

WBS 5.7 Question 14-17

PMGT 614 Planning, Directing and Controlling Projects

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Explain how useful each of the following can be during the estimating of project costs:

a. Contingency planning and estimating

Contingency planning are emergency or disaster plans. These scenarios are designed around known unknowns where at least partial information exists on what events could happen.

Incorporating contingency plans in the estimates can be a useful tool in the event they are needed and if they are not planned for and happen the results could be catastrophic.

Good estimating requires that information be collected prior to the initiation of the estimating process. Typical information includes:

- Recent experience in similar work
- Professional and reference material
- Market and industry surveys
- Knowledge of the operations processes
- Estimating software and databases if available
- Interviews with subject matter experts (Kerzner 2009)

Once the information is collected it is looked at and conclusions drawn about the costs of the project. Estimates are extremely useful in estimating projects.

b. Using historical databases

In an ideal situation, the functional manager would have at his disposal a large volume of historical data from which to make his estimates. Obviously, the more historical data available, the more reliable the estimate will be (Kerzner, 2009).

c. Usefulness of computer estimating

Computerized tools simplify the use of other cost-estimating techniques, including analogous estimating, parametric modeling, and bottom-up estimating. Cost estimating often relies on statistical analysis that is simplified by computers. Totaling and rolling-up costs are also quicker and more accurate if you use computerized tools. More details are provided below.

- **Analogous estimating.** Analogous estimating means using the actual cost of a previous, similar project as the basis for estimating the cost of a current project. With the right software, you can easily use computerized databases to aid in cost estimating.
- **Parametric modeling.** You know how well computers crunch mathematical formulas. Put this power to use if your project lends itself to parametric modeling as the best cost-estimating technique to use.
- **Bottom-up estimating.** Even the most basic of applications can make bottom-up estimating much easier and faster. Automated spreadsheets would be ideal for totaling individual work items, and then rolling-up the individual estimates to find the project total (Setiawan, 2008).

d. Usefulness of performance factors to account for inefficiencies and uncertainties.

When a company is estimating a project they can use its performance factors to standardize their estimating procedures. By developing an estimating manual companies can take into

consideration such items as downtime, cleanup time, lunch, and breaks. These past performance factors can also be in conjunction with the historical databases for estimating like conditions from previous projects. These like conditions can sometimes aide in the estimating process for uncertainties in new projects.

References

- Kerzner, H. (2010). *Project management, a systems approach to planning, scheduling, and controlling*. (10 ed.). hoboken, NJ: Wiley.
- Setiawan, I. (2008, May 15). *Computerized cost-estimating tools* . Retrieved from <http://www.itpmpro.com/2008/05/sources-of-expert-judgment-in-resource.html>