

Project Management

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Introduction:

A project is a temporary sequence of unique, complex and connected activities that have one goal or purpose and that must be completed within a specific time, within budget and according to the specification.

Project management is the process of scoping, planning, staffing, organizing, directing and controlling the development of an acceptable system at the minimum cost and within a specified time.

What is Project Management?

Organization may take different approaches to project management. One approach is to appoint a project manager from the ranks of the team of an organization.

Another approach believes that successful project managers apply a unique knowledge and skills that must be learned by other personnel. Organizations tend to hire and develop professional project managers who are assigned to one or more projects.

Process Management is an essential part for a successful project management. Process Management is the activity of documenting, managing and continually improving the process of systems development.

The Causes of Failed Projects:

From a project management perspective a project is considered a success if:

- ❖ The resulting information system is acceptable to the customer.
- ❖ The system is delivered "on time."
- ❖ The system is delivered "within budget."
- ❖ The system development process had a minimal impact on ongoing business operations.

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Not all projects meet these criteria and as a result not all projects are successful. We can develop an appreciation for the importance of project management by studying the mistakes of some project managers. Some mismanagement problems and consequences are:


- ❖ **Failure to establish upper management commitment to the project:**
Sometimes commitment changes during a project.

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 **BCA NOTES**
(Pokhara University)

- ❖ **Lack of organization's commitment to the system development methodology:** Many system development methodologies do little more than collect dust.
- ❖ **Taking shortcuts through or around the system development methodology:** Project teams often take shortcuts for one or more of the following reasons:
 - ✗ The project gets behind schedule, and the team wants to catch up.
 - ✗ The project is over budget, and the team wants to make up costs by skipping steps.
 - ✗ The team is not trained or skilled in some of the methodology's activities and requirements, so it skips them.
- ❖ **Poor expectations management:** All users and managers have expectations of the project. Over time, these expectations may change. This can lead to two undesirable situations:
 - ✗ **Scope Creep** is the unexpected growth of user expectations and business requirements for an information system as the project progresses. The schedule and budget can be adversely affected by such changes.
 - ✗ **Feature Creep** is the uncontrolled addition of technical features to a system under development without regard to schedule or budget.
- ❖ **Premature commitment to a fixed budget and schedule:** Premature estimates are inconsistent with the creeping commitment approach.
- ❖ **Poor estimating techniques:** Many systems analysts estimate by making a best calculated estimate and then doubling that number. This is not a scientific approach.

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- ❖ **Poor estimating techniques:** Many systems analysts estimate by making a best calculated estimate and then doubling that number. This is not a scientific approach.
- ❖ **Over-optimism:** System analyst and project managers tend to be optimists. But being over-optimist could cause failure in the project.
- ❖ **Adding too many people to the team when the schedule gets behind:** As the project gets behind schedule, project leaders frequently try to solve the problem by assigning more people to the team.

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It doesn't work because there is no linear relationship between time and number of personnel. The addition of personnel usually creates more communication problems, causing the project to get even further behind schedule.

❖ **Inadequate people management skills:** Managers tend to be thrust into management positions and are not prepared for management responsibilities. This problem is easy to identify.

No one seems to be in charge; customers don't know the status of the project; teams don't meet regularly to discuss and monitor progress; team members aren't communicating with one another; the project is always said to be "95 percent complete."

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❖ **Failure to adapt business change:** If the project's importance changes during the project, or if the management or the business re-organizes, project should be re-assessed for compatibility with those changes and their importance to the business.

❖ **Insufficient resources:** This could be due to poor estimating or to other priorities, or it could be that the staff resources assigned to a project do not possess the necessary skills or experience.

❖ **Failure to manage the plan:** Various factors may cause the project manager to become sidetracked from the original project plan.

Ultimately, the major cause of project failure is that most project managers were not educated or trained to be project managers.

Just as good programmers don't always go on to become good systems analysts, good systems analysts don't automatically perform well as project managers. To be a good project manager, we should be educated and skilled in the "art of project management."

Project Management Body of Knowledge:

The Project Management Institute was created as a professional society to guide the development and certification by Professional project managers. The institute created the Project Management Body of Knowledge (PMBOK) for the education and certification of professional project managers. PMBOK contains following criteria:

1. Project Manager Competencies:

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3. Project Management Tools and Techniques

PMBOK includes tools and techniques that support project managers. Two such tools are PERT chart and Gantt chart.

a. PERT Chart (Project Evaluation and Review Technique):

Project Evaluation and Review Technique (PERT) was developed in late 1950s to plan and control large weapons development for the US Navy. A PERT chart is a graphical network model used to depict the interdependencies between a project's tasks.

PERT is developed to make clear the interdependence between project tasks before those tasks are scheduled. The tasks are represented by boxes and an arrow indicates that one task is dependent on the start or completion of another task.

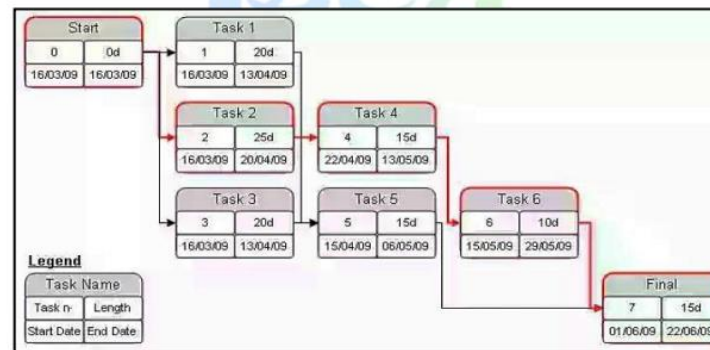


Figure: PERT chart

b. GANTT Chart:

The Gantt chart was developed by Henry L. Gantt in 1917. It is most commonly used tool for project scheduling and progress evaluation. A Gantt chart is a simple horizontal bar

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chart that depicts project tasks against a calendar. Each bar represents a named project task and the tasks are listed vertically in the left hand column.

The horizontal axis represents the calendar time line. Gantt chart shows the overlapping tasks that can be performed at the same time. It also shows which tasks are ahead and which are behind the schedule. The Gantt chart is easy to learn, read, prepare and use.

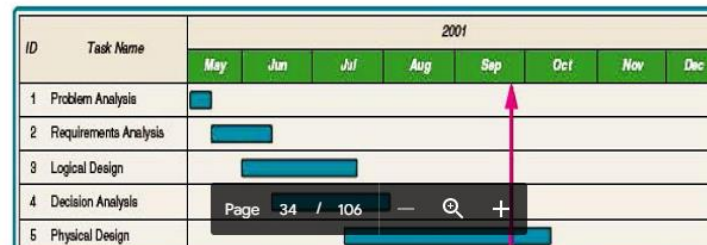




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