**Chapter one: Introduction to Project**

* 1. **Definition of a project**

The dictionary meaning of project:

The word project comes from the Latin word projectum meaning “to throw something forwards”

The word PROJECT thus actually originally meant “something that comes before anything else happens”.

The general definition is:

* According to PMI a project can be defined as a temporary endeavour undertaken to create a unique /non routine product or service.
* UNIDO (1986) defined “a project as a proposal for investment to create, expand and/or develop certain facilities in order to increase the production of goods and/ or services in a community during a certain period of time”.
* Therefore, a project is accomplished by performing a set of activities.
* Aim of the project is to attain its objectives and then terminates.

For example, the construction of a house consists of many activities like:

* *digging of foundation pits,*
* *construction of foundation,*
* *construction of walls,*
* *construction of roof,*
* *fixing of doors and windows,*
* *Fixing of sanitary fitting, wiring etc.*
* Thus, we can define a project as an organized programme of pre-determined group of activities that are non-routine in nature and that must be completed using the available resources within the given time limit.

 Basically, project is planned to achieve a particular aim. Some of the reasons to start a project can be:

* A customer request or market demand
* An organizational need
* A technological advance
* A legal requirement

 **Classification of projects**

The project can be grouped/classified according to their common characteristics

Categories of projects are many and depend on the following factors:

1. Objectives – (Economic/profit, non-profit/social services relief).
2. Sources of funds – (Private/Equity capital, Public/community, governmental, NGO).
3. Ownership – (Individuals and community)
4. Size – (Small scale, large scale).
5. Geographical coverage – (Local, National, International).
6. Time- / short range and long range /

**Details of the classification**

**1. Economic projects**

* These are projects that aim at generating income.

 E.g. Cash crop framing (coffee, cotton, tea etc.), business concerns like: shop keeping, an industry, a commercial farm or farming for profit.

**2. Social Projects**

* These are projects that aim at providing social services and do not earn a direct income.

E.g. projects on education, health, water and sanitation, road construction and maintenance etc.

**3. Private Projects**

* These are projects that belong to and are managed by individuals or groups of individuals. They aim at making a profit e.g. an individual’s retail shops; a farm belonging to a private.

**4. Public/Community Projects**

* These are projects that are community owned and benefit society (community) as a whole without exclusion.
* E.g. roads, public grazing land, forest, where everyone may be free to harvest herbs, firewood, fruits, public utilities like water, electricity, etc.

**5. Government Projects**

* These are projects initiated, planned and implemented by Government e.g. Poverty Alleviation Project (PAP)

**6. Non-Governmental Projects**

* These are projects, initiated, set up and implemented by Non-Governmental Organisations (NGOs) both indigenous (Local) and foreign (or international).

**7. Local or National Projects**

* Local projects are those projects which are initiated or funded by a given country or local authority – District, city municipality.
* National projects on the other hand are projects common to a Country/Nation as a whole.
* E.g. Polio vaccination, national road construction network.

**8. International Projects**

* These are projects that involve or are implemented by two or more countries. They may be referred as:
* Bilateral - Involving 2 countries:

 E.g. Ethio-Japan Road construction

 Finland’s development cooperation with Ethiopia such as: education for all children, clean water and toilet for all, rural development etc.

* Multi-lateral- involving more than 2 countries

E.g. COMESA (Common Market for East and Southern Africa) Projects

 IGAD (inter governmental authority on development)

**9. Small Scale (Micro) Projects**

* Also referred to as Micro-enterprises, these are projects which are small in size, use limited resources, employ few people, and have small capacity. E.g. a poultry unit, retail shop, a road side seller.

**10. Large scale (Macro) Project**

Also referred to as Macro Projects, they are projects which are:

* Large in size and scope,
* Require heavy initial investment,
* Employ many people of diverse skills,
* Have high capacity of production.

E.g. Hydroelectric power plant (HEP), sugar processing factory.

