with that.

## HAMMERTECH

*is a cloud-based, mobile performance and productivity platform, ensuring operational efficiency, quality, & safety. If you're looking to promote safety & quality on your jobsite, it's time to focus on operations. HammerTech is the ONLY operational platform to cover pre construction operations, daily operations, safety & quality. Manage online registrations & inductions, employer management, equipment induction & monitoring, permit management, SWMs and SDS management, audits, compliance, observations, defect lists and more within one mobile, configurable platform. Consolidate your apps, and go all in one.*

**Learn More:**

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2. You can read what industry experts are sharing on our media portal OneDegree: https://onedegree.hammertechglobal.com/

3. Download this software checklist to see how your current solutions match up to the HammerTech platform: https://cdn2.hubspot.net/hubfs/5108829/HT_Q+S-Checklist_0219.pdf