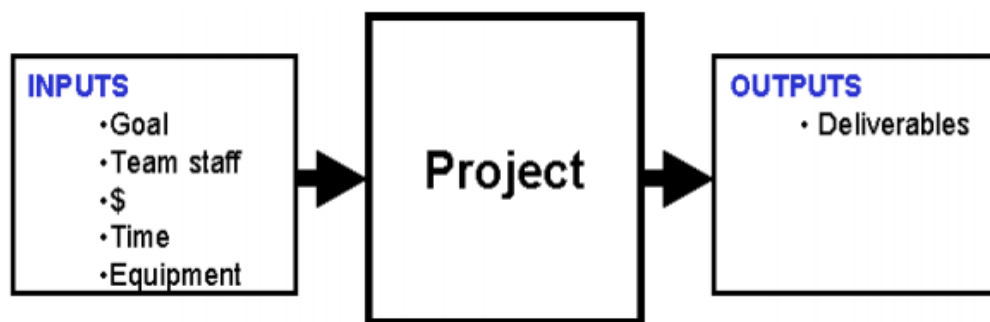


# PROJECT MANAGEMENT (ETMS–421)

## UNIT 1

### INTRODUCTION

**Project management** is the art of matching a project's goals, tasks, and resources to accomplish a goal as needed. We say "as needed" because one has limited time, money, and resources (human and machinery) with which to accomplish a goal. One can think of a project as a process. Figure 1 shows this process as a simplified block diagram.



The process involves inputs and outputs. Successful projects "do the right things, with the right tools, and in the right way"

### PROJECT:

- **A project is defined as a specific, finite activity that produces an observable and measurable result under certain preset requirements.**
- It is an attempt to implement desired change to an environment in a controlled way.
- *Project* is a great opportunity for organizations and individuals to achieve their business and non-business objectives more efficiently through implementing change. Projects help us make desired changes in an organized manner and with reduced probability of failure.

### CHARACTERISTICS OF PROJECTS-

Project can be characterized by these characteristics:

- **Temporary.** This key characteristic means that every project has a finite start and a finite end. The start is the time when the project is initiated and its concept is developed. The end is reached when all objectives of the project have been met (or unmet if it's obvious that the project cannot be completed – then it's terminated).
- **Unique Deliverable(s).** Any project aims to produce some deliverable(s) which can be a product, service, or some another result. Deliverables should address a problem or need analyzed before project start.

- **Progressive Elaboration.** With the progress of a project, continuous investigation and improvement become available, and all this allows producing more accurate and comprehensive plans. This key characteristic means that the successive iterations of planning processes result in developing more effective solutions to progress and develop projects.

A *conventional project* is:

- Purposeful as it has a rational and measurable purchase
- Logical as it has a certain life-cycle
- Structured as it has interdependencies between its tasks and activities
- Conflict as it tries to solve a problem that creates some kind of conflict
- Limited by available resources
- Risk as it involves an element of risk

## DEFINITION AND OBJECTIVES OF PROJECT MANAGEMENT

### Definition-

**Project management** is the discipline of initiating, planning, executing, controlling, and closing the work of a team to achieve specific goals and meet specific success criteria. A project is a temporary endeavor designed to produce a unique product, service or result with a defined beginning and end (usually time-constrained, and often constrained by funding or deliverable) undertaken to meet unique goals and objectives, typically to bring about beneficial change or added value.

### Objectives of project management

The main objectives and principles behind good project management are as follows:

- Agree exactly what a project is meant to do and what it is meant to deliver.
- Agree the scope, timescales, cost and quality of a project.
- Maintain a schedule and project plan.
- Deliver the agreed outcomes of the project to the right scope, timescales, cost and quality.
- Provide communications, reports and progress updates throughout the lifecycle of the project.
- Manage risks, issues and dependencies.
- Make sure that the business gets the outcome that it wants from the project.
- Manage policies, processes, tools, frameworks, techniques, people and relationships to a successful project outcome.
- Minimize any impact on normal business operations.

