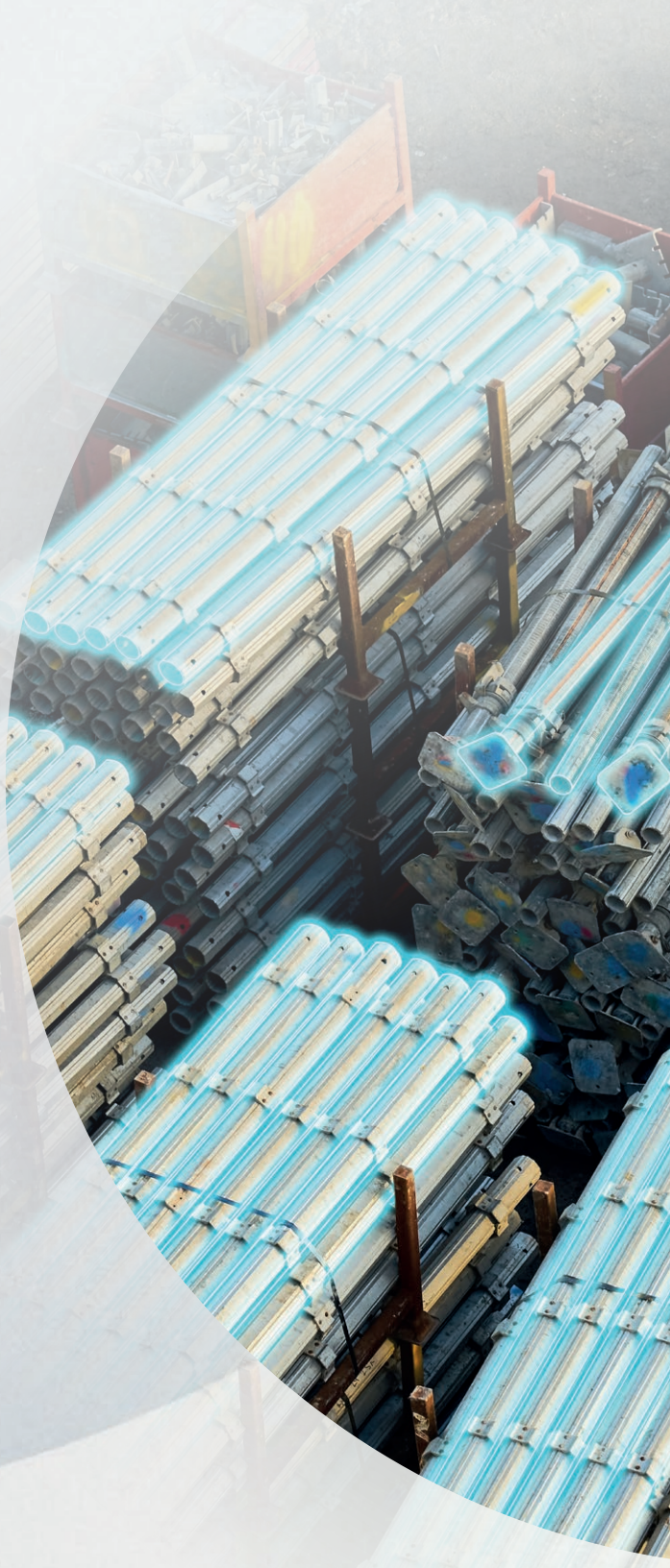
Foundation for Change:

5 Ways Digital Supply Chains Can **Revolutionize Your Construction Business**



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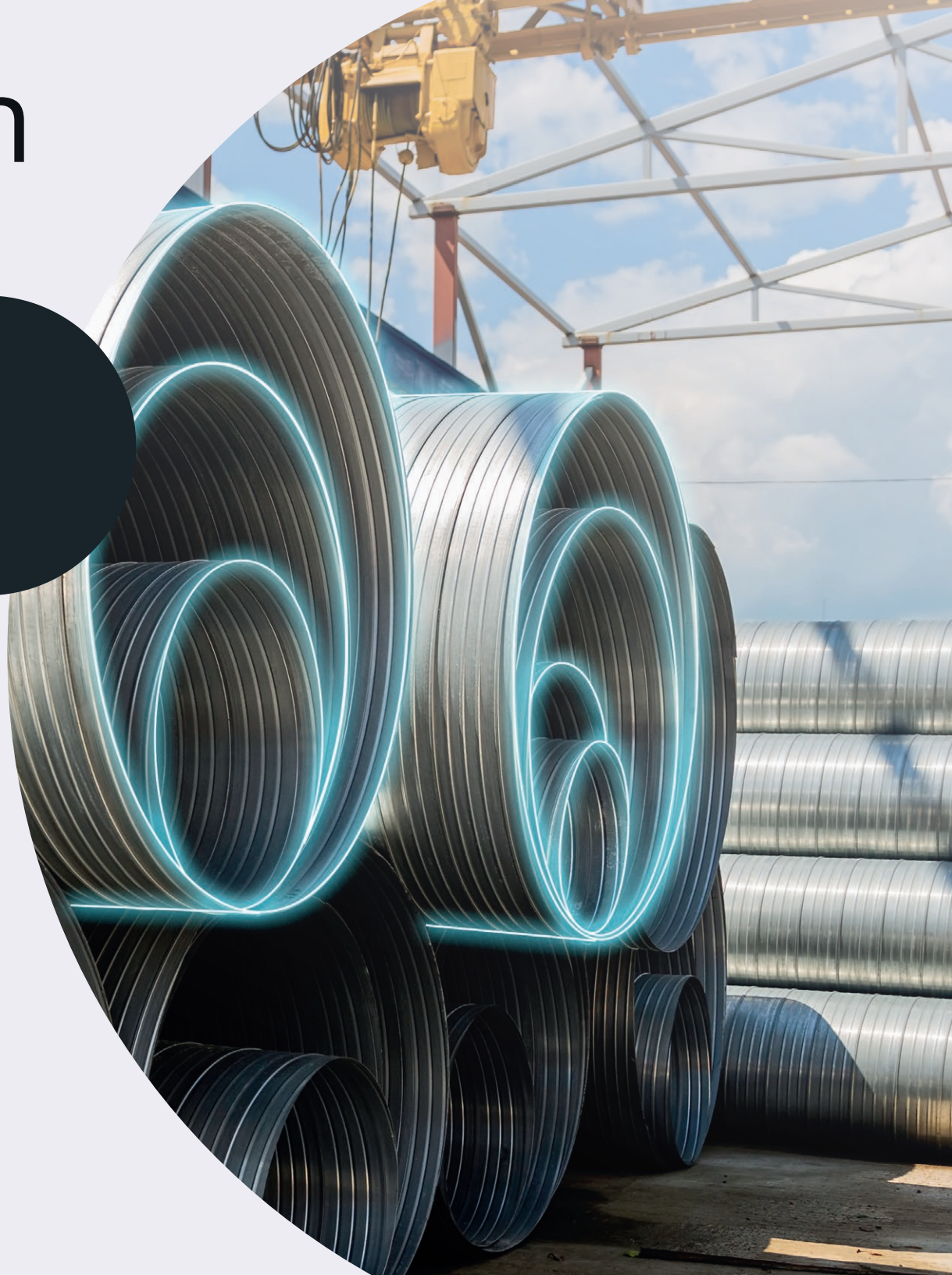
Introduction

> **"Construction supply chains are simple, stable and sturdy.**
>
> —No contractor ever



It may ruffle a few hard hats, but when it comes to embracing digital workflows, the construction industry has traditionally been–for lack of a better phrase–stuck in the concrete. For decades, contractors have managed the nuts and bolts of deeply complex projects via spreadsheets, paper invoices and receipts linked by a collage of sticky notes and sheer willpower.

To some extent, this has worked–orders are placed, invoices are paid and projects are completed. However, modern construction comes with challenges this system cannot meet, from evolving building regulations and sustainability standards to tighter margins and accelerated deadlines. This means more headaches for contractors, particularly those who attempt to manually manage project lifecycles, and disconnected legacy systems and processes are only intensifying the pressure.

Even for construction companies that incorporate digital tools, it's often a Frankenstein-like patchwork of siloed software for everything from project management to field operations to financial management. This fragmented ecosystem leads to human error, miscommunication and wasted hours on duplicate entries, causing cracks in supply chain foundations where vital project details eventually disappear.

This can have a compounding effect, especially for companies that juggle hundreds if not thousands of personnel, fleets of machinery and equipment and numerous suppliers across multiple job sites. Contractors commonly struggle with disjointed handoffs across projects and manual, time-consuming data entry. Beyond these struggles, several other systemic problems persist:

- **Lost invoices, unpaid bills:** Overdue bills or lost invoices due to sluggish processing times can harm credit ratings, strain supplier relationships and tarnish contractors' most valuable currency—their reputation.
- **Paperwork overload:** Dozens of projects with multiple teams plus a reliance on manual processes equals paper trails–long ones–which can quickly overwhelm in-trays and project managers and lead to processing delays and missed deadlines. This can be just as true for digital 'paper-on-glass' solutions that move online but retain disconnected or manual workflows.
- **Outdated supplier communication:** Price quotes by phone or email can mean hours of back-and-forth negotiations and lost/misplaced estimates, but even then, it can be unclear if current market rates or best pricing has been secured.
- **Team tension:** If procurement teams can't put in an order because invoices haven't been paid, and accounts payable can't process the invoice because necessary information hasn't been received, tensions can run high between teams.
- **Delays for days (or weeks):** Delays in materials lead to delays in projects, which can quickly spiral into cost overruns and increased idle time of teams and equipment.

