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# A.P. SHAH INSTITUTE OF TECHNOLOGY

Department of Computer Science and Engineering  
Data Science



## ● Need for Project Management

To understand why project management is important, we first need to define exactly what project management is.

PMI defines project management as “ the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements.” A basic project management lifecycle covers four stages:

- Initiation
- Planning
- Execution
- Closure

In other words, the purpose of project management is to plan and manage a project to successfully complete its listed goals and deliverables. It involves identifying and managing risks, carefully managing resources, smart budgeting, and clear communication across multiple teams and stakeholders.

Because projects are often complex and involve numerous stakeholders, having a project manager to lead the initiative and keep everyone on the same page is critical to project success. Using any type of project management methodology is better at meeting budget and staying on schedule while meeting scope, quality standards, and expected benefits.

Here are six reasons why you should use project management.

### 1. Realistic project planning

The need for project management during the planning phase cannot be overstated. Too often, organizations overestimate how quickly they can achieve deliverables, underestimate the costs, or both—a recipe for failure.

A good project manager considers the big picture and sets realistic and achievable goals, budgets, and timelines. Without careful management, a project can quickly get off track before it has even begun.

To set realistic goals, budgets, and timelines, the project manager communicates with different stakeholders to understand the strategic priorities and business objectives of the initiative. Based on their research, the project manager then outlines a project plan that balances those priorities within the constraints of time and budget. This process involves cost estimation, resource management, and risk assessment.



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## 2. Clear focus and objectives

Project managers help organizations hone in on their priorities and define their project objectives. This is critical work because avoiding project scope creep is a top-three driver of project success.

When project management is left to the team, the scope and objectives can easily get muddled. Unclear focus can lead to scope creep, missed deadlines, and overspending.

Plus, without a project manager to oversee the project plans and task breakdowns, many teams may not notice potential risk factors as they arise. If they don't address evolving project risks, the team could end up prioritizing the wrong tasks.

A good project manager keeps an eye on all these factors so that the team can focus on the right tasks at the right time and adapt as needed.

## 3. Strategic alignment

One of the most important reasons to use project management is to align projects with business strategy. Mark Langley, the president and CEO of PMI cautions, "If your organization is not good at project management, you're putting too much at risk in terms of ultimately delivering on strategy."

In other words, project management is a driver of organizational strategy. So if you aren't applying it to your initiatives, you are missing a crucial opportunity to grow.

As project managers oversee the planning and execution of a project, they help ensure the project's overall goals and its subsequent tasks and milestones all align with the organization's strategy. Strategic alignment at every level of the project keeps each stakeholder on the same page and ensures your initiatives drive the organization forward.

## 4. Managed process

Project management is a proactive process that seeks to help the right people do the right tasks at the right time. Without a set project management method, many teams tend to work reactively—handling issues as they arise rather than proactively planning for known risks and setting project goals and parameters from the beginning.

Project managers help teams break down a project into more manageable pieces. By breaking the project into a clear process of assigned tasks, milestones, and deadlines, project managers can direct their teams more efficiently and react to issues with greater agility.

## 5. Quality control



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Quality control is an essential component of project management. Your project could meet all parameters for time and budget, but if the quality standards aren't met, the project will be deemed a failure.

Unfortunately, this is an all-too-easy trap to fall into. Teams are under a lot of pressure to finish a project on time and on budget. And this can lead to rushed work and shoddy execution.

That's where project managers come in. They not only manage deadlines and objectives, but they also keep an eye on how well project tasks are executed. Project managers help outline deliverables and define their quality standards so that everyone knows exactly what they're aiming for.

## 6. Reduced costs

In 2021, according to PMI, 9.4% of every dollar invested was wasted due to poor project performance—that's \$94 million for every \$1 billion invested.

This underscores the need for project management. Project management reduces project costs by improving efficiency, mitigating risks, and optimizing resources. Even with the added cost of investing in a project manager, organizations stand to gain much more.

## ● Project Life cycle

The project life cycle (PLC) is a collection of logical stages or phases that maps the life of a project from its beginning to its end in order to define, build, and deliver the product of a project—that is, the information system. Each phase should provide one or more deliverables. A deliverable is a tangible and verifiable product of work. Deliverables at the end of each phase also provide tangible benefits throughout the project and serve to define the work and resources needed for each phase.

