

Your First Steps Into Project Management

Introduction to Project Management

A project is an endeavor that is temporary in nature, with a defined beginning and end. A project has the goal of creating a new and unique product, service, or result. A project is made up of planned tasks that are performed on a schedule, with a budget, and with expected outcomes or goals. Unlike operations, which are ongoing, repetitive activities, a project happens once.

A project manager is the person who is responsible for planning and executing a project from its inception to its conclusion. A project manager organizes internal and external teams as necessary to ensure the project is completed on schedule, on budget, and that it meets all the project requirements.

This guide will introduce you to the high-level themes that project management encompasses. You will become familiar with the life cycle of a project, which contains five key stages. You will explore what the project scope is, and why it is important to maintain project boundaries. Concepts such as risk management, stakeholder management, and how to communicate within the project are covered, as well as common soft skills that project managers possess.

The Project Life Cycle

The project life cycle is the structured series of stages or phases that a project goes through from its first inception through planning and execution, then final closure at its end. Each phase is described distinctly here, but these phases can and often do overlap in the real world. In fact, there are multiple possible project life cycle designs. This guide will focus on “traditional” or Waterfall project phases, but you should investigate other project types such as Agile project management.

Initiation

Every project starts somewhere, and all formal projects start here. The project is initiated when someone has a new idea to improve an existing product or service, or to create one that is entirely new. During initiation, a clear foundation is developed for the project's vision and success.

In this phase, a project charter that describes the project's scope and objectives is developed. Included in the charter is the business value the project will deliver. The charter defines roles and responsibilities, including what authority the project manager will have over resources, including a project team.

Stakeholders, those impacted by the project's success or failure, are identified and documented. Stakeholders include the project's sponsors (the folks wanting the project done), government regulatory agencies, customers, suppliers, and more. Documenting who the stakeholders are and what their interest is in the project will help later when the project manager needs to update them regarding the project.

At this early stage, an initial schedule and budget might be possible to produce based on what is known at the time. This will likely change as the scope is further refined and all tasks and milestones are broken down during project planning. Based on what is known at this point, initial resources will be identified. These can include people, machines, processes, technology, and more. Each of these will come with some kind of cost, which the project manager will use to create the initial budget.

Planning

Project planning takes the project's scope and further refines it to determine boundaries, deliverables, and deadlines. The project plan describes explicitly what the project team is going to do, how it will get done, and what the finish line looks like.

The project's deliverables are further broken down into tasks, where the duration and order of each task is determined. This is usually documented as a visual map called the Work Breakdown Structure. The WBS is useful in creating the project's schedule and to calculate

costs of resources in pursuit of developing a budget. This step is critical to validate the initial budget and timelines proposed during the project's initiation phase, or to seek additional time and funding to accomplish all objectives.

Execution, Monitoring, and Controlling

In this phase, the project plan is put into action. The project team executes tasks according to the project's schedule. The project manager tracks the completion and costs of each task, balancing resources and timelines as the project progresses.

Communication with stakeholders and between project team members is most active in this phase. The project manager will track the accomplishments of tasks and maintain updates both internally with other team members and externally to stakeholders. This keeps everyone informed so that there are no surprises.

If the project starts to deviate from the plan – for example, tasks take longer or are more expensive than envisioned during the planning stage – the project manager must detect this as soon as possible while monitoring progress. Monitoring is essentially continuous from initiation to project closure. Controlling is the term given to a project manager's efforts to right the ship if a project goes off plan. Sometimes this can be accomplished by adjusting schedules, sometimes it means allocating more resources.

Closing

A project must have an ending; it's part of the definition. The end of the project comes when the deliverables have been handed over to the project's customers or sponsor, and they accept the output. This last part is key. The customer has to accept the deliverables for the project to be considered a success.

After acceptance, the project manager documents how well the project performed. Was it completed on time? Was there a lot of scope creep? Did the project stay within its budget? What lessons were learned during the project? This information can be shared with the project team and stakeholders, as appropriate.

