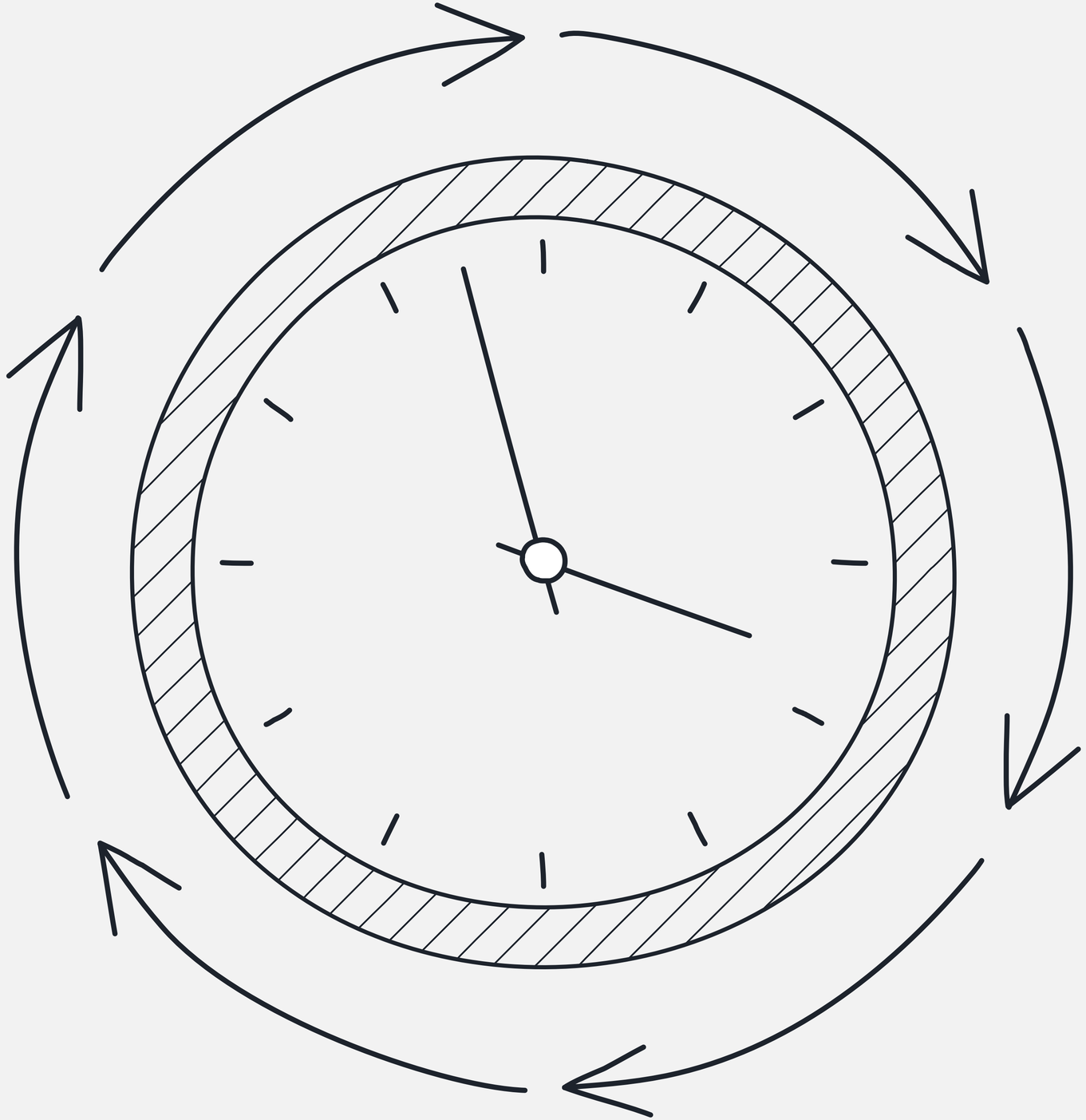
Do you ever feel like there's **not** enough **time** in the day?

We all get the same **24 hours**, so why do some people **seem to achieve more** with their time than others?

The answer is

**Good Time Management.**



**Time Management** is the process of **Organizing** and **Planning** how to divide **your time** between different activities.

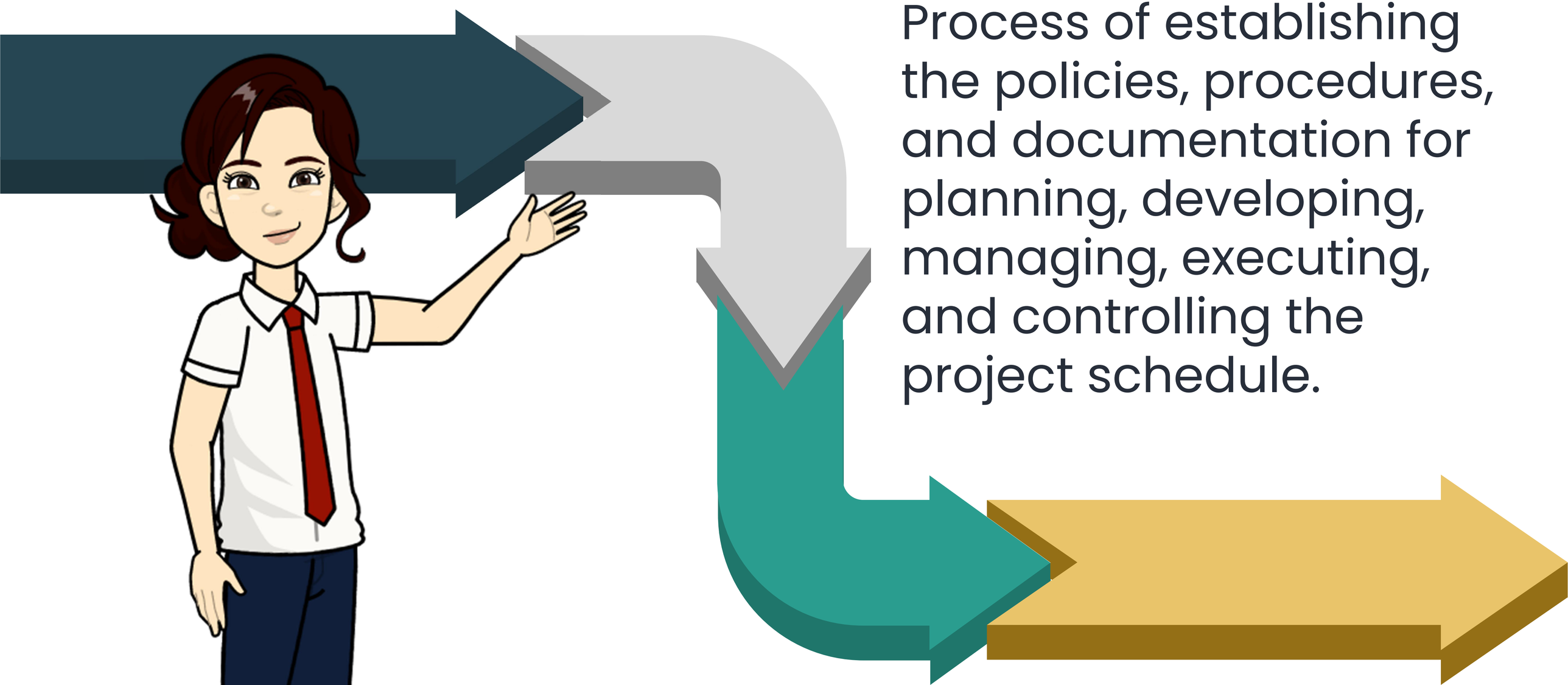
Every project has a defined **start date & end date**.

