

# Unit I

## Introduction

# Project - Definition

- ▶ In the broadest sense, a **project** is a specific, finite task to be accomplished. Any activity that results in a deliverable or a product.
- ▶ Projects always begin with a problem. The project is to provide the solution to this problem.
- ▶ When the project is finished it must be evaluated to determine whether it satisfies the objectives and goals.

# What is Management?

- ▶ Management can be defined as all activities and tasks undertaken by one or more persons for the purpose of **planning** and **controlling** the **activities** of others in order to **achieve objectives** or **complete an activity** that could not be achieved by others acting independently.
  - ▶ Management functions can be categorized as
    - ▶ Planning
    - ▶ Organizing
    - ▶ Staffing
    - ▶ Directing
    - ▶ Controlling

# Management Functions

- ▶ **Planning**  
Predetermining a **course of action** for accomplishing organizational Objectives
- ▶ **Organizing**  
Arranging the **relationships among work units** for accomplishment of objectives and the granting of responsibility and authority to obtain those objectives
- ▶ **Staffing**  
**Selecting** and **training** people for positions in the organization
- ▶ **Directing**  
Creating an atmosphere that will **assist** and **motivate** people to achieve desired end results
- ▶ **Controlling**  
**Establishing, measuring, and evaluating** performance of activities toward planned objectives

# What is Project Management

- ▶ “The application of knowledge, skills, tools and techniques to project activities in order to meet project requirements”

# What is Project Management

- ▶ Project management is a system of
  - ▶ management procedures,
  - ▶ practices,
  - ▶ technologies,
  - ▶ skills, and
  - ▶ experiencethat are necessary to successfully manage a project.

# Software Project Management

- ▶ Concerned with activities involved in ensuring that software is delivered:
  - ▶ on time
  - ▶ on schedule
  - ▶ in accordance with the requirements of the organization developing and procuring the software

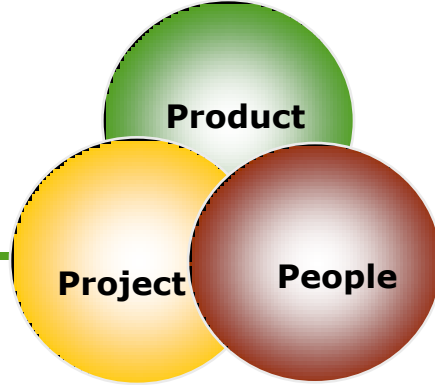
# Project Stakeholders

- ▶ Stakeholders are the people involved in or affected by the project activities
  - ▶ Stakeholders include
    - ▶ The project sponsor and project team
    - ▶ Support staff
    - ▶ Customers
    - ▶ Users
    - ▶ Suppliers
    - ▶ Opponents to the project



# Project Characteristics

- ▶ One clear objective
  - ▶ A well defined set of end results
  - ▶ Goal oriented
  - ▶ End product or service must result
- ▶ Finite
  - ▶ Fixed timeline, start date, end date, milestone dates
- ▶ Limited
  - ▶ Budget, Resources, Time
- ▶ Life Cycle
  - ▶ Recognizable sequence of phases



## Software

## Project

## Management

### Product

### Project

### People

1. Assessing Processes
2. Awareness of Process Standards
3. Defining the Product
4. Evaluating Alternative Processes
5. Managing Requirements
6. Managing Subcontractors
7. Performing the Initial Assessment
8. Selecting Methods and Tools
9. Tailoring Processes
10. Tracking Product Quality
11. Understanding Development Activities

12. Building a WBS
13. Documenting Plans
14. Estimating Costs
15. Estimating Effort
16. Managing Risks
17. Monitoring Development
18. Scheduling
19. Selecting Metrics
20. Selecting Project Mgmt Tools
21. Tracking Process
22. Tracking Project Progress

23. Appraising Performance
24. Handling Intellectual Property
25. Holding Effective Meetings
26. Interaction and Communication
27. Leadership
28. Managing Change
29. Negotiating Successfully
30. Planning Careers
31. Presenting Effectively
32. Recruiting
33. Selecting a Team
34. Teambuilding



**34 Competencies Every Software Project Manager Needs to Know**