

Change Assumptions to Revise an Estimate

Working with Jerry for the last six months had been a real treat for me. When Jerry first started his project to update the phone mail system, he was inexperienced and had no idea how to approach project management in an efficient and organized fashion. Now he was much more knowledgeable. He wasn't a seasoned pro by any means, but he had come a long way in a short time. We celebrated the completion of his project to upgrade the phone system and software a few weeks ago, and so far, there had been very few complaints—and an abundance of compliments on a job well done.

In fact, Jerry did such a good job on the phone project he was given another big assignment: deploying an operating system upgrade on all

Mega Manufacturing desktops. It was a large project and involved more team members and more responsibility, but Jerry's confidence was high and I could tell he felt capable of handling the job. His confidence was noteworthy, especially given where he was just a few months ago. It was also significant considering he and his wife would be moving into the Morettis' house in a few weeks. Clearly the organizational skills and confidence gained at work were carrying over into his personal life because he showed no signs of stress or worry about the move.

Jerry came to see me at the end of June to discuss feedback he had received from his manager on the desktop upgrade project. Jerry's manager had just read his draft project charter. Apparently, he liked the overall definition and plan but had a problem with the cost estimate.

"Are you ready for your big move, Jerry?" I asked as he entered the office.

"We sure are, Tom. Barbara already has a list of things she wants to change after we move in. We are both really excited."

"Are you planning any major changes?"

"Not at all. Barb wants to do some painting in certain rooms to better match our color schemes, and we are thinking about changing the tile in the master bathroom. Small things, really."

"Sounds good. As always, let me know how I can help. So tell me, where are things with your project?"

"Well, I'm not sure what to do next," Jerry began. "I worked with a number of technical experts to prepare the effort and cost estimate for this project, but my manager says it's too high."

"Did your manager give you any insight as to why he thought the estimate was too high?" I asked.

"As best I can tell, the estimate is too high because it's more than the budget allocated for this work," Jerry explained. "He said if the numbers were closer to budget, he would just go ahead, but my estimate is 60 percent more than the initial budget allocation."

"Really?" I asked. "Well, the original budget was proposed last year during the business planning process. Those numbers are put forward at a pretty high level. It is not surprising your more detailed estimate is much

higher. It's also probably much more accurate. Did your boss have any advice on how to reduce the number?"

"Not really," he replied. "He just said he wanted me to 'sharpen my pencil' some more and try to get the project estimate down substantially. This really stinks!"

"Hang in there," I said encouragingly. "You should not be forced into making an estimate you don't believe in. However, let's look at some options that might help you out."

LESSON

Jerry is not the first person to have an estimate questioned, and he will not be the last. This scenario happens all the time. The project to upgrade the desktop operating system was proposed and approved last year as part of the business planning process. The company also allocated a preliminary budget to the work. However, managers don't have the time to perform a detailed effort and cost estimate for each project during the yearly planning process. Those budgets are estimated at a high level and need to be validated once the actual project starts.

That's where we are now. Jerry was assigned to the project and is defining and planning the work at a lower level of detail. As a result, Jerry has created a much more realistic estimate of the costs involved, and his new figures are 60 percent higher than the original budget. The company expects the estimates to be off somewhat. In fact, Jerry's boss told him if his estimate was closer to the original budget, they could go back and ask for more money. However, his boss feels he will not be able to ask for a 60 percent increase. That type of increase will either not be funded at all, or the additional funding will probably require another approved project to be cancelled.

This puts Jerry in a tough position. The company wants to do the work—that's why it was approved for this year. However, now they may not be able to afford it. Jerry's boss wants the estimate reduced and has asked Jerry to "sharpen his pencil." On the surface, Jerry's manager is asking him to make the estimate more accurate. However, the clear implication is he wants the estimate reduced. His boss is assuming Jerry's estimate is sloppy or has some inherent padding that can be removed.

Jerry's first thought is that he needs to reduce the estimate arbitrarily and then take the heat when the work comes in over budget. That is definitely not the path to take. Instead, he should look at two areas.

First, Jerry needs to verify his own estimate. If he used an estimating tool or a spreadsheet, he should double-check the formulas, confirm that he is using the right resource rates, and make sure the non-labor costs are reasonably accurate. Once he is convinced his math is accurate, Jerry should also see if there is at least one other estimating technique he can use for validation. It sounds like he relied on expert opinions to prepare the original estimate. He could also estimate the work at a low level using his work breakdown structure (or his project schedule if he is at that level). Since the work is fairly repetitive on thousands of workstations, he could also look for some estimating algorithm that could lead to a logical and reasonable number.

Second, Jerry should look at his estimating assumptions. All estimates are based on a set of explicit and implied assumptions. This is a time to look for creative ways to get the work done with less cost and effort, such as the following:

- **Look for less-costly alternatives:** This means looking at all costs associated with the project to see if less-expensive alternatives exist that will accomplish the same thing. For instance, if you are counting on contract labor resources, you can see whether they could be replaced with employees. If you are proposing new software, see whether your company already has something that will work. You could evaluate whether existing hardware can be utilized rather than buying new machines. If you have training costs in your budget, see whether the training can be done in-house instead of sending people to formal off-site classes. Remember, the purpose of this step is to see if there are alternatives that will allow you to reduce costs while still delivering all the required functionality.
- **Look for process improvements:** This step involves looking at how you propose to do the work to see if alternative approaches or techniques exist that will result in less effort and cost. For instance, if you have trips planned, determine whether some or all of the work can be accomplished with phone calls or teleconferences. See whether some manual processes can be automated. Perhaps a focused group meeting can be utilized to gather requirements instead of traditional one-on-one interview sessions. It may be possible to outsource some of the work at less cost than it would take to do it internally. Again, the purpose of this step is to deliver as planned while requiring less effort.

- **Negotiate a reduction in scope:** The two preceding options allow you to deliver all the work requested for less effort and cost than was originally proposed. This third option looks for activities or parts of the project that can be eliminated. Removing work should result in reduced effort and cost. Although all of the work on the project may have originally been seen as important, it usually turns out some components of the project are more important than others. In some instances, work can be deferred until a later date, perhaps when a new budget is available. This may result in a less-than-perfect solution, but one still acceptable to your sponsor.

Jerry needs to go back and revisit the estimate with these points in mind. He may find there are ways to pare down the estimate while delivering much of what the company needs. This exercise is not meant to force him into committing to a project budget he does not believe in. It is simply meant as an honest effort to reduce the estimated cost and effort.

Jerry owes his manager a complete explanation of how the estimate was prepared. If, at the end of this process, Jerry's estimate is still too high, he must ask for the assistance of his manager and other stakeholders to determine whether or how to proceed.

One option is to not do the project at all. If the cost of doing the project is more than the perceived benefit, it simply should not be done. Management stakeholders may have other options, including requesting the required incremental budget dollars if they are convinced additional money is justified.

After seeing Jerry's second estimate, including reasonable alternatives and options, his manager can determine how to proceed. If Jerry's estimate is still too high, his manager will need to take the new number forward for approval or come up with some alternatives. If Jerry's estimate is closer to the original budget (even if the project scope has been reduced), his manager may be able to approve the work and let the project proceed. Either of these alternatives is better for Jerry and for the company than purposely underestimating the work—and then having to face the consequences later when the project goes over budget.

