

Assignment - 5

(Q1) What are the responsibilities and roles of the project manager?

Ans: A project manager is a person with excellent entrepreneurial mindset and use their technical understanding to win team members respect.

The responsibilities and roles of the project managers are :-

1.) Activity and resource planning - They define the project's scope and determine available resources. Good project managers know how to realistically set time estimates and evaluate the team & team's capabilities. They then create a clear and concise plan to both execute the project and monitor its progress as projects are naturally unpredictable.

2.) Organizing and motivating a project team - They develop clear, straightforward plans that stimulate their teams to reach their full potential. They cut down on bureaucracy and steer their teams to reach down a clear path to the final goal.

3.) Controlling Time Management - Clients usually judge a

project's success or failure on whether it has been delivered on time. Good project managers know how to do the following:-

- Define activity
- Sequence activity
- Estimate the duration of activity
- Develop a schedule
- Maintain a schedule.

4.) Cost estimating and developing the budget -

Good Even if a project meets a client's expectations and is delivered on time, it will still be a failure if it goes wildly over-budget. Good project managers frequently review the budget and plan ahead to avoid massive budget overruns.

5.) Ensuring customer satisfaction - In the end, a project is only a success if the customer is happy. One of the key responsibilities of every project manager is to minimize uncertainty, avoid any unwanted surprises and involve their clients in the project as much as is reasonably possible.

6.) Analyzing and managing project risk - Good project managers know how meticulously and almost intuitively, identify and evaluate potential risks before the project begins. They know how to

then avoid risks or at least minimize their impact.

7.) Monitoring progress - During the initial stages, project managers and their teams have a clear vision and high hopes of producing the desired result. A project manager needs to monitor and analyze both expenditures and team performance and do always efficiently take corrective measures.

8.) Managing reports and necessary documentation - Good project managers can present comprehensive reports documenting that all project requirements were fulfilled, as well as the project's history, including what was done, who was involved, and what could be done better in the future.

Q2)

Q2.) What are different project scheduling techniques Explain.

Ans:) A project schedule helps in put prioritizing work involved in a project and finish it off in an orderly manner. There are different scheduling techniques.

1.) Mathematical Analysis.

The first two techniques used by project managers are Critical Path Method (CPM) and Program Evaluation

and Review Technique (PERT). These methods are used to calculate the assumed start and finish dates, based on the scope of the project.

• Critical Path Method (CPM) - Every project's tree diagram has a critical path. The CPM estimates the maximum and minimum time required to complete a project. CPM also helps to identify critical tasks that should be incorporated into a project. Delivery time changes do not affect the schedule.

• Program Evaluation and Review Technique (PERT) - It schedules the flow tasks in a project and represents how each task is dependent on the others. To schedule a project using PERT arrange them in an orderly manner and define milestones. Timeline of a project can be calculated on the basis of the level of confidence:

- Optimistic timing
- Most-Likely timing
- Pessimistic timing

2.) Duration Compression

It is a way to shorten a schedule. It can adjust the set schedule by making changes without changing the scope of the project in case the project is running late. Two methodologies used are:-

a) Fast tracking - It is another way to use CPM. It finds ways to speed up the pace at which a project

is being implemented by either simultaneously executing many tasks or by overlapping many tasks to each other. Although fast tracking may seem appealing, remember about the risks, too. As several important tasks are to be managed at once, it's easier to make costly mistakes or sacrifice quality.

b) Crashing - It deals with involving more resources to finish the project on time. Resources available are to be spared for disposal. All the tasks cannot be done by adding extra resources. New team members are needed to be added to a project. The crashing technique can also be used by adding time, paid overtime, but it should stay within the desired deadline. Hence, it leads to raising the cost of the project.

3.) Simulation

Here, we can use a different set of activities to calculate the possible durations of the project. One of the models used is "Monte Carlo Simulation". It takes different assumptions and possible outcomes into account, resulting in forecasted duration. The advantage of this approach is that it takes risks and uncertainties into account, so even if scope changes or additional tasks occur, you can adjust your schedule.

4.) Resource - Leveling Heuristics

It means cutting the delivery time of a project by avoiding under or overutilization of resources by making adjustments with the schedule or resources.