**11. Short Range Projects:**

They are completed within one year, and are focused towards achieving the tactical objectives. They are less rigorous (accurate); require less risk. They are not cross functional (denoting to a system whereby people from different areas of an organization work together as a team.)

These projects require limited Project Management tools, and have low level of sophistication. It is easy to obtain approval, funding and organizational support for short range projects.

**12. Long Range Projects:**

These projects involve higher risk and a proper feasibility analysis is essential before starting such projects. They are most often cross functional. Their major impact is over long period of time, on internal as well as external organization. Large numbers of resources are required to undertake long range projects and they require break through initiatives from the members.

* 1. **Main Features /characteristic of a Project**
	+ **Objectives:** A project has a set of objectives or a mission. Once the objectives are achieved the project is treated as completed.
	+ **Life cycle:** A project has a life cycle (it has beginning & an end).
	+ **Uniqueness:** Every project is unique and no two projects are similar. Unique does not mean that there is nothing else that is similar
	+ **Team Work:** Project is a team work and it normally consists of diverse areas. There will be personnel specialized in their respective areas and co-ordination among the diverse areas calls for team work.
	+ **Complexity:** A project is a complex set of activities relating to diverse areas.
	+ **Risk and uncertainty:** Risk and uncertainty go hand in hand with project.
	+ **Customer specific nature:** A project is always customer specific. It is the customer who decides upon the product to be produced or services to be offered and hence it is the responsibility of any organization to go for projects/services that are suited to customer needs.
	+ **Use of resources:** A project consumes resources. The resources required for completing a project are material, money and time.
	1. **National Development Planning and Project Analysis**

National planning is the mechanism by which governments set up their proprieties, objectives and demonstrates their intension. Project analysis and national development planning are closely related;

The best economic appraisal of projects cannot be made without referring to such plans and policies of the country. A sound plan requires a great deal of knowledge about existing and potential projects.

National plans spell out (explain) a range of economic and social objectives and strategies meant to enhance growth and development

What is growth? What is development?

* Investment and development expenditures foreseen (predicted) in the plans can be clarified and realized through projects
* Development plans and projects are closely interlinked

Effective planning requires wide range of information:

* About existing and potential, investments, and
* Their likely effects on growth and national objectives
* Project analysis provides the necessary information for national planning
* Projects selected for implementation become vehicles for using resources to create new income/wealth

Financial and administrative resources available to governments are always limited

* Scarce resources need to be allocated among many sectors and competing demands as efficiently as possible
* Project analysis enables optimal allocation of resources.
* Helps to prioritize activities - higher priority projects with greater payoff undertaken first
* During 1960s--70s period the project became the means through which governments of developing countries translated their development plans and policies into programs of action
* Projects were (and still are) seen to act as crucial coordinating mechanism for implementation of policy and the integration of resources and institutions

Policy, institutional, and physical environments influence the progress of development activities Developing countries–characterized by poor policy environment

Have to undertake extensive & consistent policy reforms to attain good and stable macro -economic environment

Structural Adjustment Programs (SAP) –is mentionable as an extensive reform initiative

SAP–required governments to open the path for the private sector

**Rationale for SAP:**

* Governments do not have sufficient capacities or the comparative advantages to do everything
* Governments should help the private sector to undertake most activities
* Governments should create an enabling environment for the private sector to flourish or making appropriate policy reforms
* Government should provide public goods

**Fundamental roles of government**

* Establish a firm foundation of law
* Maintaining a non distortion policy environment including macro-economic stability
* Investing in basic social service & infrastructures
* Protecting the vulnerable in the society
	1. **Role of project manager (PM)**

The project manager (PM) is the leader of a team performing a project. To ensure a successful project, the project manager and his team must:

* Identify the stakeholders,
* Determine their needs, and
* Manage and influence those needs

A key to stakeholder satisfaction is the diligent and accurate analysis of the stakeholders themselves as well as their stated needs and unstated expectations. A project manager should not just be handed a statement of work from upper management and then try to complete it; rather the PM should be deeply involved with the development of that statement of work. The roles of a PM are many, some of which include the following:

