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An Overview of Project Planning

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Abstract

One of the most important administrative developments in the developed as well as in developed countries has been the commencement and development of a large numbers of new projects in every field like agriculture, irrigation, industry, community, development, health and social welfare etc. The principle aims and objectives of all these programs have been to bring about overall changes in the exciting socio-economic structure in the country providing thereby dignified way of life to a citizen as a unit and socio economic upliftment of the world.

So most of the administrators are directly concerned with the project administration than former activities. The potential of administrative system to formulate and implement, relevant and in viable project effectively constitutes a crucial element in the process of development. Development requires planning and planning includes a lot of projects.

Introduction

Project planning is part of project management, which relates to the use of schedules such as Gantt charts to plan and consequently report progress within the project environment.

Initially, the project scope is defined and the appropriate methods for completing the project are resolute. Following this step, the durations for the various tasks necessary to complete the work are listed and grouped into a work breakdown structure. Project planning is often used to organize different areas of a project, including project plans, workloads and the management of teams and individuals. The logical dependencies between tasks are defined using an activity network diagram that enables identification of the crucial path. Float or slack time in the schedule can be calculated using project management software. Then the necessary resources can be estimated and costs for each activity can be allocated to each resource, giving the total project cost. At this stage, the project schedule may be optimized to achieve the appropriate balance between resource usage and project duration to comply with the project objectives. Once established and agreed, the project programme becomes what is known as the baseline schedule. Progress will be measured against the baseline schedule throughout the life of the project.

1.1. Overview

A project plan, according to the Project Management Body of Knowledge, is: "a formal, approved document used to guide both project execution and project control. The main uses of the project plan are to document planning assumptions and decisions, facilitate communication among stakeholders, and document approved scope, cost, and schedule baselines. A project plan may be shortened or detailed."

PRINCE2 defines: "a statement of how and when a project's objectives are to be achieved, by showing the major products, milestones, activities and resources required on the project."

The project manager creates the project management plan following effort from the project team and key stakeholders. The plan should be agreed and approved by at least the project team and its key stakeholders.

Fig (a): Project Planning

1.2. History

Until 1900 civil engineering projects were generally managed by creative architects, engineers, and master builders themselves, for example Vitruvius (first century BC), Christopher Wren (1632–1723), Thomas Telford (1757–1834) and Isambard Kingdom Brunel (1806–1859). It was in the 1950s that organizations started to systematically apply project management tools and techniques to complex engineering projects.

Henry Gantt (1861–1919), the father of planning and control techniques.

As a discipline, project management developed from several fields of relevance including civil construction, engineering, and heavy defenseactivity. Two forefathers of project management are Henry Gantt, called the father of planning and control techniques, who is famous for his use of the Gantt chart as a project management tool (alternatively Harmonogram first proposed by Karol Adamiecki); and Henri Fayolfor his creation of the five management functions that form the foundation of the body of knowledge associated with project and program management. Both Gantt and Fayol were students of Frederick Winslow Taylor's theories of scientific management. His work is the forerunner to modern project management tools including work breakdown structure (WBS) and resource allocation.

The 1950s marked the beginning of the modern project management era where core engineering fields come together to work as one. Project management became recognized as a distinct discipline arising from the management discipline with engineering model. In the United States, prior to the 1950s, projects were managed on an ad-hoc basis, using mostly Gantt charts and informal techniques and tools. At that time, two mathematical project-scheduling models were developed. The "Critical Path Method" (CPM) was developed as a joint venture between DuPont Corporation and Remington Rand Corporation for managing plant maintenance projects. And the "Program Evaluation and Review Technique" or PERT, was developed by Booz Allen Hamilton as part of the United States Navy's (in conjunction with the Lockheed Corporation) Polaris missile submarine program; These mathematical techniques quickly spread into many private enterprises.

At the same time, as project-scheduling models were being developed, technology for project cost estimating, cost management, and engineering economics was evolving, with pioneering work by Hans Lang and others. In 1956, the American Association of Cost Engineers (now AACE International; the Association for the Advancement of Cost Engineering) was produced by early practitioners of project management and the associated specialties of planning and scheduling, cost estimating, and cost/schedule control (project control). AACE continued its pioneering work and in 2006 released the first integrated process for portfolio, program and

project management (Total Cost Management Framework).

