

How to Produce an Accurate Forecast



OVERVIEW

Forecasting is one of the most challenging activities for finance and project teams. The project teams often do not realize the impact they have on the company's overall forecast and the effect on the organization's overall strategy. It is the grassroots project plans for awarded work as well as forecasted opportunities that guide the business. The building blocks of the Annual Operating Plan (AOP) and Long-Range Plan (LRP) are the project forecasts; there is not a magic forecast that comes from the corporate finance team. These plans (AOP and LRP) are critical for all decision-making, and companies that do a great job forecasting will be more efficient and successful.

WHY IS FORECASTING SO HARD TO DO?

There are many moving parts, making it hard to get your arms around all the components of a forecast at one time.

Who influences the project forecast:

- Customer
- Project Manager
- Subcontractors
- Financial Managers
- Control Account Managers
- Work Package Manager
- Financial Analysts
- PMO
- Resource Manager
- Business Development
- Contracts Manager
- Human Resources

Communication and collaboration are the most challenging aspects of forecasting. The number of touches above explains why it can be difficult to produce an accurate project forecast. In this paper we will discuss methods, techniques, and tools that will help make your forecast a true indicator of the direction of your business.

- **Annual Operating Plan (AOP)** is a short-term, highly detailed plan used to achieve tactical objectives.
- **Long Range Plan (LRP)** is a set of financial goals (usually five to ten) that outline the path for the company's future.

WHAT IS THE DIFFERENCE BETWEEN BUDGETING AND FORECASTING?

Forecasting predicts what will happen in the future. A forecast can be compartmentalized as short, medium or long- term. It is based on the best assumptions known at the time of development of the forecast. These assumptions will change over time and the forecast will need to be updated to reflect the changes.

Budgeting is what the organization believes is achievable. There should be an action plan in place to achieve the budget. The budget is a target which the organization sets for itself, and becomes management's commitment to action.

The tips and methods below are applicable to both budgets and forecasts. Budgeting is a vital part of the process giving the business a starting point that will indicate performance over time.

TIME PHASE YOUR BUDGET AND FORECAST

Unfortunately, businesses still try to budget and forecast using lump sums by year with minimal break out of labor, material, and ODC. Lump sum methods provide no actionable information for the business.

The best practice would have the forecast broken out at a minimum by month but could be done by week. The units (month or week) needed are driven by the nature of the business. For instance, if you have short duration projects (6 weeks) with specialty labor, you would want to budget and forecast by week instead of by month – otherwise there will be no time to course correct if issues arise. If specialty labor is needed, it will be necessary to make sure the talent is available at the time the project needs that skill. Time phasing will also allow you to look at date ranges such as month, quarter, first and second half of the year, government fiscal year, and your fiscal year if different than a calendar year, enabling comparisons and analytics.

Near-term and mid-term plans should be broken down into weeks or months. These forecasts can be used to form the basis for the out years adding credibility and past learning so that the future can be more accurate. Make sure you have a system that allows you to time phase and group in date ranges.

START WITH THE PIPELINE

Let's start off with the definition of an opportunity pipeline. For a project-based business it is the visualization and/or measurement of contracts or projects that you will attempt to win over time. The time horizon can be "time now" to five plus years into the future depending on the planning needs of your business or the length of your sales cycle. An opportunity pipeline is the incubator for your business growth and it should reflect your company's overall business strategy.

The most compelling reason to have an opportunity pipeline is to understand the revenue forecast and resource needs for the future. The revenue forecasts will be the barometer of your company's future financial health and will be an element of both the AOP and LRP forecasts. Managing the pipe will help you adjust forecasts as opportunities move through the business development capture process. It will also paint the picture of the future with all variables included.

ESTABLISH A RESOURCE MANAGEMENT PRACTICE

"People are our most important asset!"

If people really are the most important asset a company has, you would think they would work very hard to manage and invest in their people, yet so many companies struggle to truly manage this resource.

Many times, resource planning is done too late in the process to make a difference and the result is behind schedule and over-cost projects. Even if proposal and project managers want to plan their resources, the reality

is that most resource planning is done ad- hoc with spreadsheets at the project level. There is no consideration of skills or what other projects need, and there is no clue what new work will require from a resource perspective.

It does not have to be this way.

BELOW ARE 8 SIMPLE TIPS TO HELP INCREASE THE EFFICIENCY OF MANAGING RESOURCES ACROSS THE ENTERPRISE:

1. Have a centralized repository for all resource plans that is accessible to all stakeholders
2. Create a skills catalog so that the right resources will be available when (and where) you need them
3. Forecast resources throughout the project lifecycle, don't just start at contract award
4. Use a pool of resources across your company, not just on one project or portfolio
5. Include named resources where specific employees are key to the success of the effort,
6. Plan at the project level and roll-up to the enterprise – do not forecast by department only
7. Provide stakeholders real-time resource demand and KPI reports, as well as role based dashboards
8. Don't plan your most important resources on disparate spreadsheets

MODEL SCENARIOS FOR BEST FIT

Modeling scenarios, sometimes known as what-iffing, is a great way to assure you are picking the right path and maximizing resources. For example, you can ask: What if rates change (up or down)? What if we outsource, instead—will that save us money or provide additional opportunity to use in-house resources more effectively (trade-offs)? If not for a specific project, will that shift free up resources within the portfolio of the company and save money elsewhere?

When forecasting a long-range plan, factoring will be necessary to account for uncertainty. Projects that have been bid or that are in early stages of the capture process are very challenging to forecast. One method to use for factoring is using the probability of award (POA). The POA utilizes two criteria, probability of win and go. The probability of win multiplied by the probability of go provides the POA.