Which means **definite timeline**.

**Project Time Management** includes the processes required to **manage the timely completion** of a project.

# Time Management Process

# What is Plan Schedule Management?



Process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule.

# Plan Schedule Management

**INPUT**

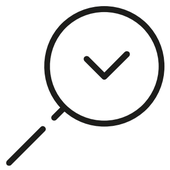
- Project Management Plan
- Project Charter
- Enterprise Environmental Factors
- Organizational Process Assets

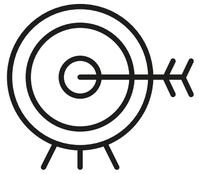
**TOOLS**

- Analytical Techniques
- Meetings
- Expert Judgment

**GOAL**

- Schedule Management Plan





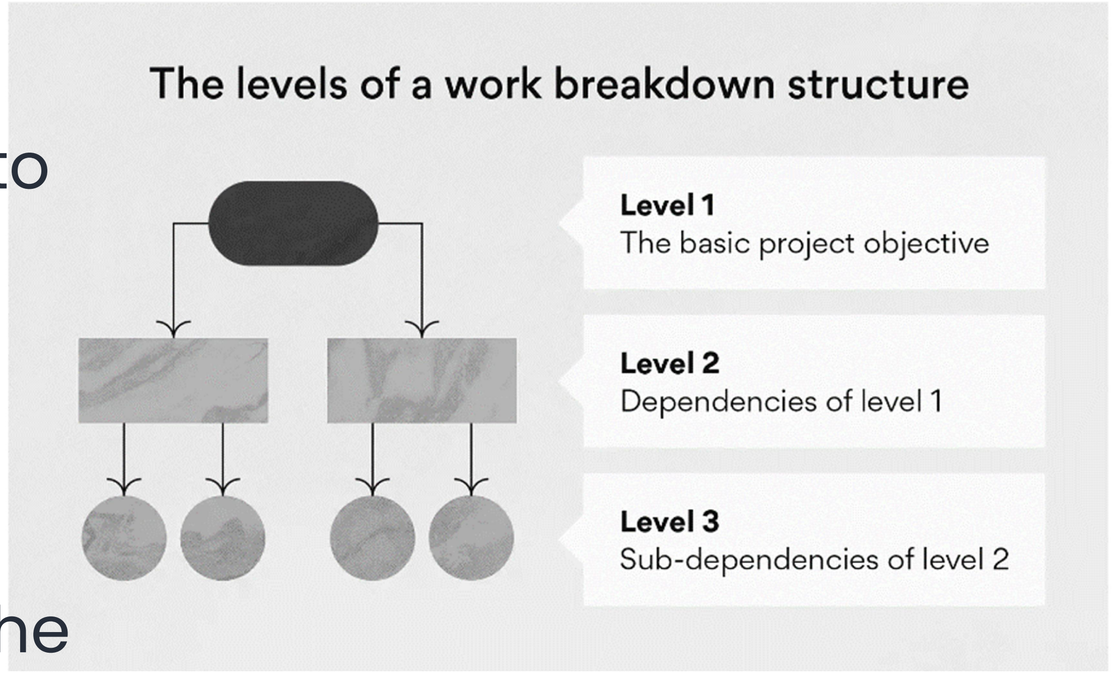

# Define Activities

Process to identify, clarify, and define key schedule activities that need to be performed to produce deliverables.

# Connecting the dots of your project schedule

Use a work breakdown structure (WBS) to bring the project schedule to life. Work breakdown structures help you coordinate work and assign it to team members.

- ❑ Use a work breakdown structure (WBS)
- ❑ Help you coordinate work and assign it to team members.
- ❑ Visual hierarchy of your task list, broken down into task dependencies.
- ❑ The first level will have the parent task, the next level would be dependent tasks on those, and so on.



# Define Activities

## INPUT

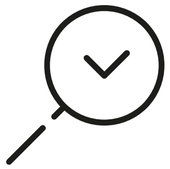
Schedule Management Plan
• Scope Baseline
• Enterprise Environmental Factors
• Organizational Process Assets

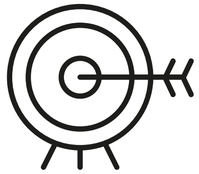
## TOOLS

- Decomposition
- • Rolling Wave Planning Plan
- • Expert Judgment

## GOAL

- Activity List
- Activity Attributes
- Milestone List





# Sequence Activities

Arrange activities in a logical order based on their dependencies.

# Sequence Activities

## INPUT

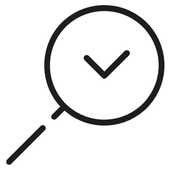
- Schedule Management Plan
- Activity List & Attributes
- Milestone List
- Project Scope Statement
- Enterprise Env. Factors
- Organizational Process Assets

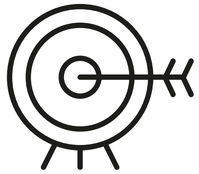
## TOOLS

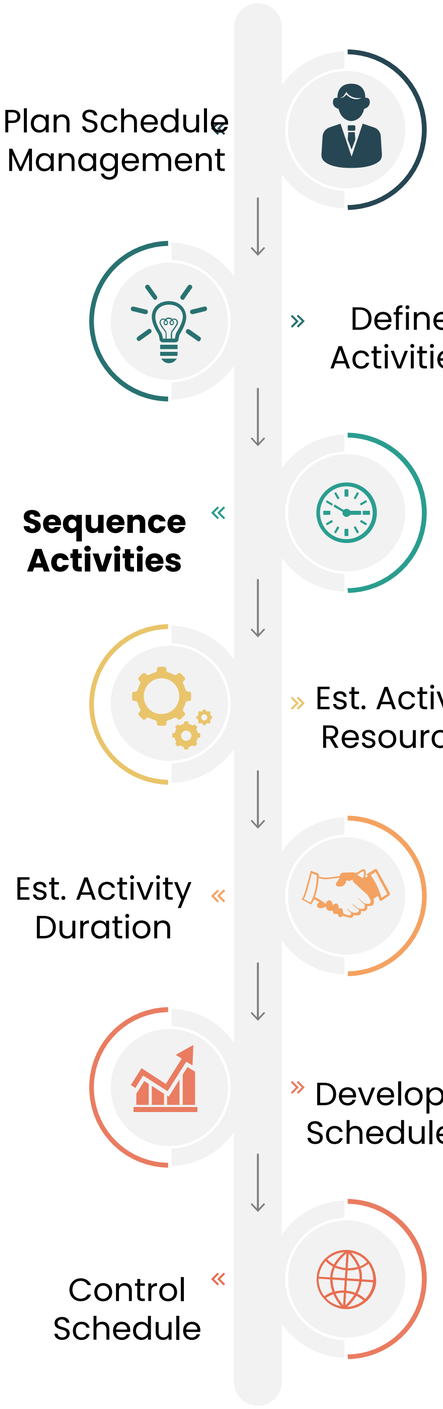
- PDM
- Leads & Lags
- Dependency Determination

## GOAL

- Project Schedule Network Diagram
- Project Documents Updates







# Estimate Activity Resources

Estimate how much/many and type of resources (people, material, equipment or supplies) needed to complete work.

