INDUSTRY INSIGHTS

From dull to differentiating: How AI is transforming financial management in construction

6 Minutes Read | Andy Holtmann | October 7, 2025

SHARE THIS POST:

SUMMARY

As more contractors and construction firms embrace modernization, advanced technologies such as artificial intelligence and machine learning are transforming high-touch processes in financial management, streamlining manual workflows and bringing greater efficiency, accuracy and compliance to critical back-office functions.

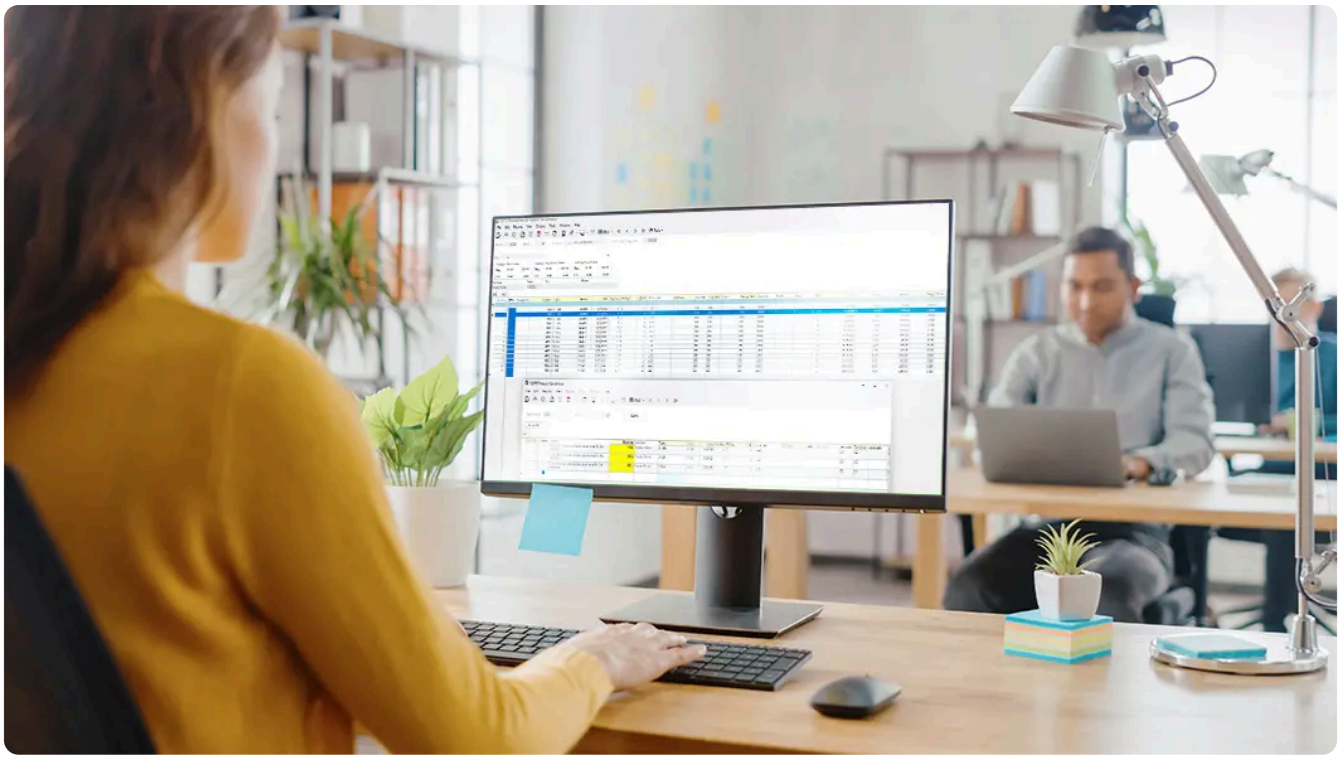
By Andy Holtmann, Senior Product Marketing Manager, Trimble Construction Management Solutions

There's a guiding principle at Trimble that technology has the ability to alleviate the dull, dirty and dangerous—a tenet as true for people in the trenches as in the trailers. For traditional back-office functions such as financial management, some workflows are less dirty and dangerous as they are dull, often in the form of manual, monotonous processes like payroll or invoicing.

