Project Schedule

- A schedule or timetable, as a basic management tool consists of list of times at which possible tasks, events, or actions are intended to take place or of events in the chronological order.
- The process of creating a schedule deciding how to order these task and how to commit resources between the variety of possible task is called scheduling.

Scheduling Concepts

- Effort represents the work required to perform a task. Effort is measured in person hours- it represents the total number of hours that each person spent working on the task.
- Duration is amount that elapses between the total number of hours that each person spent working on the desk is started and the time it is completed.

Scheduling Concepts

- Slack is the amount of time which any of the task and delayed without causing the due date of the final task in the sequence to be delayed as well.
- Tight schedule has very little slack. A delay in any task will cause delay in the due date.
- Overhead is any effort that does not go to the core activities of the task but is still required in order for the people to perform it.

Building the Project Schedule

- The project schedule is a calendar that links the task to be done with the resources that will do them.
- Before a project schedule can be created, the project manager must have a work breakdown structure.
- An effort estimate for each task, and a resource list with availability for each resources.

Building the Project Schedule

- Allocate Resources to the Task.
  - For each task in the WBS, One or more resources must be assigned.
  - Choose person or people for each task based on qualifications, familiarity and availability.
  - Take overhead into account when calculating the duration of each task.

Building the Project Schedule

- Identify dependencies
  - A task has a dependency if it involves an activity, resource or work product which is subsequently required by another task.
  - Task may have dependencies because they require the same resource.
  - Every dependency has a predecessor or a task that must be begun in progress or completed for another task to begin.

Building the Project Schedule

- Create the Schedule
  - In this process, the software will arrange the task to reflect dependencies.
  - Project manager finalize effort and duration information for each task with the help of this PM calculate final date and build the schedule.
  - Gantt Chart is a standard way to document software project schedule.

Building the Project Schedule

- Reconcile the schedule with the organization's need
  - First the project management software can calculate and expected due date for the project.
  - If date does not fit with the needs, the project manager should first go back to the resource list to see if the tasks can be reallocated more efficiently.
  - One way to do this is look for large gaps in the schedule.

Managing Projects

- Many Project managers are responsible for multiple projects.
- If each project is planned well managing a set of them should not be difficult.
- If there is no dependency it is very easy to manage projects.

Managing Projects

- Understanding dependency between projects
- Prioritize Projects Realistically
- Use the Schedule to manage commitments
- Diagnosing scheduling problems

Work Breakdown Structure

- A work breakdown structure (WBS) is a visual, hierarchical and deliverable-oriented deconstruction of a project.
- It is a helpful diagram for project managers because it allows them to break down their project scope and visualize all the tasks required to complete their projects.
- All the steps of project work are outlined in the work breakdown structure chart, which makes it an essential project planning tool.

Steps to create WBS

- Define the project scope, Goals and Objectives
- Identify project phases & Control Accounts
- List your Project Deliverables
- Set WBS Levels
- Create Work Packages
- Choose Task Owners

How to make WBS

- Gather Critical Documents
  - Gather critical project documents
  - Identify content containing project deliverables, such as project charter, scope and PMP.
- Identify Key Team Members
  - Identify the appropriate project team members.
  - Analyze the documents and identify the deliverables.

How to make WBS

- Define level 1 Elements
  - Define the summary deliverable descriptions that must capture 100% of the project scope.
  - This requirement is commonly referred to as the 100% Rule.
- Decompose(Breakdown) Elements
  - Breaking into unique lower Level deliverables. This technique is called Decomposition.
  - Continue breaking down the work until the work covered. Ensure that all Elements are mutually exclusive.

How to make WBS

- Create WBS Dictionary
  - Define the content of the WBS Dictionary. The WBS Dictionary is a narrative description of the work covered in each Element in the WBS.
  - Dictionary must cover 100% of the project.It should include information such as, boundaries, milestones, risks, owner, costs.
- Create Gantt Schedule
  - Export or enter the Work Breakdown Structure into a Gantt Chart for further scheduling and project tracking.

Graphical representation of project Schedule

- Gantt Chart
  - It's a dynamic bar chart that shows the project schedule on a timeline.
  - It allow project managers to visualize all of the activities that make up the project on a timeline.
- Flow Chart
  - These charts help visualize processes as a way to improve project efficiency.
  - The flow chart is a graphic display of the project's objective and helps create a logical order of the work required to reach that goal.

