

Theoretical Review in Project Management Basic Steps

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Abstract—This paper aimed to present a theoretical review in project management basic steps, we presented the project management definition as all management functions used to manage project in its life cycle, the paper concluded that the main project management steps are the following functions: scope management, scheduling management, cost management, quality management, resource management, communication management, risk management, purchase management, personnel management.

Key words—Basic, Management, Project, Steps.

I. INTRODUCTION

Project management aims to achieve leadership in the business sector, through continuous keenness to implement projects to ensure the achievement of the goals of the organization. However, these projects can only succeed through managing them efficiently, and here the importance of the project manager as well as the project completion team appears. its failure, and projects can only succeed with the success of its management, and it should be noted that the project manager is the most important element necessary for the success of the project.

This paper aimed to answer to the following question:

What are project management basic steps?

First we will present the project management definition as all management functions used to manage project in its life cycle, and its importance, than we will present the main steps used to manage projects.

II. DEFINITION AND IMPORTANCE OF PROJECT MANAGEMENT

A. Definition of Project

The project is considered a temporary endeavor to produce a unique good or service [1], and the project is surrounded by many and varied concepts that cannot be limited to a few lines, but there are basic concepts that must be known that help in understanding the nature of the project, and there are many definitions of the project and the most important of them can be mentioned as follows [2]:

- The project is a collective effort to achieve a specific goal through a set of tasks,
- The project is a problem to be held in the solution, and the problem is the existence of a gap between the present and the future, with an obstacle preventing the ease of movement in order to bridge the gap,

- The project is a term that refers to a successive set of activities that have distinct relationships that bind them together and are united by starting points and ending points that indicate the completion points of achieving the activities in order to reach a goal or set of goals,

And it can be said that the project is the plan developed to turn the idea into reality by spending a group of resources to create a source through which the flow of goods and services is obtained.[3]

B. Definition of Project Management

Project management is a plan that combines a number of related activities that are implemented in an organized manner, with a clearly defined starting and ending point.

The objective of the plan is to achieve specific results in order to satisfy the strategic needs of the Authority [4].

Project management is defined as a set of principles, methods and methods used by individuals with a view to Planning and monitoring the implementation of the project effectively. Project management includes a set of rules and foundations for planning the project, setting an appropriate schedule for its implementation and completion, obtaining the necessary resources for it, making the appropriate decision, and carrying out the control and re-planning process, all of this in a fully effective way.

The principles, methods, and methods for completing the project according to the specified schedule, within the limits of the drawn budget, and in full conformity with the specifications and conditions set for the project. productivity, quality and cost-effectiveness. [5]

Project management is also defined as the administrative function that includes responsibility for setting objectives, organizing, planning, scheduling, estimated budgets, direction and control to achieve the technical, time and financial standards of the project. [6]

Project management activities can be divided into the following functions: the planning function, decision-making, motivating and directing employees, and evaluating the performance of employees. to make the change. [7]

C. Importance of Project Management

The need for project management is increasing in our contemporary world, and speed, quality and cost control are becoming increasingly important in the governmental, private and non-profit sectors, and the reason for this is that project management allows managers to plan and implement strategic initiatives that generate new sources of income, and it is important to remember that The use of project management tools helps to reduce the time required to implement the project,

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reduce expenses, as it guarantees the quality of products and works to increase profitability. Project management also helps to increase the volume of sales of goods and services by providing them with a competitive advantage that distinguishes them from their counterparts. Today, project management is considered one of the most important methods and methods that are used to ensure the success of the organization, especially since the global market and electronic commerce are pushing organizations towards making change. [8]

The role of project management is based on the integration of available resources and functions for the purpose of achieving the objectives of the organization. [9]

III. PROJECT MANAGEMENT BASIC STEPS

The basic steps of project management include:

A. Scope Management

Project scope management includes the processes necessary to ensure that the project includes all required work, and only the work required, to successfully complete the project. Project scope management is primarily concerned with determining and controlling what is included and what is not included in the project. Project scope management processes include the following [10]:

- *Scope management plan development:*

The process of developing a scope management plan that documents how project and product scope is defined, verified, and controlled.

- *Requirements Gathering:*

The process of identifying, documenting and managing stakeholder needs and requirements to achieve project objectives.

