



INTRODUCTION TO PROJECT MANAGEMENT

Narrative to
Introduction to
Projects & Project
Management

Knowledge is Energy!

*INTRODUCTION TO
PROJECTS & PROJECT
MANAGEMENT*

- *Introduction*
- *What is a Project?*
- *Project Management*
- *Traditional Project Management*
- *Adaptive Project Framework*
- *The Project Life Cycle and the Organization*
- *Characteristics of Project Life Cycle*
- *Measure of Project Management*

INTRODUCTION TO PROJECTS & PROJECT MANAGEMENT

1 Introduction

Projects have traditionally been managed through a classic functional hierarchical type of organization that was not differentiated from the operations management. Project Management however offers a structured approach to managing projects that provides the focus and priority for the project and not competing with day-to-day operations. At many companies, with the increase in the number of new departments or branches and hence more projects, there has been a move towards *management-by-projects and project teams*.

Several companies have adapted their operations to a project-based environment using mainly the Traditional Project Management Approach but is cognisant of and has sought to apply the Adaptive Project Framework when applicable. Therefore, it is important to understand the nature of projects and project management to effectively implement the projects consistent with the specific needs, strategic goals and culture of the organization.

2 What is a Project?

“A project is a temporary endeavour undertaken to create a unique product, service, or result which indicates a definite beginning and end. A project’s end is reached when its “objectives have been achieved or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists”. Projects are

undertaken at all organizational levels and can involve a single person, a single organizational unit, or multiple organizational units.

Due to the uniqueness of each project, particularly in terms of the products, services, or the results that each project creates, project tasks can be new to a project team necessitating more dedication to planning routine work. They “are often utilized as a means of achieving an organization’s strategic plan and are typically authorized as a result of market demand; strategic opportunity/business need; customer request; technological advance; and/or legal requirements”

Projects vary in terms of type, complexity and size which can be in the form of constructing a building or infrastructure; developing a new product or service; effecting change in the structure, staffing or style of an organization; or developing or acquiring a new or modified information system. Therefore, the role(s) in which organizations play on any given project is also varied. I am sure you can think of many examples in the organization with which you are associated.

3 Project Management

According to the PMBOK Guide 5th Ed (2013), “Project Management is the application of knowledge, skills, tools and techniques to project activities to meet project requirements”. It is accomplished through the application and integration of forty-seven (47) logically grouped Project Management Processes comprising the five (5) Process Groups, viz.: (i) Initiating; (ii) Planning; (iii) Executing; (iv) Monitoring and Controlling; and (v) Closing.

“Managing a project typically includes identifying requirements; addressing the various needs, concerns and expectations of the stakeholders as the project is planned and carried out; and balancing the competing project constraints including scope, quality, schedule, budget, resources and risk. The relationship among these factors is such that if any one factor changes, at least the other factor is likely to be affected” (PMBOK, 2013).

4 Traditional Project Management

“Traditional project management (TPM) is a method and a set of techniques based on the accepted principles of management used for Planning, Estimating, and Controlling Work Activities to reach a desired end result on time, within budget and according to specification” (Wysocki and McGary 2003, 18 – 19).

TPM is based on routine and repetitive activities and is not designed for change, even though change is expected as projects are dynamic. Change in the TPM world is something the project manager would rather not deal with.

5 Adaptive Project Framework

“Adaptive Project Framework (APF) is an iterative and adaptive five-phase approach designed to deliver maximum business value to clients within the limits of their time and cost constraints” (Wysocki and McGary 2003, 68). The fundamental concept of APF is that scope is variable, and it maximizes business value by making the client the essential figure in deciding what establishes the business value. Change is embraced and continuously adapts to the unique character of the specific business situation.

6 THE PROJECT LIFE CYCLE & ORGANIZATION

“A project life cycle is a collection of generally sequential and sometimes overlapping project phases whose name and number are determined by the management and control needs of the organization or organizations involved in the project, the nature of the project itself and its area of application. The project life cycle can be determined by the unique aspects of the organization, industry or technology employed. While every project has a definite start and a definite end, the specific deliverables and activities that take place between will vary widely with the project. The life cycle provides the basic framework for managing the project, regardless of the specific work involved” (PMBOK, 2013).

6.1 Characteristics of the Project Life Cycle

Despite the nature, size, and complexity of a project all projects can be mapped to the following life cycle structure (PMBOK, 2013):

- Initiating the project:

The initiation phase is where a new project is defined for obtaining authorization to start and where the Project Charter is developed. The initial project scope is defined, and the initial financial resources are committed; internal and external stakeholders who will interact and influence the overall outcome of the project are also identified.

- Planning (organizing and preparing):

The planning phase involves creating a set of plans and project documents to guide the execution and closure phases of the project; it is where the scope of the project is established, objectives are refined, and the course of action required to attain the objectives is defined. This planning phase is crucial. The plans that are generated culminate into the Project Management Plan and helps in the management of time, cost, quality, change, risk, and procurement issues. They also assist in the management of human resources and external suppliers to ensure that the project is delivered on time and within budget.

It is at this phase where the organization will begin its internal planning for the project execution. They will review the scope and objectives of the project; determine the course of action required to attain the objectives that the project was undertaken to achieve and develop its internal project documents and project management plan. As the project progresses “updates to these documents provide greater precision with respect to schedule, costs, and resource requirements to meet the defined project scope” (PMBOK, 2013). This project management plan becomes the primary source of information for how the project will be executed, monitored, controlled, and closed. It is during this phase also, that the needs of the stakeholders (new knowledge area – Stakeholder Management identified in the Project Initiation phase in PMBOK Ver. 5) to meet project objectives are further defined and documented. A detailed description of the project and product is

developed and a work breakdown structure of all the deliverables in the project is created, subdividing the project deliverables and project work into smaller more manageable components- specifically the scope baseline that is the specific actions to be performed to produce project deliverables and the appropriate work periods needed to complete individual activities are documented in the project schedules. The relationships among project activities are defined and established (PMBOK, 2013).