Doing the tasks as per the available resources, so that no resource is under or over-utilized. The only demerit is it may increase the project's cost and time.

5.) Gantt Chart

It is a visualization technique used in project management. It is used by project managers most of the time to get an idea about the average time needed to finish a project. It is like a bar chart that represents key activities in sequence on the left vs time. Each task is represented by a bar that reflects the start and end date of the activity and its duration.

Q3.) Define Project Management. Write down the objectives of project management.

Ans.) Project management is the practice of applying knowledge, skills, tools, and techniques to complete a project according to specific requirements. It comes down to identifying the problem, creating a plan to solve the problem, and then executing on that plan until the problem has been solved.

The objectives of project management are-

1. Performance and Quality -

The end result of a project must fit the purpose for which it was intended. The concept of total quality management has come to the fore, with the responsibility for quality shared by all staff from top management downwards.

2. Budget -

The project must be completed without exceeding the authorised expenditure. Financial sources are not always inexhaustible and a project might be abandoned altogether if funds run out before completion.

3. Time to Completion -

Actual progress has to match or beat planned progress. The timescale objective is extremely important because late completion of a project is not very likely to please the project purchaser or the sponsor.

Q4.) Explain the steps of project planning and its activities carried out in each step?

Ans.) The steps of project planning are:-

1. Create and analyze the business case - The business case is the reason why an organisation needs to carry

out the project. It should outline the problem and describe how this will be solved and how much monetary benefit should accrue to the organization once the project is completed.

2. Identify and meet relevant stakeholders for approval

Identifying project stakeholders means listing anyone who will be affected by the project which may include the public and government regulatory agencies.

3. Define Project Scope - It is necessary to delineate the boundaries of the project to prevent "scope creep", i.e. the resources going towards something that isn't project's goals.

4. Set Goals and Objectives - The goals and objectives for the project are built on the initial objectives outlined in the business plan. At this step a finer detail is given to the initial broad ideas.

5. Determine deliverables - Deliverables are the concrete results that the project produces. One of the most important project planning steps is to decide on what these deliverables will be and who is responsible for both producing and receiving them.

6. Create Project Schedule and Milestones - The project schedule

is a very important document that outlines when different tasks of a project are due to begin and end, along with major measurement milestones.

7. Assignment Of Tasks - Within a team everyone should know their role and who is responsible for different elements of the project. Assigning tasks clearly should remove any uncertainty about roles and responsibilities on the team.
8. Carry out Risk Assessment - Having a functional risk management plan means performing a strong assessment at the planning stage of the project.

Q5.) Name and explain at least five types of risks in project management.

Ans.) The five types of risks in project management are:-

1. Cost risk
2. Schedule risk
3. Performance risk,
4. Market risks
5. Risks associated with external hazards.
6. Legal risks.

• Cost risk - It typically includes escalation of project costs due to poor cost estimating accuracy and scope creep.

• Schedule risk - The risk that activities will take longer than expected. Slippages in schedule typically increase

costs and, also, delay the receipt of project benefits, with a possible loss of competitive advantage.

- Performance risk - The risk that the project will fail to produce results consistent with project specifications
- Market risks - include competition, foreign exchange, commodity markets, and interest rate risk, as well as liquidity and credit risks.
- Legal risk - These risks arise from legal and regulatory obligations, including contract risks and litigation brought against the organisation
- Risks associated with external hazards - These include storms, floods and earthquakes; vandalism, sabotage, and terrorism, labor strikes; and civil unrest.

Q6.) What is project organization? Explain briefly different functions that are important to successfully managing the project.

Ans) Project organization is a process which provides the arrangements and decision about the realization and the process of the project. Such tasks as organization of the project process, planning of the project frameworks, should be carried out and all the project requirements should be given to the project stakeholders during this process.



The different functions that are important for successfully managing a project are :-

1. Scope - It defines the scope boundaries of the project and what is outside those boundaries. The boundaries are typically defined in terms of objectives, deliverables and resources. The more aspects of scope we identify, the better our project will be.
2. Time - It involves establishing a timeline for completion of the project, including deadlines, benchmarks and milestones.
3. Cost - It is the amount of money that will be required to complete the project successfully.
4. Quality - It is the ability of a process or product to satisfy both stated and implied needs, with those needs being defined by the stakeholders.

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