

# UNIT–1 : Project Overview and Feasibility Studies

**Subject: Project Management**

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## 1. Project Overview

### Definition

A **Project** is a temporary activity undertaken to create a unique product, service, or result within a specific time, cost, and quality limit.

### Exam Definition

“A project is a planned set of interrelated activities with a definite beginning and ending, undertaken to achieve specific objectives.”

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### Easy Introduction

Suppose a company wants to build:

- a new mobile app
- a bridge
- a shopping mall
- a software system

All these works need:

- planning
- money
- manpower

- time management

This complete planned work is called a **Project**.

Project management helps complete work:

- ✓ on time
  - ✓ within budget
  - ✓ with required quality
- 

## Why This Topic is Important

### In Real Life

Every company runs projects for:

- software development
- construction
- manufacturing
- research
- business expansion

### In Exams

- ★ Very important theoretical topic
  - 🔥 Frequently asked in RGPV exams
  - 🎯 Used as base topic for all units
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## Detailed Explanation

A project has:

| Feature            | Meaning        |
|--------------------|----------------|
| Definite Objective | Specific goal  |
| Start and End Date | Temporary work |

| <b>Feature</b> | <b>Meaning</b>              |
|----------------|-----------------------------|
| Budget         | Limited cost                |
| Resources      | Men, machine, money         |
| Risk           | Uncertainty involved        |
| Unique Nature  | Different from routine work |

## **Characteristics of Project**

### **1. Temporary**

Project has fixed beginning and ending.

### **2. Goal Oriented**

Every project has specific objective.

### **3. Unique**

Each project is different.

### **4. Resource Requirement**

Needs manpower, money, materials.

### **5. Risk Involved**

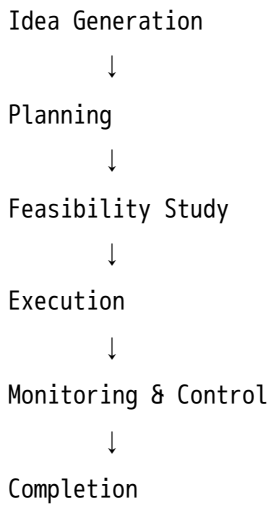
Possibility of failure exists.

### **6. Interrelated Activities**

Many tasks are connected together.

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## **Project Life Cycle**



## Example

### Example: College Website Project

| Activity  | Description           |
|-----------|-----------------------|
| Objective | Build website         |
| Budget    | ₹50,000               |
| Team      | Developers + Designer |
| Duration  | 2 months              |
| Risk      | Server failure        |

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## Advantages

- Better planning
  - Proper resource use
  - Time management
  - Cost control
  - Quality improvement
- 

## Disadvantages

- High complexity
  - Risk of failure
  - Requires coordination
  - Budget issues possible
- 

## **Applications**

- Software companies
  - Construction industry
  - Banking sector
  - Manufacturing
  - Government projects
- 

## **Important Keywords for Exam**

- Temporary endeavor
  - Goal oriented
  - Resource allocation
  - Time constraint
  - Project life cycle
  - Risk management
- 

## **Conclusion**

Project is a planned effort to achieve a specific objective within limited resources and time.  
Proper project management increases efficiency and success rate.

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# **2. Feasibility Study**

## **Definition**

Feasibility Study is the process of checking whether a project is practical, profitable, and possible before starting it.

## Exam Definition

“A feasibility study is an analysis used to determine whether a proposed project is technically, economically, and operationally viable.”

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## Easy Introduction

Before investing money in any project, companies ask:

- Can this project be completed?
- Will it make profit?
- Is technology available?
- Is market demand present?

These checks are called **Feasibility Study**.

