

Project Feasibility Study

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Budgeting the Project

Lecture 7



OVERVIEW

1. **Methods of Budgeting.**
2. **Cost Estimating.**
3. **Improving the Process of Cost Estimation.**
4. **Budget Uncertainty and Risk Management.**

Budgeting the Project

- Having finished the planning for the technical aspects of the project, there is one more important element of planning to finish that then results in the final go - ahead from top management to initiate the project.
- **A budget must be developed in order to obtain the resources needed to accomplish the project ' s objectives.** A budget is simply a plan for allocating organizational resources to the project activities.
- But the budget also serves another purpose: **It ties the project to the organization ' s aims and objectives through organizational policy.**

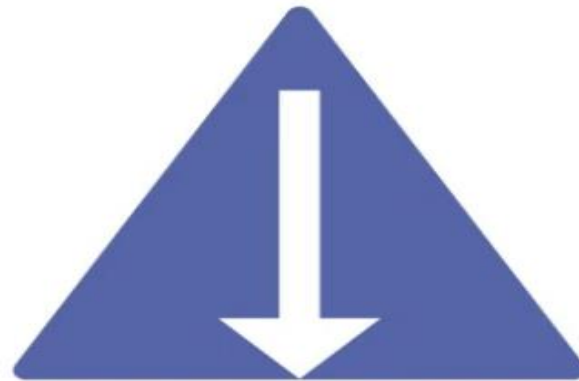
What is Budget?

A budget is a quantitative plan for acquiring and using resources over a specified period.



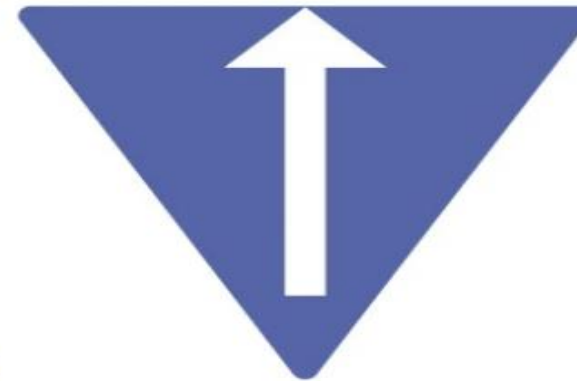
1- Methods of Budgeting

Budgeting



Top-Down Approach

Management decides on budget to spend and trickles the information down



Bottom-Up Approach

Individual departments have input into the overall budget set by upper management

Top-Down Budgeting.
Bottom-Up Budgeting.

Methods of Budgeting

❑ Organizational tradition also impacts project budgeting.

Every firm has its own rules about how overhead and other indirect costs are charged against projects.

❑ Next, we look at two different approaches for gathering the data for budgeting a project :top - down and bottom - up.



Top-Down Budgeting

The top - down approach to budgeting **is based on the collective judgments and experiences of top and middle managers concerning similar past projects.** These managers estimate the overall project cost by estimating the costs of the major tasks, which estimates are then given to the next lower level of managers to split up among the tasks under their control, and so on, until all the work is budgeted.

TOP DOWN BUDGETING



Top-Down Budgeting

- The advantage of this approach is that overall budget costs can be estimated with fair accuracy.
- يمكن تقدير التكاليف الإجمالية للميزانية بدقة معقولة
- Another advantage is that errors in funding small tasks need not be individually identified because the overall budget allows for such exceptions. تمويل المهام الصغيرة لا تحتاج إلى تحديدها بشكل فردي لأن الميزانية الإجمالية تسمح بمثل هذه الاستثناءات.
- The experience and judgment of top management are supposed to include all such elements in the overall estimate.



Top-Down Budgeting

- Based on managerial judgment, and historical data.
- History can include actual costs from similar projects, adjusted for differences and for inflation.
- Start at the top and allocate down through the WBS.



