

Six Steps to an Accurate EAC

Building a solid, reliable foundation for project forecasting

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Project management professionals have an incredibly difficult job, akin to some combination of magician, juggler and business executive. One of the most difficult parts of a project manager’s already difficult job is accurate forecasting—schedule and cost forecasting.

Why is forecasting such a challenge? Because nearly every piece of the project is in its own silo. From resources—including products and staff—to finances to overall project scope, a successful project will successfully integrate all this information.

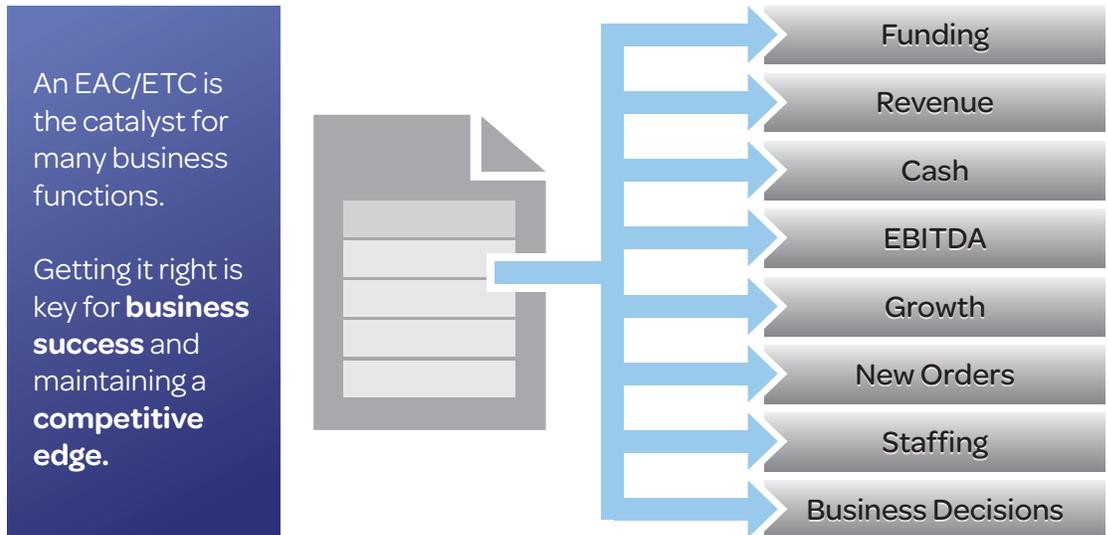
This is why an accurate EAC, or Estimate at Completion, is one of the most critical pieces of your project. An EAC is the catalyst for a broad range of business functions. Getting it right is key for business success and maintaining a competitive edge.

Defining the EAC

What, exactly, is an EAC? And what are the components that make up an EAC? Let’s start with some definitions.

EAC = the final cost of your project. This is your forecast. The EAC is made up of your “actuals” (labor, materials, other direct costs, and indirect costs) plus your Estimate to Complete (ETC)—the cost of the work left to complete. So, $EAC = Actuals + ETC$.

Why is this important? The EAC is the basic building block for project forecasting. The EAC will help you forecast revenue, net cash, profit, and understand what staffing loads and other resources will be necessary to complete the project.



Once your baseline is in place, incorporate the following six characteristics to create a highly accurate EAC:

1. Time-phased Estimates
2. Schedule Integration
3. Risk and Contingencies
4. Rate Differences
5. What-if Scenarios
6. Top-down Planning

In a project-driven organization, everything at the project level relates to higher-level business. It's all cause and effect. For example, an accurate EAC will tell you if you'll make your completion dates and if you've got the right resources available—or if you'll need to outsource. This information will, in turn, help your company look at your project relative to other projects and make sure you have the right mix of resources within the project portfolio. This equates to meeting management goals.

Let's put it more simply: Imagine you're going someplace you've never been before—without a map. There's a good chance you'll get lost. In fact, why use a simple map when a GPS system will tell you where you're going, how long it will take to get there, and provide alternate routes? The EAC is the GPS of your project. It will guide you completely, from start to finish. It is one of the most critical pieces of your business process.

Creating an Accurate EAC

Just as it is vital to have an accurate GPS for traveling, it is equally vital to have an accurate EAC for your project. And just as you would start any project, before creating your EAC you must create a good, accurate project baseline.

A good baseline will include project scope, schedule, and cost—and will give you the ability to track to each one of these throughout the project. So, you will need to have some process in place with your baseline to see how it's changing over time—how the work may be changing over time, or how your execution of the work may be changing over time.

The baseline then becomes the standard you track to, which becomes your EAC—or, how you're actually executing. In other words, you have your baseline and you have your working plan, and you're comparing the two.

1: Time-phased Estimates

Estimates should be time phased—they should include how, exactly, are you planning to accomplish the work period by period. Estimates should be time phased over the life of the project. This time phasing should be done monthly, at a minimum. Forecasting monthly gives you the ability to look at your estimates by quarter, year, government fiscal year, or any combination you need.

