

Project Evaluation and Programme Management



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- **Business case for a project**
- **Project portfolio management**
- **Project evaluation**
- **Cash-flow forecasting**
- **Detailed steps of C-B Analysis**
- **Categories of costs and benefits**

The business case

- Feasibility study is also called as “business case”
- Main focus is to determine whether it would be financially & technically feasible to develop the S/W.
- Provides a justification for starting the project
- Should show that the benefits of the project will exceed the costs of development, implementation and operation (or production)
- Needs to take account of business risks



Types of feasibility study

- Technical Feasibility
- Financial Feasibility
- Operational Feasibility



Contents of a business case / feasibility study

1. Introduction/
background
2. The proposed
project
3. The market
4. Organizational and
operational
infrastructure
5. The benefits
6. Outline implementation
plan
7. Costs
8. The financial case
9. Risks
10. Management plan



Contents of a business case cont...

- **Introduction/background:** describes a problem to be solved or an opportunity to be exploited.
- **The proposed project:** a brief outline of the project scope.
- **The market:** the project could be to develop a new product (e.g. a new computer game). The likely demand for the product in the market needs to be assessed.

Contents of a business case cont...

- **Organizational and operational infrastructure:** How the organization would need to change? This would be important where a new information system application was being introduced.
- **Benefits** Normally, these should be expressed in financial terms. In the end, it is up to the client to assess these – as they are going to pay for the project.

Contents of a business case cont...

- **Outline implementation plan:** How the project is going to be implemented? This should consider the disruption to an organization that a project might cause.
- **Costs:** The implementation plan will supply information to establish these.
- **Financial analysis:** Combines costs and benefit data to establish value of the project

Contents of a business case cont...

- **Risks:** Two types
 - ✓ **Project Risk:** related to threats to successful project execution.
 - ✓ **Business Risk:** related to factors threatening the benefits of the delivered project.
In business case, main focus is on *Business Risk*.
- **Management Plan:** Detailed plan for smooth management of the organization.



Project Portfolio Management (PPM)

- Provides an overview of all the projects that an organization is undertaking.
- Prioritizes the allocation of resources to projects.
- Decides which new projects should be accepted and which existing ones should be dropped.



Project portfolio management cont ...

The concerns of project portfolio management include:

- Evaluating proposals for projects
- Assessing the risk involved with projects
- Deciding how to share resources between projects
- Taking account of dependencies between projects
- Removing duplication between projects
- Ensuring that necessary developments have not been inadvertently missed.

Project portfolio management cont...

There are three elements (concerns) to PPM:

I. Project portfolio definition

- Create a central record of all projects within an organization
- Must decide whether to have ALL projects in the repository or, say, only ICT projects
- Note the difference between new product development (NPD) projects and renewal projects.

Project portfolio management cont...

2. **Project portfolio management**

Actual costing and performance of projects can be recorded and assessed

3. **Project portfolio optimization**

Information gathered above can be used to achieve better *balance of projects* e.g. some that are risky but potentially very valuable balanced by less risky but less valuable projects



Pros and cons of Project portfolio management

Pros:

- Allows some small ad-hoc tasks to be done outside the portfolio e.g. quick fixes to systems.

Cons:

- While the full-time staff are allocated to a project, they may effectively be part-time because, they still have routine work to do.
- The official project portfolio may not accurately reflect organizational activity, if some projects are excluded.

Evaluation of individual projects

Technical assessment:

- Consists of evaluating whether the required functionality can be achieved with current affordable technologies.
- Cost of the technology adopted must be taken into account in the financial assessment (cost-benefit analysis).

Evaluation of individual projects cont...

Financial assessment (Cost benefit analysis):

This relates to an individual project. You need to:

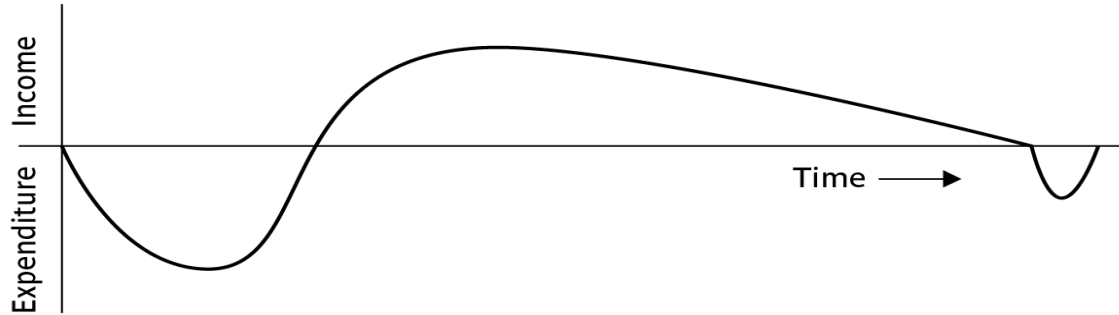
- Identify all the costs which could be:
 - Development costs (e.g. Salary to staffs)
 - Set-up cost (e.g. Hardware cost, recruitment and staff training cost)
 - Operational cost (e.g. Cost for operating the system after installation)
- Identify the value of benefits
- Check that benefits are greater than costs

Cash-flow forecasting

- Like C-B analysis, it is also important to produce a cash-flow forecast, which indicates when expenditure and income will take place.
- The development of the project will incur costs. We need to spend money such as purchasing equipments, staff payment during project development.
- These expenses cannot wait until income is received from the project.
- When the system or product is released it will generate income that gradually pays off costs.
- Also, the timing of costs and income for a product of system needs to be estimated.