Does any of this sound **familiar?**

Digital supply chains can alleviate these pains through a centralized, cohesive ecosystem of real-time data. Since all project stakeholders have their fingerprints on some stage of the supply chain, integrated digital solutions automate tedious, manual workflows like data entry and help eliminate communication breakdowns between departments and suppliers.

The reality is, for projects that often span months or even years, tight margins and tighter deadlines mean adopting digital workflows is no longer just trendy but a tactical requirement. Here are five ways to leverage connected workflows and solutions to streamline supply chain management, improve productivity and drive greater profitability.

Go Digital, Work in Real Time

1

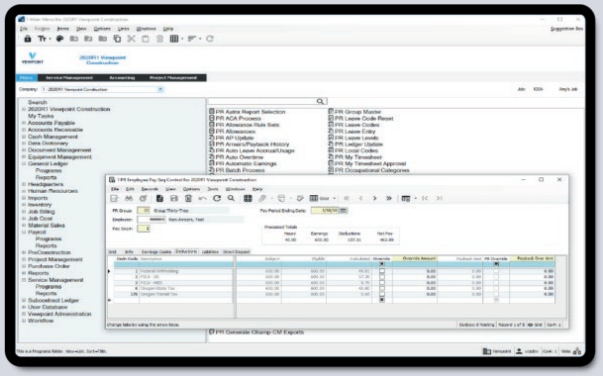
Digitizing supply chain management can be an absolute game-changer in modernizing processes and improving outcomes. Of course, prior to implementing any change, it's imperative to first assess current processes and bottlenecks–where are the biggest challenges? Where are the greatest opportunities?

This starts with mapping current processes and workflows to find weak links in the chain. From there, goals and objectives must be set before looking into or implementing any new technology. This can include setting key performance indicators (KPIs) to closely monitor lead time, inventory and costs or whichever challenge is of utmost priority. Setting KPIs also allows continuous refinement and improvement in real time, all based on feedback and performance.

One of the biggest boons digitization introduces is the ability to act in real or near-real time–from monitoring shipments, inventory and production to pulling in accurate pricing from thousands of suppliers to inform decision-making. The increased visibility across the entire procure-to-pay lifecycle drives cost savings so contractors not only get the exact supplies they need but also better bids and pricing along the way.

Digitization also fosters collaboration. Contractors can make faster decisions via connected systems and processes compared to checking multiple applications or manual methods. Instant updates across suppliers, contractors and project stakeholders means no more games of telephone. Everyone gets the same message at the same time.

Real-time monitoring of materials, people and work streams also helps reduce errors and project delays. According to the Association of General Contractors, more than 65% of construction firms report project delays due to supply chain challenges. With digital supply chain management, a contractor who runs out of materials can quickly find, and source required materials to get projects back on track and alert downstream teams of delays and schedule changes. Not to mention, less reliance on data entry and hands-on inventory management decreases reliance on manual tasks and can also reduce problems like sloppy notes, keyboard mistakes and other human errors.



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Digitization is also a catalyst for future growth. Implementing digital solutions and technology can lead to better resolutions for the next project. Teams can dig into trend and pattern data to draw insights that inform future choices and outcomes. For example, data can be used to forecast demand, detect potential disruptions and mitigate risk. Take the integration developed between Hilti's ON!Track asset management system and Trimble Viewpoint Vista Enterprise Resource Planning (ERP) solution. This integration pulls Hilti tools and consumables usage data into a user's ERP so they can rely on real-time numbers instead of forecasts to create more accurate estimates.

Business thrives when information flows easily. Accurate supply chain management is paramount at every phase of a project–from design to managing warranties after the crew leaves the site. Ultimately, digitizing supply chain management brings the agility, responsiveness and efficiency required to stay competitive.

Create a Single Source of Truth

2

While construction projects are built on physical materials, the industry is built on data, and ERPs are the central repository for managing every bit and byte of employee, supplier and project information. However, the process of accurately and expeditiously migrating invaluable operational data from disparate systems into ERPs has traditionally had one glaring vulnerability: people. The time-consuming, mind-numbingly repetitive nature of this work makes it highly susceptible to duplication and a variety of human-led errors.