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## Why This Topic is Important

Without feasibility study:

- ✗ project may fail
- ✗ money may get wasted
- ✗ losses may occur

## In Exams

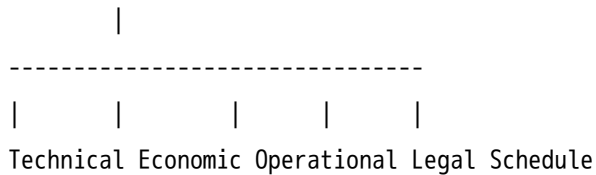
- ★ Most repeated topic
  - 🔥 Important for 7-mark and 14-mark questions
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## Types of Feasibility

| Type                    | Meaning                     |
|-------------------------|-----------------------------|
| Technical Feasibility   | Technology availability     |
| Economic Feasibility    | Profitability               |
| Operational Feasibility | Organizational capability   |
| Legal Feasibility       | Legal permissions           |
| Schedule Feasibility    | Time completion possibility |

## Diagram

Feasibility Study



## Step-by-Step Working

### Step 1: Identify Project Idea

Select business/project concept.

### Step 2: Analyze Technical Requirement

Check hardware, software, machinery.

### Step 3: Market Analysis

Study customer demand.

### Step 4: Cost Estimation

Estimate expenses.

## **Step 5: Financial Appraisal**

Check profit and investment return.

## **Step 6: Final Decision**

Accept or reject project.

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## **Advantages**

- Reduces risk
  - Prevents losses
  - Improves planning
  - Helps decision making
- 

## **Disadvantages**

- Time consuming
  - Costly process
  - Requires experts
- 

## **Applications**

- Software projects
  - Startups
  - Manufacturing industries
  - Construction companies
- 

## **Important Keywords**

- Viability
- Profitability

- Technical analysis
  - Economic analysis
  - Risk reduction
- 

## Conclusion

Feasibility study helps organizations decide whether a project should be started or not.

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# 3. Project Identification

## Definition

Project Identification is the process of selecting suitable project ideas based on business needs and opportunities.

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## Easy Introduction

A company cannot start random projects.

First it identifies:

- market need
- customer problem
- business opportunity

Then project idea is selected.

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## Sources of Project Identification

| Source            | Example              |
|-------------------|----------------------|
| Market demand     | Need for EV vehicles |
| Government policy | Smart city projects  |

| Source             | Example             |
|--------------------|---------------------|
| Technology changes | AI applications     |
| Customer feedback  | New mobile features |

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## Steps in Project Identification

Idea Generation



Opportunity Analysis



Resource Availability Check



Project Selection

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## Example

### Example:

Demand for online education increased.

Company identified opportunity and launched learning app.

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## Advantages

- Better opportunity selection
  - Increased profitability
  - Reduces business risk
- 

## Important Keywords

- Opportunity analysis

- Idea generation
  - Resource availability
  - Market opportunity
- 

## **Conclusion**

Proper project identification helps organizations choose profitable and successful projects.

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# **4. Market and Demand Analysis**

## **Definition**

Market and Demand Analysis studies customer needs, competition, and future demand of a product.

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## **Easy Introduction**

Before launching product, company checks:

- Will customers buy it?
- How many customers exist?
- Who are competitors?

This process is called market and demand analysis.

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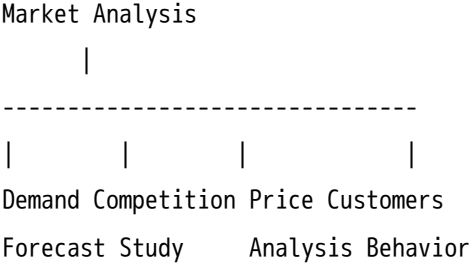
## **Objectives**

- Estimate future demand
  - Understand customer behavior
  - Study competition
  - Decide product price
-

# Components of Market Analysis

| Component            | Meaning                  |
|----------------------|--------------------------|
| Market Size          | Total customers          |
| Demand Forecasting   | Future demand prediction |
| Competition Analysis | Competitor study         |
| Pricing Analysis     | Product pricing          |

## Diagram



## Demand Forecasting Methods

### 1. Survey Method

Customer feedback collection.