Product/system life cycle cash flows

- We need to know that, whether we can fund these expenses either from the own resources or by borrowing.
- So, a forecast is needed.



Typical product life-cycle cash-flow



Cost-benefit analysis – Detailed Steps

1. Identify the costs and benefits pertaining to the project
2. Categorize the various costs and benefits
3. Select a cost-benefit evaluation technique
4. Interpret the results of the analysis
5. Take appropriate action.



Identify the costs and benefits pertaining to the project

- Certain costs and benefits are easily identifiable, e.g. direct costs, such as the price of a computer etc. can be easily identified.
- Direct benefits often relate one-to-one to direct costs, especially savings from reducing costs in the activity in question.



Identify the costs and benefits pertaining to the project cont...

- Some direct costs and benefits, may not be well defined, since they represent estimated costs or benefits that have some uncertainty, e.g. cost reserved for bad debt.
- A category of costs or benefits that is not easily identifiable is opportunity costs and benefits. These are the costs or benefits forgone by selecting one alternative over another.



Categorize various costs and benefits for analysis

- Tangible or Intangible
- Direct or indirect
- Fixed or variable



Categorize various costs and benefits for analysis

Tangible costs.

- Tangibility refers to the ease with which costs or benefits can be measured.
- An outlay of cash for a specific item or activity is referred to as a **tangible cost**.
- Examples: purchase of hardware or software, personnel training, and employee salaries.

Categorize various costs and benefits for analysis cont...

Intangible costs

- Costs that are known to exist but whose financial value cannot be accurately measured.
- Example: employee morale problems caused by a new system or lowered company Image.
- In some cases, they are easy to Identify but difficult to measure, e.g. the cost of breakdown of an online system during banking hours will cause the bank to loose deposits and waste human resources. But, by how much? Difficult to measure.
- In some cases, these costs may be difficult even to identity, e.g. improvement in customer satisfaction due to online systems.



Categorize various costs and benefits for analysis cont...

Tangible benefits

- Benefits which can be measured/quantified.
- Examples: Benefits due to completing jobs in fewer hours or producing reports with no errors.



Categorize various costs and benefits for analysis cont...

Intangible benefits

- Benefits which cannot be easily measured / quantified.
- Example: More satisfied customers or an improved corporate image.
- Both tangible and intangible costs and benefits, should be considered in the evaluation process.
- Management often tends to deal irrationally with intangibles by ignoring them, which should not be.

Categorize various costs and benefits for analysis cont...

Direct Costs

- Costs those with which a dollar / rupee figure can be directly associated in a project.
- Easy to quantify in monetary terms.
- For example, the purchase of a box of CDs for Rs. 350 is a *direct cost* because we can associate the diskettes with the rupees expended.
- Other examples: Development cost, setup cost, operational cost .



Categorize various costs and benefits for analysis cont...

Direct benefits

- Benefits which can be specifically attributable to the given project.
- Example: A new online system that can handle 25 percent more transactions per day.

Categorize various costs and benefits for analysis cont...

Indirect costs

- These costs are the results of operations that are not directly associated with a given system or activity. They are often referred to as overhead.
- Example: Insurance, maintenance, protection of the computer center from heat and fire, lighting, and air conditioning.
- But, it is difficult to determine the proportion of each, attributable to a **specific activity / project**.



Categorize various costs and benefits for analysis cont...

Indirect benefits

- The benefits which are realized as a by-product of another activity or system.
- Examples: benefits due to selling of fertilizers in a steel plant, selling of empty oil containers (tin boxes), etc.



Categorize various costs and benefits for analysis cont...

Fixed Costs

- Some costs are constant, regardless of how well a system is used. They are called *fixed costs*.
- Once encountered, they will not recur.
- Examples: Straight-line depreciation of hardware, exempt employee salaries, and insurance etc.



Categorize various costs and benefits for analysis cont...

Variable costs

- These costs are incurred on a regular (weekly, monthly) basis.
- They are usually proportional to work volume and continue as long as the system is in operation.
- Example: Costs of computer forms which vary in proportion to the amount of processing or the length of the reports required.



Categorize various costs and benefits for analysis cont...

Fixed benefits

- These benefits are also constant and do not change.
- Example: Benefits due to the decrease in the number of personnel by 20 percent resulting from the use of a new computer.
- The benefit of personnel savings may recur every month.



Categorize various costs and benefits for analysis cont...

Variable Benefits

- On the other hand, these benefits are realized on a regular basis.
- Example: Consider a safe deposit tracking system that saves 20 minutes preparing customer notices compared with the manual system. The amount of time saved varies with the number of notices produced.

Summary

- Discussed the concept of business case and its contents.
- Presented the concerns of project portfolio management (PPM) and the elements to PPM.
- In order to evaluate individual projects, one has to carry out
 - ✓ Technical Assessment
 - ✓ Financial Assessment (C-B Analysis)

Summary cont ...

- Discussed the steps for carrying out C-B Analysis.
- Learnt the different types of costs and benefits with suitable examples.
- These costs and benefits have to be considered properly in C-B analysis.

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Thank you