Estimating Project Costs

Many techniques, books and software packages exist to help with estimating project costs. A few basic rules will also help ensure that an accurate and realistic estimate is produced.

- Assume that resources will only be productive for 80 percent of their time.
- Resources working on multiple projects take longer to complete tasks because of time lost switching between them.
- People are generally optimistic and often underestimate how long tasks will take.
- Make use of other people's experiences and your own.
- Obtain an expert view.
- Include management time in any estimate.
- Always build in contingency for problem solving, meetings and other unexpected events.
- Cost each task in the Work Breakdown Structure to arrive at a total, rather than trying to cost the project as a whole.
- Agree a tolerance with your customer for additional work that is not yet defined.
- Communicate any assumptions, exclusions or constraints you have to your customer.
- Provide regular budget statements to your customer, copying your team, so that they are always aware of the current position.

Much data exists about the length of time particular items of work take, especially in the construction industry.

Common Mistakes

These are some of the common mistakes that can lead to inaccurate estimates.

- Not understanding what is involved to complete an item of work.
- Starting with an amount of money and making the project cost fit it.
- Assigning resources at more than 80 percent utilisation.
- Failing to build in contingency.
- Failing to adjust the estimate in accordance with changes in scope.
- Dividing tasks between more than one resource.
- Providing estimates under pressure in project meetings.

Three Point Estimating

Three point estimating is a technique that helps project managers produce better estimates. Rather than a ballpark estimate, project managers can use three point estimating to gain a greater degree of control over how the end value is calculated. The end value is the weighted average of three estimates.

To do three point estimating, in its simplest form for a particular task or activity, ask the resource for their best, most likely and worst estimates. Add the best estimate to

four times the most likely, then the worst and divide by six. This gives you your estimate, which is a slightly more balanced view of how long the task or activity is likely to take.

Monte Carlo Simulation in MS Excel

The Monte Carlo method of estimating project cost is based on the generation of multiple trials to determine the expected value of a random variable. There are a number of commercial packages that run Monte Carlo simulation, however a basic spreadsheet can be used to run a simulation.

Project Management Saying

The same work under the same conditions will be estimated differently by ten different estimators or by one estimator at ten different times.