

Estimating is defined as an informed assessment of an uncertain event. For project managers, accurate estimates are the foundation for effective project planning and execution. There are many processes that have been developed to assist in the estimation process. Without proper estimating of project duration, cost, resources, risks and other parameters, it is impossible to implement proper alternatives and ultimately make timely and sound decisions.

There are five (5) main steps that an effective project management program engages to maximize success of projects. These steps are: project planning; project baseline; reporting; change control; and project closure. Each of these steps relies upon accurate estimating and proper control to ensure project success. So what are some typical events that may impact the validity of your estimates?

1. Poorly defined scope of work- this includes misinterpreted work elements, or the task granularity (detail) is not adequate for current phase of the project life cycle (PLC).
2. Lack of knowledge for internal project cost (typically inability to determine accurate crew cost, resource productivity rates, indirects, etc).
3. Inflated Optimism- the proverbial rose colored glasses way of guessing project problems or events.
4. Inadequate risk management- ignoring risks and uncertainty will skew the estimates and expectations become unrealistic.
5. Time pressure or unrealistic targets- this is a miscalculation of the time a project task will take and failure to communicate what is reasonably achievable.
6. Adoption of inappropriate estimation methodologies.
7. Failure to utilize historical data or lack of accurate, meaningful historical data.

With so many factors that could possibly cause estimate inaccuracies, what can be done to make your estimates the most accurate?

1. Educate your project team and organization on estimating, and require the appropriate project team members to prepare the estimate associated with their scope aspect of the project.
2. Reach out to a subject matter expert (SME) with experience for scenarios.
3. Incorporate peer reviews and estimate validation processes into your PLC.
4. Incorporate Risk Management and contingency assessment /re-assessment throughout the PLC
5. Encourage estimate review and validation after each phase of the PLC.
6. Accurate and timely documentation of change requests.
7. Research historical data on the project effort, schedule, cost, risk and resources for lessons learned and make appropriate adjustments. Statistical baselines should be created and revised periodically.
8. Use mock ups, trial runs, field studies, or other simulations as a guide.
9. Adequately define work scope and accurately track time against each task.
10. Develop and maintain Basis of Estimate Document.



Project Estimation should consider validation of project performance as measured against the plan for purposes of evaluating estimate accuracy and ensuring proper methodology is utilized. Metrics based on comparison of project estimates and corresponding actuals should also be utilized when making decisions regarding estimates of remaining or future work . A sound risk management program should also be implemented and should capture risk occurrence for current and future reference. Estimates should include applicable adjustments relative to risk management policies where necessary. Proper incorporation of Risk Management into the estimating process will reduce project uncertainties and will enable better estimates. Finally, estimation methodologies should provide a basis for developing performance metrics used to determine project health and provide capability to make informed decisions on contingencies. It is important to develop a consistent process that can be utilized (on a graded approach if necessary) in all phases of the PLC.

In conclusion, there is an unrealistic pressure to complete projects faster, cheaper, and more efficiently. By developing and implementing these control points into the estimating process, you increase your estimate accuracy and improve the probability of delivering projects accurately and timely.