Construction Risk Advisor

DATA SCIENCE TO BOOST EFFICIENCY AND SAFETY

In order to improve worker safety and boost efficiency, about 20 construction companies have launched data science initiatives over the past few years.

One of those pioneers is a Boston-based company whose data scientists have developed an algorithm that analyzes photos from its job sites and then scans them for safety hazards. The algorithm then correlates those images with its accident records.

Although the technology still needs some fine-tuning, the company hopes to use the algorithm to rate project risks. As a result, the technology could prove extremely helpful in detecting elevated threats and then intervening with safety briefings.

Combining the data collected from these efforts could also be used to forecast project delays. Although data science is somewhat new to construction, a recent McKinsey report said that firms could boost productivity by as much as 50 percent through real-time analysis of data.

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AVOIDABLE ESTIMATION MISTAKES IN CONSTRUCTION

In the past three years, only 31 percent of construction projects came within 10 percent of their budgets, according to RSMeans, a provider of construction cost information. Completing projects within budget is a constant challenge for many contractors. Here are five estimating mistakes to be aware of, along with best practices to combat them.

1. **Unrealistic expectations**—Don't rely on ideal or worst-case scenarios, which can lead to impractical estimates. Find the middle ground to avoid setting expectations too high and blowing timelines.

2. **Flying solo**—Don't be afraid to use outside data sources from a credible third party. Create a realistic estimate by including a combination of your own historical data and their custom data.

3. **Lack of or wrong permits**—If you lack permits or have the wrong type, work can come to a standstill. Factor proper permits into your estimate, as well as their corresponding costs.

4. **Unclear parameters**—Parameters must be established clearly at the onset of each project. Make sure you clearly understand your clients' limitations and restrictions before creating an estimate to avoid unnecessary change orders.

5. **Missing details**—A lack of knowledge, missing items or generalized task descriptions can lead to estimates that are too low. Take the time to account for all necessary materials, labor and equipment by referencing similar work done in the past or detailed cost data from a third party.