

CONSTRUCTION MANAGEMENT



Submitted by:

Arqam Habib

ID: 7702

Section : A

Submitted to:

Dr. Engr Muhammad Zeeshan Ahad

IQRA NATIONAL UNIVERSITY PESHAWAR

Problem - No 1

Project life cycles

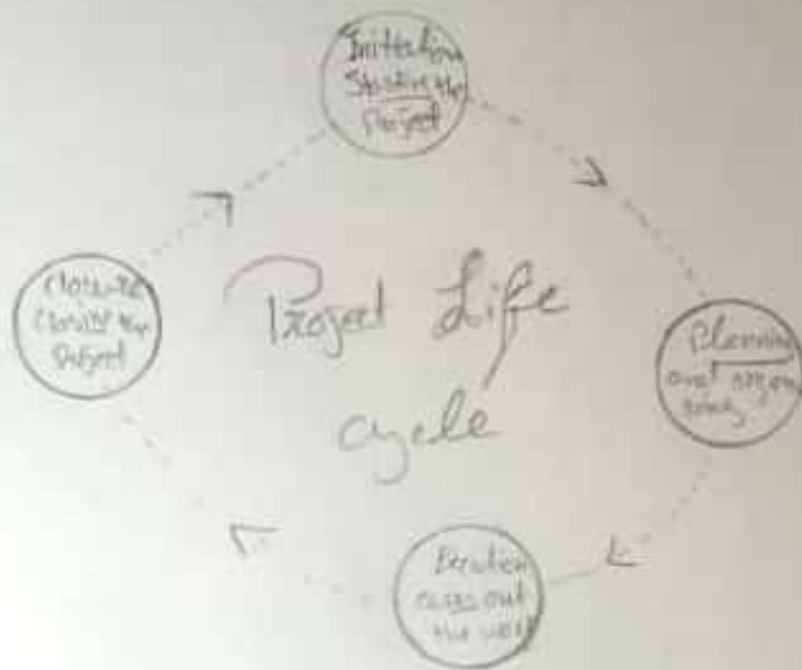
A Project life cycle is the sequence of phases that a Project goes through from its initiation to its closure.

The number and sequence of the cycle are determined by the management and various other factors like need of the organization involved in the project, the nature of the Project, and its area of application. The phases have a definite start, end, and control point and are constrained by time.

The Project life cycle can be defined and modified as per the need and aspects of the organization.

Even though every project has a definite start and end, the particular objectives, deliverables, and activities vary widely. The lifecycle provides the basic foundation of the actions that has to be performed in the project, irrespective of the specific work involved.

Project life cycle's can range from Predictive or Plan-driven approaches to adaptive or change-driven approaches. In a Predictive life cycle, the specifics are defined at the start of the project, and any alterations to scope are carefully addressed. In an adaptive life cycle, the product is developed over multiple iterations, and detail scope is defined for iteration only as the iteration begins.



Different Phases of Project life Cycle are :-

- Initiation (Starting the Project)
- Planning organizing & Preparing
- EXECUTING (carry out the work)
- CLOSURE (closing the Project).

Phase # 01

The Conceptualization Phase :-

This can also be referred to as the 'Initiation Phase' and is the starting point of any project or idea.

For the conceptualization phase to begin, a strategic need for the project or service must be recognized by upper management.

The Conceptualization Phase typically involves :-

- Creation of the Statement of Work (SOW)
- Presenting the Business Case.
- Creation of a Business Contract.

Phase # 2 :- The Planning Phase :-

The second phase of the project management life cycle is referred to as the planning phase.

once management has given the OK to launch a project, a more formal set of plans - outlining initial goals - is established.

The planning phase typically involves:-

- Determining resource availability
- Creating a project budget
- Beginning to allocate tasks to certain resources.

Phase # 3

The Executing Phase :-

The third phase is labeled Execution. This is when the actual work of the project is performed.

Required materials, tools and resources are transformed to reach the project goals. During this phase, performance is continually measured to ensure the project is successful.

The Execution phase typically involves.

- Strategic planning
- Implementation planning.

Phase #4

The Termination phase:-

The fourth and final phase is called Termination Phase, also referred to as Project closure.

This phase begins once the Project has been completed.

The Termination Phase typically involves:

- The disbandment of the project team.
- Personnel and tools are reassigned to new duties.
- Resources released back to parent organization.
- Project transferred to intended users.

Problem No 2

Major Types of Construction Projects

There are four major types of construction each with its own requirement and characteristics.

The four major types of construction includes

- Residential Building
- Institutional and commercial Building
- Specialized industrial construction
- Infrastructure and heavy construction

1. Residential Building :-

The first type of construction is residential housing construction which involves building, repairing and

remodeling of structures for the purpose of housing people, supplies, or equipment. It includes apartments, town homes, condos, nursing homes, dormitories, etc.

Also garages and outbuilding like utility sheds are considered as residential constructions. As mentioned above,

residential construction also involves repair and installation of utilities like water and electricity around the structure.

The design of residential housing projects is usually done by engineer and architects and the construction itself executed by construction companies who hire subcontractors companies who hire subcontractors to do the mechanical, structural and electrical work of the project.

But for single-family houses, builders usually do all of the phases, both the design and the construction.

2. Institutional and commercial Building :-

This type of construction encompasses projects schools, sports arenas, shopping centers, hospitals, stadiums, retail stores, and skyscrapers. Like the residential housing construction, institutional and commercial building involves both putting up of new structures and repair and maintenance of existing structures. Typically, a project like a retail store is usually commissioned by a company or private owner.

Other projects such as stadiums, schools and medical facilities are often paid for and managed by both local and national government.

3. Specialized Industrial construction^{n.}

The third type of construction is Specialized Industrial construction which entails building structures that require a high level of specialization as well as technical skills in planning construction, and design. Typically, this type of construction is carried out by for-profit or industrial corporations.

For instance, a chemical industry can build oil refineries, and power generation can build structures

nuclear power plants and hydroelectric hydroelectric power plants, which are examples of specialized industrial constructions.

4. Infrastructure and heavy constructions :-

The last type of construction project is Infrastructure and heavy construction which encompasses building and upgrading of railways, communications and roads of railways to the surroundings of a city or existing building construction usually done due to the public interest and is often executed by government agencies and large private operations.

Some other projects that fall under this type of construction include tunnels, bridge, highways, transit system, drainage system and PIPe lines.