- *Scoping:*

The process of developing a detailed project and product description.

- *Preparation of the Work Breakdown Structure:*

The process of breaking down the project's key deliverables and project work into smaller, more manageable components.

- *Scope Check:*

The process of formalizing the acceptance of completed project deliverables.

- *Scope Tuning:*

The process of monitoring the status of the project and product scopes and managing changes to the scope baseline.

B. Scheduling Management

Managing the project schedule includes the processes necessary to manage the completion of the project in a timely manner, and the processes for managing the project schedule include the following [11]:

- *Develop schedule management plan:* The process that defines the policies, procedures, and documents needed to plan, develop, manage, implement, and control the project schedule.

- *Defining Activities:* It is the process of identifying and documenting specific procedures that need to be completed in order to produce project deliverables.

- *Sequence of activities:* It is the process of identifying and documenting the relationships between project activities.

- *Estimating Activity Duration:* It is the process of estimating the number of work periods required to complete individual activities using estimated resources.

- *Schedule development:* The process of analyzing the sequence of activities, their time periods, resource requirements, and schedule constraints to create, monitor, and control the project implementation schedule model.

- *Schedule Control:* The process of monitoring project status to update the project schedule and manage changes to the schedule baseline.

C. Cost Management

Project cost management includes the processes necessary to plan, estimate, budget, finance, manage and control costs so that the project can be completed within the approved budget. The project cost management processes are as follows [12]:

- *Developing a cost management plan:* It is the process of determining how to estimate project costs, budgeting, managing, monitoring and controlling them.

- *Cost Estimating:* The process of developing an estimate of the financial resources required to complete the project work.

- *Budgeting:* The process of calculating the estimated total costs for each individual activity or work packages to establish an approved cost reference line.

- *Cost Control:* The process of monitoring project status in order to update project costs and manage changes to the cost baseline.

D. Quality Management

Project quality management includes the processes necessary to integrate an organization's quality policy with regard to planning, managing, and controlling project and product quality requirements in order to meet the objectives of project stakeholders.

Project quality management also supports continuous process improvement activities as undertaken on behalf of the implementing organization. The project quality management processes are as follows [13]:

- *Developing a quality management plan:* is the process of defining the quality requirements and/or standards for the project and its deliverables, and documenting how the project will demonstrate compliance with the quality requirements and/or standards.

- *Quality management:* it is the process of translating the quality management plan into actionable quality activities that integrate the organization's quality policies into the project.

- *Quality Control:* The process of monitoring and recording the results of implementing quality management activities to evaluate performance and ensure that project deliverables are complete, correct, and meet customer expectations.

E. Resource Management

Project resource management includes the processes of identifying, acquiring, and managing the resources needed for the successful completion of a project.

These processes help ensure that the right resources are available to the project manager and the project team at the right time and place. The project resource management processes include the following [14]:

- *Developing a resource management plan*: It is the process of determining how to estimate, obtain, manage and use material resources and the resources of the work team.
- *Estimating the resources of the activities*: It is the process of estimating the resources of the work team, the types and quantities of materials, equipment, and supplies needed to carry out the project work.
- *Resource Acquisition*: The process of obtaining team members, facilities, equipment, materials, supplies, and other resources needed to complete the project work.
- *Team development*: Team development is the process of improving competencies and interaction between team members and the general environment in which team members work to improve project performance.
- *Team Management*: Team management is the process of tracking team members' performance, providing feedback, resolving issues, and managing team changes in order to improve project performance.
- *Resource control*: It is the process of ensuring that the physical resources assigned to a project are available as planned, in addition to monitoring planned versus actual utilization of resources, and taking corrective action when needed.

F. Communication Management

Project communication management includes the processes necessary to ensure that the information needs of the project and its stakeholders are met through the development of products and the implementation of activities designed to achieve the effective exchange of information. Project communication management consists of two parts. The first part is developing a strategy to ensure effective communication for stakeholders. The second part is the implementation of the activities necessary to implement the communication strategy. The project's communication management processes include the following [15]:

- *Developing a Communication Management Plan*: The process of developing an appropriate method and plan for project communication activities based on the information needs of each individual or group of project stakeholders, the organization's available assets, and the project's needs.
- *Communication Management*: The process of ensuring that project information is collected, configured, distributed, stored, retrieved, managed, monitored, and ultimately disposed of in an appropriate manner.
- *Communication Follow-up*: The process of ensuring that the information needs of the project and those involved in the project are met.

