

Why AI is Your Estimator's New Personal Assistant

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HOW ARTIFICIAL INTELLIGENCE PROPELS PROJECTS FORWARD

Artificial intelligence (AI) is leading the conversation across the construction industry. As contractors seek new ways to improve efficiency and productivity in estimating, they're turning to automated processes that eliminate the need for time-consuming, manual work. While machine learning and generative AI offer many solutions to increasing business efficiency, they also come with a level of risk and questions surrounding accuracy.

Whether it's AI in your preconstruction software performing automatic takeoffs on plans, using ChatGPT to increase efficiency in marketing and sales communications, or AI using data analysis to reduce risk and improve operations, it is an essential tool every contractor should be leveraging to allocate, but not replace, resources more efficiently.

WHAT'S OUT THERE AND HOW IS IT TRANSFORMING CONSTRUCTION?

The depth and interconnectivity of AI is vast. The goal of AI is to mimic human behavior. Machine learning is how we break down the human senses into algorithms to mimic human intelligence – how we identify data, classify data, formulate decisions from that data, etc. – and how AI can learn from its experiences.

Generative AI is a variant of artificial intelligence that relies on



machine learning and deep learning algorithms for creating new text, video, images, or programming logic for different types of applications. Automatic takeoffs, an application of generative AI, are being used across preconstruction, from conceptual estimating to streamlining internal takeoff processes to reviewing bids. With chat, estimators can connect with the plans and specifications to centralize fragmented notes and requirements throughout the construction documents.

AI IS NO LONGER HYPE — IT'S AN ESSENTIAL ESTIMATING TOOL

While digital tools far surpass the accuracy and efficiency of manual takeoff and estimating methods, contractors can still struggle to scale and increase bid output because of a lack of

time and resources. AI can significantly increase the efficiency of estimating processes by automating repetitive tasks such as quantity takeoffs and cost analysis. This allows estimators to focus on more complex and strategic aspects of work, leading to faster project turnaround times and increased productivity. Adding AI functionalities to your preconstruction process helps fill in the spaces where workforce shortage or time is an issue, but how many companies are taking this tech revolution seriously? According to new research by McKinsey & Company, the gap in AI maturity between leaders and laggards has increased by 60%. Late adopters of AI will struggle to keep up with the competition and scale at the rate needed to survive in the construction industry. Without AI-powered tools, estimators may struggle to keep up with the growing complexity and demands of projects, leading to inefficiencies in planning and inaccurate bids.

FEAR NOT, SKEPTICS: ROBOTS WON'T TAKE YOUR JOB

The worry that machines and robots will take jobs in the construction industry is palpable but not necessarily valid. Technologies are designed to improve the productivity and well-being of human workers, not displace them – but it's on contractors to keep up with the speed of AI's deployment.

While AI is developing at a rapid pace and in the process of being regulated in the U.S., the deep concern lies in the safety, accuracy, and security of data with many AI platforms and tools. There is an overwhelming amount of unstructured data in construction, such as duplicate documents causing false relevancy in AI outputs or “stale” or outdated data causing insufficient insights. How can contractors have trust in AI's accuracy when their own data input isn't centralized and standardized?

THE ODDS ARE WITH YOU

Where there is risk, there is also opportunity. Now more than ever, contractors need to prioritize adaptability with AI. Data standardization, hygiene, and security are the most important considerations when adopting an AI solution. You need to feed the deep algorithms with organized and reliable data to get the hyper accuracy you're looking for in estimates. And with all that data, you need a process to access information that is quick and efficient.

According to an FMI report, “contractors lose almost two full working days each week solving avoidable issues and searching for project information.” AI can instantaneously access your data, giving estimators time back in their day to make better-informed decisions and develop effective strategies. It's a more scalable solution than hiring a team of human experts for the task.

You should be looking for software with AI-centric capabilities that use prompt-and-response chat, perform automatic area and linear takeoffs, leverage data in schedules and legends in takeoffs, utilize a plan pre-search focusing on their trade, and perform automated takeoff counts on specific symbols. With less time searching, clicking, measuring, and counting, you'll be able to focus more on evaluating projects, increasing bid output and maximizing scalability.

Platforms with longevity in the construction technology space will have the most leverage with powerful AI tools because of the historical data that's been created and stored in the software for years. Contech companies investing in research and development are hyper focused on how AI can improve their customers' experience while maintaining the highest standards for accuracy.

AI'S PROVEN RESULTS

Early adopters of AI in construction will see a profound impact on business with these acceleration tools. A recent McKinsey & Company report shows generative AI use cases that could deliver a value in the range of \$2.6 trillion to \$4.4 trillion in economic benefits. In an industry struggling with razor-thin margins, labor shortages, and supply chain woes, contractors could use some economic benefits.


AI has the potential for estimators to do the following:

- » Enable teams to allocate resources more efficiently and accelerate estimating volumes.
- » Increase productivity to focus more on value-added tasks.
- » Eliminate manual errors, reducing material shortages and rework.
- » Improve profitability and competitiveness.

CAUTIOUS AND CALCULATED

Reliability, accessibility, and accuracy are imperative to unleash AI's full potential. Using AI as a tool, not a replacement, is key, and building an AI strategy for your company is vital. Set an AI policy, keep a pulse on regulation, and continue workforce development around AI tools.

Estimators still need to have an intimate knowledge of project details and be aware of AI's capacity for accuracy. Do your due diligence and make sure the information processed is correct. AI mistakes don't get financially covered by a machine – that falls 100% on the contractor.

Innovation and technological breakthroughs will always force us to recalibrate our understanding of AI's impact on our work and lives. Given the speed of AI's deployment today, the need to accelerate digital transformation and reskill labor forces is great. 



About the Author

Ryan Bender is junior product owner at [Stack Construction Technologies](#). Since 2016, Bender filled many roles at Stack, including internal estimating, product quality assurance, and customer training. In his current role, he brings his expertise in technology and background in construction to advance and simplify the takeoff and estimating process.

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