Why is this important? Let's say your government customer wants to see what your expenditures are through their fiscal year so that they can provide you the right amount of funding. You want to be able to give it to them rapidly. You may even want to forecast weekly—that, too, can be valuable depending on business needs.

Many projects are performed over long periods of time—often, several years. Resources will change based on the project phase, as will other direct costs. Understanding how you will accomplish the work period by period will play directly into the EAC. It is best practice to forecast the entire project's period of performance not just the current year. Many companies make that mistake and they miss out on seeing the big picture of the overall project.

Time phasing your EAC will help increase its accuracy and better map out exactly how your needs will change over the life of the project. You will need a good time-phased model to compare against your original baseline plan. At a minimum the EAC should be detailed by Element of Cost (EOC) (labor, material, and other direct costs) and it is a best practice to forecast at the resource level.

2: Schedule Integration

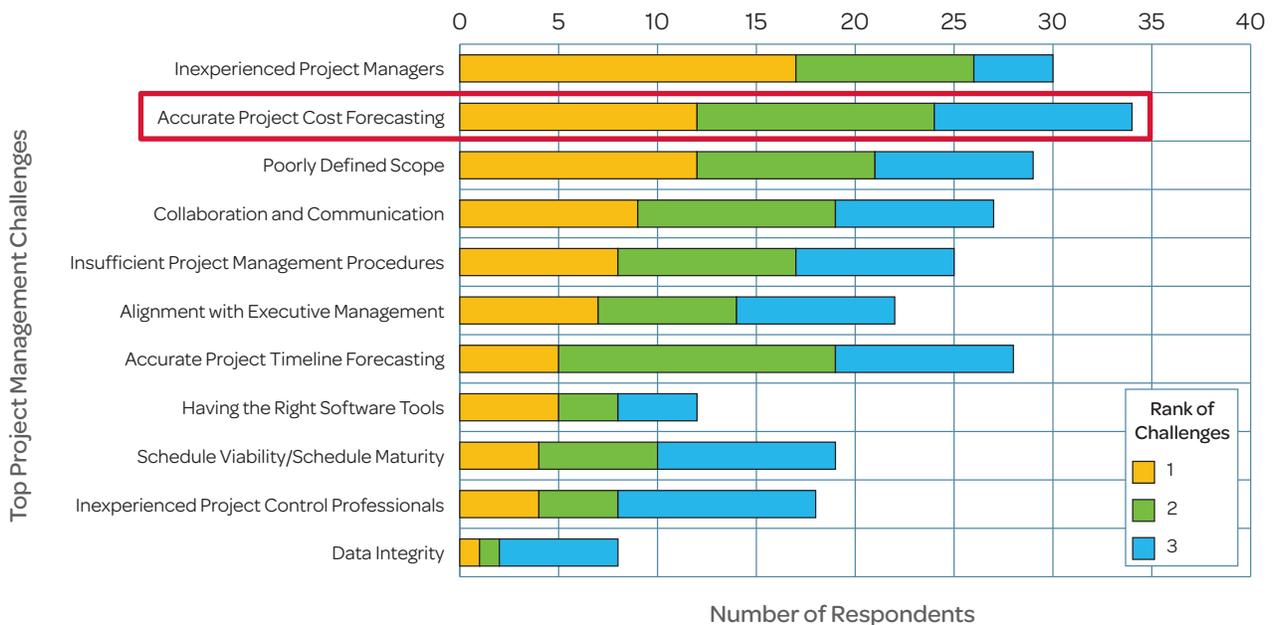
It is very important to have cost schedule integration. The schedule tells the Project Manager when the work starts and ends and the sequencing of the work to be performed. Cost gives the ability to monetize the schedule, keeping the integrity of the dates and resources needed to finish the project. Clearly, these need to be in perfect symbiosis. Cost should be expressed by EOC as well as the resource level. A best practice is to resource-load the schedule for both the baseline schedule as well as the forecast at the task level. Resources and dates are passed from the schedule into the cost system and assure that the time phasing of the Baseline and the EAC is accurate and complete. The integration is accomplished with a series of structures (WBS, OBS, Work package ID, SOW references, PM Name, Risk ID etc.). These codes are loaded in both the schedule and cost system and are the basis for the integration between the two systems.

Keep in mind if you are a government contractor with EVMS requirements, Cost/Schedule integration is an ANSI requirement. You are executing your work using the Integrated Master Schedule (IMS) and collecting the cost and looking at those costs in your cost management or EVM system.

3: Risk and Contingencies

Project Managers tend to be optimistic and want to plan for the best hoping that nothing goes wrong. Too often the business culture wants to label people that look at risks as “negative” or “problem makers” but that is actually harmful to the overall execution of the project. Accepting that things will go wrong is half the battle because then you can plan for the unknowns.