- **Pwin** = Probability that your company will win the business based on discriminators, competition, or other factors.
- **Pgo** = Probability that the customer will fund the project.
- **Pwin x Pgo = Probability of Award (POA)**

Having a system that will allow for what-iffing and factoring will play a huge role in the accuracy of the forecasts and will help to formulate budgets. Some companies choose to just use the Pwin to account for uncertainty. POA and/or Pwin can be a effective tools for portfolio-level analysis, at lower levels in the analysis, you will want to recognize that the effort will either be won at some expected value, or lost. The expected value will be more precise and should be utilized for near-term work where you are more certain of the award.

UTILIZE RATE CALCULATIONS

There are multiple types of rates - Labor, Overhead, G&A, Fringe, COM. Some types of projects may have different labor types and labor rates involved. These contracts are typically T&M (time and material), where the customer is purchasing labor and specific types of labor at a defined rate.

Rates play a big role in revenue forecasting assumptions. For instance, if your overhead rates are less than you predicted on cost plus projects, the actual revenue recognized will be less. On fixed price projects, higher than anticipated rates will eat into planned profit. Having a revenue forecast for the 1-5 years horizon will help the finance team more accurately predict corporate or forward pricing rates. Managing rate forecasts are important for all contract types, and communication of rate changes

to project and proposal teams will help eliminate a rate impact surprise. Teams should also discuss the ability to predict changes in an out-year rate, based on the expected potential new awards that will impact corporate rates.

TOP DOWN PLANNING VS BOTTOM UP PLANNING

Top-Down Planning

In the process of top down planning, the objectives and path to achieve goals are driven from the top. First, top goals are set, and ways to achieve them are established. These steps to achievement are gradually moved to lower and lower levels of the organizational hierarchy to be developed and specified. These are the pros and cons of top-down planning.

Pros:

- C Suite typically develops the plan and is already bought-in
- Quicker way to forecast - short cycle time
- Aligns with corporate strategy

Cons:

- C Suite might not understand the issues/risks at the project level
- Little to no buy-in from the project managers
- Must back into the resource plan for the top-down mandates

Bottom Up Planning

Bottom up or grassroots planning is a technique based on the concept of asking those who are close to the project, customer, and subcontractors (such as project managers, functional managers, control account managers, etc.), about what they need from a resource perspective, what they think the risks and opportunities are, and account for any constraints (ex. skill sets or technical), and then roll that up to higher levels in the organization.

BELOW ARE THE PROS AND CONS OF BOTTOM-UP PLANNING:

Pros:

- Project teams actively work to establish a cost and schedule forecast
- Improved communication at the project level and buy-in for the plan
- Potentially more accurate at the project level

Cons:

- Cycle time to complete planning will be longer due to the detailed nature of the planning
- The scope of the contract or project must be crystal clear
- May not tie to the overall corporate goals
- Alternatives may not be explored to meet the corporate goals

Top down and bottom-up forecasting both have a place in your process and business environment. The type of projects will dictate when and where to utilize each methodology.

FIND THE RIGHT LEVEL TO FORECAST

Budgets and forecasts are used in many ways throughout the business and multiple methods will be needed as we discussed above. This next point is

obvious, but near-term forecasts are more accurate than long-term forecasts since there is more visibility into the scope, schedule, current economic conditions, resource availability, etc. Looking in the future is more difficult and the level of granularity of the forecast will be less detailed since many long-term projects are still in the proposal phase or in the “crystal ball” phase with many unknowns.

Grouping projects makes it easier to forecast, especially in the mid-range time (3-5 years). Those groupings may be by programs, customer, product, business unit, portfolios, or functional groups. You can look at these forecasts in aggregate and derive an accurate forecast because you understand the customer demand, your capacity, and potential growth. Forecasting using constraints and other pertinent information can make for a very good forecast. Using very detailed forecasts in the long-term will take lots of time and will not be accurate. Save the detailed forecasting for 0-2 years (unless you have a high level of confidence in the customer and market).

There is also a check of reasonableness that needs to be added. C-Suite members and project teams need to work together to decide on the level of forecasting required and for what purpose it will be utilized.

For example, an AOP is a short term forecast and granularity is necessary. An LRP may need to utilize detailed forecasting for an agreed upon time period and then utilize a grouping for out-years. One other thing to think about is the frequency of the update and who is needed to provide input.

COMMUNICATE AND COLLABORATE

Projects in and of themselves are social. There must be constant and continuous interaction between

the functional groups, project personnel, executive management, subcontractors, and most importantly the customer. If projects themselves are social, the overall business must recognize social needs. The business needs to provide all the stakeholders a way to communicate and facilitate a culture of collaboration. Successful projects are the lifeblood of a project-based business.

Establish a business cadence that encourages or forces collaboration. This is a calendar of events and interactions that will happen on a daily, weekly, monthly, quarterly, bi-yearly, or yearly basis. A great example of this is a weekly meeting with the resource manager and the project manager to establish needs.

Having a system that everyone can access is also critical. Invest in tools to better your business and get out of the siloed spreadsheets and disparate tool

sets (beware, some tools are disparate even though they have the same name placard on them).

IN CONCLUSION

As you can see, forecasting is not an easy job. There are lots of moving parts and many touches, and it is vital that all players are up to speed. Teams involved in forecasting need training on the basic concepts, tools, policies, and procedures. Modern ERPs with project-based budgeting and forecasting tools will give project managers vital information to know where their projects stand in real time. The project management office can gain insight into resource demands through analytics, graphical dashboards, earned value, project portfolio management, and project costing, and can leverage this information to make strategic decisions across your company's entire project portfolio.



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