What's dull isn't trivial, however; these processes are as intricate as they are imperative.

The ability to pay workers and vendors accurately and on time, or deliver the right materials to the right job sites are cornerstones of every project lifecycle. But manual workflows are inherently vulnerable—to err is human, after all—and any delays or errors can ripple through teams and timelines, leading to cost overruns, crew interruptions, cash flow constraints and even site stoppages.

Artificial intelligence (AI) and machine learning (ML) are now bolstering construction enterprise resource planning (ERP) systems such as the Viewpoint Vista and Viewpoint Spectrum solutions from Trimble. For financial management staff, these intelligent capabilities and workflows are turning the dull into differentiating advantages—verifying and validating accuracy, automating hours-long tasks to mere minutes and liberating bandwidth to focus on higher-value work.



Shorten workflows, stem risk

Construction has long tried to shake a stubborn perception as an industry of slow technology adopters. While there are plenty of contractors and companies still powered by paper spreadsheets and other analog processes, more are shedding this label as they embrace the benefits of digital transformation to streamline cumbersome, tedious functions.

In construction financial management, investments in AI and ML are accelerating workflows while simultaneously improving accuracy. The equation is simple: the less time teams spend on mundane data entry and processing, the more time they can devote to revenue-driving tasks like deep data analysis.

Smart payroll

Take payroll, historically an incredibly manual and matrixed process. A foreman in the field might collect timesheets, either manually (paper) or digitally, and send those to the office. Payroll clerks painstakingly key and re-key data from dozens or hundreds of unique timesheets into spreadsheets and various systems for reporting or payroll processing, all while taking into consideration a multitude of factors such as craft

class, prevailing wages, job location, union rules and time thresholds (regular/overtime/double time).

After a payroll provider calculates and applies withholdings, paystubs are couriered to the office where they're either mailed or given to the foreman. Any inevitable discrepancies about hours and rates must be reflected on the next payroll period—altogether, a deeply time-consuming and error-prone exercise that repeats every week.

Smart payroll workflows, assisted by AI capabilities and featuring automated data transfer, act as audit angels on the shoulders of accounting teams. They auto-validate timecards and flag discrepancies in employee history, prevailing wages or other state regulations to ensure accuracy, compliance and peace of mind *before* payroll is processed. These intelligent systems can automatically check a myriad of payroll nuances, including if an employee is at multiple job sites at the same time, if daily hours or hours over a pay period exceed specific thresholds, or if pay rates align with employee files or unique pay rules.

Say you're a contractor operating in Montana, Idaho and Washington. One of your workers does a job in Missoula, where the prevailing wage is $44 per hour, and moves onto a site in Spokane, where the prevailing wage is $58 per hour. If the pay rate fails to update, the system will immediately flag the inconsistency for further verification—a fundamental evolution that prevents minor hiccups from escalating into costly fits.

Automatic invoicing

Traditionally, invoicing is another high-touch, multi-step process. Purchase order clerks may manage dozens if not hundreds of paper and PDF invoices a week, liaising with vendors and suppliers to reconcile code errors, missing fields or incorrect information before they're transferred by hand into ERPs for approval and payment.

But what happens when a vendor mistakenly charges for Brand X rebar instead of Brand Y at three or four times the price? Or when a purchase order clerk accidentally hits an extra zero and inputs 5,000 linear feet of rebar instead of 500? In manual workstreams, these discrepancies are easier to overlook and have the potential to not only incur thousands of dollars in additional costs (that contractors often have to eat) but also delay future project phases until payments are rectified.

With automatic invoicing capabilities, teams can rapidly upload invoices within ERPs, significantly reducing the burden, time and risk of manual data extraction and entry. These tools can recognize pricing or quantity patterns based on historical purchase and project data and flag invoice discrepancies in real time.

Substantial mistakes persist in invoicing. If a procurement department processes about 200 invoices a week, even with an error rate of just 10 percent and an average correction time of only 15 minutes per invoice, this still translates to five hours every week just on remediation. This could be the difference between a project staying in the black or slipping into the red.

Training and tech support on demand

Beyond automation and accuracy, AI assistants embedded directly into ERP interfaces are helping finance, accounting and other back-office teams become more proficient with technology. Think of this like a searchable software “wizard” that empowers users to quickly navigate applications to find project files and information.