### 2. Statistical Method

Past data analysis.

### 3. Expert Opinion Method

Advice from experts.

# Example

## Example:

Before opening new PG hostel:

- check student population
  - nearby colleges
  - rent prices
  - competitor hostels
- 

## Advantages

- Reduces market risk
  - Helps pricing decisions
  - Improves sales planning
- 

## Disadvantages

- Data collection difficult
  - Future prediction may be wrong
- 

## Important Keywords

- Demand forecasting
  - Customer analysis
  - Market segmentation
  - Competition analysis
- 

## Conclusion

Market analysis helps businesses understand customer demand and market opportunities before investment.

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## 5. Project Cost Estimate

### Definition

Project Cost Estimation is the process of calculating total expected cost required to complete the project.

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### Easy Introduction

Every project needs money for:

- labor
- materials
- machines
- software
- maintenance

Estimating these expenses is called project cost estimation.

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### Types of Costs

| Type          | Meaning                 |
|---------------|-------------------------|
| Fixed Cost    | Constant cost           |
| Variable Cost | Changes with production |
| Direct Cost   | Directly related        |
| Indirect Cost | Administrative expenses |

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### Components of Project Cost

Project Cost

|

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| | | | |

Land Machinery Labor Raw Material Misc

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## Steps of Cost Estimation

**Step 1: Identify activities**

**Step 2: Estimate resources**

**Step 3: Calculate labor cost**

**Step 4: Add material cost**

**Step 5: Add contingency cost**

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## Example

### Software Project Cost

| Item          | Cost      |
|---------------|-----------|
| Developers    | ₹2,00,000 |
| Server        | ₹50,000   |
| Testing       | ₹30,000   |
| Miscellaneous | ₹20,000   |

Total = ₹3,00,000

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## Advantages

- Budget planning
  - Cost control
  - Better financial management
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## **Disadvantages**

- Estimation errors possible
  - Future prices uncertain
- 

## **Important Keywords**

- Budgeting
  - Cost control
  - Resource estimation
  - Fixed cost
  - Variable cost
- 

## **Conclusion**

Project cost estimation helps organizations plan budget and avoid overspending.

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# **6. Financial Appraisal**

## **Definition**

Financial Appraisal evaluates profitability and financial strength of a project.

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## **Easy Introduction**

Company checks:

- Will project earn profit?
- Will investment recover?
- Is project financially safe?

This checking is called financial appraisal.

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## Objectives

- Measure profitability
  - Analyze investment return
  - Reduce financial risk
- 

## Techniques of Financial Appraisal

| Technique           | Meaning                    |
|---------------------|----------------------------|
| Payback Period      | Time to recover investment |
| NPV                 | Net present value          |
| IRR                 | Internal rate of return    |
| Profitability Index | Profit comparison          |

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## Payback Period Formula

$$\text{Payback Period} = \frac{\text{Initial Investment}}{\text{Annual Cash Inflow}}$$

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## Example

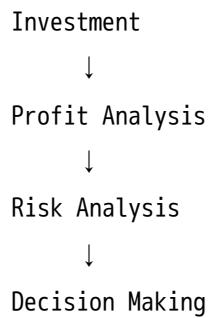
Investment = ₹1,00,000

Annual Profit = ₹25,000

Payback Period = 4 years

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# Diagram



## Advantages

- Helps investment decisions
  - Measures profitability
  - Reduces financial risk
- 

## Disadvantages

- Future uncertainty
  - Complex calculations
- 

## Important Keywords

- Profitability
  - Investment recovery
  - Payback period
  - Financial viability
  - Cash inflow
- 

## Conclusion

Financial appraisal helps determine whether a project is financially profitable and worth investing in.