G. Risk Management:

Risk management is an integrated and comprehensive system to create the appropriate environment and the necessary tools to anticipate and study potential risks, identify and measure them, and quantify their potential effects.[16]

It can be said that the risk is a group of simultaneous or successive events whose occurrence is uncertain and whose occurrence affects the goals of the organization (individual, family, company and society).

Some risks may have positive effects, which we seek to reach and call them "luck" or "Opportunity", and the risks may have negative effects, which we seek to avoid and are called "threats".[17]

Project risk management includes the processes of conducting risk management planning, identifying, analyzing, planning the response to it, applying the response, and following up the risks in the project. In order to improve the chances of success of the project.

Project risk management processes include the following [18]:

- *Developing a risk management plan*: It is the process of determining the way in which risk management activities will be implemented in the project.
- *Identification of risks*: It is the process of identifying the individual risks of the project in addition to the sources of the overall risk of the project and documenting their characteristics.
- *Performing a qualitative analysis of risks*: It is the process of subjecting individual project risks, according to their priorities, to further analysis or procedures by evaluating the likelihood of their occurrence and impact in addition to other characteristics.
- *Performing a quantitative analysis of risks*: It is a process of numerical analysis of the joint impact of individual risks identified for the project and other sources of uncertainty on the objectives of the project as a whole.
- *Developing a risk response plan*: It is the process of developing options, selecting strategies, and approving procedures to address the overall risk exposure of the project, in addition to addressing the individual risks of the project.
- *Application of risk responses*: It is the process of implementing agreed risk response plans.
- *Risk Follow-up*: It is the process of following up on the implementation of agreed risk response plans, tracking identified risks, identifying and analyzing new risks, and evaluating the effectiveness of the risk-handling process throughout the entire project.

H. Purchase Management

Project procurement management includes the processes necessary to purchase or bring in products, services, or necessary results from outside the work team.

Project procurement management includes the management and control processes required to develop and manage agreements such as contracts, purchase orders, memorandums of agreements, or internal service level agreements.

Authorized workers may be Procurement of goods or services required for the project by members of the project team, management, or part of the organization's procurement department, if applicable.

Project procurement management processes include[19] :

- *Developing a procurement management plan*: the process of documenting project procurement decisions, defining the method, and identifying potential vendors.
- *Purchasing*: The process of obtaining vendor offers, selecting a vendor, and concluding a contract.
- *Procurement Control*: It is the process of managing procurement relationships, following up on contract

implementation, making changes and corrections as needed, and closing contracts.

I. Personnel management:

The management of individuals or stakeholders in the project includes the necessary processes to identify individuals, groups or institutions that may influence or be affected by the project and analyze their expectations and their impact on the project, in addition to preparing an appropriate strategy for managing and attracting project stakeholders to participate in decision-making and follow-up implementation. The processes support the work of the project team to analyze expectations Stakeholders, assessing the degree of their influence or being affected by the project, and developing strategies to actively involve stakeholders in supporting project decisions, planning and implementing project work, and project stakeholder management processes include the following [20] :

–*Stakeholder identification*: the process of regularly identifying project stakeholders, analyzing and documenting relevant information regarding their interests, participation, connections, effectiveness and potential impact on project success.

–*Developing a stakeholder participation plan*: It is the process of developing ways to involve stakeholders in the project, based on their needs, expectations, interests, and potential impact on the project.

–*Stakeholder participation management*: It is the process of communicating with and cooperating with project stakeholders to meet their needs and expectations, monitor problems, and enhance the participation of project stakeholders.

–*Follow-up on stakeholder participation*: The process of following up on project stakeholder relationships and allocating strategies to involve stakeholders through modifying participation strategies and plans.

IV. CONCLUSION

Through this paper, we tried to get acquainted with the theoretical aspects of project management from an administrative perspective, by addressing the various administrative functions applied to the project from the beginning of planning for its completion through the stage of implementation and continuous follow-up until its completion and evaluation. It is worth noting that we point out the importance of the leader or manager of project in the success of the project and the achievement of its objectives, so that the leader plays a prominent role in motivating the work team and pushing it towards work successfully.

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