There is a vast marketplace of tailored software solutions for every role in a construction firm; however, construction technology stacks are often cobbled together by multiple vendors and are rarely interoperable. According to JBKnowledge's Annual ConTech Report, 23.6% of construction companies say "none" of the software applications they use integrate with other solutions. That incompatibility deepens organizational siloes, adds bloat to the tech stack and spreads data across already complex digital environments.

Across design/Building Information Modeling, procurement, HR/payroll, accounts payable and other operational touchpoints, most firms rely on a wide variety of digital tools along with analog processes like vendor Rolodexes and binders of spreadsheets, invoices and other records that continue to clutter most companies' supply chain processes. Unsurprisingly, contractors regularly report that inefficient data transfer between applications continues to be a top frustration.

Like any modern business, construction stays on schedule when data flows seamlessly between teams and tools. This makes it essential that key business applications can easily integrate with other common procurement, project management and payment solutions. Building these digital bridges of information unlocks visibility between these systems and their users—connecting people, workflows and, eventually, entire ecosystems.

Take a digital procurement platform, where bills of materials are uploaded into a central system and then automatically synced to an ERP. Not only does this streamline communication between procurement and finance, but it also expedites purchase order approvals and ensures invoices and statements are promptly received, processed and paid.

A digital procurement platform syncs to your ERP.

Just as outdated tools have largely been relegated to the annals of construction history, so too should the painstaking process of manual data entry into ERPs. With connected software solutions, vital procurement and payment details can be automatically imported into a single platform to create a 'golden record,' reducing duplication and re-entry errors, alleviating bottlenecks and saving employees hours (and several grey hairs) each week.

Foster Collaboration Between the Field and Back Office

3

> **The single biggest problem in communication is the illusion that it has taken place.**
>
> – George Bernard, Shaw Nobel Laureate

Now, Shaw may have been referring to the broader human condition rather than a construction project, but his words embody a disorder at the heart of an industry still reliant on paper and punch cards—a loss in translation between the field and back office.

> **I can get real-time information on materials used and where it's going as it happens, in the office. If changes must be made, I don't have to hop in the truck to get to the site. I'm in constant wireless communication with our people and machines.**
>
> – Will Newall, Survey Manager
> Fletcher Construction

Miscommunication, a byproduct of disconnected applications and manual processes, slows work, dampens morale and obscures project visibility, impacting everything from procurement and pricing to delivery and payments. In fact, we consistently hear that disjointed project handoffs remain a top headache for contractors.

For any construction company, a unified digital supply chain is the cornerstone of establishing a culture of collaboration, where everyone has access to the same single source of truth, regardless of whether their office is in HQ, a shipping container or the cab of their vehicle. With harmonized data and digital workflows, there isn't an illusion that communication has taken place but an undeniable record of it.

Field supervisors, site managers and other frontline roles can all access and submit data from the field, tracking labor hours, equipment usage and material deliveries. This means more reliable, trustworthy and accurate information to properly manage crews, equipment and requisitions.

For estimators, purchasers and other office-based roles, this means centralized supplier relationships to streamline procurement and ensure the right materials at the right price get to the right sites at the right time. With potentially hundreds of shipments across various locations, project leaders can leverage solutions like Supplier Xchange to instantly compare vendor prices and product availability, determine shipping costs or lead times, negotiate real-time quotes, place and track orders and adapt to changing project requirements to avoid delays and cost overruns. What's more, finance teams get 360-degree visibility into orders and payment schedules, eliminating confusion on vendor payment timelines and keeping jobs on track.

From groundbreaking to ribbon cutting, alignment between field and back office has always been paramount to project pace and profitability. With connected digital workflows, siloed systems and processes can be demolished, simplifying collaboration and reducing communication breakdowns that have traditionally inhibited coordination between these two equal branches of construction.

Leverage AI to Automate Processes

4

A not-so-subtle thread connects these chapters so far—old-school, manual processes belong in a bygone era of construction, more suited for the collection in the National Building Museum than a company's supply chain. Automated workflows, now powered by the latest advancements in artificial intelligence (AI), are a hallmark of modern construction management, saving hours of mindless manual data input, searching or consolidation and liberating bandwidth for teams to focus on more business-critical, revenue-generating tasks.

Automated processes are crucial to a streamlined supply chain, from estimates to procurement to accounts payable. But this is arguably most heightened in the payment phase, where any processing delays of the hundreds of invoices construction companies receive from dozens of vendors can wreak havoc on project timelines, work quality and cash flow. Each invoice, often in paper or PDF form, requires line-level entry of data fields into an ERP—a monotonous, manual task that's prone to duplication and errors.