Pros and Cons of Top-Down Budgeting

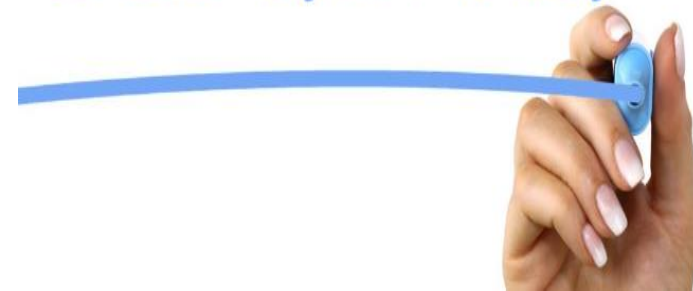
Pros and Cons of Top-Down Budgeting

- Pros
 - Quick, simple
 - Fair accuracy overall, though individual elements may be in error
 - Small tasks need not be individually identified
- Cons
 - Limited buy-in by junior managers
 - Senior managers views may be biased
 - Using data from dissimilar projects, or old projects, can mislead

Bottom-Up Budgeting

- In bottom - up budgeting, **the WBS identifies the elemental tasks, whose resource requirements are estimated by those responsible for executing them.**
- **This can result in much more accurate estimates**.. The resources, such as labor and materials, are then **converted to costs** and **aggregated to different levels** of the project, eventually resulting in an overall direct cost for the project.
- The PM then adds, according to organizational policy, **indirect costs** such as general and administrative, a reserve for **contingencies**, and **a profit figure** to arrive at a final project budget.

BOTTOM-UP
BUDGETING



Bottom-Up Budgeting

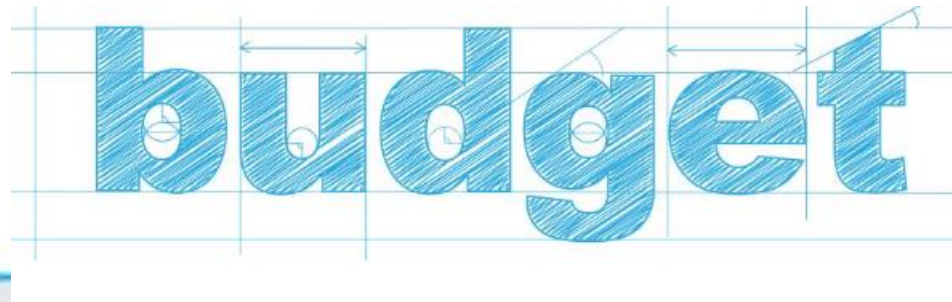
- Bottom - up budgets are usually more accurate in the detailed tasks, but costly tasks.
- Such an approach, however, is common in organizations with a participative management philosophy and leads to better morale, greater acceptance of the resulting budget, and heightened commitment by the project team.
- It is also a good managerial training technique for aspiring project and general managers.

BOTTOM-UP
BUDGETING



Bottom-Up Budgeting

- Unfortunately, true bottom - up budgeting is rare. Upper level managers hesitate to let the workers develop the budget, fearing the natural tendency to overstate costs, and fearing complaints if the budget must later be reduced to meet organizational resource limitations.
- Moreover, the budget is upper management 's primary tool for control of the project, and they hesitate to let others set the control limits.
- Again, we will see that the budget is not a sufficient tool for controlling a project. Top - down budgeting allows the budget to be controlled by people who play little role in designing and doing the work required by the project. It should be obvious that this will cause problems — and it does.



Bottom-Up Budgeting

- Starts at the bottom of the WBS, with the people who do the work
- Then costs are aggregated upward
- Overhead, project reserves, and profit have to be added in



Bottom-Up Budgeting

- Project budgeting is a difficult task due to the lack of experience with unique project undertakings.
- The two major ways of generating a project budget are top - down and bottom - up.
- The former (**top – down**) is usually accurate overall but possibly includes significant error for low - level tasks. The latter (**bottom – up**) is usually accurate for low - level tasks but costly tasks.
- Most organizations use top - down budgeting in spite of the fact that bottom -up results in better acceptance and commitment to the budget.



2. Cost Estimating

- Work Element Costing
- The Impact of Budget Cuts.
- Activity vs. Program Budgeting.



تكلفة عنصر العمل Work Element Costing

The task of building a budget is relatively straightforward but boring. Each work element is evaluated for its resource requirements, and its costs are then determined. In some organizations, the PM adds the overhead charges الرسوم العامة to the budget. In others, the labor time and materials are just sent to the accounting department, and they run the numbers, add the appropriate overhead, and total the costs.