## **Characteristics of Project Management**

### ***1. Multiple Objectives***

Project management is concerned with several objectives at once. The objectives typically fall under the headings of *time* , *cost* and *quality* . Project management decisions that affect any one of these variables will usually impact on the others.

Project management is concerned with ensuring that the chosen project success criteria are met within the changing constraints of the three way time–cost– quality continuum. Project management recognizes that there is more than one success criterion. There is no point in completing on time and on cost if the quality of the finished product is lower than specified by the client.

### ***2. Multi-Industry/Multidisciplinary Practitioners***

The concepts and practices of project management are not specific to any one industry. The time, cost and quality planning and control techniques used in project management are as applicable to agriculture as to process engineering.

### ***3. Specific Provisions***

Many organizations use fully trained project management professionals to run projects, rather than designers or others acting as managers. Project Management specialists provide combined time, cost and quality control, using national and international standards of professional practice.

## **STAGES OF PROJECT MANAGEMENT**

The process of directing and controlling a project from start to finish may be further divided into 5 basic phases:

### ***1. Project conception and initiation***

An idea for a project will be carefully examined to determine whether or not it benefits the organization. During this phase, a decision making team will identify if the project can realistically be completed.

### ***2. Project definition and planning***

A project plan, project charter and/or project scope may be put in writing, outlining the work to be performed. During this phase, a team should prioritize the project, calculate a budget and schedule, and determine what resources are needed.

### ***3. Project launch or execution***

Resources' tasks are distributed and teams are informed of responsibilities. This is a good time to bring up important project related information.

#### ***4. Project performance and control***

Project managers will compare project status and progress to the actual plan, as resources perform the scheduled work. During this phase, project managers may need to adjust schedules or do what is necessary to keep the project on track.

#### ***5. Project close***

After project tasks are completed and the client has approved the outcome, an evaluation is necessary to highlight project success and/or learn from project history.

### **PROJECT PLANNING PROCESS**

Basic Steps in the Project Planning Process:

- **Define the problem to be solved by the project:** Define the actual problem to be solved and help customers to discuss further the problem for clear concept of problem.
- **Develop a mission statement:** Develop a mission state, followed by statements of major objectives. This is important as it tends to set the project off on the right path and bring cohesion to the project team as they come to a mutual understanding of the path and goals of the project. Be sure the project really satisfies the customer's needs, rather than being what the team thinks the customer should get.
- **Develop a project strategy that will meet all project objectives:** The team must strategize as to how they will work the project with the customer and how they will satisfy the end goals of the project successfully and to the customer's satisfaction.
- **Write a scope statement to define project boundaries:** The scope - what will and will not be done on the project should be part of the project plan. Write a project scope statement that draws some obvious boundaries around what work is to be included on the engagement.
- **Develop a Work Breakdown Structure (WBS):** Creating the work breakdown structure detailing all the tasks and sub-tasks that will go into production of the final, implemented solution is a critical piece of the project planning process.
- **Prepare the project master schedule and budget:** Develop – or modify if you already have one from Sales or the account manager – the master project schedule. Include the tasks identified in the work breakdown structure and assign resources or at least resource positions if the actual resource names have not been identified yet. The project task information that you input at this point will help you to budget the project in more detail.

- **Decide on the project organization structure:** Document the proposed project organization structure as part of the project planning process. Identify whether it will be a matrix or hierarchical reporting structure.

## **ESTABLISH PROJECT ORGANIZATION STRUCTURE**

- ✓ Use the standard template to identify an effective and efficient project organization structure (checklist) that makes the delivery and acceptance responsibilities visible to all parties.
- ✓ Put in place a Steering Committee to maintain the involvement of customer management in the project.
- ✓ Establish an effective organization chart for the delivery team and define the roles and responsibilities of the team members.
- ✓ Make sure that the necessary work space and facilities are in place for project start-up