

Tools and Techniques of Project Management

Project management tools and techniques that really work; that's the problem statement. We live in a world where we are bombarded with different scenarios and projects in our daily work life. Eventually, these variables affect us to the extent where productivity suffers at multiple levels.

These strategies and tools are properly necessary so that we can get the job done without spending more and more of our revenue and manpower, because if we spend that much energy on work activities without a proper direction in mind then you are in for serious trouble down the road.

Techniques

1. Classic technique

We often think that for completing a project or an assignment in our work-life requires the latest and the most complex tools and techniques so that we can achieve tangible results and for the most part is true but for all those other times the traditional and simplest techniques are the most appropriate for effective development in projects.

The classical technique is an amazing procedure which includes a proper plan to cover all of the upcoming work activities, which tasks are to be performed and what should be the chain of application that defines which task to do first, allocating proper and resources to the tasks according to their importance, providing and receiving proper feedback from the team which helps in team building and also monitoring the quality of the work done and how are the deadlines being met by the team.

Where to use: The Classical procedure is amazing for running projects that are performed by a team that is small in number because a larger team with a complex strategy isn't required.

2. Waterfall technique

The waterfall technique is also considered a traditional project management tool because it builds on the upper mentioned Classical approach and takes it to a whole new level.

As the title suggests, the Waterfall technique is based on your project management tasks to be dealt with in a properly sequential form where the next task is only performed and performed well when the previous task has been completed. Just like a waterfall, the tasks flow to the desired direction smoothly but only if they are completed in a sequential form.

The projects are very properly monitored while using this technique and all the steps are accountable and are actually evaluated to confirm that the process is seamless and without any issues or worries.

Where to use: The waterfall technique is an amazing technique that is used for complex projects that cannot be dealt with by the classical approach. This is because of the fact that phasing is required in the development and if you really want to deliver a successful project then a properly rigid work structuring is required.

3. Agile Project Management

The Agile approach is basically crushing the big project steps into shorter sprints that help in a detailed analysis of the whole process during development stage. This detailed analysis helps in effective and adaptive planning according to the needs and changes required in the project as it gains a proper shape.

All of these activities result in a solid continual improvement during the developmental stage, and also the teams become more organized and collaboration inclined to produce the best results possible.

Where to use: The Agile project management technique is used in projects whose development unravels in short but precise increments performed by small but highly collaborative teams.

4. Rational Unified Process (RUP)

RUP is an amazing framework that was specially designed for the software market where the software development teams and the projects they work on, can benefit from this framework and achieve the best results possible.

Rational Unified Process prescribes implementing a sequential or iterative developmental process like the Waterfall technique, but with a slight change as the feedback which is collected for the betterment of the project in all future iterations and modifications, is taken from the direct product users.

Where to use: The RUP procedure is applied to software development projects where the whole process is broken down into pieces and also where the end-user input and satisfaction is a key factor of the project.

5. Program Evaluation and Review Technique

Program Evaluation and Review Technique (PERT) is an incredible software management technique that is very widely used in a lot of different areas and industries. The way this technique works is that it facilitates the project with quite complex and amazingly detailed planned scenarios that help the development team to properly visualize the whole process and their end results on PERT charts.

The main feature that this technique has is that it performs an effective analysis of the tasks that are performed within the project. That helps the team to keep track of all of their developmental activities and fix their weaknesses.

This technique was originally designed by the US Navy during the Cold War era which helped them to increase the efficiency of the work activities that were being performed in developing new technologies.

Where to use: Program Evaluation and Review Technique is best suited for those large and long term projects where there a lot of non-routine tasks with ever-changing stakes. Also, the requirements for these projects can change according to the circumstances or a number of factors but PERT can handle them just fine.

6. Critical Path Technique

The Critical Path Technique is an amazing procedure that is used for projects and different tasks to schedule and plan the work activities, according to the requirements mentioned in the project brief. This technique is also in conjunction with the Program Evaluation and Review Technique

method mentioned above. This critical importance that technique finds out is helpful because then the development teams can control the project by playing head-on and complete the critical tasks first. This saves them precious time and they can complete the project with relative ease, once the more important work is out of the way.

Where to use: Critical Path Technique is more commonly used for very complex projects that have a lot of different tasks. And the development team has no idea what to complete first so that they can meet the deadlines and complete the project in a good time without wasting precious time and energy on doing everything at once, which generally results in them completing nothing. This procedure is generally used in areas like construction, software development, defense, and others.

7. Critical Chain Technique

Critical Chain Technique is an incredible derivation from the PERT and Critical Path Methodologies of project management. It has a more relaxed approach in terms of task orders and scheduling and suggests that there should be more flexibility while allocating resourcing to different tasks and more attention to analyze how the work time is being spent by the team on different project activities.

The CCT suggests that the work should be done on the basis of prioritization and also the dependencies relative to the project should be analyzed properly while the time spent on different activities should be optimized more carefully.

Where to use: Like the Program Evaluation and Review Technique and The Critical Path Technique, the Critical chain Technique is used in very complex projects. As it shines a more prominent light on how the team spends their time and revenue, it is best suited for the projects where the resources are limited.

8. Extreme Project Management (XPM)

Extreme Project Management technique has a more loose and optimistic approach when it comes to planning a project. It insists that the approach should be open and there should be a reduction

of formalism in the company's culture and the behavior of the management should not be stern and deterministic.

Where to use: XPM technique is commonly used in large projects where the complexity and uncertainty are high. This is because there are a large number of uncertain and unpredictable factors involved in the project that need to be addressed.

Tools

Project management is a challenging task with many complex responsibilities. Fortunately, there are many tools available to assist with accomplishing the tasks and executing the responsibilities. Some require a computer with supporting software, while others can be used manually. Project managers should choose a project management tool that best suits their management style.

1. Organizing Workflow & Planning

The most important part and the literal start of any project is the planning stage which is basically the core of the whole process. This step defines who a project will be performed and how will it take shape so that the desired quality can be ensured and achieved in the future.

Large companies tend to use comprehensive solutions like MS Project that are designed for larger teams. For smaller teams though, it's a different story. There are a lot of different alternatives on the market which you can equip yourself with that don't have all of the fancy features of those comprehensive solutions, but they still get the job done with their planning and roadmap features, useful for visualizing future project progress.

2. Communication

As it is a major factor in almost all of the techniques and methodologies in not just the project management context but also in other fields of the market, communication within a project team needs to be frequent and effective. You can use emails for all of the formal stuff, but you can also use applications like Skype and Slack for impromptu conversations among team members which will increase team collaboration resulting in positive growth in productivity.

3. Scheduling and Time Management

Money is the top factor in the development of a project or anything really. And while in certain projects you are allowed to spend more resources and time quite thoughtlessly, you have to be careful in the other projects where you spend the revenue.

This is because of the limited resources and time, that the project has from the start and also because you should not spend valuable resources on teams and equipment who might not even be available when you are envisioning the work to be done. So, you should always schedule ahead and clarify/ confirm the dates with all of the team members before spending all of the revenue on an empty room full of resources but no manpower.

4. Finance & Accounting

For any project manager and business owner, understanding financial outcome of the projects is crucial for analysis and future planning. Most used accounting tools – QuickBooks, Zoho, Fresh books – help collect this information. For smaller project teams, other accounting solutions can be reasonable. They require less investment, but also provide insights on project profitability, teams' performance, and estimation accuracy.