Finding Efficiencies in Construction Estimating With RSMeans Data Online



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The accuracy of a construction estimate can make or break a client's budget and a contractor's profitability. Part art and part science, an accurate and complete estimate is, in fact, "built" several times on paper before a shovel goes into the ground. Before a new build or renovation, cost estimates are used to evaluate information for facility/business owners, contractors, architects, engineers and project managers. These stakeholders rely on the cost estimate to determine project feasibility, funding, logistics and other required resources. With proper processes, workflows and experience, people estimating construction work can set themselves and their company up for success.

But inefficiencies in construction estimating can result in budget overruns, delays throughout the duration of the construction project and loss of work. Even small margins of error across a plethora of projects will add up and can have long-lasting repercussions. Budget issues weaken credibility with clients and local officials, and overruns can drain funding from other mission-critical operations.

Some costs are more difficult to estimate than others, particularly in an increasingly dynamic economy where costs change quickly. This is because external and third-party labor costs are prone to risk and change, and construction material prices are kinetic. It's also important to remember that a reasonable cost for one job may be completely unrealistic for another.

Sustainment, restoration and maintenance costs, which focus on the needs and upkeep of existing facilities, can also be difficult to predict, but planning for each of these contingencies is key to an estimator's job.

Recent advancements in predictive cost data development, cloud technology deployment and AI-based contextual cost analysis have the potential to drive exponential improvements in project estimating and budgeting.





Root Causes of Inaccurate Estimates

Inaccurate estimates have several root causes, and it's important for estimators to avoid each to maximize budgets and profitability.

Inaccurate cost data

Access to accurate line-item cost data is extremely important, and the absence of such data is probably the primary root cause for inaccurate estimates. Using an unreliable database of material, labor and equipment costs to price the scope of work according to prevailing market conditions will derail any estimate. This is even more difficult today due to market volatility and supply chain issues.

Incomplete scopes of work

Ensuring that the project or task is adequately represented by a tight scope of work greatly reduces the possibility of missed or incorrect work elements and increases the probability of producing a more accurate cost estimate.

Inconsistent processes

Capturing, packaging and applying consistent methods of developing estimates help every cost estimator (from expert to novice), ensure organizational best practices are applied and create a repeatable process for developing streamlined reviews and easily applied QA governance methods. For most organizations that produce cost estimates as a key component of their business operations, this becomes the single most critical aspect of developing consistently accurate cost estimates.

Unrealistic expectations

Banking on ideal or worst-case scenarios can lead to biased, improbable estimates, which is a recipe for blown timelines and unrealistic expectations.

Lack of data verification

Trust your own knowledge, but don't be reluctant to also rely on outside data sources. An accurate estimate should marry historical project data with credible sources of third-party construction cost data for additional validation.

Missing or incorrect permits

How an estimator budgets for the soft costs and direct overhead costs of a project can either make or break an estimate. Permits cost money, and if you don't have them or if you have the wrong types, they can bring work to a standstill. Permit costs vary greatly depending on many factors, such as the type of project, the proposed occupancy, the project location, local code requirements, as well as any zoning considerations that might come into play. When entering a new market or performing an unfamiliar scope of work, be certain to factor proper permits and corresponding costs into estimates to avoid any unexpected delays. This helps to ensure that all direct overhead costs are captured and accounted for, which is critical for a reliable estimate.

Designing in a silo

It's important for the various parties involved in a project to work closely and establish clear project parameters from the outset. Understanding limitations and constrictions ensures everyone is on the same page, limiting the possibility for unnecessary change orders.



Omitting details

Whether due to time constraints, lack of knowledge or unintended mistakes, missing items or generalized task descriptions can have immediate (and delayed) consequences for a project. Estimates will generally be too low, leading to inevitable change orders and project delays. Therefore, take the time to account for all materials, labor and equipment by referencing past similar work and detailed cost data.

Fortunately, there is a simple formula for efficient construction estimating: cost, accuracy and speed. The sweet spot of estimating is the convergence of these three factors.



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Critical Elements To Ensure Optimal Efficiency in Construction Estimating

Capture Complete Scope

To ensure optimal construction estimating efficiency, estimators must consider several critical elements. First, focusing on the preconstruction plan and harnessing human expertise, versus designing in a silo, can set the project up for success. To accurately capture the project's scope of work, visit the job site, gather input from as many vendors as possible, and study the drawings and plans intently. It's important not to stop at the scope of work defined by an architect and engineer's plans and specifications. Go a step further and include the context scope and construction scope for a more complete and accurate construction estimate. The context scope should include details about the location of the build, such as building age, time constraints, weather, labor availability and more to capture the dynamic, real-world circumstances surrounding the build. The construction scope answers how the project will be built, including planning how materials will get to the job site and what team will need to use those materials. This process forces estimators to consider the equipment and labor necessary to execute the work.



"Capturing the project's full scope of work is always a challenge. An estimator can overcome this challenge by asking detailed questions, as well as physically walking the job site and taking photos, then following up with more questions. Factors to consider include site access, proximity to resources (e.g., utilities), and storage for materials and equipment on-site."

JOHN GOMES JR., MANAGER, PROFESSIONAL SERVICES AT GORDIAN

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Build Trust With Clarity and Transparency

Increasing transparency is also extremely important to foster trust among the project team. Improved reporting structures, clarity about changes in a budget or schedule, and commitments to learning from best practices will all serve to maintain confidence.

An adequate understanding of construction materials, means and methods, coupled with a clear visualization of the project, plays an important role in estimating.

Ultimately, it's important to think like a contractor when estimating by asking key questions such as:

- "How will the project be built?"
- "Which areas of the job will require the most attention?"
- "What means/methods will the contractor use to execute the project?"
- "What potential challenges might a contractor encounter on this project?"
- "Have all aspects of the project been properly estimated and accounted for?"

