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Why is Planning a Relevant Factor in the Management of Projects

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Abstract: ***Planning is an essential part of project management. Without an adequate plan, the chances for project failure is enhanced. The project plan serves as the roadmap that creates a fine pathway to get you from where you are to your destination. Planning seeks to answer the following questions; who will manage the project, how long will it take to manage the project, cost of managing the project and how will the project impact its beneficiaries/clients. In order to avoid circumstances such as budgets overrun, missed project completion dates and partially achieving client specifications; there should be a viable plan so that you can plan the work and work the plan. Considering the enormous contributions of planning to project success, it's incumbent on every project to have a plan.Such plan will enable projects to achieve its core objectives which is to meet client's requirements within given constraints. The project is deemed successful if it is able to accomplish client's requirements; such, will convince the client to accept the project which is the hall mark of success. What's the use implementing a project that the client will reject at the end of the day. In preventing such from happening, project stakeholders should embrace planning.***

Keywords: Planning; Work breakdown structure; Work packages; Responsibility matrix; Stakeholders

1. Introduction

Planning is a systematic arrangement of tasks to accomplish objectives. It is pertinent for the following reasons:

- Provides a sense of direction to project stakeholders
- Minimizes uncertainty by creating awareness thus, reducing the impact of change to the project
- It severely curtails wastages and redundancies in the project
- It establishes set standards to facilitate control in the project

Planning serves as the hub of every successful project. Managing a project is such a tedious and enduring task, that can lead to frustration especially when proper plans are not in place to combat the prevailing circumstances. Most projects failed even before the start of its implementation.

Therefore, as a project manager you should be mindful of the varied factors that can compromise your work in the project. These factors can be both internal and external. External factors are difficult to control but yet easy to detect than some internal ones that are insidious in nature. Even though the internal factors are within your reach, but then negligence on the part of the project manager might make it complex and difficult to curb.

However, identifying and controlling some of these factors are critical to the duties of the project manager and team; thus, questioning their level of competence. These potential issues that have the tendency to stagnate the project can be better taken care of in the planning process.Having a robust and comprehensive plan for the project, can help restore sanity and proper direction in the management process. Therefore, it is imperative for the project manager to have an efficient plan going forward with the project.

2. Assessing Project Efforts Devoted to Planning

Planning is at the center of every project success. Therefore, it becomes necessary for project stakeholders to lay emphasis on this exercise in order to accomplish project goals. In other words, you must plan for the project to meet customer's satisfaction and eventual acceptance. However, there are other significant components of the project besides planning. In fact, the project lifecycle comprises of five key phases; initiation, planning, execution, monitoring and control and closure. Each phase should be adequately completed within time, scope and budgets. In essence, planning is the tool that is spearheading the logical sequence in which these phases are coordinated and aggregated to deliver the project. Thus, supporting the popular adage which says "failing to plan means planning to fail".It is extremely difficult to estimate project efforts towards planning for the following reasons:

- The nature and type of project: There are several types of projects being implemented out there. Some are complex, simple etc. and the technology involved in some of these projects are sophisticated and delicate enough for such implementation, thereby increasing the planning duration, costs and efforts. Comparing such sophisticated projects to relatively simple ones in terms of effort towards planning; you will realize that the planning duration in both circumstances will differ considerably. In addition, we should not be forgetful of the fact that every project is unique in nature, so also the planning exercise; it may be similar but the fine details differ.
- Project objectives: This actually dictates the entire planning process. You plan for the project to achieve its objectives. However, because every project has its own objectives, it becomes tough to assess the amount of energy put into the planning process.
- How much project experts are involved in the planning? Having few staff with the technical knowhow to plan the

project tends to delay the process and hence, leading to increase planning duration. Moreover, the experience of project team counts in the planning exercise.

- Project resources: This refers to the equipments, machines, personnel, costs, technology etc. that are required to implement the project. Resources vary across projects depending on several factors.
- Number of risks associated with the project: Risk prone projects tend to increase planning duration and more efforts committed.
- The number of dependencies and interfaces of the project: This includes project stakeholders such as suppliers, senior management and other institutions supporting the project.

The above-mentioned reasons justify the difficulties and necessities of planning in project management. It is worth noting, that planning takes significant portion of the total efforts dedicatedin the project. As the saying goes "proper planning brings about good success".