Projects should be broken up into phases to make the project more manageable and to reduce risk. Phase exits, stage gates, or kill points are the phase-end review of key deliverables that allow the organization to evaluate the project's performance and to take immediate action to correct any errors or problems. Although the deliverables at the end of a stage or phase usually are approved before proceeding to the next stage, fast tracking or starting the next phase before approval is obtained can sometimes reduce the project's schedule. Overlapping of phases can be risky and should only be done when the risk is deemed acceptable.

1. Define the project goal: Defining the project's overall goal should be the first step of the project. This goal should focus on providing business value to the organization. A well-defined goal gives the project team a clear focus and drives the other phases of the



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project.

2. Plan Project: Once the project's goal has been defined, developing the project plan is a much easier task. Some of the questions asked are:

- a. What are we going to do?
- b. Why/How are we going to do it?
- c. Who is going to be involved?
- d. How long will it take and how much will it cost?
- e. What can go wrong and what can we do about it?
- f. How did we estimate the schedule and budget?
- g. How will we know if we are successful?

In addition, the deliverables, tasks, resources, and time to complete each task must be defined for each phase of the project. This project plan defines the agreed upon scope, schedule, and budget and is used as a tool to gauge the project's performance throughout the life cycle.

3. Execute the project plan:

After the project's goal and plan have been defined, it's time to put the plan into action. As work on the project progresses, scope, schedule, budget, and people must be actively managed to ensure that the project achieves its goal. The project's progress must be documented and compared to the project's baseline plan. In addition, project performance must be communicated to all of the project's stakeholders. At the end of this phase, the project team implements or delivers a completed product to the organization.

4. Close Project:

A project should have a definite beginning and end. The closing phase of a project ensures that all of the work is completed as planned and as agreed to by the project team and the sponsor. Therefore, there should be some kind of formal acknowledgement by the sponsor that they will accept the product delivered. This closure is often capped with a final project report and presentation to the client that documents that all promised deliverables have been completed as specified.

5. Evaluate Project:

Evaluating whether the project met its goal can be made only after the system has been



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implemented. The project team should document its experiences in terms of lessons learned -those things that it would do the same and those things it would do differently on the next project, based on its current project experiences. This post mortem should be documented, stored electronically, and shared throughout the organization. Subsequently, many of these experiences can be translated into best practices and integrated into future projects. The project manager may evaluate each project team member's performance in order to provide feedback and as part of the organization's established merit and pay raise processes and procedures.

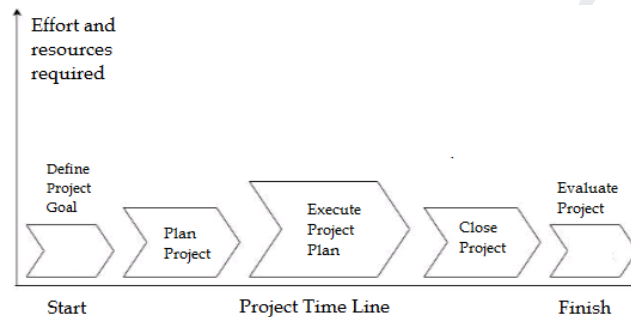


Figure: The Project Lifecycle

## ● ITPM

A methodology provides a strategic-level plan for managing and controlling IT projects.

Methodology is a template for initiating, planning, and developing an information system. It is the product and not the process of managing the project that makes the information system different.

The ITPM recommends the following phases, deliverables, tools and knowledge areas for supporting an IT project.

The following are the phases in ITPM:

### 1. Phase 1: Conceptualize and Initialize

The first stage of ITPM involves defining the goals for the project. The project's goal aids in defining the project's scope and guides decisions throughout the project life cycle. It is also used at the end to determine the success of the project. Alternatives to meet the goal must be specified and cost and benefits, risk and feasibility of these alternatives are analyzed. Based upon this analysis, one alternative is recommended and the goal and analysis is summarized in a deliverable called the business case. Senior management then takes the decision whether to fund the project or not based on the business case.





