

Integrating Schedule and Cost for Better Risk Management

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Schedule and cost. Though they may seem very different, in reality, it's hard to talk about one without also referencing the other – because what impacts the timeline will have an effect on the budget, and vice versa. Yet they've often been treated as siloed functions, each with their own point solution. However common, this treatment can make risk management of these two interdependent factors trickier than it has to be. The key to reducing their risk factors? In a word, integration.

Why integrate schedule and cost?

There's no denying that it's becoming all about connected data and how to turn it into usable, actionable information that you can apply throughout a project's life cycle. Especially with schedule and cost – the key measures used to gauge project progress and success – there's a wealth of insight just waiting to be explored by bringing the two together.

Think of the enormous amounts of information you've carefully curated from past projects. Integrating all that schedule and cost data means those details can be more easily imported and exported from each other's databases, without being compromised or lost – and removes the risk of redundant data entry that is susceptible to rekeying errors. Further, cloud technology opens the door for equal access to this connected data, providing the foundation for real-time joint analysis



and decision making on anything that can have an impact on schedule and cost factors.

What does this have to do with risk management?

Today's advanced construction project software provides a more comprehensive way to determine real-world risks. It does this by assessing your historical project data to "learn" how cost and schedule affect each other and how to identify these risks early on. Those learnings can then be applied to your risk management and forecasting efforts for future projects,

allowing you to approach risk as a proactive opportunity based on objective, integrated data.

For instance, you could build known risks into the estimating stage so you can intentionally create what-if scenarios for forecasting both real-time and predictive impact on schedule and cost. Imagine being able to clearly see the effect of what happens to the cost and/or schedule when the work scope changes. Now you can ask questions and get reality-based answers as you experiment plugging in different details. For example, if you move the project completion date one week earlier, how much would this impact labor cost overruns for overtime or extra shifts in order to meet that adjusted deadline? If you expand the scope in a specific way, what will be the corresponding effect on the timeline?

What you gain when running these scenarios is the opportunity to develop risk-adjusted contingency plans for if and when any of those risk scenarios actually occurs. So, think of it not just as risk management but as risk preparation. These turnkey plans of action, based on data, help prevent making perhaps ill-advised decisions or taking insufficient action based on guesswork.

As schedule and cost fluctuate, so does risk. This is where earned value management (EVM) metrics play a supporting role as an extra set of eyes in both risk management and planning. Integrating cost, schedule and scope into one performance tracking method, it calculates and delivers real-time metrics showing details of what's on target and what's deviating. Values that skew beyond acceptable ranges (ideally established before the project begins) are tagged as risks requiring attention and/or action. EVM's ability to continually monitor and deliver updates to your schedule and

cost metrics, such as schedule performance index (SPI) and cost performance index (CPI), gives you ample opportunity to either execute any of those contingency plans you've already created or develop a new one based on any deviations due to unexpected events beyond your control.

Ultimate benefits of integration on risk management

In truth, it's very hard to completely get around issues that may throw off budgets and timelines – whether it's an unexpected event or the intentional improvement introduced after the build has begun. It's this unpredictability that often comes with large capital projects that has reinforced the need for software that supports more project certainty.

Integrated, risk-adjusted schedule and cost forecasting, however, helps foster a corresponding data-validated confidence for both owner and contractor. This is true even when the timeline goes beyond the desired completion date and/or the costs exceed the budget in order to properly account for anticipated risks. Rather than looking at risk management as merely averting risk, approach it as an opportunity for both the contractor and the owner to work together proactively for the most successful project outcomes. Because with more realism figured into the project, client expectations are better managed. And along with increased transparency into the interplay of schedule, cost and risk, comes the improved odds of accepted bids.

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