* Identifying the requirements and risks
* Making plans and organizing the effort
* Qualifying and possibly selecting project team, vendors, and other participants
* Communication among team, management, stakeholders
* Assessing the probability of occurrence of problems
* Developing solutions to problems (both in advance and on the spot)
* Ensuring that progress occurs according to the plan
* Deliverable management

***Key stakeholders on every project includ*e:**

* **Project manager**-the individual responsible for managing the project
* **Customer** – the individual or organization that will use the project’s product.
* **Performing organization** – the enterprise whose employees are most directly involved in doing of the project work
* **Project team members**- the group that is performing the work of the project.
* **Sponsor** – the individual or group within or external to the performing organization that provide resources in cash or in kind to the project.



 Figure.1.1. ***Relevant stakeholders***

* 1. **Project Environment**

All projects are planned and implemented in a social, economic, environmental, political and international context.

* ***Cultural and Social Environment*** is that how a project affects the people and how they affect the project. This requires understanding of economic, demographic, ethical, ethnic, religious and cultural sensitivity issues.
* ***International and Political Environment*** refers to the knowledge of international, national, regional or local laws and customs, time zone differences, teleconferencing facilities, level of use of technology, national holidays, travel means and logistic requirements.
* ***Physical Environment*** is the knowledge about local ecology and physical geography that could affect the project, or be affected by the project.



* 1. **Project Organization Structure**

A project organization is a structure that facilitates the coordination and implementation of project activities. Its main reason is to create an environment that fosters interactions among the team members with a minimum amount of disruptions, overlaps and conflict. One of the important decisions of project management is the form of organizational structure that will be used for the project.

A project structure can take on various forms with each form having its own advantages and disadvantages.

One of the main objectives of the structure is to reduce uncertainty and confusion that typically occurs at the project initiation phase. The structure defines the relationships among members of the project management and the relationships with the external environment. The structure defines the authority by means of a graphical illustration called an organization chart.

A properly designed project organization chart is essential to project success. An organization chart shows where each person is placed in the project structure. An organization chart is drawn in pyramid form where individuals located closer to the top of the pyramid have more authority and responsibility than members located toward the bottom. It is the relative locations of the individuals on the organization chart that specifies the working relationships, and the lines connecting the boxes designate formal supervision and lines of communication between the individuals.

* + 1. **forms of organizational structure**
1. Functional organization
2. Project organization
3. Matrix organization
4. **Functional organization**

A functional organization is the most common type of the three.

It works best in small organizations in which the different sections are geographically close together and which provide only a small number of goods and/or services.

In a functional structure, the organization is broken into different sections based upon specialty. For example, there may be one area for sales, one for customer service and one for the supervisors who deal with escalated problems.

The **project manager's** role is to ensure smooth execution (implementation) of processes and projects; however, the **functional manager** has the most power and makes the final decisions.

**Advantages of Functional Organization**

An advantage to the functional structure is the role of the functional manager, which means there is only one boss. This reduces or prevents conflicts of interest and makes it easier to manage specialists:

* Clear line of authority
* Career development
* Comfortable and easy
* Technical expertise
* Flexible resource assignment

**Disadvantages of functional Organization**

A disadvantage of this type of structure is that the project manager has limited authority and a limited career path.

* No accountability over complete project
* No project emphasis
* Low coordination across function
* No customer focal point
* Low delegation of authority
* Work delays due to red tape
* Heavy politics
* Lack of a big picture view
1. **Project organization**
* Projectized organization is a project focused organizational structure where project manager has the final authority over the project to make project decisions, priorities, acquire and assign resources.
* A **projectized** **organization** refers specifically to an organizational structure that has been set up in a manner in which the project manager leads the group and in which the project manager has the ultimate **authority** to make any and all decisions involving the organization.
* In a projectized structure, all the work is looked at as a project. The project manager has complete control, unlike in the functional structure, and all team members report directly to the project manager.
* Sometimes these team members are permanent, and sometimes they are hired as temporary workers to help with the project until its completion. If the organization takes on a large project, it will have all the necessary resources available to sustain the project and will act as a small, self-contained company.
* The project manager works with complete autonomy (central authority, power) over the project, team is on the project full time and report to the project manager.
* As a project manager, you have the responsibility to take authority, rather than waiting for someone to give you the authority.