Automation, fueled by AI and machine learning, can streamline this process to improve accuracy and ensure timely payments. Trimble's Automatic Invoicing uses AI to process PDF invoices into validated invoice entries in your ERP with minimal manual entry. With intuitive drag-and-drop upload or forward to an inbox, pertinent invoice data such as vendor information, order number/amount, fee and sales tax auto-populate into respective fields, which are displayed alongside the original invoice for simple verification and approval.

As AI innovation continues to evolve, so too will the opportunities to integrate these smart solutions into construction technology suites. But let's be clear—automation doesn't mean omission. It's not about removing people from these processes but simplifying their work lives, where AI does the initial labor and people embrace a supervisory role to ensure compliance, quality and oversight.

Pay Suppliers on Time, Every Time

5

According to Rabbet's 2024 Construction Payments Report, slow payments cost the U.S. construction industry $280 billion in 2024. The survey found that general contractors spend an average of 73 hours per month (roughly two work weeks) managing payments to subcontractors and vendors, a 26% increase from 2023. Additionally, nine in 10 respondents (92%) endured work delays or stoppages due to slow payment to their crews.

With construction projects spanning months and years, payments are often tied to performance milestones and delivery of goods and services, making on-time and on-budget delivery constantly top of mind. In addition, overdue bills can harm a company's credit rating or industry reputation. Issues related to payment can also affect supplier relationships and introduce less favorable terms or delayed/refused deliveries. On the more extreme end, payment delays can also lead to project conflicts and work stoppages.

This isn't negligence. Construction professionals are consistently buried in work and often struggle to keep track of everything they must manage. It's easy to understand how errors are made with the systems and manual processes they have in place today, especially when there are multiple projects, teams and managers involved. Furthermore, manual payment processes are more vulnerable to fraud. According to a 2024 report from the Association for Financial Professionals, 80% of organizations experienced payment fraud attacks in 2023. Of those victimized, 30% were unsuccessful in recovering lost funds.

Automation not only fuels simplicity in the payment process but reinforces confidence in it. Trimble ePayments, powered by Corpay, transforms how construction companies manage accounts payable by processing payments aligned to supplier preferences. Instead of hours writing checks, stuffing envelopes, navigating payment information and details and following up with vendors and banks, automation can cut these efforts down to a single step or click.

Automation also protects organizations, helping mitigate fraud risk with insured payments and offering secure online banking processes without a lot of extra steps or effort. Invoice scanning and data capture, clearer payment terms and scheduling, hands-off processing and disbursal of funds, automated communication outlining payment status and more can all be achieved by modernizing technology stacks and shifting away from manual practices.

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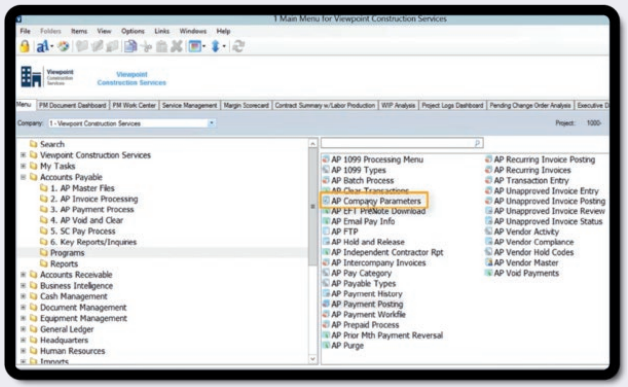

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How Trimble Can Help

When an industry is more than 10,000 years old, it's not shocking that modernization and evolution are required to meet modern demands. The industry has managed it before but continued reliance on manual and traditional processes in the era of digitization and AI cannot last.

Construction is ripe for change.

Automation and digitization of supply chain management are critical to meet the needs and demands across the industry today and, most certainly, tomorrow. The good news is that proven technology has already shown the way forward. From procurement through payment, there are solutions that work in concert to provide real-time visibility and a single source of truth, foster collaboration, increase automation and improve on-time payments. Trimble has been at the forefront of frontline technology since its founding more than 40 years ago. The company remains ahead of the curve, recognizing the need for digitization and real-time collaboration in the construction space.

The Trimble Construction One suite, for instance, brings all construction personas and stakeholders together in an interconnected construction technology stack within a single subscription–simplifying the entire procurement-to-payment process and streamlining construction projects.

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Reach out today to learn more about how Trimble can simplify and connect your procurement and payment processes, improve efficiency and visibility and reduce financial risk.

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