Risks and opportunities management should be a basic part of the project culture and should be treated as a discipline. Risks, contingencies, and mitigation plans should be included in the schedule and therefore in the cost system. There is absolutely no way to mitigate every risk as that would cost a small fortune (although all risks can be tracked in tools like RiskBook) but the risks you decide have the largest impact and are the best use of your management reserve should be included in your schedule and hence forth will be in your cost system and will be included in your EAC!



Source: Deltek Clarity GovCon Industry Study

4: Rate Differences

Rates can be for Labor or OH/G&A/COM. Some types of projects may have different types and rates for labor. These contracts are typically T&M (time and material) or IDIQ (Indefinite Delivery/Indefinite Quantity) type projects where the customer is purchasing labor and specific types of labor at a defined rate. You will need to have the ability to look both at the actual rates being charged as well as your bid rates to determine profit by resource. Oftentimes proposed rates will be different than actual rates, budget rates different than forecast rates, forecast rates are different year over year and having the ability to apply multiple rate decks to your direct cost is a HUGE analysis tool.

You should be considering this: Am I doing the work for more or less than I planned, or am I actually working more or less than I planned? Make sure your system can handle multiple, different rate decks so that you can help your business bid more accurately, understand how the overall business expenditures are affecting your projects (increase in OH), and help your project manager manage his overall cost picture.

5: What-if Scenarios

Performing what-if scenarios is critical during all phases of the project: bid, initiation and execution. Different than risks, what-if scenarios are simply different ways you may complete the project.

For example, you can ask: What if my rates go up? What if I outsource, instead—will that save me money or provide me some additional opportunity to use my in-house resources more effectively? If not for my own project, will that shift free up resources within the portfolio of my company and save money elsewhere?

6: Top-down Planning

Let's say there's a target you're looking to meet within your project—a delivery date or a budget number. You should have the ability to start with that target and work backward. You should be able to ask yourself, "What resources are required to meet that target?" and come up with a solid answer. Maybe you'll need to outsource; maybe you'll need to bring more people in internally; maybe you'll need to hire different talent than you have in place now.

Benefits of an Accurate EAC

Having an accurate forecast is critical. As we discussed earlier, not having an accurate forecast is like going someplace you've never been before without a map, with no GPS to guide you.

An accurate EAC is your project GPS—it will tell you where you're going, how you're going to get there, if there are obstructions in the way of getting you there and achieving your goals, and when you'll arrive. It will even tell you if there are better, alternate routes.

From a corporate perspective, an accurate EAC will help you better align with corporate goals—to make sure your staffing is right and you've got the right resources in place. An accurate EAC will give you visibility into your project early in the process, before any problems might set in and with enough time to mitigate successfully.

An accurate EAC also keeps you competitive. With an accurate EAC you'll be able to bid effectively—with highly competitive timelines and estimates based on actual projects. Accurate bids equal successful projects, which mean more satisfied customers.

Finally, an accurate EAC enhances efficiency. So many companies get bogged down in reams paper processes or overwhelmed by spreadsheets. Whether you're using paper or spreadsheets, there is a better way. Creating an EAC introduces automation, which eliminates the inefficiencies of paper and spreadsheets. In fact, that automation enhances efficiency even more by driving processes for you. In other words, you don't have to stay on top of the process—the EAC stays on top of it on your behalf.

The value of top down planning is being able to answer this question:

"Here's where I'm trying to end up—what's the best way for me to get there?"

World Headquarters:

United States

2291 Wood Oak Drive
Herndon, VA 20171-2823
800.456.2009

Worldwide Locations:

Belgium

+32 (0) 2 709 2191

Denmark

+45 35 27 79 00

Germany

Düsseldorf
+49 (211) 52391

Netherlands

+31(0)30 7430014

Norway

+47 22 01 38 00

Sweden

+46 (0)8 587 077 00

United Kingdom

London
+44 (0)20 7518 5010

deltek.com

info@deltek.com

Deltek Cobra

The way to incorporate all six characteristics and create a highly accurate EAC—and, in turn, realize all the benefits of an accurate EAC—is through Deltek Cobra.

Deltek Cobra is an integrated software system that automatically brings together schedule, budget, plan and resource data with accounting information to help your organization overcome these challenges. Deltek Cobra can help your project-focused enterprise control costs, track performance and evaluate forecasts more effectively. By seamlessly integrating with most accounting and estimating systems, it enables you to analyze true project performance and predict trends that threaten current projects or present new opportunities.

By incorporating both schedule and cost data, estimating completion cost becomes much more accurate. With Deltek Cobra you are able to accurately calculate cost and resource requirements, ensuring project goals are consistently met. With Deltek Cobra's powerful reporting you continually know where your project stands against the baseline plan, providing you the status information necessary to predict project outcomes.

Discover how Deltek Cobra can help you create a more accurate EAC and improve the overall outcome of your projects at deltek.com/cobra

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