

Project Management

Unit 3: Project budgeting and Estimation

Faculty Name : Mr. Prasad Pathak

Project Cost Estimation & Budgeting



Project Cost Estimation & Budgeting

- An **estimate** is an approximation, while a **budget** is some type of financial plan. Usually, a **project estimate** becomes a **project budget** after the client approves the **project estimation**.
- The **project budget** determines the total **cost** allocated by the client for the **project**. The **budget** is what you're allowed to spend.
- The **estimate** provides a guideline, the **budget** provides hard edges. You can't go 'over-**estimate**', but you can go over-**budget**.
- Project Cost Estimation is defined as the process of approximating the total expenditure of the project.

Project Cost Estimation

- The accuracy of the cost estimation depends on the accuracy and details of the project scope, which is the scope baseline.
- The scope will also define any constraints like date, resources or budget. The risk register will help to calculate estimate types of costs, the expenses made behind the contingent action and the expenses made to cope with risks.
- The **purpose of cost estimation** is to predict the quantity, **cost**, and price of the resources required to complete a job within the project scope.
- **Cost estimates** are used to bid on new business from prospective clients and to inform your job and budget planning process.

Types of Cost Estimates

- **Cost estimates** are broken down into **three** categories that serve one of **three** basic functions: design, bid, and control.
 1. Order of magnitude estimate
 2. Budget estimate
 3. Definitive estimate
- To establish a project's financing, you must start with a design **estimate** or a bid **estimate**.
- To estimate the cost of project you have to categorize various cost types into categories like
 - Labor cost
 - Equipment cost
 - Cost of supplies
 - Travel cost
 - Training cost
 - Overhead cost, etc.



Techniques used to estimate project cost

- **Analogous Estimating**

- This estimating technique is based on expert judgments and information based on similar previous projects. Where previously done similar project cost is considered with plus or minus of 20% for existing project.

- **Parametric estimating**

- Past data or record is used to estimate cost for the current project.

- **Bottom-up estimating**

- Once you have defined the scope of the project, it is the most reliable form of technique. In this technique, based on WBS, you estimate the cost for each resource or deliverables.

- Likewise, there are other methods (techniques) which could be useful for estimating cost like PERT estimating, vendor bid analysis, etc.

Methods of Cost Estimation in Projects.

- Expert Judgement Method.
- Analogous Estimating Method.
- Parametric Estimating Method.
- Bottom-up Estimating Method.
- Three-Point Estimating Method.
- **Data Analysis** Method.
- Project Management Information System Method.



Project Budget Planning

- The **project budget** determines the total **cost** allocated by the client for the **project**. The **budget** is what you're allowed to spend.
- The main purpose of this activity is to allocate and authorize the monetary resources required to complete the project.
- The main output for determining the budget includes cost performance baseline.
- It not only specifies what cost will be incurred but also when costs will be incurred.

Project Budget Planning

- The inputs for determining budget includes following Project management budgeting methods:
 - Activity cost estimates
 - Basis for estimates
 - Scope baseline
 - Project Schedule
 - Resource calendars
 - Contracts
 - Organizational process assets

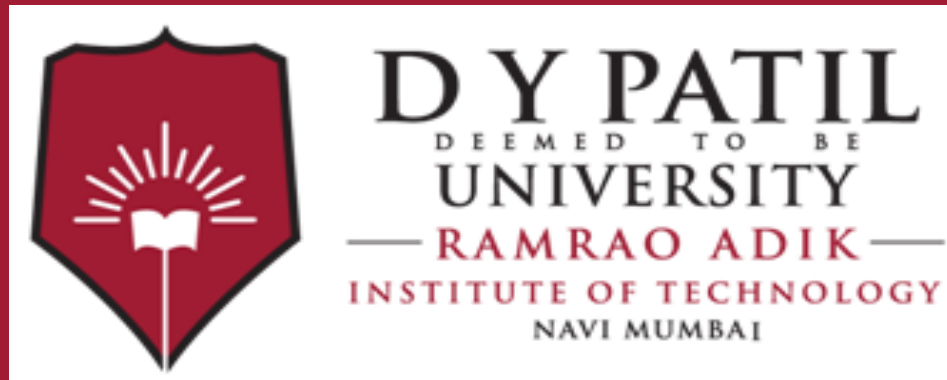
- The output of this process is
 - Cost performance baseline
 - Project funding requirements
 - Project document updates



Project Budget

- The project budgeting is performed in parallel with the project scheduling process. It is highly dependent on three component -
 - Cost estimation
 - Task durations
 - Allocated resources
- During project budgeting and costing, project manager communicates with different people responsible for managing the work efforts as well as estimating project costs.
- He will use various project prospects like work breakdown structure of the project, the cost estimates, historical data and records, resource information, and policies.
- Without risk assessment, the budgeting process is not completed. Risk assessing process considers factors like time shortage, availability of resources, development team experience, the technology used, etc. The risk assessment can be an amount between 25 and 30 percent of the overall project cost.





Thank You