

Applying AI on construction jobsites: Where it actually delivers value

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Every employer should devise a response plan, a former DHS attorney said Friday at an American Bar Association event.



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Construction teams don't need another tool that promises everything and delivers friction. They need AI that fits how work actually gets done, supporting the daily rhythms of field coordination, cost tracking and project oversight without adding complexity.

The gap between AI's potential and construction's reality isn't about the technology. It's about alignment. Most AI tools fail because they don't account for how foremen plan work, how superintendents track progress or how project managers reconcile costs. Practical AI succeeds by strengthening these existing workflows instead of replacing them.

Where AI Actually Delivers Value

AI works best when applied to tasks that repeat across every project; tasks already captured in your systems:

- **Data entry and validation.** Field teams submit time, quantities and equipment hours daily. AI reviews entries in real-time, flagging anomalies before they compound into costly corrections weeks later.
- **Drawing and documentation support.** Instead of crews searching through revision sets and RFI logs, AI surfaces relevant drawings, specifications and annotations instantly. Questions get answered without waiting for office support.
- **Progress tracking and variance detection.** AI compares planned versus actual progress, highlighting discrepancies that need attention. Project teams focus on exceptions instead of manually reviewing everything.
- **Resource planning.** AI analyzes patterns in past projects, from labor deployment, equipment cycles and subcontractor sequences, to guide short-term planning and reduce bottlenecks.

These aren't theoretical applications. They're immediate improvements to work that's already happening.

The Right Way to Introduce AI

Successful adoption comes down to three principles:

First, use data you already capture. Time cards, cost codes, schedules, RFIs, equipment logs—AI should work with existing information, not demand new processes.



Second, deliver insights when teams actually make decisions. Foremen review work daily. Project managers update costs weekly. AI should surface information during these natural touchpoints, not in separate dashboards that nobody checks.

Third, start focused. A narrow, well-defined role—like validating labor entries or retrieving drawing references—builds trust faster than broad promises. Expand capabilities once teams see consistent value.

Measurable Productivity Gains

Three areas consistently improve with AI support:

Labor reporting becomes more accurate when AI flags entries that deviate from similar work patterns. This eliminates rework during cost reconciliation and provides clearer visibility into productivity rates.

Drawing interpretation gets faster when AI maps tasks to relevant sheets and details. Clarification cycles shorten. Crews spend less time waiting and more time building.

Progress reviews become more focused when AI highlights variances from planned activities. Meetings get shorter and decisions become clearer.

The Importance of Incorporating the Best AI-Enabled Solution to Your Construction Operations

It is clear that finding the right AI-powered solution to incorporate into your technology stack is critical to elevating performance. While there are many options in the market today, there are some that stand out.

Enter CMiC's latest product offering, NEXUS.



Representing the first AI-powered construction ERP, NEXUS combines Natural Language Processing, Construction Intelligence and Agent-Driven Automation to deliver a next-generation construction management solution built for long-term performance.

NEXUS revolutionizes how construction teams interact with data, automate workflows and make critical business decisions. Powered by the large language models (LLMs), CMiC has built the foundation to support agentic workflows. Teams can query their data using natural language, delegate time-consuming tasks to AI-enabled task agents and leverage sentiment analysis to identify potential project issues before they escalate. With a modernized interface and enhanced system performance, NEXUS eliminates manual processes and frees teams to focus on strategic, high-value work.

On top of that, CMiC's unified platform creates the right conditions for practical AI. Labor, costs, quantities, equipment, drawings and correspondence live in a single system. AI insights appear where teams already work (in daily reviews, planning sessions and cost assessments), not as separate analytical exercises.

This approach keeps AI grounded in routine practice. Workflows stay familiar. Information becomes more reliable. Decision-making gets clearer across the field and office. Productivity improves through steady, repeatable progress that builds over time.