The even planning process in project management

This is a planning approach that identifies all the tasks that are required to successful complete a project. It precisely delineates project activities to aid effective coordination in the implementation of projects. It shows the sequence in which tasks are implemented; be it, in a simultaneous or individual manner. Thus, allowing the team to have better control of project tasks. Such control is actually needed for the project to accomplish its set-out goals. However, the even planning process is necessary in projects for the following reasons:

- Makes complex and difficult projects with unclear objectives to appear relatively simple to implement.
- Gives the project team a sense of direction as to how to implement the identified tasks. Clearly shows which task should succeed or precede the other.
- Helps the project team to better allocate resources to project activities. Resources here talks of the time, costs, scope and quality. Moreover, some activities do carry higher costs than others, the same applies to time and scope for each activity.
- For better supervision and control of the project. The project manager knows when and how these activities are implemented, thereby putting him at a vantage point to keep track of the implementation process.
- Better management of budgets and other relevant resources.
- Risks are easily identified and addressed using this approach.

3. Components of the Project Plan

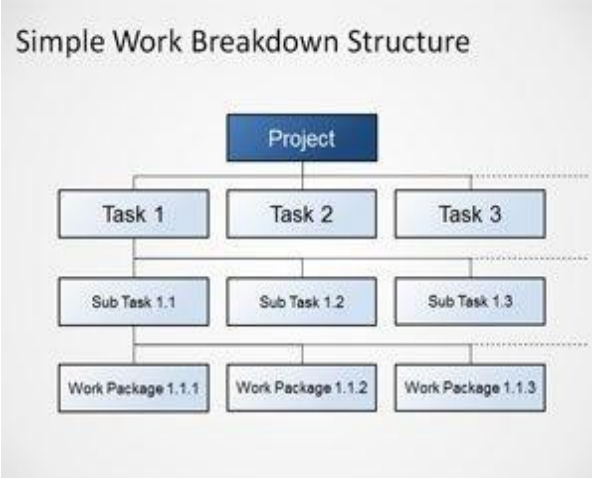
Project plan is an important document that creates the path for the project. It brightens project route thus, making it clear for project stakeholders to know the direction of the project. However, this document is made up of several essential items which are:

- Executive summary: This captures the name of the organization, goals and objectives of the project, project organizational structure, project scope, timelines schedules and major project targets. It establishes the relationship between the project and the parent organization in terms of their objectives. In short, it gives a general overview of the entire project.
- Project scope: This focuses on the technical aspect of the project. It identifies the major deliverables and expands on the scope and targets stated in the executive summary. The detail description of project technologies is documented. This involves the competitive strategies, new markets captured and even final product that will be produced by the project.
- Approaches to the project: This specifies the management and technical approaches to the project. The project manager provides the project with managerial oversight whereas technological preferences come from the functional unit of the organization. Whether the project is divided into subcomponents to aid the implementation process is determined at this level.
- Project Contracts: Several legal and regulatory documents are prepared at this level of the project. This document creates legal relationship between the project and other stakeholders such as suppliers, contractors, senior management, project board etc. It establishes clear sense of direction in the relationship existing between these parties and the project. In addition, it creates the regulatory framework for the smooth running of the project; this state how specifications are modified, how change request is made to the project.
- Resources: Every project must have adequate resources for effective implementation. Resources actually point to the budgetary allocation to the project though, not limited to that. Direct and indirect costs are included in this level of the planning process. Costs of equipments, facilities, technologies and other items are all inclusive.
- Risk Plan: Risk forms an integral component of every project. The development of such document will help the project manager and team in addressing the potential uncertainties that can have adverse impact on project implementation. This plan does not only identify and document risk but also proffer remedies to mitigate the effect of these identified risks. There are several tools and techniques used in developing an effective risk management plan.
- Project scheduling: This is a core component of the planning exercise that determines activity sequence, activity durations. Tasks are arranged in a manner to ensure logical flow in the implementation process. Tasks are assigned to staff with specific timelines for the project to meet its deadline.
- Human resources: This focuses on project personnel. It deals with the recruitment process of staff in the project. Having staff with the right technical competence is a plus to the project. The welfare of these staff is key to their retention in the project and as such project managers should ensure that project staff are well trained and motivated to do the work else, project work would stall or move at a snail pace. Robust human resource plan should be in place to establish a clear direction in the way staff issues are handled in the project.
- Monitoring and evaluation: The development of proper monitoring and evaluation plan. This plan should include effective evaluation methods to enhance project effectiveness. Procedures, methods and techniques and how they are used are critical component of this process

Some planning tools used in project management

Work Breakdown Structure (WBS): This is a planning tool that helps project team in structuring tasks as well as work packages. It is a significant project deliverable that breaks down complex project work into forms that can be easily managed.Decomposing the WBS into minute components that can easily be managed by the project team is known as a work package.Work package is a task that cannot be furtherbroken down into meaningful unit. It follows this pattern; tasks, subtasks and work packages.

