[Academic Script]

Introduction to Project Management (Part 2)

Subject:	Business Economics
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Unit No. & Title:	Unit – 1 Introduction
Lecture No. & Title:	Lecture – 2 Introduction to Project Management (Part 2)

Academic Script

1. Feasibility Studies: Meaning

In the previous session we discussed the basic concepts related to project. In this session we are going to discuss feasibility studies and formulation of a project, Project planning, Market and Technical Analysis.

Feasibility Studies: Meaning

After the project identification stage, the project ideas are subject to a process of preliminary filtration through pre-feasibility study. This involves the study of the project idea at a more elaborate level.

A pre-feasibility study should not normally take more than three months to complete, and on the basis of its results the investor should be able to decide: whether the project can be straightaway accepted or rejected, the project requires a detailed analysis (i.e. a feasibility study), or some aspects of the project need to be subjected to special investigations or studies such as market research, physical or mathematical modelling (e.g. for establishing a nuclear power reactor), site surveys, laboratory tests, etc.

In simple words, feasibility study, will confirm whether the project is viable. At this stage various significant, critical and decesive aspects should be evaluated. It is necessary to examine the various physical design options that might meet the objectives set for the project.

A feasibility study is

an analytical tool used during the project planning process. It shows how a business would be operating under certain assumptions. These assumptions include the technology to be

used, the facilities required, types of equipment, manufacturing process, etc. and the various financial aspects of the project (capital needs, volume, cost of goods, wages etc.)

The feasibilitystudy answers the essential question of "should we proceed with the proposed project idea?"

Feasibility studies can be used in many ways but primarily focus on proposed business ventures.

Feasibility study determines whether the business idea will work or not.

Purpose of Feasibility Study

The purpose of the feasibility study is to validate that the project meets feasibility of cost, technological, safety, marketability, and ease of execution requir ements.

It is possible for the company to use outside consultants or Subject Matter Experts (SMEs) to assist in both feasibility studies and benefit-to-cost analyses.

A feasibility report is an investment proposal based on certain information and factual data which review the project.

It is a study which is required by financial institutions, sponsors of the projects, and project owners.

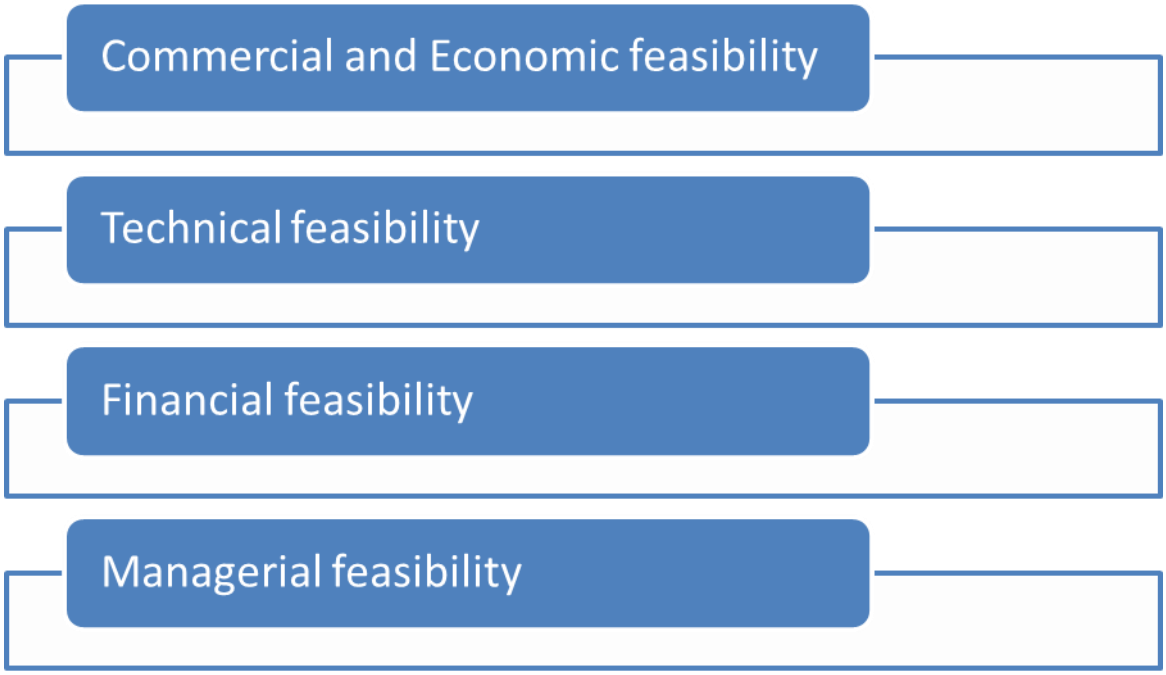
For a project to be complete, it must have complete technical configuration of the project, key equipments must be defined, cost estimate for the project should be specified, and drawing up of the complete schedule should be mentioned.