These intelligent searches are also shortening the onboarding cycle. Rather than passive training programs led by busy colleagues and dated tutorials, new hires can actively lead self-guided exploration of features, functionality and workflows at will. Through intuitive ‘how do I’-type questions (How do I set up a new job for all project phases?), they instantly receive simple, step-by-step instructions that can be templatized for future use.

Early AI adopters take pole position

'Keeping up with the Joneses' is a strong motivator in construction—what are my peers and competitors doing that allows them to process faster, get better material rates and minimize errors and rework? Just about every company is curious about AI, yet a recent KPMG Global Construction Survey found that only 37% of project owners or engineering and construction companies were either adopting or just starting to adopt AI.

While there's an understandable hesitancy and degrees of comfort with this technology, it should be FOMO—Fear Of Missing Out—rather than simply fear that dictates adoption.

AI and ML shouldn't be the only tools in the back-office belt, but denying the benefits is like ignoring heavy machinery because shovels and trowels work just as well. The faster teams can digest and deploy the initial salvo of innovation focused on reducing tedious, manual tasks, the more dexterity they will have to adapt to the next phase.

In that next phase, AI technology will move from detecting anomalies to taking guided action to correct them and from basic analytics to predictive insights, leveraging the latest market trends and troves of employee and project data to deliver prescriptive recommendations.

Buyers, however, should also beware. In a sector flooded with disparate point solutions, AI's impact can be severely stunted if it's stranded on islands. The vast potential lies in the ability of AI to integrate with and operate among broad data sources and workstreams, and the most effective use cases will be defined by interoperability within common, connected construction ecosystems.

For process-heavy, back-office functions like financial management, companies that take a proactive approach will not only ensure greater project efficiency now, but take pole position to harness inevitable innovations around the corner.

Learn how AI-integrated solutions from Trimble help customers bring greater speed, accuracy and performance to their financial management processes.

- **Trimble Viewpoint**
- **Viewpoint Vista**
- **Viewpoint Spectrum**
- **Trimble Construction One**
- **SketchUp Diffusion**
- **Trimble Business Center (point cloud classification)**

TAGS

Industry Insights Construction A/P / Payroll Manager Finance Manager Inventory / Purchasing / Procurement Professional Project Manager / Operations Project Owner / Executive Artificial Intelligence (AI) Cashflow Management Communication & Collaboration Compliance & Regulations Data Analytics & Benchmarking Data Management Increased Efficiency Integration & Interoperability Onboarding & Workforce Management Project Management Risk Management Budgeting & Estimating Change Order Management Financial Management Connecting Office & Field Optimizing Cashflow Pricing & Purchasing Civil Construction Construction Project Management Viewpoint Financial Controls Viewpoint Spectrum Viewpoint Vista General Contractor Specialty Contractor

Related Articles

ARTICLE

Beyond the build: How digital twins are redefining construction handover and asset management

This blog explores how digital twins transform project handovers into long-term asset value. By carr...

Read full article >

ARTICLE

From fragmented to future-ready: Why integration is the real innovation in construction tech

This blog highlights that despite high digital adoption, UK construction productivity lags due to fr...

Read full article >

ARTICLE

Using machine grade control to control costs

Modern machine control helps contractors boost their bottom line. Cut rework, save fuel, reduce mate...

Read full article >

About
Investor Relations
Events
Newsroom
Partners
Careers
Contact

Industries
Solutions
Suites
Platforms
Technologies
Product Finder

Sustainability
People & Culture
Education & Leadership
Trimble Foundation
Trimble Ventures
Compliance
Ethics Concerns
Trust Portal

Support
Dealer Locator
Professional Services
Extended Protection
Thought Leadership
Learn
Developer
Blogs and Resources

CONNECT WITH US

Trimble is a global technology company that connects the physical and digital worlds, transforming the ways work gets done. With relentless innovation in precise positioning, modeling and data analytics, Trimble enables essential industries including construction, geospatial and transportation. Whether it's helping customers build and maintain infrastructure, design and construct buildings, optimize global supply chains or map the world, Trimble is at the forefront, driving productivity and progress.

Legal Terms And Conditions
Website Terms Of Use
Privacy Center
Privacy Notice
California Notice At Collection
Your Privacy Choices (US)