

Lecture 4: Varieties of Projects, Life Cycle & Project Selection

Project Management (BCS Students)

Introduction

- Projects differ not only in sector (IT, construction, R&D, etc.) but also in scale, scope, and audience.
- Classification helps managers design appropriate strategies, allocate resources, and set realistic goals.
- We can classify projects into Personal, Local, Organizational, National, and Global Projects.

Types of Project

A. Personal Project

- Definition: Small-scale, individual-driven projects, often for self-improvement or personal needs.
- Examples: Writing a thesis or dissertation.
- Learning a new programming language.
- Building a personal website or blog.
- Features: Limited scope, few resources, short duration, personal benefit.

Types of Project

B. Local Project

- Definition: Projects carried out at the community or city/town level.
- Examples: Setting up a public Park or library
- Local vaccination campaign.
- Roads repairs within a city.
- Features: Community-focused, often sponsored by local governments or NGOs.
- Impact: Directly improves quality of life for residents.

Types of Project

C. Organizational Project

- Definition: Projects within a company, institution, or NGO aimed at achieving organizational goals.
- Examples: Launching a new product
- Implementing an ERP system.
- University developing a new Learning Management System (LMS).
- Features: Medium to large scope, managed professionally, goal = organizational growth & efficiency.

Types of Project

D. National Project

- Definition: Projects of **national importance** undertaken by governments or state institutions.
- Examples: Construction of highways, airports, or dams.
- National healthcare or education initiatives.
- CPEC projects in Pakistan.
- Features: Large budgets, long timelines, political oversight, affects millions.

Types of Project

E. Global Project

- Definition: Projects that cross borders, involve multiple countries, and address global needs.
- Examples: Climate change initiatives (Paris Agreement projects).
- International space missions (NASA, ESA collaborations).
- COVID-19 vaccine development and distribution.
- Features: Complex, high cost, multi-stakeholder, requires global cooperation.
- Impact: Affects entire humanity, requires international governance.

Life Cycle of a Project

- Initiation – Idea, feasibility.
- Planning – Budget, scheduling, resources.
- Execution – Actual work.
- Monitoring – Tracking, risk handling.
- Closure – Delivery, handover.



Initiation

Planning

Execution

Monitoring

Closure

Why Project Selection is Important

- Ensures resources are used on the **most valuable projects**.
- Aligns projects with **strategic goals** of the organization.
- Reduces risk of project failure.
- Improves chances of achieving long-term growth.

Project Selection Methods

- Non-Numeric Models – Based on judgment or urgency.
- Numeric Models – Payback Period, NPV, IRR.
- Scoring Models – Weighted criteria like cost, risk, benefit.
- Example: Choosing between LMS, mobile app, or biometric system.

Project Selection Methods

A. Non-Numeric Models – (Qualitative)

- Based on judgment, experience or urgency.
- Example:
- “First Come, First Served”
- “Sacred Cow” (Top manager’s favorite project)
- “Urgency” (Disaster recovery projects like flood relief).
- Pros: Quick and simple.
- Cons: Can be biased, lacks objectivity.

Project Selection Methods

B. Numeric Models – (Quantitative)

1. Payback Period (PP)

- Time required to recover initial investment.
- Example: Invest PKR 1 million → project returns PKR 250k/year → Payback = 4 years.
- Shorter payback preferred.

2. Net Present Value (NPV)

- Calculates today's value of future cash flows.
- Positive NPV = good

Project Selection Methods

B. Numeric Models – (Quantitative)

- Example: If NPV of IT portal = +500k PKR → worth investing.

3. Internal Rate of Return (IRR)

- Discount rate at which NPV = 0.
- Higher IRR → better project.

C. Scoring/Ranking Models (Multi-Criteria)

- Assigns weights to criteria → scores projects → choose highest total.
- Example Criteria: Cost, Benefit, Risk, Strategic Fit.

Selection Matrix Example

- Criteria: Cost, Benefit, Risk, Strategic Alignment.

Project	Cost	Benefit	Risk (low)	Total
LMS	4	5	3	12
Mobile App	3	4	4	11
Biometric System	2	3	5	10

Summary

- Projects come in many varieties (construction, IT, social, economic).
- Life Cycle = Initiation → Planning → Execution → Monitoring → Closure.
- Selection uses non-numeric, numeric, and scoring models.
- Right project = better use of resources and strategic fit.