Below is a diagrammatic illustration of WBS



***Source**: (Koyalirie, 2018)*

Dividing project work into such, brings clarity and efficiency in the implementation process; making it easier for the project manager to estimate time and costs required for each task.

Steps to design WBS

- Develop an action plan that contains detailed outline of project tasks that are decomposed into smaller units to aid project planning. Work packages are carefully identified and listed to ensure efficiency of the process. For instance, failing to include all the necessary tasks in your breakdown will skew the entire process and leads to challenges in implementation. Thus, making the identification of work packages an essential component of this management process.
- Another essential step, is the assignment of project staff to individual work packages. This fosters proper coordination and ensures timeline delivery of project deliverables. If something goes wrong, the project manager knows who is accountable.
- Verification of the process to ensure the WBS is precise.
- Using the decomposed breakdown to estimate costs and other resources that should be allocated for each work package.
- Once the breakdown structure has gone through proper vetting, it becomes apparent for each package to be scheduled. Scheduling helps the project team to know when to start and complete each package so that customer's expectations are met.
- Work packages should be distinct and independent of other work packages in the WBS.

Functions of WBS

- Decomposing project tasks into manageable form for effective implementation
- Shows the connections between project tasks
- Can even establish responsibilities of team members; especially when done with the responsibility matrix
- Identification of probable risks in the project
- Used to track project progress and performance

The lowest layer of the WBS should be the work packages, where individuals or small team are assigned to finish project tasks on time.

Functions of work packages

- Easy and straightforward estimation of costs.
- It is easy to monitor and supervise assigned staff
- It establishes relationships existing between decomposed units even though these packages are independent
- Prepare the ground for effective project scheduling
- Helps the team to identify project targets and deadlines

In managing work packages, it essentially true for project managers and team toeffectivelyverify that the required work packages for the project are identified and documented. Missing out on any work packages that should be included will adversely affect the project planning process. In addition, the planned packages should be implemented within the given project framework i.e. time, budgets, scope and quality. Moreover, the team should be able to assess what has been implemented so far. These checks and balances create the breeding ground for proper accountability and responsibility which is dearly needed in project management(Dobson, 2015).

Project stakeholders' input in designing the WBS

- Responsible managers can bring a lot of experience into the process. They have been working with the organization, so they know the things that are easily achievable, thereby guiding the project team in designing the WBS.
- Resources available for the project is key to its success, so having these managers around can help the project manager in negotiating for project resources.
- No one has monopoly of knowledge; having managers and other workers can help in the identification of critical tasks that should be included in the WBS.
- Scheduling, cost estimations and assigning staff to project tasks are all essential happenings in the development of the WBS; and as such, these responsible people can be of considerable help. Incorrect schedules and cost estimations would have long lasting consequences on the project. No project manager would ever want that to happen during project implementation.
- As a project manager, you are actually relying on the technical people in your team to provide or give technical support to the project. This support includes; determining the tasks required, the platform that should be used to implement the project, materials and other key resources needed, the decompositions of these tasks into smaller components, risks identification and more importantly the duration required to complete these identified tasks.

Responsibility matrix

This is a tool designed to help describe roles and responsibilities of project team members assigned in accomplishing the project (Parayitam, Desai, Desai, & Eason, 2009). It brings out the following:

- Identified tasks in a project; ensuring that all the necessary tasks are captured
- Person responsible for each task; this individual is responsible to endorse the outcome of each task. This person is responsible to inform the project manager on progress made so far.
- The level of authority/ degree of control the assigned staff has towards that task
- What the assigned staff supposed to do; ensuring that tasks are completed within the prescribed requirements such as time, costs, specifications and scope

Below is a diagrammatic illustration of linear responsibility chart

Linear Responsibility Chart:

Legend:			Approval	A		Responsbility	R		
			Co-operation	C		Information	I		
Task Nr.	Tasks & Functions:	Person	P.v.Z.	N.S.	H.	C.I.	J.K.	N.H.	I.M.	A.H.	C.d.P.
		Dept.	Head	Maint.	Prod.	HSEC	Maint.	Process	Production	Planning	Maint.
1	Lock and Isolate Gearbox, Electrical motor and Fan		A	A	A	A	C	C	C	C	R
2	Remove gearbox inspection cover.			I	I		R	C	C		C
3	Inspect gear condition.			I			R	C	C		C
4	Drain gearbox oil.			I		I	I	C	C		R
5	Clean inner gearbox casing.			I		I	R	C	C		C
6	Close inspection cover.			I			C	C	C		R
7	Refill gearbox oil to max. limit.			I			R	C	C		C
8	Remove Lock & Isolation			I	I		C	C	C	I	R
9	Compile inspection report		I	A	I	I	R	I	I	I	R

Source:*https://www.google.com/search?q=project+responsibility+matrix&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiSt9PM7ZLgAhWTBWMBHREZAKUQ_AUIDigB&biw=1366&bih=651#imgdii=HwpkOy7p_kWqnM:&imgrc=iklutZakUUwiFM*

Functions of responsibility matrix

- It establishes critical project interfaces, something the project manager is keen to know for effective project monitoring
- Provides the project manager with thorough and up to date information about the project. This comes as a result of the regular updates from staff assigned to each task.
- Helps the project manager in tracking the project thus, assisting him in assessing the performance of the project team.

It is worth noting, that there are other planning tools not mentioned because they are not the focus of this article. Examples of them are Critical Path method (CPM), Program Evaluation and Review Technique (PERT), Gantt Chart, Manpower Histogram, Logical Framework etc.

4. Planning and Project Risks

Risk forms an important component in project planning and as such, should be seriously addressed in order to prevent it from damaging the project. In fact, one of the critical duties of the project manager is to be able to manage project risks. Risks are uncertainty or unexpected events that might wreck projects if the necessarypreventive measures are not put in place to mitigate its impact. (Viswanathan , 2018) postulated four types of risks captured in the project plan and these are; scope risk, risks associated with project schedule, resource risk and technological risk.

- Scope risks: For most complex projects, there is always the possibility for clients to keep changing the requirements in order to suit their comfort. This is largely due to the fact that clients are mostly confused or unclear about what they want. So, they keep changing and modifying the project requirements, thereby creating room for increasing project risks. It deepens the scope of the project thus, making it difficult for the project manager and team.In addition, as the project grows in size, so are the interfaces and subcomponents of the project. Such growth can make the project become more susceptible to risk. Complex and highly technical projects are prone to risks than small and simple ones.
- Scheduling risks: This encompasses the numerous delays that occurs thus, preventing the project from going on as initially planned. They are setbacks that must be avoided in project implementation. These unforeseen delays usually come from the following areas; natural disasters, break in the supply chain (suppliers unable to supply on time), failure on the part of the project team to finish tasks within the stipulated time, stiffer regulations or laws impose by some authorities that can cause significant delay during project implementation, inadequate project plans that leads to incorrect estimation of task durations and many more.

The project manager should have appropriate contingency plans to handle such situations especially when you know that such is bound to happen in a project. Again, it all boils down to planning. An effective plan can address most of these problems.

- Resource risks: Every project needs adequate resources for its implementation. It ranges from equipments, materials, personnel and many more. Having the right resources for the project is fundamental to its success. The

project manager should ensure that project personnel are well motivated to do the work. The project should be able to keep most of its vital staff especially those ones with rare technical skills; this helps to boost the project manager's effort in accomplishing the project.Another potential risk is the availability of project funding. A project is not a project without funds; making funding the fundamental pillar of every good project. Therefore, losing project staff or not having the right set of people for the project and funding challenges are critical to project resource risks.

- Technological risks: This refers to the technological preferences of the project. The hardware and software platform, design and installation favorites. These are all potential risks areas such as defects or incompatibility issues in the technology used. How these components are synchronized in order to enhance system performance. Technological risks are more pronounced in sophisticated and complex projects than less complex ones.

5. Conclusion

Planning is relevant in project management because of its contribution to the success of projects. Some of these contributions are thus:

- Structured and well-coordinated project
- Enabling the project to deliver it key deliverables within time, scope, budget and quality constraints
- Better monitoring and control of project tasks
- Better management of project stakeholders and dependencies
- Helps project staff in developing their career as they participate in the planning process
- Provides better and effective ways to deal with potential risks
- Defines project communications and reporting format used in the project
- Shows the scheduling structure of tasks and their dependencies
- Cost estimations and other project tracking tools necessary for guiding the project

The arguments put forward in this article establishes the relevance of planning in the management of projects.

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