Out With the Old and in With the New — Using Trusted Cost Data and Construction-Estimating Software

Using construction estimating software and trusted cost data is another critical element for accurate estimating. Estimates should be powered by historic cost information, including old estimates, subcontractor quotes, vendor quotes and published cost information. These cost estimations and assessments used to rely heavily on nonspecified software tools or pen-and-paper execution of mathematical models. But now, cost estimators can leverage the power and speed of cost estimating software and apply their knowhow to confirm or improve the results. This software introduces a new range of tools that easily and consistently produce very accurate cost estimates that account for a wider range of variables. This is all thanks to industry advances in machine learning, which streamlines a complex process with order and convenience to help avoid human error.

Functionality and accessibility accelerate a large part of a cost estimator's work, so contractors and A/E/C firms can improve internal project-management skills and develop good habits that get highquality estimates out the door quickly. Standardizing methods and processes with a systematic approach to estimating will also help streamline your day-to-day work. This includes creating templates for common types of projects, standardizing unit costs and organizing data in a logical way.

"To develop clear and accurate cost estimates, estimators should use digital tools to scope out a project and perform quantity takeoffs rather than printing out project plans and specifications. And instead of calculating quantities and recording historical costs manually, they should use electronic pricing templates. Most importantly, they should use a trusted source for construction cost data for creating and validating their cost estimates."

JOHN GOMES JR., MANAGER, PROFESSIONAL SERVICES AT GORDIAN





Exploring RSMeans Data and Related Software

Gordian's RSMeans Data has been synonymous with detailed costs for decades. Robert Snow Means was a civil engineer who kept meticulous construction costs in a series of leather-bound books he made at his kitchen table. By the early 1940s, his peers were so impressed by his tracking of equipment, material and labor costs that they began offering to buy his homemade "cost books." Today, RSMeans Data is North America's leading construction cost database, containing more than 91,000 material, labor and equipment costs that engineers spend upward of 30,000 hours validating each year. Costs are still available in books, just as in Robert Snow Means' day, but increasingly, estimators are turning to RSMeans Data Online, a dynamic estimating software, to create quicker and more accurate estimates.

RSMeans Data Online helps users fill in their knowledge gaps when costing new jobs or projects in new markets. Engineers and estimators can enter the project ZIP code and find localized costs for more than 970 locations. They can also estimate new commercial and/or renovation construction costs per square foot and price out large-scale projects in multiple locations. The software provides access to material, labor and equipment costs for each line item and enables users to quickly adjust quantities as needed. The result is a paradigm shift in cost accuracy, scope completeness, project schedules and staff training.







Features of RSMeans Data Online

Beyond the cost database, RSMeans Data Online is an estimating software that updates automatically and regularly to account for cost fluctuations, so every estimate reflects real-world market conditions. Users can select which "release" of data they want to use to create estimates, and costs are updated automatically within an estimate when it's modified.

Construction costs comprise material, labor, and/or equipment prices, and they can be referenced at the unit, assembly or square-foot level of detail. Estimators can search by keyword or CSI MasterFormat and pin frequently used items. They can also view detailed price breakdowns, including material, labor, equipment and productivity. The cloud-based estimating software is accessible 24/7 on a desktop or mobile device.

Create square-foot estimates fast

How long does it typically take to create conceptual estimates? Hours? Days? RSMeans Data Online makes it easy to create an accurate square-foot estimate in a matter of minutes. With the power to access over 40 square-foot models, RSMeans Data Online users can make fast changes to square-foot estimates and provide clients with options that maximize their budgets, exceed their functional expectations or both.

Harness predictive data

Budgeting confidently for projects that take place years in the future is one of the construction industry's oldest problems. Now, estimators can accurately estimate future projects with predictive cost data that's accurate up to three years in the future.



Cost item assemblies

Cost item assemblies are another way to create efficiency. An assembly is a collection of cost line items necessary to construct a component. For example, estimating for a linear foot of an interior office wall might require the estimator to individually seek out and select a dozen or so cost line items (e.g., drywall, baseboard, wall studs, tape, spackle and finishing, etc.) from the construction cost book. By selecting a "gypsum board wall" from an assembly catalog, those dozen line items are already built into the assembly, and the estimator can be confident they've accounted for all necessary materials and labor to execute the scope of work. By entering a takeoff quantity (say, the length of wall), the assembly component is programmed to calculate the total estimate, including labor and quantities for each cost line item included in the assembly. RSMeans Data Online offers over 12,000 cost item assemblies as part of the commercial cost data offerings. Customer-specific assemblies are also available.

Life cycle costing – maintenance, renovations and repairs

Estimators can plan for the next five years, 10 years and beyond with RSMeans Data Online's Life Cycle Cost Estimator. They can also estimate future renovation costs via dozens of renovation models. This includes everything from a coat of paint to a total gut job for dozens of models, from apartments to warehouses. And it's now easier to plan and budget for maintenance and repairs with approximately 1,700 repair and replacement assemblies. "RSMeans Data Online is a vital tool for owners, engineers, architects AND contractors, as it provides estimators with an excellent starting point for pricing construction projects. Not only does it enable quick access to material and equipment pricing, but estimators can use labor-hour units to estimate the time necessary to complete specific construction tasks, then easily apply these hours to site-specific labor rates to improve accuracy. RSMeans Data Online is the industry standard and trusted source for construction costs."

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Gordian is the leading provider of Building Intelligence[™] Solutions, delivering unrivaled insights, robust technology and expert services to fuel customers' success through all phases of the building life cycle. Gordian created Job Order Contracting and the industry-standard RSMeans Data. We empower organizations to optimize capital investments, improve project performance and minimize long-term operating expenses.

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