Top Down Estimate and Its Value

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During the Project Initiation Phase, a top-down cost estimate using Order of Magnitude is appropriate (Kanabar & Warburton, 2008). According to Larson and Gray, a top-down estimate’s accuracy fluctuates depends on the estimators’ experience in relation to the project uncertainties. (Larson & Gray, 2011) When comparing with bottom-up estimate, the top-down estimate lacks the ground-up accuracy; nevertheless, its strength lies in its speed and minimal effort. It has a lower initial resource investment thus able to assist decision makers making cheaper and faster business decisions to capture business’s precious window of opportunity. This is supported by Gary Chin who states that “Spending inordinate time creating minute detail may be a wasted effort, if some external events create a sudden change in the project plan.” (Chin, 2004)

**Project Charter, Scope Documents and Risk Assessment Analysis**

In order to avoid Cost Estimating pitfalls, according to the GAO-0903SP Cost Estimating and Assessment Guide, “Developing a good cost estimate requires stable program requirements, access to detailed documentation and historical data, well-trained and experienced cost analysts, a risk and uncertainty analysis, the identification of a range of confidence levels and adequate contingency and management reserves.” (USGOA, 2009) Therefore, step one of any Cost Analysis is to construct a clear Project Charter, Scope Document and Risk Assessment. According to Kanabar & Warburton, the Project Charter is a document that has high-level description of the project objectives, business case, as well as important constraints and assumptions. The Project Scope document contains project description, justification, goals and objectives, deliverables, milestones, assumptions, limits and constraints, statement of work (spec and requirements), and customer interface. (Kanabar & Warburton, 2008) The Risk Assessment
is an analysis done after the risks are identified. Risk scenario analysis is the simplest form of a risk analysis and it involves measuring the positive or negative impact of a risk and its probability of occurrence. (Larson & Gray, 2011) Expert opinions and historic data would be used to calculate one risk’s severity over another. The traditional weighted risk score measuring formula is: Impact of Event x Probability. (Crockford, 1986) In additional to the above formula, the Failure Mode and Effects Analysis also multiply an additional dimension: Ease of Detection.

It is important to point out that risk assessment should not be treated as a pure mathematic model, since FMEA could give different risks the same multiplied weighted score. It is suggested that risk assessment should supplement the data driven risk scores with non-quantifiable, careful judgment and be mindful of the main project objective. (Larson & Gray, 2011)
References