The International Project Management Association (IPMA) was founded in Europe in 1967, as a federation of several national project management associations. IPMA maintains its federal structure today and now includes member associations on every continent except Antarctica. IPMA offers a Four Level Certification program based on the IPMA Competence Baseline (ICB). The ICB covers technical, contextual, and behavioural competencies.

In 1969, the Project Management Institute (PMI) was formed in the USA. PMI publishes A Guide to the Project Management Body of Knowledge (PMBOK Guide), which describes project management practices that are common to "most projects, most of the time." PMI also offers multiple certifications.

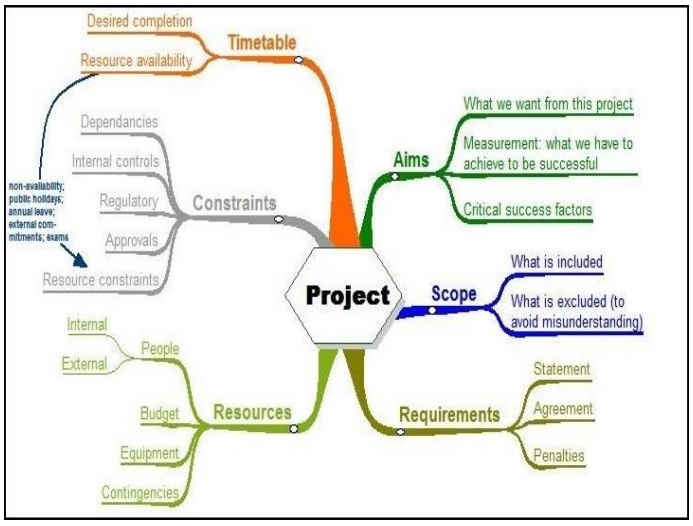

Fig (b): Project Planning

1.3. Understanding

Project Planning is a very vital aspect of project management. Over 50% of the project is planning and a fair deal less time is actually executing the plan. This percentage range may be a big shock to some people but ultimately, it makes perfect sense! You can't pull off a great project with only a minimal amount of planning! Think about anything you do that requires planning. You are not going to take a trip without booking a plan ticket or filling up on gas or packing your suitcase. Weather you "plan" for your vacation or decide to randomize it; you have to consider all the details. You have to figure out the best way to travel verses the cost of expenses and not to mention hotel locations and cost. Without these elements, you will not have a vacation.

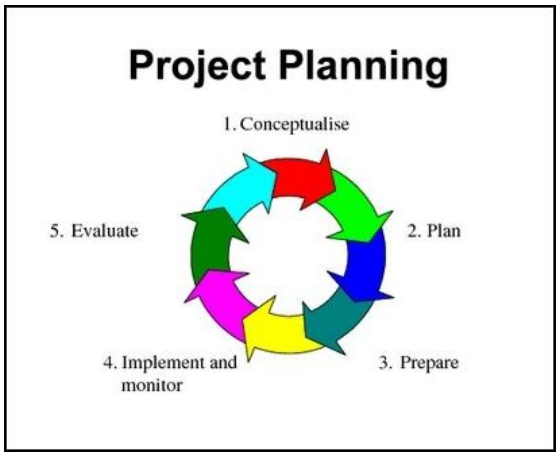

Fig (c): Project Planning Cycle

The following components should be covered when putting together your project management plan: (Understanding a PMI Project Plan)

- **Project Overview**
- **Project Charter Summary**
- **Management advice, guidance, and instruction**
- **Scope**: Work breakdown, deployment, change control, and training
- **Detailed Plans**
- **Scheduling:** Who will be responsible for what and how will time be managed?
- **Cost Analysis:** Estimating how much the project will cost and what factors could adversely affect those estimates
- **Cost Management**
- **Risk Management:** What activities will be taken to deal with risk?
- **Risk Log:** Record of known and possible risks
- **Resources:** Staffing, budget, and vendors.