Work Element Costing

- Determine resource requirements and then costs for each task
 - costs (e.g., materials)
 - labor time
 - labor rate
 - equipment time
 - equipment rate
 - overhead



The Budget cuts

تخفيضات الميزانية

The Budget cuts can be challenging, but they're a practical management strategy. It may be necessary for a company to make budget cuts during unfavorable economic conditions that may affect the company's return on investments. When the management makes these decisions, it becomes your responsibility to convey **تنقل** this news and handle the reduction with your team.



This could be happened through the following steps:

1. Take care of yourself first (and take care of your team).
2. Give clear and concise facts.
3. Stay calm and polite.
4. Manage expectations.
5. Address areas with low investment returns.
6. Focus resources on revenue generators.
7. Work with employees.
8. Reduce unnecessary expenses.



Activity vs. Program Budgeting

- **Activity oriented budgeting** are based on historical data accumulated through an activity-based accounting system.
- Expenses assigned to basic budget lines,
- Lines are aggregated and reported by units.
- **With program budgets**, each project is divided by task and time period allows for aggregation across projects. يسمح بالتجميع عبر المشاريع.
- Budget reports are shown both aggregated and disaggregated by regular operations.
- Each project has its own budget.
- Units- lines- expenses- accounting system **Activity oriented budgeting**
- Projects- regular operations- own budget **program budgets**

Activity vs. Program Budgeting

Activity Based Budgeting

A Budgeting Method in which budgets are prepared using Activity Based Costing after considering the overhead costs.

Advantages

- Evaluation
- Competitive Edge
- Business as a Unit
- Elimination of Bottlenecks
- Improves Relationship

Disadvantages

- Requires Understanding
- Complex
- Resource Consumption
- Cost Involved
- Short Term

What is Program Budget?

Program budget is a budget that is prepared specifically for a project or program. This type of budget includes expenses and revenues related to a specific project only.

Advantages

- It helps in determining the priority of the projects.
- It helps in planning and managing the delivery of services in the future.
- It helps in spotting the areas where higher funds are required.

Disadvantages

- If the program budget is incorrect, it can lead to increase in costs.
- It requires lot of information so takes ample time to find out exact financial resources required.

3- Improving the Process of Cost Estimation

There are two fundamentally different ways to manage the risks associated with the chance events that occur on every project:

- The most common is to make an allowance for contingencies - usually 5 or 10 percent.
- Another is when the forecaster selects “most likely, optimistic, and pessimistic” estimates.



Funding Non profitable Projects

There are several reasons that firms would choose to fund a project that is not profitable :

- To develop knowledge of a technology.
- To get the organization's "foot in the door".
- To be in a good position for a follow-on contract.
- To improve a competitive position.
- To broaden a product line or a line of business.



Types of Estimation Error

There are two generic types of estimation error:

- **Random error** - where overestimates and underestimates are likely to be equal.
- **Bias** - a systematic error where the chance of overestimating and underestimating are not likely to be equal.

Different Types of Estimate



4. Budget Uncertainty and Risk Management

Budget Uncertainty
Risk Management



Budget Uncertainty

In spite of the care and effort expended to create an accurate and fair budget, it is still only **an estimate made under conditions of uncertainty**. Because projects are unique, risk pervades **تسود** all elements of the project, and particularly the project's goals of performance, schedule, and budget. We will discuss these issues of uncertainty and risk here, and offer some suggestions for dealing with them.



Risk Management.

The field of risk management has grown considerably over the last decade. In general, risk management includes three areas:

- (1) risk identification
- (2) risk analysis
- (3) response to risk.

The process of accomplishing these three tasks is broken down into six sub processes:



Risk Management

1. Risk Management Planning

developing a plan for risk management activities.

2. **Risk Identification** finding those risks that might affect the project.

3. Qualitative Risk Analysis

evaluating the seriousness of the risk and the likelihood it will affect the project.



Risk Management

4. *Quantitative Risk Analysis*

Developing measures for the probability of the risk and its impact on the project.

