How The Construction Industry Can Utilize Artificial Intelligence To Reduce Risk And Prevent Disputes And Litigation

The future of AI in construction will consist of experts skillfully using AI to enhance their analyses and complement their experiences.

MARLTON, NJ, UNITED STATES, October 24, 2024 /EINPresswire.com/ -- The construction industry has a reputation for being slow to adopt new technologies, largely due to the industry's complexity and fragmentation. Because virtually every construction project is a custom endeavor, it can be difficult to design technological applications to be compatible providing blanket solutions, as they are in other industries.

> "The construction industry will be receptive to AI because it represents significant value that cannot be ignored. AI may be the tech catalyst that transforms construction into a tech-forward industry."
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> *James F. Gallagher, P.E., F.ASCE, Principal at RMC*

Construction thought leader James F. Gallagher, P.E., F.ASCE and Principal at Resolution Management Consulting believes that artificial intelligence may be the new technology that breaks through, with an added benefit of having the potential to reduce risk and prevent disputes and litigation. Gallagher says, "Although the construction industry is noted for its fragmentation, there are many operational processes that have core similarities or are relatable to broad numbers of projects. Those similarities can provide the foundation for the machine learning of AI in construction, ultimately reducing risk."

Gallagher cites change orders, as one example of a common construction activity with potential to trigger disputes. By adding artificial intelligence into the change order process, one adds advanced analytical, predictive and communications capabilities. With AI, one can more quickly and effectively identify related clashes, analyze options, recommend solutions and communicate broadly to the entire team to facilitate corrections well before they become disputes.

Gallagher believes that by incorporating artificial intelligence into the overall process, construction companies will be able to significantly reduce disputes and litigation, saving them time and resources. He has identified five key areas where applied AI offers the potential to reduce risk:

- The initial design phase.
Artificial intelligence, when utilized in the design phase, enables early intervention and modification well before the project begins and resources are expended. AI used in this manner can also help companies in improving cost estimation.


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- Providing for more efficient scheduling and updating scheduling.
AI, when utilized within 4D and 5D BIM scenarios can anticipate inefficiencies or conflict in schedules, and then recommend solutions well before actual activities become clashes or disputes.

- More effective communications to the entire team.
With an analog process, changes are noted as specified, which may or may not be communicated to the entire team. With AI, not only can changes be noted and made available to the entire team, but also the effects of changes to the next steps will also be updated so everyone will be able to understand their part in the modified plan. This will more effectively prevent clashes and errors, as well as more efficiently make stakeholders aware of how and when their next steps in the process may have changed.

- Predictive analytics.
AI enables a level of predictive analytics far beyond the scope of conventional project management. Predictive analytics can anticipate and advise vast amounts of data from various sources. It will provide deep insights and analyze patterns to prevent disputes by recommending changes in installation and timeline.

- Provides project monitoring in real time.
In addition to anticipating issues, during the planning phases, AI can monitor actual daily work and compare and analyze it relative to project goals as well as to relative construction best practices. In real time, it has the potential to significantly reduce human error.

- Machine learning for future improvement.
AI in construction not only offers the potential to enhance efficiency and reduce risk in the project at hand, the machine learning will also be used to improve future projects.

As impressive as AI potential might be, Gallagher cautions that AI should be viewed as only a tool. It is not a replacement for expert analysis. The fear of AI taking over the construction industry is unfounded. The more likely scenario will be that the future of AI in construction will consist of experts skillfully using AI to enhance their analyses and complement their experience.

Said Gallagher, “I believe that the construction industry will be more receptive to AI and AI enhanced applications because it represents significant value that cannot be ignored. Money talks . . . and to the construction industry, AI advantages can be quantified. Artificial intelligence could be the tech catalyst that finally transforms construction into a tech-forward industry.”

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