# Estimate Activity Resources

## INPUT

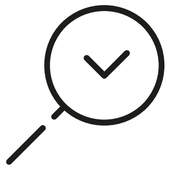
- Activity List, Attributes
- Resource Calendar
- Risk Register
- Activity Cost Est.
- Schedule Mgmt. Plan
- Enterprise Env. Factors
- Organizational Process Assets

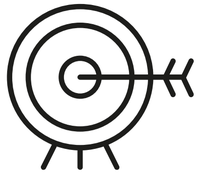
## TOOLS

- Bottom Up Estimating
- Expert Judgment
- Alternative Analysis
- Published Est. data
- Project Mgmt. Software

## GOAL

- Resource Breakdown Structure (RBS)
- Activity Resource Requirements
- Project Document updates





Plan Schedule Management

Define Activities

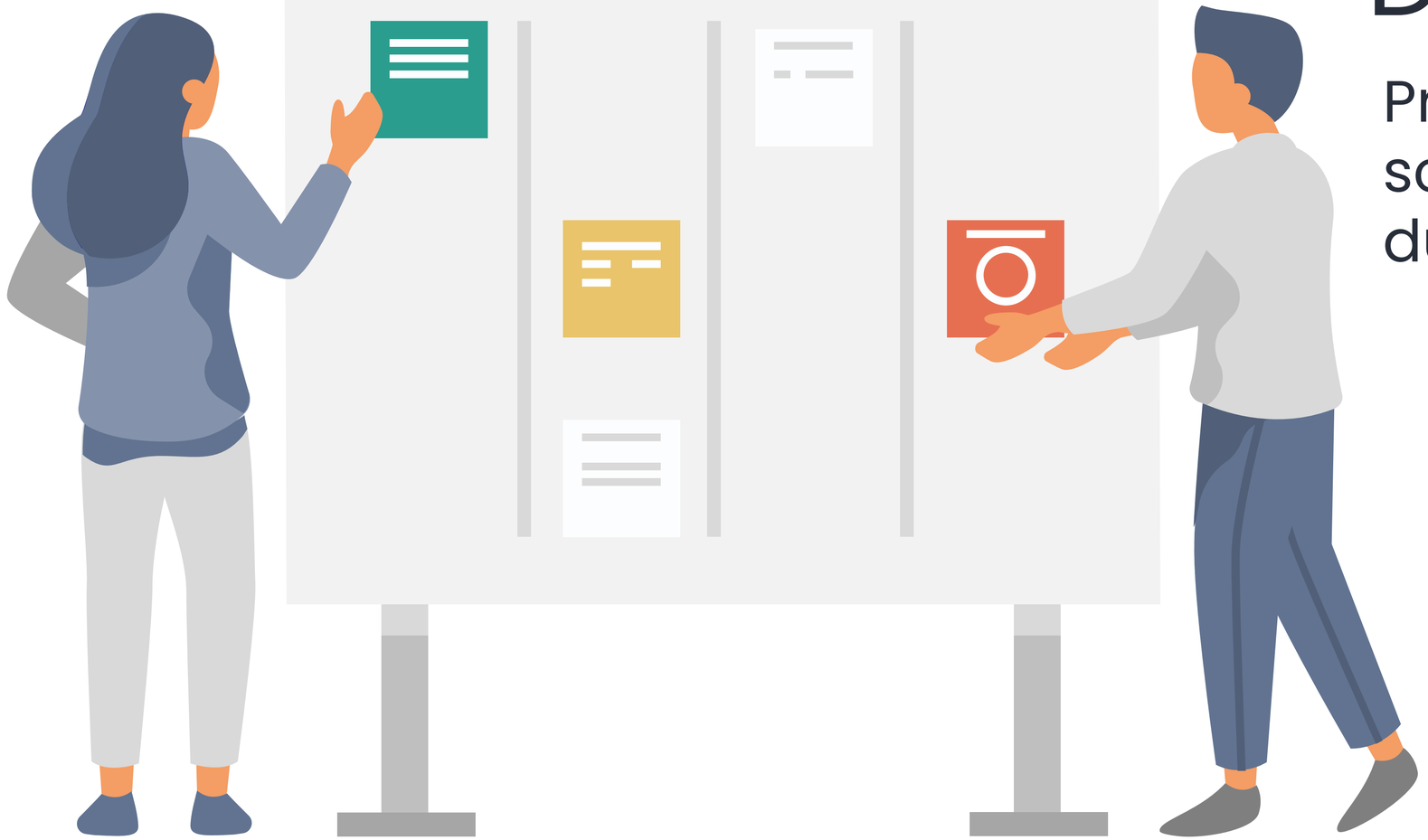
Sequence Activities

**Est. Activity Resources**

Est. Activity Duration

Develop Schedule

Control Schedule



# Estimate Activity Durations

Process of estimating schedule activity durations.

# Estimate Activity Duration

## INPUT

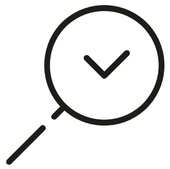
- Schedule Mgmt. Plan
- Activity List & Attributes
- Activity Resource Requirements
- Resource Calendar
- Project Scope Statement
- Risk Register
- RBS
- Enterprise Env. Factors
- Organizational Process Assets

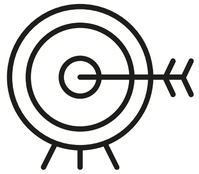
## TOOLS

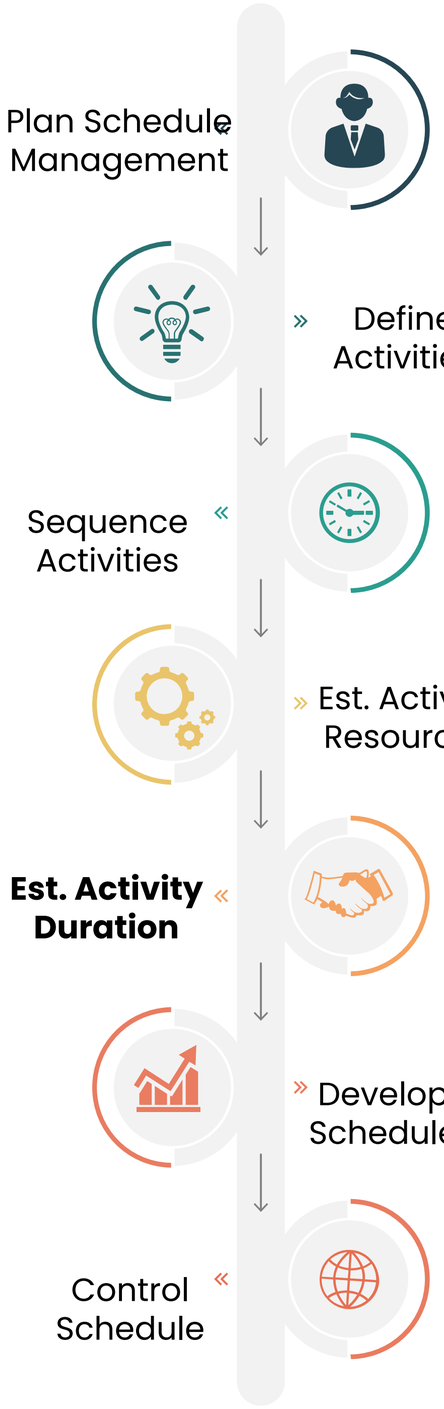
- Analogous Estimating
- Parametric Estimating
- 3 Point Estimates
- Group Making Decisions
- Reserve Analysis
- Expert Judgment