Graphical representation of project Schedule

- Critical Path Diagram
  - It's used to show the activities that are required to complete the project.
  - The diagram illustrates the duration of each activity and the preceding activity, how the two are related.

RACI Chart

- RACI is an acronym that stands for responsible, accountable, consulted and informed.
- A RACI is a chart that helps assign responsibilities in project management.

Graphical representation of project Schedule

- PERT Chart
  - PERT is another acronym that stands for project (or program) evaluation and review technique.
  - It provides a graphical view of the project's tasks, schedule and timelines.

Workflow Diagram

- Workflow diagrams visually show the layout of a process, project or job.
- Workflow diagrams are commonly used to show the full business process and information flows.

Graphical representation of project Schedule

- Risk Matrix
  - A risk matrix is used in project planning to identify and plan to resolve risks as they arise as issues in a project.
  - The risk matrix lists risks that could occur based on experience and historical data.

How to manage Multiple Projects

- Create an integrated plan and schedule
- Prioritize and delegate
- Communicate Constantly
- Use techniques that improve task and time management.
- Create a single source of truth for project work.
- Adapt and continuously optimize your project plan.

How to manage Multiple Projects using Wrike

- Save time searching for status updates. Wrike Dashboards and color-coded custom workflows tell you exactly what you need to know at a glance.
- View projects in one place and invite team members and stakeholders to collaborate in one easily accessible project area.
- Use Wrike Gantt Charts to visualize and manage project timelines and dependencies. When things get complicated, Gantt charts can help you see the finish line and the tasks along the way.

Challenges with managing multiple Projects

- Scope Creep
- Unrealistic Client Expectations
- Poor Communication
- Stress
- Managing resource across multiple projects
- Managing time across multiple projects

Commitment to project Success

- A commitment to success means:
  - Believing in the project and the benefits it is to deliver.
  - Taking an interest in the progress of a project.
  - Making the business' resources available to the project team to achieve success.

Schedule to Manage Commitments

- A project schedule represents a commitment by the team to perform a set of tasks.
- Person who is assigned to that task now has a commitment to complete it by the task's due date.
- Schedule as an accurate forecast of how the project is going to go When the schedule slips, it's treated as an exception, and an explanation is required.
- For this reason, the schedule is a powerful tool for commitment management .

Schedule to Manage Commitments

- Adding tasks to the schedule represents the actual improvements that need to be made.
- For example, by scheduling all of the review meetings the project manager has a much better chance of gaining a real commitment from the team.
- If the team does not feel comfortable making a commitment to the new practice, the disagreement will come up during the schedule review.
- This is usually justified with an explanation that there isn't enough time, and that implementing the change will make the task late.

Schedule to Manage Commitments

- By explicitly adding a task to the schedule, the project manager ensures that enough time is built in to account for the change.
- good consensus-building tool, allows team members to bring up the new practice when they review the project plan.
- The project manager encourages real discussion of it, and is given a chance to explain the reason for the practice during the review meetings.
- If the practice, the project manager ends up with a real commitment from the team to adopt the new practice.

Communication issues in project scheduling

- Unclear goals, unrealistic deadlines, and planning
  - Inadequate planning
  - Organizations often fail to devote enough time and effort plan for projects.
  - Failure to establish project milestones and quality test cases.
- No mechanism for feedback
  - Less accountable in work.
  - Failure to track and analyze team performance.
  - Failure to conduct frequent meetings with all stakeholders.

Communication issues in project scheduling

- Sub-optimal resource allocation
  - Project will fail if the team lacks the requisite abilities to solve the problem.
  - Failure to allocate task according to role or skill set.
  - Project Managers must compile a full list of all deliverables.
- Budgetary issues
  - Budget and resource restrictions are difficult to overcome.
  - Failure to take trade of trade-off decisions due to budget limits.
- Scope Creep

Communication issues in project scheduling

- Problem 1 : No clear view of task
- Solution 1 : Use a work Breakdown Structure
- Problem 2 : Not enough resources
- Solution 2 : Resource Leveling
- Problem 3 : No structure to the work
- Solution 3 : Create order of work
- Problem 4 : Any Overly optimistic Project Plan
- Solution 4 : Get a realistic view of outstanding work