Optimizing Construction Foresight With a Three-Tier Analytics Approach

Written by: Sid Nair, Chief Technology Officer, PlanHub

In recent years, industries that are traditionally slow to embrace technology have started to leverage it for a competitive edge. The construction industry, in particular, has been late to integrate technology, but many businesses now recognize its significant value, especially in data collection. Recent research by KPMG found that more than 45% of construction companies are working to incorporate digital analytics tools while around 68% have already adopted or plan to use advanced analytic systems to increase their productivity and inform their decision-making processes.

Historical data plays a crucial role in construction, offering workers and project managers insight into past project trends. These insights facilitate informed decision-making regarding budgeting, resource allocation, potential risks, and project timelines. However, lacking comprehensive data can lead to flawed insight, as it causes us to draw conclusions from only successful projects while overlooking valuable lessons from those that did not succeed.

Based on Gartner's Foresight approach to analytics, here are three primary pillars of construction analytics that can transform how contractors bid, plan, and execute projects.

HINDSIGHT: ANALYZING HISTORICAL DATA FOR ACCURATE REPORTING

Companies collect a lot of data during and after a construction project, whether it's change order data or completion reporting.

Over the years, this data has become a key component of project analytics. From budgeting a project to sourcing material, historical information can be used to drive better outcomes for contractors and their customers. Unfortunately, this data is all too often forgotten after it's reported, leading to little or no learnings for the company to inform future projects.

Luckily, adopting AI and other automated applications can make it easier for construction companies to pull industry-wide data and reliably record their own. With these functions becoming more readily available and easily integrated, construction companies will have access to a greater amount of historical data, laying the foundation for professionals to make better decisions for their clients and companies.

OVERSIGHT: REAL-TIME ALERTING AND MONITORING OF ONGOING PROJECTS

Oversight data is gathered in real-time to keep track of day-to-day projects, with the ability to also monitor complex scenarios like deliveries, weather conditions, and pricing. Project managers can utilize this data to gain live insights into field operations. This "control tower approach" equips construction companies with the necessary information to make informed decisions based on the current environment and how it is forecasted to change.

FORESIGHT: PREDICTING FUTURE TRENDS TO INFORM STRATEGIC DECISIONS

Historical data from completed projects, whether these were successful or unsuccessful, enables construction companies to make predictions and decisions based on patterns to better scope future projects. For example, if a project was initially projected to take seven months and cost $1 million, but ultimately required nine months and $1.3 million. The next time a company undertakes a similar project, it can utilize these insights to achieve a more profitable and efficient outcome.

Technology will continue to be a deciding factor in who ends up on top in the construction industry. What's more, this three-tier approach to analytics could be the key to solving the construction industry's longstanding productivity challenges — with 60% of contractors expecting their sales to increase over the next six months, according to ABC's Construction Confidence Index.

Ultimately, for any construction company to thrive, it is essential to have accurate data available for timely and cost-effective forecasting. Leveraging historical data and technology to gather and interpret this information lays the foundation for effective business planning and preparation. Without these insights, construction professionals risk going into the future blind.

About the Author

Sid Nair is a technology and product leader with deep experience in industrial and SaaS businesses. He is currently the chief technology officer at PlanHub, where he leads product and technology efforts to drive growth and innovation in the pre-construction tech space.

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