

# Project Management

Lec#1

Overview of project Management  
2023

## Course Objectives

- To learn:
  - What is the project management
  - Project planning
  - Project cost management
  - Project Quality management
  - Project communication management
  - The best project management tools
  - Project manager roles and responsibilities

## Project Definition

A Project is a set of tasks that:

- Are related to each other
- Have a specific objective to be completed within certain specifications
- Have defined start and end dates
- Have funding limits
- Consume resources

## Project Definition

- *A temporary endeavour or undertaking to create a unique product or service*
- *An undertaking or venture to accomplish some objective or goal.*
- *A project is a temporary endeavor(try) undertaken to create a unique product, service, or result.*

## Structure of a project

- A set of interrelated jobs whose accomplishment leads to the completion of the project.
- Jobs or activities consume time and resources and are governed by precedence relations

## Some Examples of the projects

- Personal level Projects (writing a book, preparation for the exam, Birthday function, family vacation,...)
- Neighborhood level Projects (?)
- Organizational Projects ( construction of a highway,...)
- National Projects ( preparation of yearly budget,...)
- Global Projects (climate change)

## Features of Projects

- Well defined collection of jobs
- One time effort, non-repetitive
- Jobs interrelated through precedence
- Independency of individual jobs.
- Jobs consume time and resources.
- Coordination between individuals, groups and organization
- Time, cost and performance constraint.

## Project Management

Project Management comprises a body of methods and tools that facilitate the achievement of project objectives

- Within time
- Within cost
- Within scope
- At the desired performance/specification level
- While effectively and efficiently utilizing resources
- While carefully managing risks and opportunities

## Life cycle of a project

- Selection of a project/ initiation
- Project planning (scope of work, scheduling, time cost trade off and resource consideration)
- Project implementation
- Project completion and audit

## Project initiation/Project Selection

In this phase, the feasibility and worth of the project will be check

- New ideas
- Vision of future growth
- Long term objective
- SWOT analysis (strength, weakness, Opportunities, and Threats).

Systematic analysis of these factor will help to identify correct project.

- Initial project analysis

## Project Appraisal

- Market (Market share, competition, pricing option, future demand,...)
- Technical (Engineering, Production process, size,...)
- Finance (Cash flow, Profitability, Break even point, Net Present value, Payback period,...)
- Economic (Benefit and cost i.e. soar projects in term of land requirements)
- A feasibility report considers all the issues prior to project adoption

## Project Planning

Simply it is Plan to achieve the project objective(s) including following steps:

- Forming a project team with a leader
- Defining scope and terms of reference
- Work breakdown structure
- Basic scheduling
- Time cost trade off
- Resource consideration

## Basic Scheduling

- Project representation as a network
- Estimation of activities duration
- Forward and backward pass
- Determination of activities float
- Critical path for selective control and minimum project duration

## Resource aggregation

- Aggregation all the resources to understand total resource needed for the project)
- Project schedule
- Consumption profile/resource
- Provisioning of resource over time

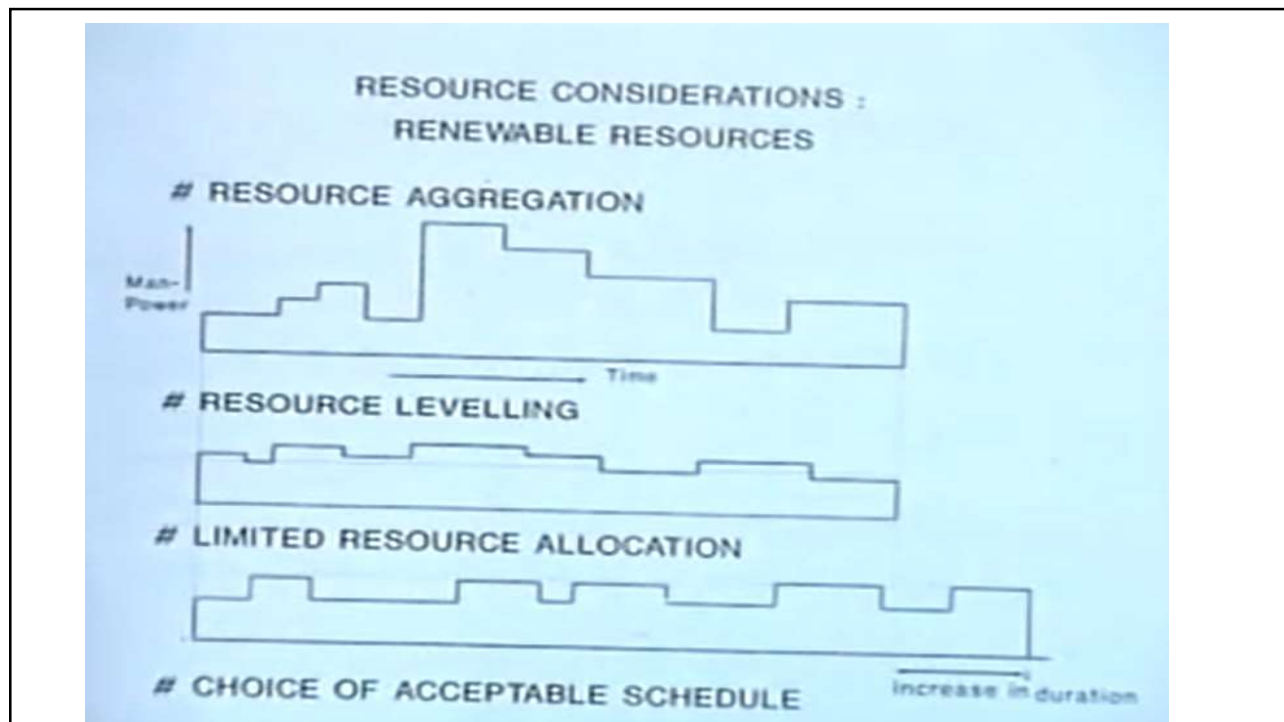
## Resource leveling

- Shifting the slag jobs in the project to obtain the balanced resource profile
- Keep project duration fixed

## Limited resource allocation

- The minimum duration schedule satisfying the limited availability of the resources
- May delay some critical jobs





## Project Implementation

- Organizing team and work
- Clear cost/time performance goal
- Project monitoring with regards to cost, value of work and time
- Project control

## Project completion

- Disbanding of project team
- Handing over of project to user
- Accounting and report writing
- Learning from the experience

## Problems in project execution

- Organizational
- Financial
- Legal
- Engineering
- Non availability of resources
- Weather condition

## Human issues in Project management

- Working as a team
- Communication
- Conflict management
- Leadership and motivation
- Organizational structure
- Selection of the project manager

## Using computer software in project management

- MS project, Harvard PM,...

## Conclusion and summary

- Definition and examples of projects
- Key feature of the projects
- Life cycle of a project ( project selection, planning, scheduling, implementation, completion)
- Problems
- Human issues
- How commuter will help in PM

## Text book

- <https://book.akij.net/eBooks/2018/March/5abcc35b666f7/a%20guide%20to%20the%20project%20management%20body%20of%20knowledge%206e.pdf>