**Advantages to the projectized structure include**

The project manager's opportunity for career progression. In addition, because good communication exists within the project work, the team members tend to be more committed to, and excel in, their responsibilities.

**The disadvantage of a projectized structure is that**, because the team breaks up and disperses after the completion of the project, there are no long-term goals or sense of job security for the rest of the workers. Another disadvantage is that the organization has to essentially clone the same resources for each project (project manager, work area, administrator).

**More Advantages of Project organization**

* The main advantage of having a projectized organization is that decisions are made much faster due to shorter communication paths.
* Additionally, project managers have real authority and the team is more loyal, more dedicated, and is not disturbed by the problem of "multiple managers"
1. **Matrix organization**

It is used mainly in the management of large projects or product development processes, drawing employees from different functional disciplines for assignment to a team without removing them from their respective positions.

**Matrix** **management** is a type of organizational management in which people with similar skills are pooled for work assignments.

The matrix structure **combines** both the functional and projectized structures. Each team member has two bosses; they report both to the functional manager and the project manager.

 - If the matrix is strong, the power resides more with the project manager.

 - If the matrix is weak, the power resides more with the functional manager.

 - The key is to find a balance in which the power is shared equally.

Because of its **complexity**, this type of structure can lead to problems if it is not used carefully and properly. Good communication is essential for success.

Advantages of Matrix Structure

Advantage to the matrix structure lies in the efficient use of resources because of ease of access. This structure also demonstrates efficient communication both vertically and horizontally.

Because of this, once the projects have ended, the team members are likely to receive a job elsewhere in the organization.

**The advantages of a matrix include:**

 - Individuals can be chosen according to the needs of the project.

 - The use of a project team which is dynamic and able to view problems in different way as specialists have been brought together in a new environment.

 - Project managers are directly responsible for completing the project within specific deadline and budget.

 - Required resources can be managed moving into and out of the project team

 - Project cost is lessened because resources are used as needed

 - There are appropriate focuses on the project objectives through a single PM

 - The overall enterprise utilization of resources is better handled in the mode

**Disadvantages of Matrix**

* A disadvantage of the matrix structure is complexity, which can be difficult to manage.
* For example, if the functional manager and the project manager do not communicate well, the team members can be caught in the middle, causing confusion.

The **disadvantages** include:

 - A conflict of loyalty between line managers and project managers over the allocation of resources.

 - Projects can be difficult to monitor if teams have a lot of independence.

 - Costs can be increased if more managers (i.e. project managers) are created through the use of project teams.

**Matrix Problems**

* Unclear lines of authority, Two bosses, dual reporting

“No Man Can Serve Two Masters!”Military principle of UNITY OF COMMAND

* chaos, confusion more common
* often project manager tells you what to do, but your raise comes from functional manager

Success highly depends on individuals

**Matrix Capabilities**

* Functional part provides repository for technical expertise and physical resources
* When in functional home, workers keep up professionally (train)
* Functional homes a place to go when project over (no new job search)
	1. **Management-By Project**

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements.

Project management is accomplished through the processes such as: initiating, planning, executing, controlling and closing.

It is important to note that many of the processes within project managements are interactive in nature. This is in part due to the existence of and the necessity for progressive elaboration in a project throughout the project life cycle: i.e., the more you know about your project the better you are able to manage it. The term project management is sometimes used to describe an organizational to the management of ongoing operations this approach more properly called **management by projects.**

 