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## **MOST IMPORTANT TOPICS**

1. Feasibility Study ★★★★★
  2. Market and Demand Analysis ★★★★★
  3. Financial Appraisal ★★★★★
  4. Project Cost Estimation ★★★
  5. Project Identification ★★
  6. Project Life Cycle ★★
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## **MOST IMPORTANT 7-MARK**

### **QUESTIONS**

1. Explain feasibility study with types.
  2. Explain project identification process.
  3. Explain market and demand analysis.
  4. Explain project cost estimation.
  5. Explain financial appraisal techniques.
  6. Explain characteristics of project.
  7. Explain project life cycle.
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## **MOST IMPORTANT 14-MARK**

### **QUESTIONS**

1. Explain feasibility study in detail with diagram.
2. Explain market and demand analysis with forecasting methods.

3. Explain project cost estimation and financial appraisal.
  4. Explain project overview and characteristics.
  5. Explain various types of feasibility studies.
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## **PYQ-BASED EXPECTED QUESTIONS**

### **Very High Probability**

- ✓ Feasibility Study
  - ✓ Market Analysis
  - ✓ Financial Appraisal
  - ✓ Payback Period
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### **High Probability**

- ✓ Project Cost Estimation
  - ✓ Types of Feasibility
  - ✓ Demand Forecasting
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### **Medium Probability**

- ✓ Project Identification
  - ✓ Project Characteristics
- 

## **ONE-NIGHT REVISION NOTES**

### **Quick Keywords**

| Topic   | Keywords           |
|---------|--------------------|
| Project | Goal, Time, Budget |

| Topic               | Keywords             |
|---------------------|----------------------|
| Feasibility         | Viability, Practical |
| Market Analysis     | Demand, Competition  |
| Cost Estimate       | Budgeting            |
| Financial Appraisal | Profitability        |

## Memory Tricks

### Feasibility Types

👉 “TEOLS”

- T → Technical
- E → Economic
- O → Operational
- L → Legal
- S → Schedule

## Financial Formula

$$\text{Payback Period} = \frac{\text{Investment}}{\text{Annual Return}}$$

$$\text{Payback Period} = \frac{\text{Investment}}{\text{Annual Return}}$$

## SMART STUDY PLAN

### 2-Hour Revision Strategy

| Time   | Topic             |
|--------|-------------------|
| 30 min | Feasibility Study |
| 30 min | Market Analysis   |
| 20 min | Cost Estimation   |

| Time   | Topic               |
|--------|---------------------|
| 20 min | Financial Appraisal |
| 20 min | PYQ Revision        |

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## 5-Hour Preparation Strategy

| Time   | Work                       |
|--------|----------------------------|
| Hour 1 | Read all theory            |
| Hour 2 | Learn diagrams             |
| Hour 3 | Practice 7-mark questions  |
| Hour 4 | Practice 14-mark questions |
| Hour 5 | Revision + keywords        |

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## One-Night Preparation Plan

### First Priority

- ✓ Feasibility Study
- ✓ Financial Appraisal

### Second Priority

- ✓ Market Analysis
- ✓ Cost Estimation

### Third Priority

- ✓ Project Identification
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## TOPPER ANSWER WRITING TIPS

### How to Impress Examiner

## **1. Start with Definition**

Always begin answer with proper definition.

## **2. Draw Diagram**

Even simple flowchart increases marks.

## **3. Use Headings**

Write:

- Introduction
- Types
- Advantages
- Conclusion

## **4. Underline Keywords**

Underline:

- feasibility
- profitability
- demand forecasting
- cost estimation

## **5. Fill Pages Smartly**

Use:

- tables
- points
- diagrams
- examples

## **6. Write Conclusion**

Always end with positive conclusion.



# FINAL EXAM STRATEGY

If less time:

## **Study in this order:**

1. Feasibility Study
2. Market Analysis
3. Financial Appraisal
4. Cost Estimation
5. Project Identification

These topics alone can help score very good marks in Unit-1.