

A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is light green. Both are tilted at an angle.

CS5002NP

Software Engineering



Agendas

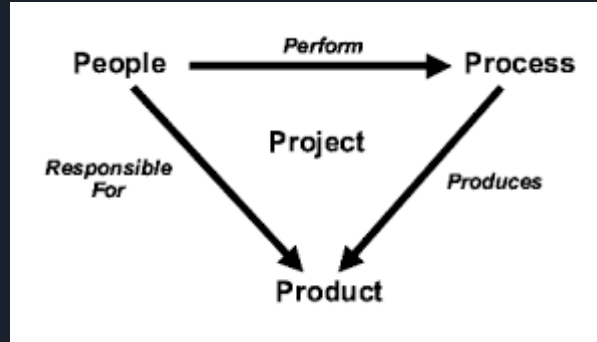
- Gantt Chart
- 4P

The 4 P's

An effective software project management focuses on the 4 P's

- People
- Product
- Process
- Project

There are 4 critical components in software project planning



People

- All the people associated with the project.

- The Stakeholders

Senior Managers-who define the business issues.

Project Managers- plan, motivate and organize and control the practitioners.

Practitioners- Who deliver the technical skills.

Customers- who specify the requirements.

End Users- Who interact with the software.

To be effective, the project team must be organized and managed, motivated. Project Managers have to ensure that there is proper collaboration between stakeholders and avoid miscommunication.

Product

- Product: Objectives and Scope have to be established before project can be planned.
- At the same time, identifying alternative solutions, technical/management constraints.
- Scope(data, functions and behaviors characterizing the product)
and objectives(goals what not how) definition is a must.

Process

- Choosing a proper process model is a very important task
- Selecting a suitable process model is necessary keeping in mind
 - the customers requesting the product and people who will do the work.
 - the product characteristics.
 - the project environment in which the software team works.
- Also adjusting the process as per need and necessity.

Project

- Project get into trouble when:
 - Software people don't understand the project needs.
 - The product scope is poorly defined.
 - Changes are managed poorly.
 - Deadlines are unrealistic.
 - Users are resistant.
 - The project team lacks people with appropriate skills.
- Project Management is needed in every steps and constraints need to be managed to minimize the risks and ensure success of the project.

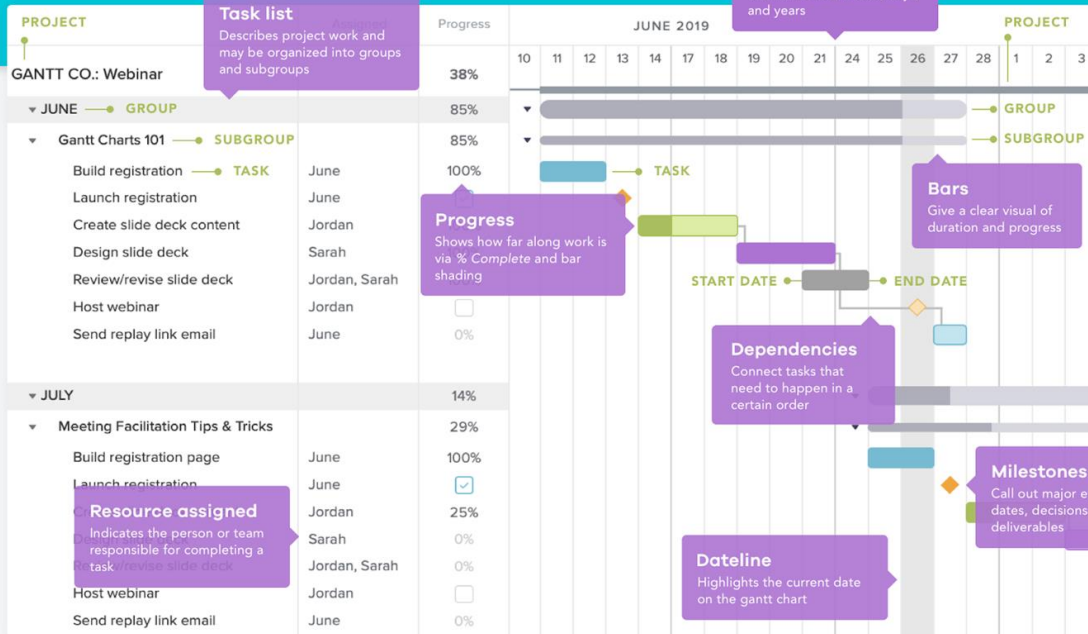
Software Project Management





Tools for Project Management

- Gantt Chart
- Critical Path Method (CPM)
- Program Evaluation and Review Technique (PERT)





Gantt Chart

- Horizontal bar chart - visually represent a project plan over time
- Modern Gantt Chart shows
 - Timeline and Status
 - Person responsible



Gantt Chart

- At a glance, Gantt chart enables you to capture:
 - How a project breaks down into tasks
 - When each task will begin and end
 - How long each task will take
 - Who's assigned to each task
 - How tasks relate to and depend on each other
 - When important meetings, approvals, or deadlines need to happen
 - How work is progressing in a project
 - The full project schedule from start to finish



Gantt Chart - Elements

- **Task List** - Runs vertically down the left - describes project work and may be organized into groups and subgroups
- **Timeline** - Runs horizontally across the top - shows years, months, weeks, and days
- **Dateline** - Vertical line showing current date
- **Bars** - Horizontal markers on the right side - represent tasks and show progress, duration, and start and end date



Gantt Chart - Elements

- **Milestones** - Yellow diamond - showing major events, dates, decisions and deliverables
- **Dependencies** - Light grey lines connecting task which happens in order
- **Progress** - Shows how far along work is - indicated by percentage completed and/or bar shading
- **Resource assigned** - Indicates the person or team responsible



Gantt Chart - When to use

- Your project has a hard deadline
- Multiple people or teams are involved in the project and need to be coordinated
- A boss, client, or team member wants to see a visual timeline of the project from beginning to end
- Your project involves even just a little complexity, such as tasks that need to be done in a specific order
- Team members work on multiple projects at a time, and you need to manage their workloads
- You have a good idea of roughly how long each task should or can take



Gantt Chart - Tools

- TeamGantt



- Microsoft Project





THANK YOU!