



5 Best Practices for Successful Project Controls

Project controls are project management tools, processes, and people used to determine the costs, scope, and schedule of a project. These factors are critical to engineering and construction but can apply to any discipline.

Project controls are a subset of project management specifically concerned with quality control of time and budget-related issues. Project management challenges inevitably arise due to managing multiple schedules and work bids—particularly in **architecture, construction, and engineering** contracts. Estimated project costs and plans should be as accurate as possible. Still, accuracy is often mitigated by unexpected circumstances like inclement weather, supply expense changes, and variations in labor costs.

To experience consistent success with engineering and construction management, here are five best project controls practices to implement:

Best Practice

1

Thorough documentation

Best Practice

2

Well-planned scheduling

Best Practice

3

Accurate cost estimating

Best Practice

4

Savvy risk management

Best Practice

5

Tech-forward methodology



Examine these best practices in detail to be ready to apply them to your next project.



1

Project Controls & Thorough Documentation



Detailed documentation is critical to project controls because of the multiple contracts involved in any construction or engineering project. Moreover, for each contract, various factors must be carefully tracked and documented, such as expense receipts, to justify necessary adjustments to costs or timeline.

Documentation protects your organization's legal interests if an unforeseen expense needs to be added or a particular sub-project takes longer than expected—for building contractors, for instance. If progress on a project is well documented, a company can pinpoint precisely which factors contributed to any given setbacks or misalignment with building plans.

There also needs to be thorough documentation for handing over project details to whatever team handles each consecutive project stage on the ground. If the cement's been poured for a structure's foundation, and the next step is the building's construction, the previous team must leave behind precise budget and timeline-related records of the progress made thus far.

Lastly, project controls management on the administrative side of things needs to be able to track progress made in detail, daily, adjusting the timeline and schedule when required as workflows continue. Careful tracking of all contract elements will allow for better project intelligence and analysis in real-time.



2

Project Controls & Well-Planned Scheduling

Proactive scheduling practices can mean the difference between a project being completed on time and under budget or extending two years over schedule—which may, on the surface, seem like a drastic timeline extension. However, according to a recent survey cited by McKinsey, an astounding [one out of five capital construction projects goes over budget](#) because timelines are extended by one to two years, on average.

Therefore, they suggest implementing the basics first, starting with “a realistic, well-structured baseline schedule with buy-in from all stakeholders.” This advice implies that many timelines are unrealistic to begin with; and that many planning committees fail to include all stakeholders. This last factor could explain part of why project plans fall behind schedule.



For example, if executives meet without the input of construction management or foreman involved in the physical labor on the ground, it naturally follows those expectations could be unrealistic. It's wise to update schedules to reflect ongoing project advancements regularly. Similarly, the Project Management Institute found that [it pays to be an agile “gymnastic enterprise”](#) able and willing to flex and pivot with the present circumstances.

McKinsey analyzes that [global capital spending will reach \\$77 trillion by 2023](#). However, owners who integrate project value improvement (PVI) practices can save up to 10 percent of the project value. PVI practices like standardization and modularization can maximize labor efficiency by preparing critical construction elements beforehand. While standardization replicates design already proven successful for use in construction projects, modularization involves pre-fabrication of essential structural elements—both of which can drastically reduce overall scheduling and production time.

Lastly, advanced analytical tools, [cloud scheduling options](#), and cloud-based technology like 3-D digital twins can help ensure realistic and achievable project schedules. Software that optimizes project management, automation, and team-level transparency brings the potential to improve project control scheduling vastly.



3

Project Controls & Accurate Cost Estimating

Cost estimating is such a highly skilled process that it's engendered a specialized position of **cost engineer**: dedicated solely to the art and science of cost evaluation. As with data scientists, cost engineers apply scientific analysis of all factors involved in cost estimating. They typically research the expected costs of labor, material, construction equipment, and tools required to bring a project to completion.

Part of the reason cost estimating is considered science is because there are so many different possible methods and approaches to estimating. However, more **modern project controls estimating methods** embrace a more thorough, extensive “preconstruction” phase than traditional design-bid-build models. Preconstruction requires more early-stage planning and coordination for capital construction projects, including scheduling, logistics, safety, and estimation considerations—as well as a preliminary risk analysis (PRA) involving

stakeholders like specialist managers and construction superintendents.

Research suggests an “optimism bias” can skew cost estimates toward unrealistic numbers. Utilizing as many records of recently completed, comparable projects as possible helps prevent this phenomenon.

Savvy cost estimating involves more **sophisticated technology and data collection**, such as drone-enabled data visualization, enabling the creation of cloud-accessible 3D models. These models allow project control teams to formulate more accurate bids—reducing pre-bid costs by minimizing unforeseen inefficiencies.

Moreover, **cloud-hosted estimating apps** simplify the cost estimating process for you and store all related data in one place. This maximizes reporting efficiency and allows for a more transparent cost assessment.



4 Project Controls & Savvy Risk Management

Project risk management proactively assesses, identifies, and mitigates or averts the consequences of obstacles to practical project completion. Since risk management requires predicting possible contingencies or project risks, the more extensive your analytics tools and processes, the better.

McKinsey recently defined '[dynamic risk management](#)' as made up of “three core component activities”:

- Detecting potential new risks and weaknesses in controls
- Determining the appetite for risk-taking
- Deciding on the appropriate risk-management approach

Moreover, they recommend five actions to establish these dynamic risk management capabilities:

- Reset aspiration for risk management
- Establish agile risk-management practices
- Harness [the] power of data and analytics

- Develop risk talent for the future
- Fortify risk culture

The focal point of these recommendations centers around being proactive and creating a future-proof plan to counteract any potential effects of projects going awry or off schedule. Dynamic risk management requires organizations to focus on prevention rather than dealing with situations after the fact.

Proactive planning involves investing in forward-looking, predictive data analytics and hiring team members trained in preventative risk management practices. Implementing comprehensive risk management requires anticipating both process and people-related risks. Thus, acquiring predictive analytics tools, hosted software applications, and teams prepared to enforce effective risk management policies is worthwhile.

This focus on the bigger picture brings us to our final recommendation: methodology.



5 Project Controls & Tech-Forward Methodology

A quick scan of the research on best project control practices will show that findings lean toward implementing data-centric, tech-forward planning, integration, and communication. Comprehensive project controls include detailed documentation, scheduling, cost estimating, and risk management.

Beyond those basics, several elements should be present for a reliable methodology: a [project execution plan \(PEP\)](#) blueprint that lays out all the critical steps of a project; ample participation from and open communication lines between all viable stakeholders; and integrated technology that allows all management to monitor, track, and amend data about progress, as it happens—in near real-time, if possible.

LoadSpring found through a recent survey of project leaders that companies using [cloud-based project controls](#) value a single-sign-on platform that is managed for them. This allows them access to app and performance support at the infrastructure level via a vendor-agnostic



cloud. Access to various software applications from the same platform offers flexibility and optimized availability for users to access the platform from anywhere in the world.

If project controls aim to improve the quality of oversight, monitoring, and facilitation of work to steer outcomes related to costs and schedules, streamlining the process so that all necessary data is accessible from one place could improve outcomes by allowing for greater control.

The [LoadSpring platform](#) allows for simultaneous access to the same database from multiple settings and stakeholders because it is housed in the cloud. In addition, [LoadSpring ProjectINTEL™](#) and [LoadSpringANALYTICS™](#) provide project intelligence and business analytics services for better risk management and proactive project planning.

Want to succeed at project controls? We can provide a cloud readiness assessment. Choose the platform with the most versatility, integration, availability, and digital transformation technology: [contact LoadSpring today!](#)