Project Management

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To complete a project we need to simultaneously work with different departments, we need to coordinate with other departments on time to time, in this case project managers play an important role in successfully completing a project.

There are some scenarios where the project managers has to deal with someone outside the organization. So, Project management plays an important role, it tells one how to proceed in completing the project successfully.

In project management we learned 10 knowledge areas and 5 phases.

1 Knowledge Areas:

There are 10 knowledge areas in project management, they are as below:

1.1 Project Integration Management

This knowledge area contains the tasks that hold the overall project together and integrate it into a unified whole.

1.2 Project Scope Management

This knowledge area involves the project scope, that is, the work that is included within the project. Since scope changes are one of the top causes of project changes and grief in general, it is very important that the boundaries of the project be well defined from the outset and monitored rigorously. It is very easy for people to insert unauthorized work into the project when the project appears to be big enough to absorb it, but most projects are estimated with the minimum cost.

1.3 Project Schedule Management

This is usually the most time consuming of the knowledge areas. During planning, the project manager must divide the project into tasks and create both a schedule (start and finish dates for each task) and budget for each task. During the project, earned value management determines the project status at regular

status intervals. Because most project changes involve a change to the schedule, it must be continuously re-baselined and the project management plan updated (and approved by the project sponsor).

1.4 Project Cost Management

The project budget is usually one of the most sensitive parts of a project. Wouldn't it be nice to have have project budgets that are comfortable and contain plenty of cushion, but very few projects have this luxury. The budget must be established through rigorous estimating techniques and monitored to ensure there are no unnecessary changes that make stakeholders unhappy.

1.5 Project Quality Management

Quality is one of the triple constraints of Time, Cost, and Quality. As such, when you need better quality you need to put in more time or cost. Because of this integral nature of the quality of the project's deliverables, the quality level should be established during project planning and specified within the project management plan. Then when issues arise regarding product specifications, there is a plan to deal with it.

1.6 Project Resource Management

The project team is usually one of the most important factors in the success of a project. If you have a good team, you will have a successful project. This knowledge area is concerned with acquiring the right team, ensuring their satisfaction, and tracking their performance.

1.7 Project Communications Management

Communication with stakeholders is often the key factor that allows stakeholders to be satisfied even when unexpected changes happen. It is essential to develop a communications plan to keep all stakeholders "in the loop" throughout the project and communicate early and often when unexpected issues occur.

1.8 Project Risk Management

Managing project risk is one of the most underrated aspects of project management. Major risk are very seldom identified up front and analyzed within the project management plan, but when they are project stakeholders tend to forgive the unexpected issues much quicker. Not to mention they hold the project manager in high regard for strong safeguarding of their investments.

1.9 Project Procurement Management

Almost all projects have some form of outside procurement. Hiring subcontractors can get the job done quicker or with better expertise but sacrifices the

ability to control the quality, schedule, or other factors. Also, the fine print often results in budget and schedule overruns that were not envisioned.

1.10 Project Stakeholder Management

There is nothing more important than the project's stakeholders. You could, in theory, declare a project a success if the stakeholders are satisfied but the project was a disaster (although I wouldn't recommend this line of thinking). The stakeholders should be actively managed and addressed within the project management plan.

2 Phases in Project Management:

2.1 Phase 1: Project Initiation

This is the start of the project, and the goal of this phase is to define the project at a broad level. This phase usually begins with a business case. This is when you will research whether the project is feasible and if it should be undertaken. If feasibility testing needs to be done, this is the stage of the project in which that will be completed.

2.2 Phase 2: Project Planning

This phase is key to successful project management and focuses on developing a roadmap that everyone will follow. This phase typically begins with setting goals. Two of the more popular methods for setting goals are S.M.A.R.T. and CLEAR:

2.3 Phase 3: Project Execution

This is the phase where deliverables are developed and completed. This often feels like the meat of the project since a lot is happening during this time, like status reports and meetings, development updates, and performance reports. A "kick-off" meeting usually marks the start of the Project Execution phase where the teams involved are informed of their responsibilities.

2.4 Phase 4: Project Performance/Monitoring

This is all about measuring project progression and performance and ensuring that everything happening aligns with the project management plan. Project managers will use key performance indicators (KPIs) to determine if the project is on track. A PM will typically pick two to five of these KPIs to measure project performance:

2.5 Phase 5: Project Closure

This phase represents the completed project. Contractors hired to work specifically on the project are terminated at this time. Valuable team members are recognized. Some PMs even organize small work events for people who participated in the project to thank them for their efforts. Once a project is complete, a PM will often hold a meeting – sometimes referred to as a "post mortem" – to evaluate what went well in a project and identify project failures. This is especially helpful to understand lessons learned so that improvements can be made for future projects.

3 Agile project management

There are 7 most popular project management methodologies, they are

1. Scrum
2. Kanban
3. Lean
4. Waterfall
5. Six Sigma
6. PMI/PMBOK
7. Agile

Out of these Agile methodology is most commonly used in project management.

Agile project management is an iterative and incremental approach to delivering requirements throughout the project life cycle. At the core, agile projects should exhibit central values and behaviours of trust, flexibility, empowerment and collaboration.

4 Unified Process in Project Management

The Unified Software Development Process or Unified Process is an iterative and incremental software development process framework. The best-known and extensively documented refinement of the Unified Process is the Rational Unified Process (RUP). Other examples are OpenUP and Agile Unified Process.

The Unified Process is not simply a process, but rather an extensible framework which should be customized for specific organizations or projects. The Rational Unified Process is, similarly, a customizable framework. As a result, it is often impossible to say whether a refinement of the process was derived from UP or from RUP, and so the names tend to be used interchangeably.

4.1 Phases in Unified Process:

1. Inception
2. Elaboration (milestone)
3. Construction (release)

4. Transition (final production release)