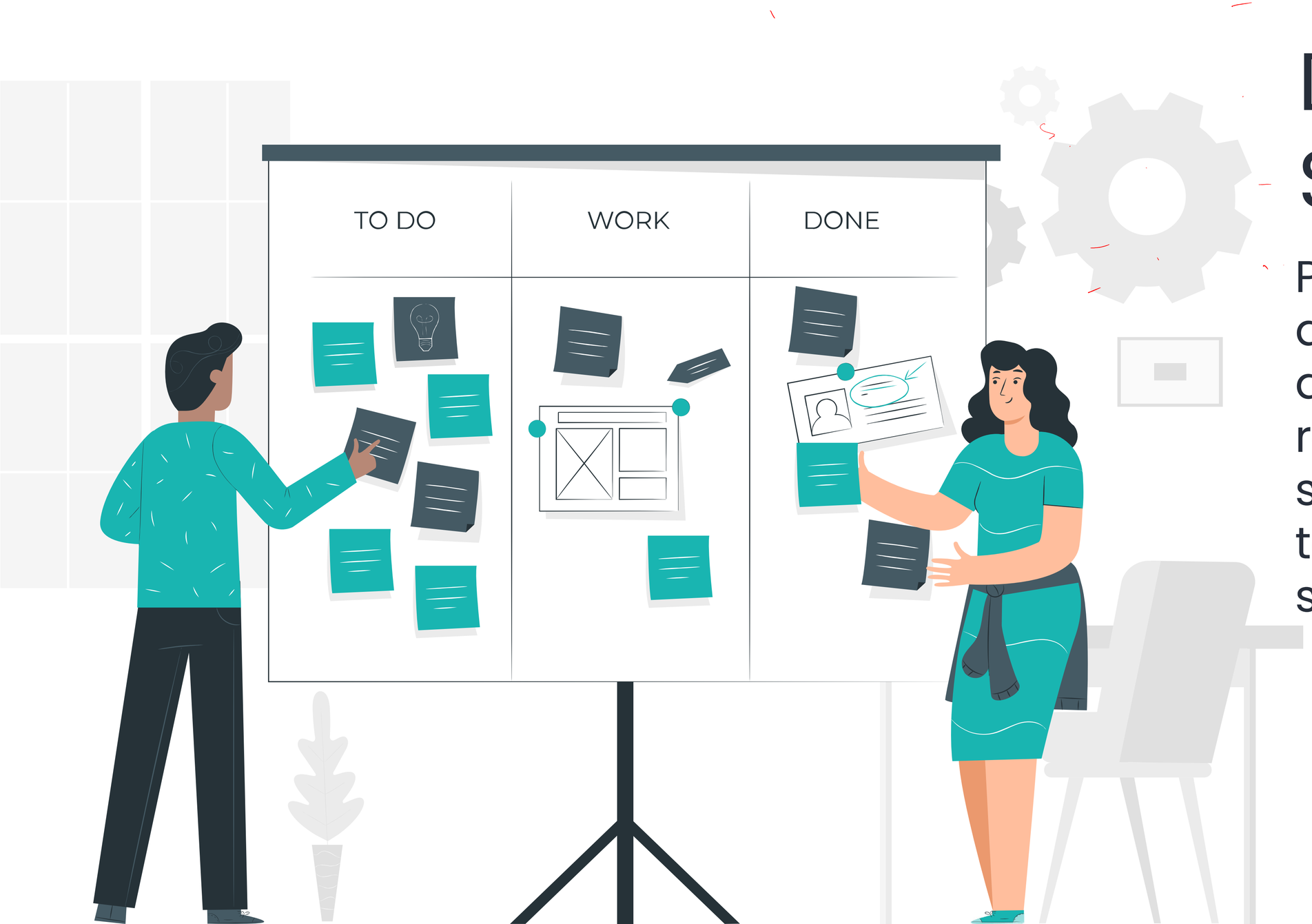
## GOAL

- Activity Duration Estimates
- Project Document Updates










# Develop Schedule

Process of analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule

# Develop Schedule

## INPUT

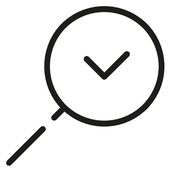
- Activity List & Attributes
- Project Schedule Network Diagram
- Activity Resource Requirements
- Project Scope Statement
- Resource Calendar
- RBS
- Risk Register
- Project Staff Assignments
- Schedule Mgmt. Plan

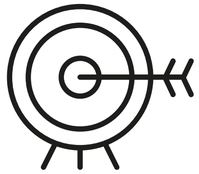
## TOOLS

- Schedule Network Analysis
- Schedule Compression
- Modeling Techniques
- Critical Path Method
- Critical Chain Method
- Scheduling Tools
- Leads & Lags

## GOAL

- Schedule Baseline
- Schedule Data
- Project Calendars
- Project Plan & Document Updates
- Project Schedule