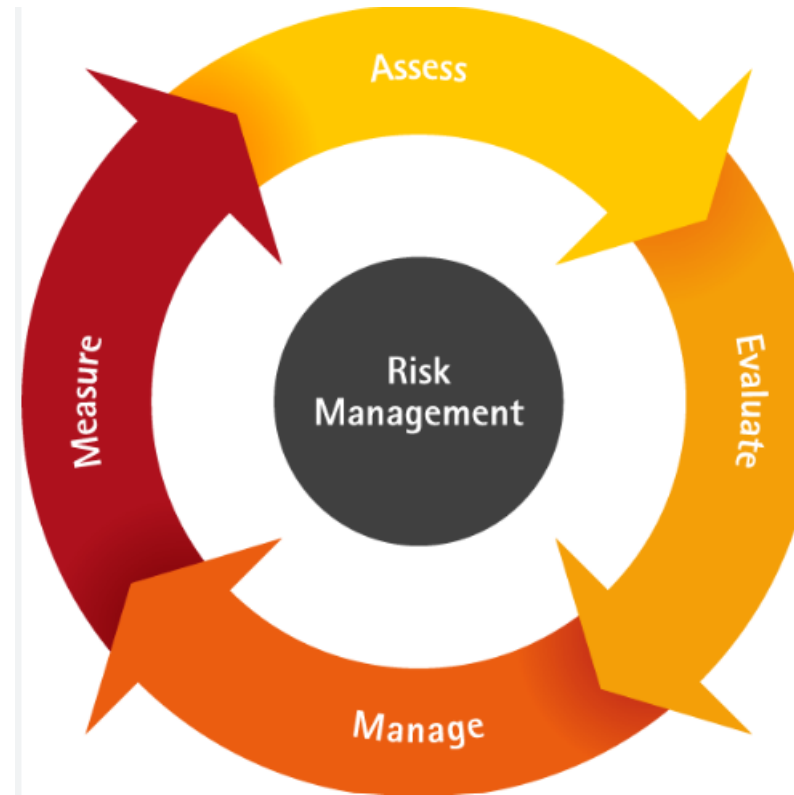
5. Risk Response Planning finding ways of reducing negative impacts on the project as well as enhancing positive impacts.

6. *Risk Monitoring and Control*

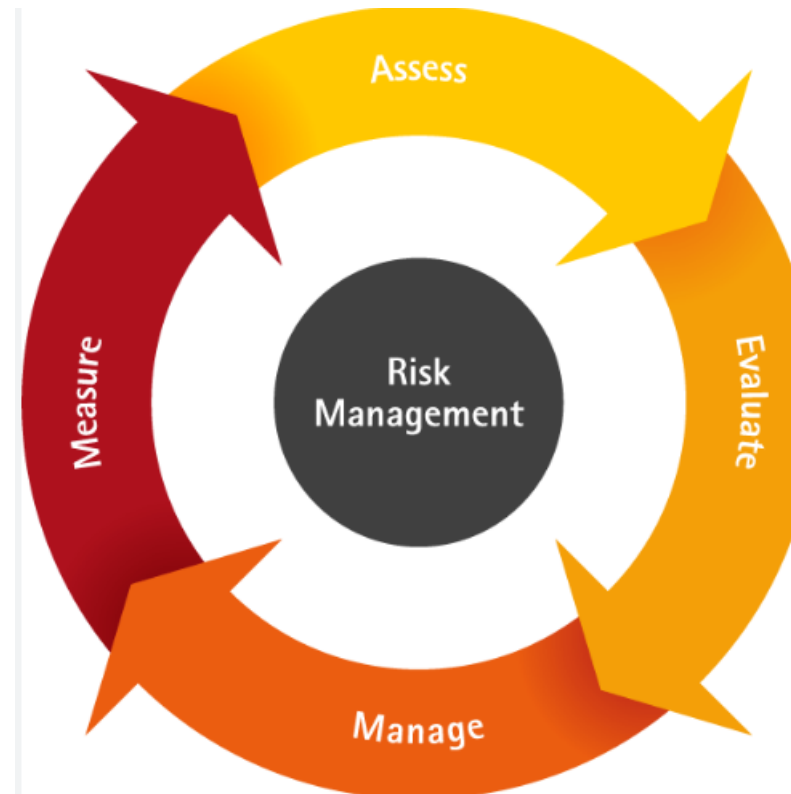
Maintaining records of and evaluating the sub processes,



In spite of the effort taken to make realistic budget estimates, it can still be useful to prepare for changes in the budget as the project unfolds يتكشف. Such changes derive from multiple sources, including technology, economics, improved project understanding, and mandates. It is best to try to include these contingencies in the contract in case they come to pass.



Risk management consists of risk planning identification, qualitative and quantitative analysis, response, and monitoring. We deal with risk through such means as decision tables, simulation, and response, which entail identifying which risks will be prepared for and which will be ignored and simply accepted.







Thank You