- **Change Management**
- **Issue Management:** How will issues be managed and recorded, using an issue log
- **Communication Plan:** How will you communicate internally to the team and externally to stakeholders?
- **Quality Control:** Approaches that must be taken to ensure that quality is maintained throughout the project
- **Procurement:** How will needed goods and/or services be obtained?
- **Compliance**

Every project is different but, you can always use these components to get you happening. The secondary documents will allow teams to take the individual components and tie them to the current project. The document's details will reveal how each part pertains to the current project.

2. Step wise: An Overview Of Project Planning

Planning is the most difficult process in project management This chapter describes a framework of basic steps in project planning. Many different techniques can be used but this chapter tells the overview of the steps and activities in each step of project planning.

A major step in project planning is to plan in outline first and then in more detail.

Following are the major steps in project planning

Steps in Project Planning

Step 0: Select project

Step 1: Identify project scope and objectives

Step 2: Identify project infrastructure

Step 3: Analyze project characteristics

Step 4: Identify project products and activities

Step 5: Estimate effort for each activity.

Step 6: Identify activity risks.

Step 7: Allocate resources

Step 8: Review / Publicize plan

Step 9 & 10: Execute plan / lower level of planning

Each step of project planning has different activities to perform. Following the description of each step with its activities

- **Step 0 : Select project**

This is called step 0 because in a way of project planning, it is outside the main project planning process. Possibility study suggests us that the project is worthwhile or not.

- **Step 1 : Identify project scope and objectives**

The activities in this step ensure that all parties to the project agree on the objectives and are dedicated to the success of the project.

Step 1.1: Identify objectives and practical measures of the effectiveness in meeting those objectives

Step 1.2: Establish project authority.

Step 1.3: Stakeholders analysis – Identify all stakeholders in the project and their interest.

Step 1.4: Modify objectives in the light of stakeholder analysis.

Step 1.5: Establish method of communication

- **Step 2 : Identify project infrastructure**

Projects are rarely carried out in a vacuum. There is usually some kind of infrastructure into which the project must fit. Where the

project managers are new to the organization, they must find out the precise nature of this infrastructure.

Step 2.1: Identify relationship between the project and strategic planning

Step 2.2: Identify installation standards and procedures.

Step 2.3: Identify project team organization.

- **Step 3: Analyze project characteristics.**

The general purpose of this part of planning operation is to ensure that the appropriate methods are used for the project.

Step 3.1: Distinguish the project as either objective- product driven

Step 3.2: Analyze other project characteristics (including quality –based ones)

Step 3.3: Identify high level project risks

Step 3.3: Take into account user requirement concerning implementation.

Step 3.4: Select development methodology and life cycle approach.

Step 3.5: Review overall resources estimates

- **Step 4 : Identify project products and activities**

The more detailed planning of the individual activities now takes place. The longer term planning is broad and in outline, while the more immediate tasks are planned in some detail.

Step 4.1: Identify and describes project products (or deliverables)

Step 4.2: Document generic product flows

Step 4.3: Record product instance

Step 4.4: produce ideal activity network

Step 4.5: Modify the ideal to take into account need for stages and checkpoints.

- **Step 5: Estimate effort for each activity.**

Step 5.1: Carry out bottom-up estimates

Step 5.2: Revise plan to create controllable activities.

- **Step 6: Identify activity risks.**

Step 6.1: Identify and quantify activity based risks

Step 6.2: Plan risk reduction and contingency measures where appropriate

Step 6.3: Adjust overall plans and estimates to take account of the risks

- **Step 7: Allocate resources**

Step 7.1: Identify and allocate resources

Step 7.2: Revise plans and estimates to take into account resource constraints

- **Step 8: Review / Publicize plan**

Step 8.1: Review quality aspects of the project plan.

Step 8.2: Document plans and obtain agreement.

- **Step 9 & 10: Execute plan / lower level of planning**

Once the project is started, plans will need to be drawn up in greater detail for each activity as it becomes due. Detailed and lower level of planning of the soon stages will need to be delayed because more information will be available nearer the start of the stage.