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## **2. Phase 2: Develop the Project Charter and Detailed Project Plan**

The project charter is a key deliverable in the second phase of ITPM. It defines how the project will be organized and how the project alternative that was recommended and approved for funding will be implemented. The project charter defines the project's objectives in terms of scope, schedule, budget, and quality standards and gives authority to a project manager to begin carrying out the processes and tasks associated with the systems development life cycle (SDLC). The project plan provides all the tactical details concerning who will carry out the project work and when. Sometimes the project charter and plan may be combined with a business case but this is not recommended.

## **3. Phase 3: Execute and Control the Project**

The third phase of ITPM focuses on carrying out the project plan to deliver the IT product and managing the project's processes to achieve the goal. It is during this phase that the project team uses a particular approach and set of systems analysis and design tools for implementing the systems development life cycle (SDLC). The project manager must ensure that the environment and infrastructure to support the people includes items like – technical infrastructure for development, acquisition of people with proper skills, development method and tools, a proper work environment, a detailed risk plan, quality management plan, change management plan, testing plan, implementation plan etc.

## **4. Phase 4: Close Project**

After the information system has been developed, tested, and installed, a formal acceptance should transfer control from the project team to the client or project sponsor. The project team must prepare a final project report and presentation to document and verify that all project deliverables have been completed as given in the project scope. This installs confidence in the project sponsor. The final cost of the project can be determined at this time. The project manager and team must follow a set of processes to formally close the project by doing such things as closing all project accounts, archiving all project documents and files, and releasing project resources.

## **5. Phase 5: Evaluate Project Success**

The final phase of the methodology focuses on evaluating four areas. A. A final project review should be conducted by the project manager and the team assessing what went well and what could have been done better on the project. The lessons learnt should be documented and shared with others. Best practices are identified and institutionalized in the organization.

B. The second review is between the project manager and individual team members. Although this performance review may be structured in terms of the organization's



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performance and merit review policies and procedures, it is important that each member of the team receive honest and useful feedback concerning his or her performance on the project.

C. An outside party must review the project manager and team based on – whether the project met its scope, whether the team delivered on its promises, whether the project manager and team followed due processes and other factors.

D. The project must be evaluated to see if the project provided value to the organization. In general, the value an IT project brings to the organization may not be clearly discernible immediately after the project is implemented. Therefore, it may be weeks or even months before that value is known.

Methodologies provide the team with a game plan for implementing the project and product life cycles. Additionally, a methodology provides common language between team, manager and sponsor. A good methodology should be flexible and adapt to the needs of the project organization over time.

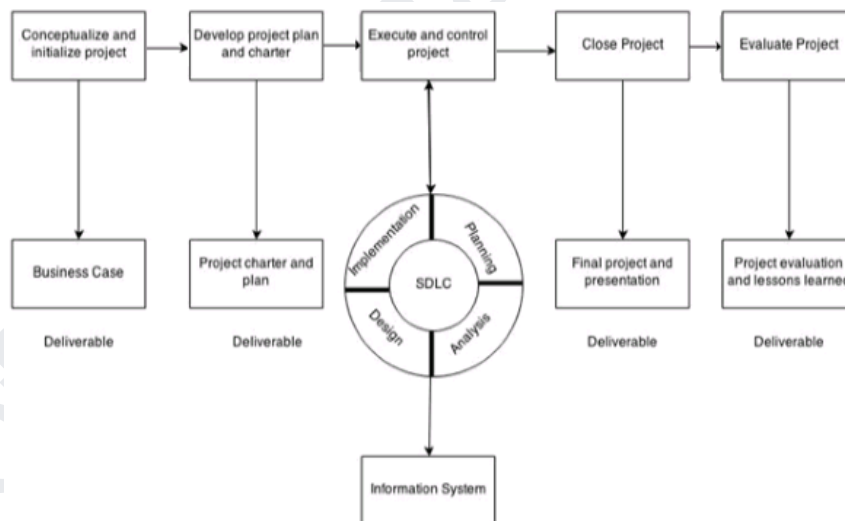


Figure: An Information Technology Project Methodology