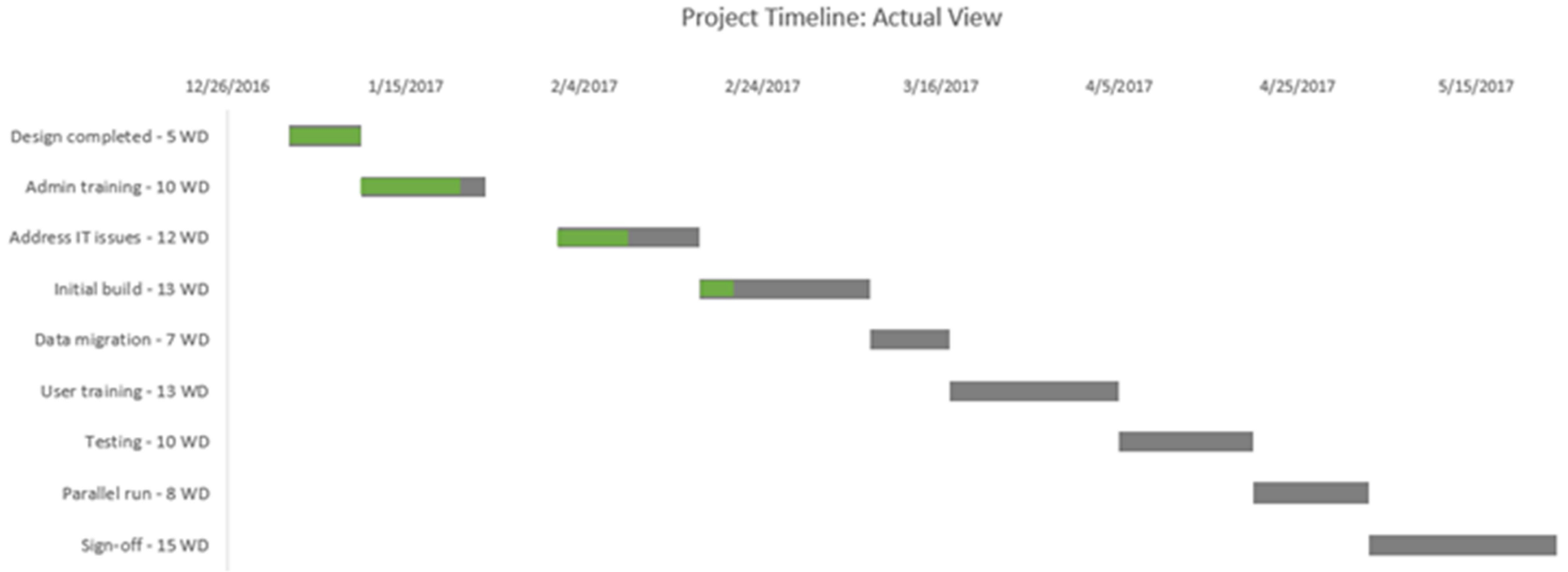
# Control Schedule

Controlling changes to project schedule.

# Variance Analysis

Variance analysis is performed to determine the degree of variance a schedule has from the baseline data.

- It compares target schedule dates with the actual start
- Helps detect variations
- Leads to the implementation of corrective actions




A schedule control table can be used to track the trends in schedule performance, showing the times when the project was behind schedule and that corrective actions were taken to bring the project back in track with the planned schedule estimates.

# Control Schedule

## INPUT

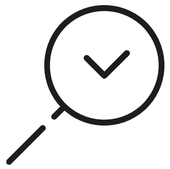
- Project Management Plan
- Project Schedule
- Work Performance Data
- Project Calendars
- Schedule Data
- Organizational Process Assets

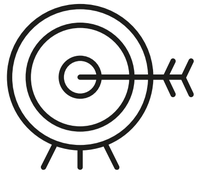
## TOOLS

- Performance Reviews
- Project Management Software
- Resource Optimization
- Techniques
- Modeling Techniques
- Leads & Lags
- Schedule Compression
- Scheduling Tool

## GOAL

- Work Performance Information
- Schedule Forecasts
- Change Requests
- Project Management Plan & project
- Documents Updates
- Organizational Process Assets Updates





Plan Schedule Management

Define Activities

Sequence Activities

Est. Activity Resources

Est. Activity Duration

Develop Schedule

**Control Schedule**

# Monitor & Control Schedule

Determining the status of the project Based on the information, What factors have influenced the changes .These may be internal or external factors.

- Determine the impact on the schedule
- Determine various actions to bring the schedule to baseline
- Or accept changes.

**Progress Report**
Progress reports are used to evaluate the impact to the schedule and determine if the project is still on track or will be delayed.

For Example some of the activities  have lasted more days than actually planned, but if the activity is not on the critical path then the project end is not affected and no action is required.

# What to do , when you find a variance ?

# Remedies to Variation

- Propose Schedule Changes
- Evaluate options available to bring the schedule back on track.
- This effort may include the use of additional resources and that can have an impact to the project budget.
- 2 simple corrective actions techniques

# Corrective Actions Techniques-1

**Crashing** is a technique for making budget and schedule trade off to obtain the greatest amount of schedule compression for the least amount of cost increase.

For example, by assigning an extra resource to an activity in order to reduce the time to complete it. The project manager must be determined if reducing the project duration is enough to justify the higher costs associated with reducing the activity. The tradeoff may be with increasing an activity duration that is not on the critical path by moving the resources assigned initially to it.

## Adding More People

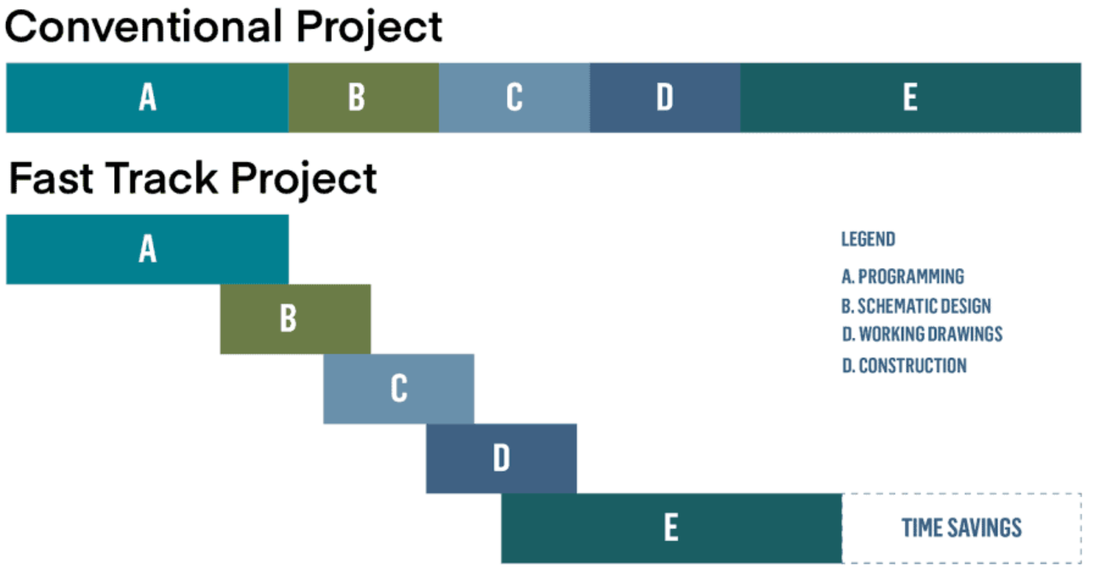
- **Brook's Law:**
- Adding developers to a late project will make it later.

# Corrective Actions Techniques- 2

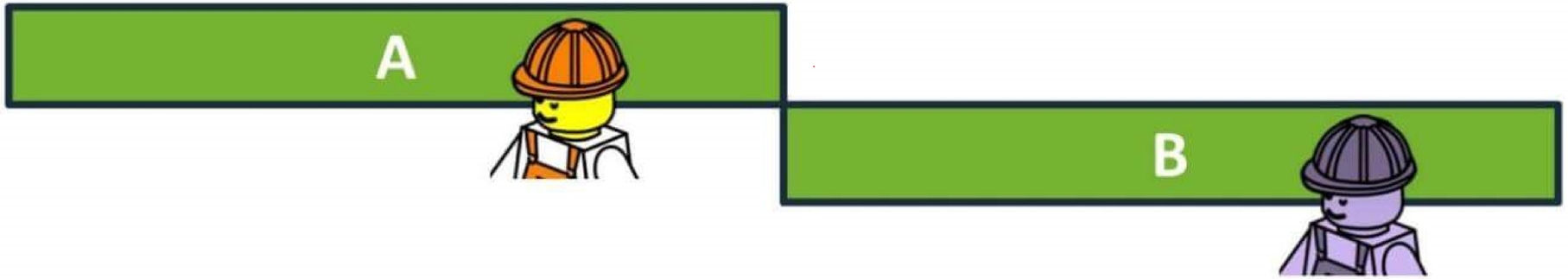
**Fast tracking** involves doing activities in parallel that was originally planned to be in sequence. The project manager must determine if there are no critical dependencies.

