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SD Digital

Building the Future: Top 3 Digital Tools Reshaping the Construction Industry



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How is digital technology enhancing efficiency, improving accuracy and enabling smarter decision-making in the construction industry?

While the primary objective of construction management is straightforward — delivering projects on time, within budget, and to the owner's satisfaction — the processes and technologies involved can be complex and demanding.

Through our experience working with leading construction firms, we've identified three essential tools that every company should have in its arsenal: Accounts Payable (AP) automation software, mobile field solutions and data analytics. Let's explore how these technologies can be game changers for construction companies.

AP Automation: Streamlining Financial Processes

AP automation is essential for modern construction companies, helping streamline financial operations and allowing teams to better manage spending for a stronger bottom-line impact. Manual invoice and payment processing is often time-consuming, error-prone and costly. Here are some key components and benefits of AP automation:

Touchless Invoicing

2- or 3-way matching, invoice processing and payments are among the most time-consuming tasks in the AP process. When these tasks are manual, the goal should be to implement AP automation to achieve touchless invoicing—where invoices are processed without manual intervention. This is made possible through intelligent invoice processing and matching, which automatically captures, validates and approves invoices, eliminating manual data entry and approval.

For example, project managers generate a digital purchase order (PO) and send it directly to the vendor through the vendor portal. The vendor issues an invoice and routes it back to the company via the portal, where the AP system automatically matches it to the PO and, if applicable, the receipt. Approved invoices are processed for payment automatically, based on the vendor's pre-input payment information.

Once the payment is processed within the customized workflow, relevant data is seamlessly integrated into systems such as construction management software for tracking against the schedule of values and the ERP for transaction recording. By allowing the system to handle the bulk of processing, AP staff can be redeployed to more strategic, value-added tasks rather than simply pushing invoices through the system.

Reduction in Research and Resolution

Automation not only reduces the risk of human error in invoice matching, data entry, and payment processing but also streamlines the process of retrieving project information. AP requires information related to spending for tasks such as invoice verification, contract compliance, or expense allocation. Automating the flow of this data from procurement to pay enables AP to make sure that invoices are charged to the correct project, spend is aligned to contract terms and milestone payments and expenses are allocated to the appropriate cost codes within a project. These examples ensure that payment is applied accurately so downstream reporting, i.e. WIP, is reliable and can be run in real time.

Approved Cash Flow Management

With automated workflows, companies can accelerate approval processes, optimize payment schedules, and gain greater visibility into cash flow. AI and ML analyze historical project data to forecast future expenses, enabling project managers to anticipate budget overruns and allocate resources more effectively. Additionally, automation helps identify recurring payments tied to contracts or blanket POs, enhancing cash flow analysis and financial planning.

Mobile Field Solutions: Enabling Real-time Communication

In the construction industry, timely communication and data access are crucial for project success. Delays in time sheets, expense reports, or resource tracking often leads to payroll errors, delayed reimbursements, and inaccurate job costing. Similarly, delayed inventory updates on material usage and equipment tracking can result in cost-tracking issues or project delays due to poorly timed maintenance.

These challenges can also create communication breakdowns, information silos, and slower responses to change orders or discrepancies. Outdated systems and manual processes often worsen these issues, leading to unexpected costs. Mobile field solutions address these problems by equipping on-site teams with tools to stay connected and productive. Key benefits include:



Access to Information

Workers can access project plans, documents, and schedules on their mobile devices, reducing delays and ensuring everyone is on the same page.

Enhanced Data Collection

Field teams can capture and input data directly from the job site in a standardized format, improving the digitization of essential information for office processing. This seamless data flow from operations to finance reduces reliance on manual processes, resulting in faster, more accurate invoicing, cost realization, and better cash flow forecasts. It also allows for concurrent reporting, enabling a more proactive approach to project status and cost overruns, and ensuring timely processing of change orders to prevent unapproved work by crews. From an operational perspective, this can provide insights into supply volumes, aiding supply chain management and mitigating costs caused by delays in receiving supplies.

Real-time Communication

Mobile solutions enable instant communication between construction site teams and the office, streamlining decision-making around cost estimation, materials and equipment management, and stakeholder expectations. This connectivity ensures that project managers, site supervisors, and office staff can collaborate seamlessly, addressing challenges and making informed decisions quickly to keep projects on track.

Improved Estimation

Estimation stands as one of the most crucial steps in a project's lifecycle. Ensuring the job is accurately scoped and priced from the outset is vital, yet also one of the most challenging tasks. Instant data entry and digitization provides direct benefit to the estimation process by allowing project managers to update cost and timeline elements of upcoming projects based on real-time field data. It can also assist from a resource management perspective to help track resource usage and availability in real-time, allowing for more precise allocation and estimation of required resources.

Data Analytics: Driving Informed Decision-Making

Data analytics is revolutionizing the way companies operate, making your business more efficient, cost-effective, and competitive. Neglecting data analytics as a foundational requirement can leave construction companies blind to critical insights, resulting in inefficient resource allocation, project delays, missed opportunities for cost savings / optimization, etc. Some of the examples of data analytics success from our experience include:

Project Performance Monitoring

By analyzing real-time data, companies can track KPIs to monitor progress, spot bottlenecks, and adjust timelines proactively. This helps keep projects on schedule and within budget while offering insights into jobs in the estimation phase. Predictive analytics uses historical data to improve estimates and identify cost-saving opportunities. Unlike basic reporting, which flags issues, data analytics digs deeper to reveal root causes—whether related to project managers, suppliers, customers, or project complexity. This level of insight, difficult to achieve with manual calculations alone, empowers construction companies to address problems more effectively.

Cost Estimation and Control

Leveraging historical data allows for more accurate cost estimations and better financial planning. By identifying cost trends and anomalies early, companies can proactively prevent budget overruns.

Resource Optimization

Data analytics enhances resource allocation by optimizing labor schedules and managing materials more effectively, reducing waste and boosting productivity, that, as mentioned earlier, has a direct impact to the estimation process.

Adopting advanced technologies does more than automate back-office tasks; it transforms finance and accounting into a dynamic support system. By providing continuous insights, it empowers project teams to work with greater clarity and confidence. Integrating AI and ML further enhances efficiency, reduces costs, and drives better outcomes. In an industry with tight margins and strict deadlines, this innovation is essential.

SD Digital and the Construction Industry

Leveraging our extensive expertise in finance, digital solutions, and the construction industry, our team empowers construction clients to enhance their project and business outcomes by utilizing technology to provide greater insights, automate processes, and enable clients to concentrate more on their core business activities. Have questions? Contact us at contact@sddigital.com.

About SD Digital

SD Digital helps organizations translate technology to transformative change and realize the best version of themselves. With a forward-thinking cap and digital lens, we empower organizations to realize the art of the possible with the power of digital through business-focused and technology-enabled solutions, built on an unwavering commitment to practicality, speed to market and the user experience.

For more information on SD Digital, please visit www.sddigital.com.

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