3. Architecture

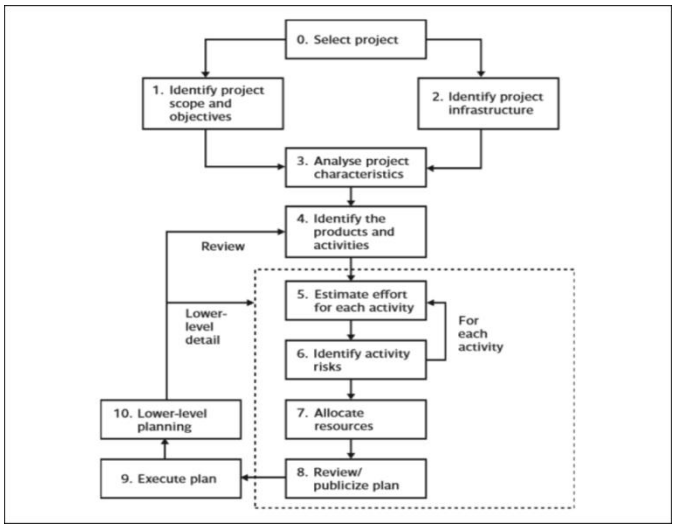

Fig (d): An Overview of Stepwise Project Planning

4. Project Planning Tools

Fortunately, there is a huge variety of project management tools available to help freelancers and small business owners with their project planning needs. Some of the very best tools require a substantial financial investment on the part of the freelancer. However, there other tools that may not be quite as full-featured that will work fine for a freelancer who is just starting out or for a very small business owner.

- jxProject
- dotProject
- GanttProject
- Open Workbench
- SugarCRM
- ProjectPier
- OpenProj
- Project HQ
- Clocking IT
- TaskJuggler, etc

5. Advantages and Disadvantages of Project Planning

S.No	Advantages	Disadvantages
1	It saves crucial execution time.	Too much time can be spent tweaking Gantt charts to get everything lined up.
2	Defines the project in detail	Too long of a plan takes a great deal of time to update.
3	Indicates the project schedule and major milestones	Getting bogged down in the details of the plan can cause one to lose sight of the big picture
4	Establishes baseline plan for schedule, scope and cost	Project sponsors assume every task as set in concrete which reduces your flexibility to change the order of deliverables around and yet still meet the end date.
5	Identifies risks to the project and indicates a response mechanism	Increases the risk that time is spent managing the plan instead of managing the people.

6. Services

Project Planning Services are:

Facilitation of project planning sessions that will cleanse desired future-state business processes, define the basic project timeline, determine the staff and resource requirements, and classify potential roadblocks.

Development of the infrastructure every project wants in order to stay on track including a project communication and reporting plan, issue tracking, change management process, and the project plan.

6.1. Importance of Project Planning

a. Increases efficiency.

b. Reduces business related risks.

c. Facilitates proper coordination.

d. Aids in organising.

e. Gives right direction.

f. Keeps good control.

g. Helps to achieve objectives.

h. Motivates the personnel.

i. Encourages creativity and innovation

j. Helps in decision making.

7. Characteristics of Project Planning

1. Consists of temporary activities that have predetermined start and end dates.
2. Uses restricted resources.
3. It has a single goal or a set of goals.
4. All events are to be realized to develop a single and new output.
5. Usually has a budget.
6. Usually a project manager is responsible for co-ordinating all activities.

8. Future Uses of Project Planning

Planning helps a corporation adapt to the future. Planning allows a corporation to consider future uncertainties in a systematic fashion so that contingency plans can be developed. For large projects concerning large capital outlays, this is extremely important. Systematic planning is also useful for smaller projects as well. If many small projects "go wrong," the corporation's bottom line will suffer.

9. Conclusion

Above given theory I can conclude that project planning has of very much importance for the organisation's success and development. Organisations that do not implement the tradition of project planning have to suffer a lot in terms of resources, time and money. In such a competitive world, organisations have to do anything that reduces their costs and resources on any given task. Project Planning is one of the tools from which one organisation could use its resources efficiently and minimised costs. Is has very tangible and intangible benefits, therefore every organisation have to think about it and implement it.

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