For example, an activity for aggregating baseline data was planned to start once all data was collected, but by fast tracking the activity could start earlier than planned and doesn't need to wait until all data is collected, some work like preparation of the database could start earlier than planned thus reducing the time to compete the project.

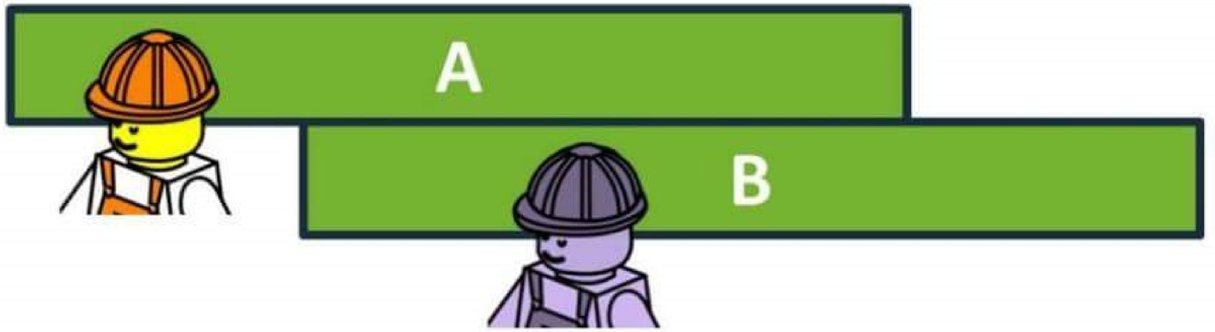
In Fast tracking, activities can be arranged to take advantage of non-dependent activities that can occur simultaneously, thus shortening the overall project timeline.



Normal

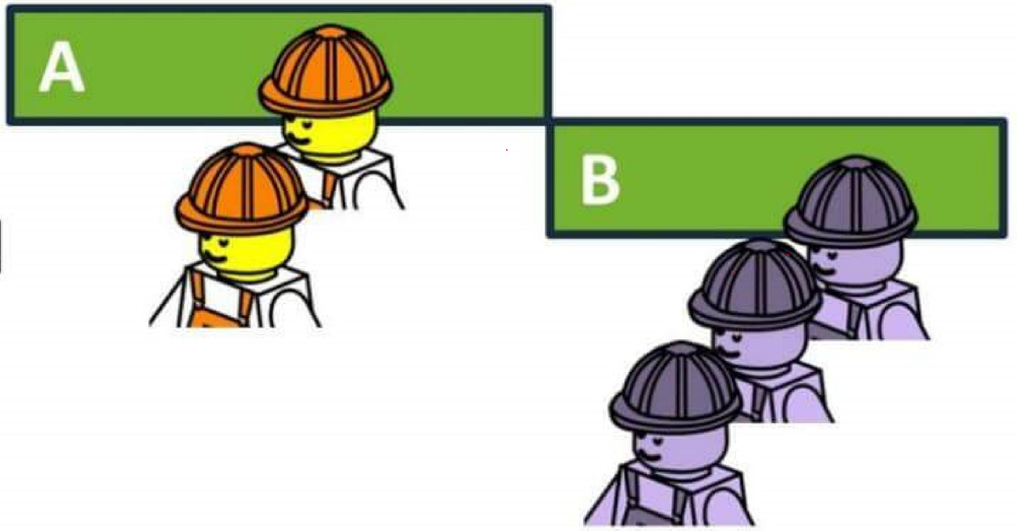



Fast Tracked




Increases Risk

Crashed




Increases Cost

# Fast Tracking vs Crashing

## Fast Tracking

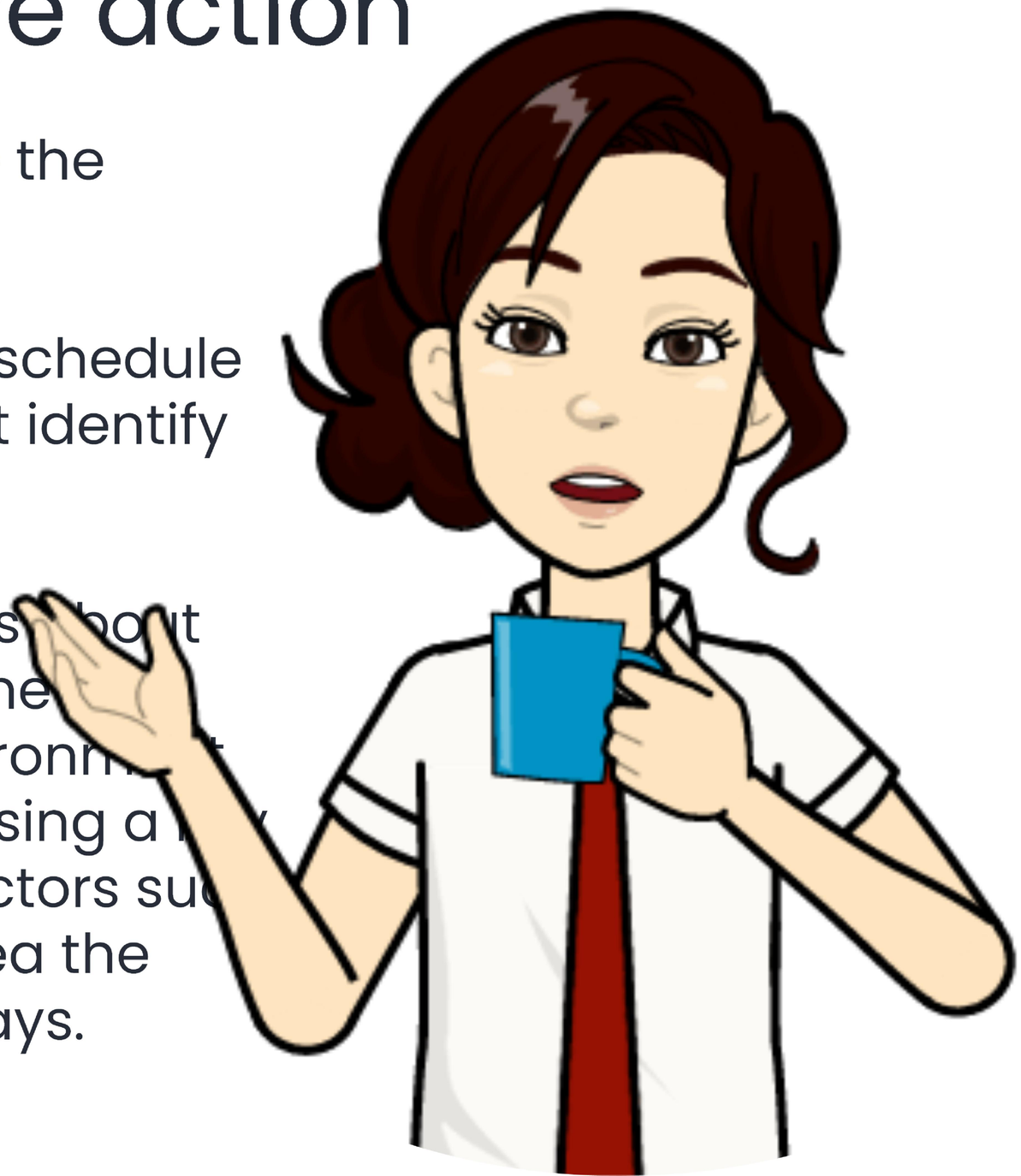
- Activities are performed in  parallel
- No Additional resources are employed
- Works with all activities in the schedule diagram
- Work only if activities can be overlapped
- May result in rework and increase risk
- Cost mostly remain the same if executed properly