Different institutional and management strategies should also be examined and their requirements in terms of staffing, equipment and infrastructure need to be evaluated.

The major question which is encountered here is what a feasibility study should cover? A feasibility study should comprise of market analysis, technical analysis, financial analysis and social profitability analysis.

2. Types of Feasibility

There are different types of feasibilities



Commercial and Economic feasibility

It determines the earning capacity of the project. Earnings would depend on the sales and expenses. Here, a careful analysis of Present as well as future demand that is proper demand forecasting should be done.

The anticipated rate of return on investment should be estimated. If it is positive, the project is economically justifiable. Deciding the cost pattern is an important aspect of commercial feasibility. The project manager should match the costs with revenues in order to estimate the profitability. It is essential to calculate the breakeven point.

Technical feasibility

It serves to establish the fact that the project is technically feasible. It requires a thorough assessment of the actual production process and detailed estimates. The project should be described in terms of technology, requirement of equipment, labour and other inputs, location, and layout supporting the chosen technology.

It is the review of the engineering feasibility of the project. It includes the structural, civil and other relevant engineering aspects required by the project design. It is necessary for the project to have technical capable personnel as well as sound projected technologies which would be used in the project.

Financial feasibility

The success of a project is ultimately measured in terms of its financial viability. The main aim of this study is to assess the financial attractiveness of the project.

A company should be emphasising on audited financial statements such as P&L a/c, balance sheet and cash flow statements. A detailed analysis of return on investment, return on equity, operating statements break even analysis, cost volume and profits are essential.

Managerial feasibility

The success and failure of the project depends on the competency of the mangers that are going to look after the project. A project comprises of various activities which needs to be coordinated to produce the desired result.

Demonstrated management capability and availability, employee involvement, participative management and commitment are key elements required to ascertain managerial

feasibility. This study addresses the various issues in management and organizational structure of the project.

Formulation of Projects

Project formulation is an examining process which needs to be undertaken before the investment decision

The whole purpose behind this exercise is to present all the relevant facts and information subjective or objective in nature, so that a informed decision can be taken with regard to go ahead signal for the project or not.

The project should explain the objectives, goals, and justification for the acceptance of the project.

It should focus on financial, technical, managerial, economic aspects and also the resource constraints.

Stages in Project formulation

There are various stages in project formulation

- Feasibility analysis
- Techno economic analysis
- Project design and network analysis
- Input analysis
- Financial analysis
- Socio cost benefit Analysis
- Project appraisal

Feasibility analysis is the first stage in the process of project development. It examines the desirability of investing in a project. It is necessary to examine the project idea in relation to inputs, resources, and outputs and environment.

Techno Economic Analysis

It is mainly concerned with the projection of demand potential and the selection of the optimal technology to be used to achieve the project objectives.

Project design and network Analysis

This defines the various activities of the project and its interrelationship. It should determine the sequencing of various activities. All the activities are represented in the form of Network.

