

Cuts to Budget & Duration: 4-Corners Technique



By Dick Billows, PMP, GCA

Presenting tradeoffs to executives is the best technique for building your credibility while maintaining a feasible project. The 4-Corners tradeoffs are between budget, duration, scope and risk.

Many executives like to ignore the fact that projects are like a tube of toothpaste. When an executive squeezes on the duration corner of a project by making the due date a month earlier than planned, the toothpaste oozes out one of the other corners to compensate. When you cut the duration, the project will either achieve less business value (scope), cost more, or have a higher risk of failure. This fact is inconvenient for executives who just want to make a change to one corner. But ignoring this fact of project life leaves project managers with projects that are no longer feasible and which will be late, over budget and achieve less than planned.

PMs make the situation worse when they quantify only the duration corner and leave the other three corners of the project open to subjective interpretation. It's not unusual for projects to use 1-corner management:

1. Duration was set by the sponsor with no consideration of: work, staff, other projects
2. Scope is described in a wandering 5 page narrative that everyone interprets differently
3. No budget exists so everyone thinks that the project and all changes are "free"
4. Risk is not quantified and the odds of success are assumed to be 100%

In this all too common circumstance, the project manager has no data to present to the sponsor on the consequences of changes. Not surprisingly, changes are frequent and large and so are project failures.

Duration Trade-offs: The First Corner

If you are using modern project software with work estimates and dynamic scheduling, then producing our first tradeoff is straight forward. Save a new version of the schedule. Then add the additional work for the requested change and let the software model the impact. Then you can say, "The training class will push the completion date out by 1 week. Here's what happens," and show it to the boss on your PC.

Tradeoffs are a project manager's best technique when dealing with a project sponsor who outranks you or may sign your paycheck. Having tradeoffs is the best way to support compensating for changes when the sponsor wants to add something. You are not trying to block all changes. You are merely trying to get some additional time or resources so the change does not doom the project.

Managing with 2 Corners: Adding the Cost Corner

If you are using modern project software, adding a budget takes a few minutes. You don't need people's pay rates, using averages or the same rate for everyone is close enough. Your schedule must be based on estimated hours of work and you simply add the cost of each hour of work to the resource schedule.

With costs set up, you model the change, like the training class example, and you'll have both cost and duration data. Then you can talk about the trade-offs and say something like, "Certainly, I can add the three day training class but it will increase the cost of the project by \$5,500 and add a week to the project duration. Do you want to proceed?"

If the boss takes away a resource, you can also model the impact so the sponsor knows the consequences in terms of additional duration and the additional costs for a contractor to take up the slack.

Adding the 3rd Corner: Measureable Scope

The next corner takes more work; we need to quantify the scope of the project. We call this the Measure of Success or MOS™ in our best practices methodology. We convert the mushy 5-page scope statement into a crystal clear measure of project success. It is the acceptance criteria for the project. As an example, an MOS™ for a customer call center project might be, "Answer 85% of customer inquiries in 120 seconds or less with fewer than 5% call-backs on the same problem." This gives us a third corner that is measureable. More importantly, we can talk about different levels of achievement such as lowering the percent of calls handled successfully from 85% to 65%. When we model that alternative we may find that we can hit 65% even if we eliminate one or two major deliverables; lowering both cost and duration. So we can now say to the sponsor, "Yes we can cut duration by 3 months and costs by 65% but we will also need to lower the MOS to 65% from 85%." You can see how this trade-off approach lets a PM tailor a project's results to fit an executive's strategy and still preserve the feasibility of the project.

Adding the 4th Corner: Risk

The last corner is providing a measure (probability) of the likelihood that the project will deliver its MOS™ within the planned budget and duration. This technique requires that we use 3-point or PERT estimating which gives us data on the risk in each task and the project as a whole. With that data we express a success probability for the whole project. Using the above example of the project with the 85% success rate on customer calls, we had a budget of \$125,000, a duration of 8 months and a success probability of 75%. If the sponsor wants to cut the budget without increasing the duration or lowering the MOS™ we use the 3-point data and our model of the project to calculate that the success probability would drop from 75% to 50%.

With all four corners, we still model the options as above but you have a more complete presentation of the impact of changes.

Implementation

These 4-Corner techniques are a central element in our best practices project methodology. To learn the techniques, enroll in one of our personal 1-to-1 training classes where you work directly with an expert PM over the web.