## Crashing

- Sequence of activities is not changed
- Additional resources are employed
- Works only for activities on the critical path
- It does not  matter  if activities  overlap or not
- May result in increased risk
- Costs mostly increase for additional resources

# Caution with Corrective action

- Any corrective action must investigate the causes for the delays on the project
- it is not enough to change the project schedule but to understand the root causes that identify the causes of the changes.
- These may include wrong assumptions about the project at the time of developing the estimates, changes in the project environment causes by internal factors, such as loosing a key member from the team, or external factors such a social or political upheaval in the area the project works that have cause the delays.



# Critical Path Analysis

## Process of analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule

Critical Path
The Critical Path is the longest total duration. Activities on the critical path cannot be delayed or the whole project will be delayed, unless the loss of time can be offset somewhere else later on the critical path.
To find the critical path add up the duration of the activities for each possible path trough the network, to determine which has the longest total duration. The difference between the longest total duration and the shortest path(s) is the total amount of float or slack for the noncritical path activities.
The critical path is in essence the shortest time a project can be completed, even tough the critical path is the longest path on the project. It is not the path with the most critical activities it is only concerned with the time dimension; it is not either the shortest path on a project network diagram. There are cases in which a network diagram may have two critical paths that have the same total duration
To calculate the path using the diagram above use the duration of each activity and all the possible paths on the network.
Path A, Activities 1-2-4-7, total time = 90 days
Path B, Activities 1-2-5-7, total time = 80 days

# Gantt Chart

## Process of analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule

Gantt chart

Another method to display project schedule is know as the Gantt chart, it has become a popular method in project management for its use in the most common project scheduling software. It was developed by Henry Gantt in 1911 and since then has been incorporated, with some improvements, to the field of project management.

Figure Gantt chart

The chart above shows a Gantt schedule where activity durations are show as bars and the arrows show the dependencies

The steps needed to create a Gantt chart include:

- Review the network diagram to ensure all activity relationships are complete
- Review the activity durations, resource assignments and skill levels required to complete each activity
- Review the project calendar and include project dependencies and constraints
- Develop the Gantt chart and determine the time scale and the symbols to identify the activity bars and milestones

As a graphical representation of activities as segments on a time scale, the Gantt chart helps plan and monitor project development or resource allocation. The left-hand side of the Gantt chart is a column with lists of activities. The horizontal axis is a time scale, expressed either in absolute or relative time. In a Gantt chart, each activity takes up one row. Dates run along the top in increments of days, weeks or months. Rows of bars in the Gantt chart show the start and end dates

# Calculating Slack/Float

Process of analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule

# Calculating PERT

Process of analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule

# Calculating PERT

Project Time Management  includes the processes required to manage the timely completion of a project.

## Next steps after you complete your project schedule

The purpose of a project timeline is to get more work done, more efficiently. Seeing the overall picture of your project and creating a well-thought-out plan means less stress and more productivity. Once you've completed your plan, there are two more essential steps to take.

### Share it with your team

By sharing your project schedule, team members will clearly understand their responsibilities for the project and have an avenue to give insights on their pieces of the plan. Start by sending the project schedule to everyone involved and ask for specific feedback (questions, concerns, or ideas).

Stay organized by offering a central location to deliver all responses and give a firm deadline to promote timely action from team members. Once you've collected all feedback, create an updated version of the project schedule and re-share it with all stakeholders. Additionally, make sure your project schedule is included in all of your important project planning documentation, like your project brief and executive summary.

### Adapt it as you go

The only constant is change. That goes for your project plan as well. Once you've kicked off the project, make sure you're checking on your schedule consistently. Build out a change management plan, so you can adapt your schedule when unforeseen circumstances arise.

Managing your project schedule, and all project assets, in a central location will help everyone have a single source of truth and ensure the most updated version of the project schedule is being used.

### Improve efficiency: Turn your plans and schedules into templates

To save even more time planning projects, use a proven template and stop reinventing the wheel every time you press "Go" on a new project.

If your current project is an annual event—say, a vendor expo—then it's a no-brainer to get a solid project schedule in place now, so you can build off it for the next one. And what other projects do you work on that go through the same process each time? For example, your vendor expo might share comparable tasks with the virtual client luncheon you are hosting later this year. Having a project schedule template means you'll be able to launch future projects faster and more efficiently.

# Key thing before sign off

Get Schedule Approval
This step also includes negotiations with project stakeholders, for example the time a certain activity is needed by the administrative function of the organization must be negotiated so that the resources and people are made available. Another negotiation include meeting with community leaders or beneficiary representatives to agree on specific milestones or dates when the project requires the participation of the beneficiaries.
Once all people have agreed, at least in principle to the schedule, it is ready to be published. These negotiations may include in changes to the schedule, the skills of the project manager in making negotiations will determine the amount of change on the schedule. Stakeholders and management will often pressure the project team to either shorten or change the start dates of certain activities so that they do not interfere with their own schedules. The project team must learn to defend their estimates and learn to negotiate with these demands

Schedule Baseline
Once the team has completed the development of the project schedule they need to lock or set a baseline that will be used to monitor the schedule as the project makes progress. This baseline will be reviewed on a regular basis and all approved changes to the schedule will be updated against this baseline. This is the schedule that will be published to the team and stakeholders.
Communicate the Schedule
Once the project has “locked” the schedule with a baseline version it is ready to be shared with all the people that will be affected by it. This obviously includes the project team, and the best way to communicate the schedule is to draw a large version of the schedule and place it on a wall in a central location of the project office or room, this way the project schedule is visible to all the team and visitors to the project room.
A copy of the schedule also needs to reach the organization and the administrative support functions, especially management.
Stakeholders also receive a copy of the schedule, although it may include short versions that only highlight the major activities, copies can be distributed to the donor, key representatives of the community or beneficiaries, consultants, and partner organizations.
The project schedule is the principal communication tool that graphically shows the progress of the project and it is used to identify activities that are not on track, by publishing a copy of the schedule the project begins to educate the stakeholders about the project’s complexity and critical dependencies that will impact the project and ensure that all people who are responsible for delivering outputs for the project are aware of their responsibilities along the project timeline.
Schedule Updates
As the project starts to make progress, the project manager will use the activity status reports from the project team to update the schedule and update the information of progress. This information comes from the Work Assignment Sheet or the Scope of Work report detailed on chapter 7.

## Choosing a project scheduling software

Many projects can benefit from project scheduling tools, or project scheduling software that allows stakeholders to easily visualize their project scheduling process. Which project scheduling software you choose depends on your project scheduling methods, but you should ensure the ability to produce Gantt charts easily and efficiently.