Input analysis

Input analysis must throw light on the project inputs and to assess the availability of such inputs and its supply. Here, how much inputs will be consumed by each activity should be determined.

Financial analysis

Financial analysis helps to develop the project from the financial aspect. It helps in the estimation of the project costs, funds required estimation, funds and cash flow estimation and so on.

For the financial analysis it is necessary to prepare various financial statements which need to be analysed in depth. The costs and revenues of a project are represented as a financial statement as cash flows. To do this, all the physical inputs required over a project's life will need to be staged and then it is essential to work out on an annual basis the cost structure for the project, and present-day prices.

Social cost benefit analysis: It is a methodology developed for evaluating investment projects from the point of view of the society. It is mainly used to evaluate public investments. Mostly in planned economies, SCBA helps in evaluating the projects within the planning framework. Here, the focus is on social cost and benefits compared to the cost and returns of the projects.

3. Project Planning

It involves few activities, resource, constraints, and interrelationships can be visualised easily by the human mind and planned informally. However, when a project is considered and the complexities involved is more, its size, informal planning is not sufficient and formal planning has to be substituted in the place of informal planning.

Planning is required more for the project work compared to normal operations.

Without effective planning, there may be chaos and duplication and overlapping of efforts which might result in wastage of resources, time and efforts.

Planning provides a basis for organizing the work on the project and allocating resources and responsibilities to various individuals.

It is a means of communication and coordination among all those who are involved in the project.

It induces people to look ahead, peep into the future and makes provision for it.

Bar chart, network techniques, hierarchy of plans are the major tools of project planning.

The most significant facet of project analysis is the market analysis. The potential size of the market for the product should be estimated. The two very important issues concerning market analysis are the likely aggregate demand for the product or service and the share of the market which the proposed project will enjoy. Here, it is necessary to understand the various patterns like consumption growth, income and price elasticity of demand, composition of market, nature of competition,

availability of substitutes, reach of distribution channels and so on.

Keeping in mind the importance of market and demand analysis, it should be carried out in an orderly and systematic manner. Situational analysis, objectives specification, secondary data collection, market survey, studying the market characteristics, demand forecasting, and market planning are the key steps in such analysis.

Once the information is gathered about the various aspects of the market from primary and secondary sources, the future demand should be estimated. There are various methods like qualitative, time series projections, and causal methods which are available for forecasting.

A suitable marketing plan, pricing, distribution, promotion, and services needs to be developed to enable the deep penetration into the market.

4. Technical Analysis

It is an important analysis of the project as it deals with various aspects such as manufacturing process/ technology, technical arrangements, materials and inputs, plant capacity, plant location, machineries and equipment required, structures and civil works required, environmental aspects, project charts and layouts, project implementation schedule and so on. The relationship among the mentioned aspects is very vital like, there is a close relationship between plant capacity and production technology. The choice of technology also depends on the principal inputs available for the project. For example, the quality of lime stone determines the choice of wet or dry process.

There are various factors which affect the choice of technology such as plant capacity, principal units, investment outlays, production cost, product mix and ease of absorption. The companies should use appropriate technology which means those are suitable to local, economic, social and cultural conditions.

The plant location, requirement of machinery and equipment is dependent on production technology and plant capacity. Project implementation is also an important part of the technical analysis.

The choice of technology would determine the investment outlay and production cost over a period of time.

Environment Impact Analysis (EIA) is also, a part of Technical analysis.

This analysis identifies the environment in which a project is to be implemented.

It also assesses the short and long-term impacts the project will have on environment as a result of the project activities during construction as well as operation phases.

5. Summary

The most significant facet of project analysis is the market analysis. The potential size of the market for the product should be estimated on the basis of aggregate demand.

Project formulation is an investigating process which needs to be undertaken before the investment decision. The whole purpose behind this exercise is to present all the relevant facts and information subjective or objective in nature, so that a informed decision can be taken with regard to go ahead signal for the project or not.