- Execution (carrying out the project work):

This phase involves building the physical project deliverables which is presented to the Client for sign-off. It requires the effective coordination of people and resources as well as the effective integration and performance of project activities in accordance with the project management plan.

It also includes auditing the quality requirements and results from quality control measurements to ensure appropriate quality standards and operational definitions are used; improving the competencies, team interaction and the overall team to enhance project performance; tracking team member performance, providing feedback and resolving issues and managing changes to optimize project performance; making relevant information available to project stakeholders as planned; and communicating and working with stakeholders to meet their needs and addressing issues as they occur. This is generally the longest phase in the project life cycle and typically consumes the most energy and the most resources for the delivered products. It is also the phase in which the performance of the organization is measured as it strives to meet project deliverables on time and complete within budget.

As performance is crucial during this phase it is important to monitor and control the project currently. Therefore, mechanisms are put in place to track, review and regulate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes. The monitoring and control mechanisms that are put in place help the organization to measure its performance.

- Closing the project:

Closing the project involves finalizing all activities across all enterprises involved in the project to formally close the project or phase; officially hand over the deliverables to the Client and inform stakeholders of the closure of the project.

The project closure phase also provides an opportunity to review the overall performance of the project and identify the things that went well or didn't go well; provide lessons learned for future projects.

All projects, irrespective of the final deliverables will operate within this project lifecycle framework in Figure 1 below. An understanding as well as working within these phases of the Project Lifecycle provides structure in which to organize the project.

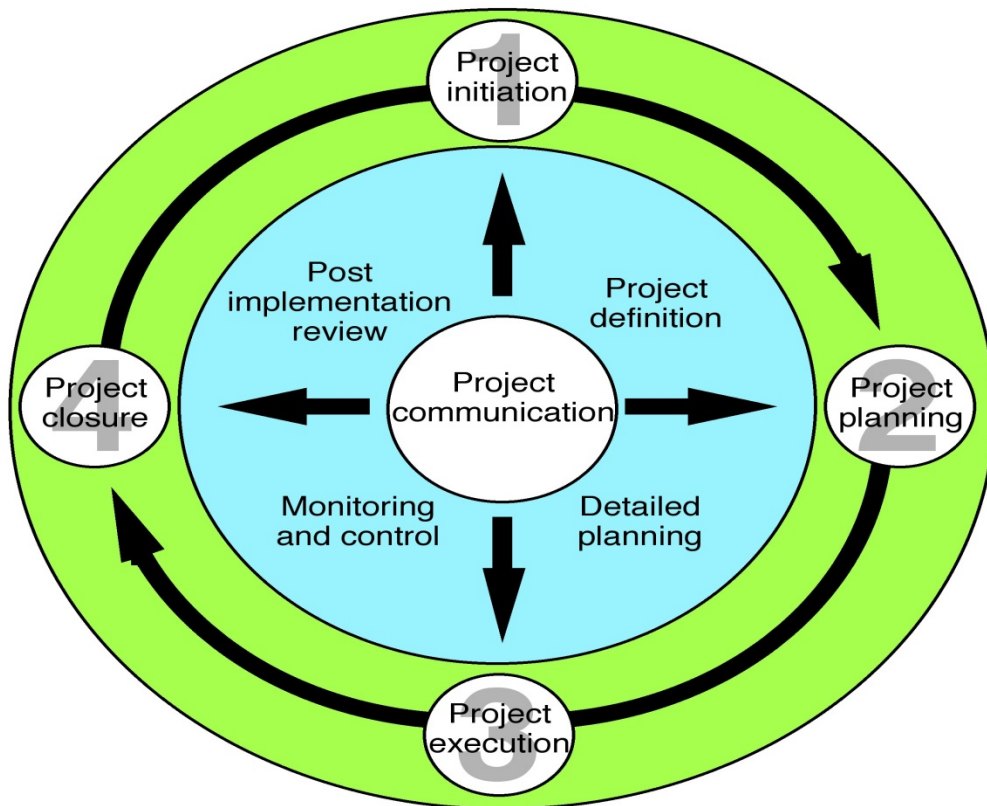


Figure 1: The four phases of the project life cycle.

Adapted from J. Westland, *The Project Management Lifecycle*, Kogan Page Limited (2006)

7 MEASURE OF PROJECT MANAGEMENT

“The primary challenge of Project Management is to achieve all the project goals and objectives while adhering to project constraints.” (Harrison and Lock, 2004). Project measures in project management take into consideration the “outputs of a project and input factors that impact outputs” (Cao and Hoffman 2010, 367 - 390). According to Belassi and Tukel (1996, 141- 151) in Cao and Hoffman (2010, 367 – 390) project success factors are multi-dimensional and include factors related to the project; project managers and team members; and factors related to the external environment.

However, “the most cited project output variables are comprised of cost, schedule, technical performance outputs, quality and customer satisfaction” (Cao and Hoffman 2010, 367-390). In practice most organizations use cost and schedule performance measures to evaluate project performance (Cao and Hoffman 2010, 367-370).

Summary

The introduction to projects and project management gives a general overview of the management of projects as described in the PMBOK5. The focus is on the traditional project management methodology. The use of these project management principles is very useful in planning and executing projects as it gives a structured approach to the problem and development of a solution.

Kenson School of Production Technology

Knowledge is Energy!