The right project management scheduling techniques can zero in on individual tasks, as well as zoom out to see the bigger picture of the project milestones that need to be met.

Wrike for project management allows you to maximize your project management scheduling tools and techniques and bring 360-degree visibility to your next project.

## Features to look for in project scheduling software

### Customizable shared team calendars

Keeping your calendar clutter-free and up-to-the-minute is essential for efficient project planning. Ensuring that your project scheduling software has the functionality to connect you and your teammates' calendars to projects and tasks will guarantee that updates are seen immediately, and changes can be made exactly where and when you need them.

### Risk and issue tracking

Unnoticed risks have the power to completely overthrow a project's schedule. Project managers need to be able to identify, track, and rectify risks as soon as they arise, especially when deadlines are tight. Choose a project scheduling software with robust risk management tools so that risks can be tracked by all stakeholders in real time and escalated as soon as they begin to obstruct project progress.

### Dynamic request forms

Nothing slows a project down more than tasks being assigned to the wrong team or becoming lost in a sea of disorganization. Your project scheduling software should utilize AI to coordinate tasks and seamlessly insert tasks into your teams' workflows. Every task should be assigned to the correct person, with every stakeholder in the know about its progress.

### Customizable dashboards and work views

People work better when they can work the way they want to. Depending on your team's industry, the specific project, or the project scheduling techniques we mentioned above, you may need to utilize different views on your personal dashboard. Wrike's project scheduling software offers customizable dashboards that allow teams to assess workloads, results, and more at a glance, in any view that suits them.

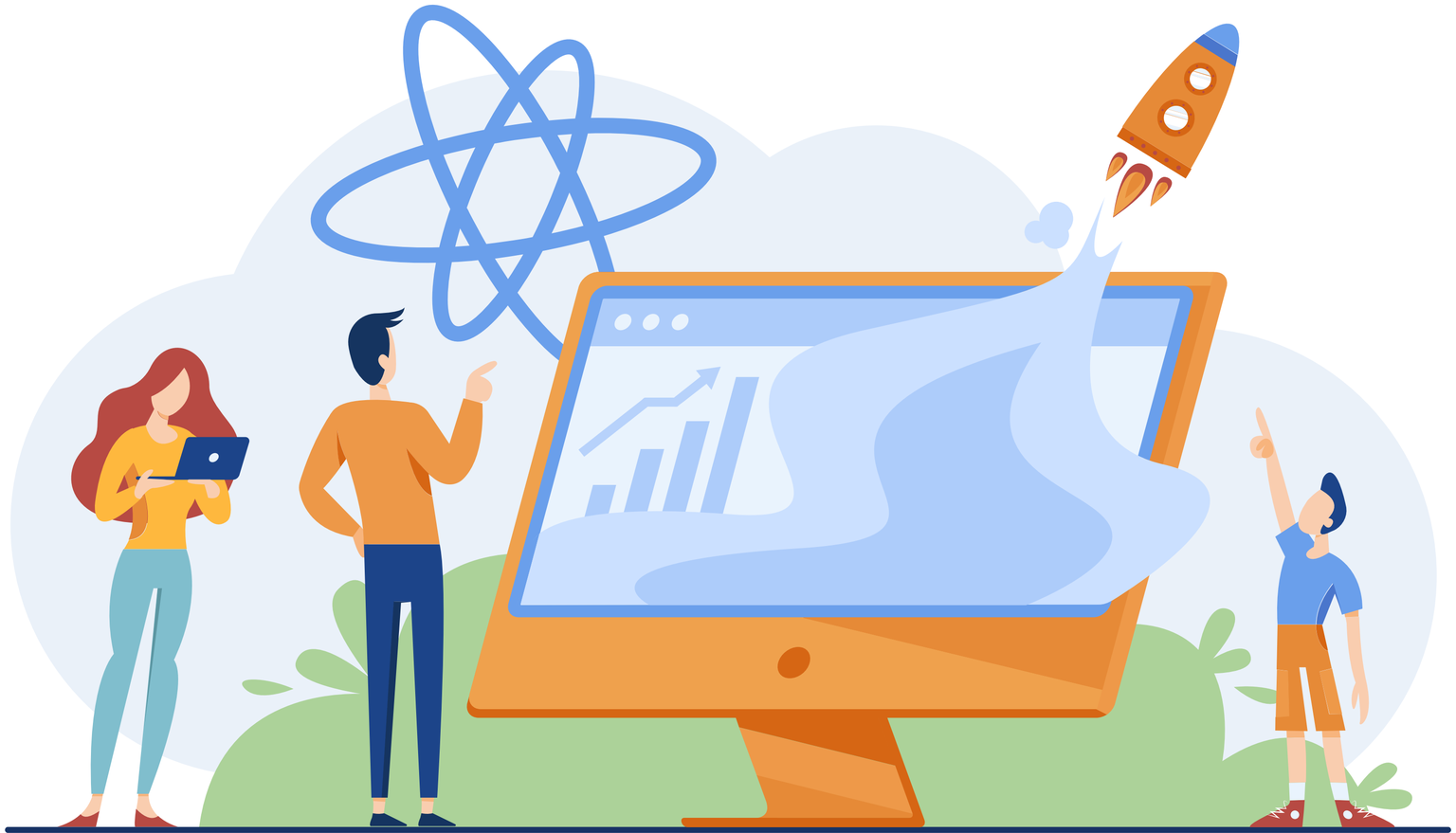
### Cross-tagging

Cross-tagging is an invaluable tool for project scheduling, as it ensures that cross-departmental tasks and projects are not lost between teams. Cross-tagging allows teams to view their work in the context of any relevant workflow or parent project. One task can live in the folder of multiple teams, easily accessible from anywhere. This ensures seamless collaboration when planning and scheduling a project, as everything you need to know is right in front of you.

# Benefits of project scheduling in project management

- Assists with tracking, reporting, and communicating progress
- Ensures everyone is on the same page with tasks, dependencies, and deadlines
- Highlights issues and concerns, such as a lack of resources
- Identifies task relationships
- Monitors progress and identify issues early

# Scheduling Tools & Software



# Benefits of Online Scheduling Tools

- ❑project managers can make data-driven time management and resource management decisions.
- ❑When they see that there’s a bottleneck or some block preventing team members from moving forward on their tasks, they can quickly reallocate resources and keep the project on track.
- ❑Managers and teams can work better together with the right online scheduling software
- ❑Manage resources and budgets at same places.
- ❑Build detailed plans for your projects
- ❑View all your work on task lists and project calendars
- ❑Get status updates to stakeholders
- ❑Create task lists for yourself and your teams
- ❑Manage start and end dates for your tasks
- ❑Manage workload and reallocate work
- ❑Monitor performance in real time
- ❑Edit with drag-and-drop scheduling

# Achieving deadlines = Success

- Planning
- Management
- Control

# SUMMARY

**Plan Schedule Management**

It is defined as the process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule.

**Define Activities**

Is the process to identify, clarify, and define key schedule activities that need to be performed to produce deliverable

**Sequence Activities**

Arrange activities in a logical order based on their dependencies.

**Estimate Activity Resources**

Estimate how much/many and type of resources (people, material, equipment or supplies) needed to complete the work.

**Estimate Activity Durations**

Process of estimating schedule activity during durations..

# Next :

## How we Manage Cost ?

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