Any remaining open contracts or agreements with suppliers and partners should be closed during this phase. This will prevent ongoing costs from piling up.

Finally, the project team is formally released from the project so that they can be reallocated to different projects or different work.

The Importance of Project Scope

Project scope identifies the boundaries, objectives, deliverables, and requirements of a project. It serves as the critical foundation for the project's success. The project scope provides clarity about what is included and what is excluded in the project. The project scope aligns stakeholders and team members on shared expectations. Clear scope prevents "scope creep", or uncontrolled changes that expand the project's demands, leading to delays, cost overruns, and frustration.

Failing to understand the scope of a project can result in several pitfalls. Misaligned expectations will lead stakeholders and team members to conflicting opinions about the goals of the project. Time, budget, and effort may be wasted on tasks that were never planned. Undefined project deadlines or milestones will lead to poor prioritization and schedule delays.

To determine a project's scope, the project manager must engage key stakeholders to determine and document the objectives and deliverables of the project. All necessary tasks to achieve milestones must be defined. A formal agreement, the project plan, ensures all parties are on the same page about what the project is, what it will deliver, when, and on what budget.

Project Time or Schedule Management

Schedule management is necessary to keep tasks delivered when needed and to keep delays from jeopardizing the success of the project. Scheduling allows the project manager to allocate resources where they are needed, when they are needed. This

prevents over- or under-utilization. The project schedule can grow out of the creation of the project's Work Breakdown Structure or as an output of network diagramming.

Project managers use a wide variety of tools to help with project scheduling. There are simple projects in Microsoft Excel, for example. For a home project, a diagram made out of sticky notes can work. For something more complex, consider platforms such as Jira, Monday.com, or others that offer online access and collaboration. One advantage of online project management platforms is that stakeholders and team members can access the schedule in real time, provide updates and feedback, and get notified of any changes.

Project Cost or Budget Management

Budget management means achieving project objectives while remaining within the project's financial constraints. If the project cannot exceed \$10,000, then the tasks within the project must not cost more than this in total. The project manager must monitor and control the project's expenses as tasks are executed to prevent cost overruns.

The project budget includes funding for people, material, technology, and ideally a contingency reserve for unforeseen challenges. The cost of each of these is carefully forecasted during project initiation and planning and then tracked as the project is executed. Changes in scope, unexpected expenses, and delays can all impact the project's budget. The project manager may have to recalculate the budget to move resources and costs from one task to another task in order to maintain the project. In extreme cases, the project manager may need to ask for additional funding, especially if scope changes are permitted and the final deliverables are altered.

Project management software helps with budget management, with many of the same scheduling applications offering budget monitoring and forecasting components.

Project Quality Management

Quality is a project constraint that impacts the deliverable acceptance by the end client. If quality is low, the value to the customer is likely to be low and unacceptable. Higher levels of quality are often possible, but will cost more in terms of time and/or treasure. That is,

quality can influence and be influenced by both the project's budget and its schedule constraints.

Identifying and Engaging Project Stakeholders

A stakeholder is any individual person, group of people, or organization affected by or capable of influencing a project's outcome. Stakeholders might include the project sponsor, team members, customers, suppliers, government regulators, or other parties with a vested interest in the project. Successful stakeholder management is critical to achieving project goals and minimizing conflict.

Identifying stakeholders requires that the project manager develop and examine the project's scope and objectives to identify who benefits from the project, who provides resources, and who might be impacted by the results. Brainstorming, stakeholder interviews, and organizational charts are some ways to identify stakeholders. As they are identified, stakeholders should be categorized by their influence, interest, and power using tools like a stakeholder matrix. This will help to prioritize the project manager's efforts to engage the stakeholders.

The benefits of identifying and engaging stakeholders are substantial. First, it helps keep everyone interested in the project aligned with what the project's goals are. Clear communication ensures stakeholders understand the project objectives and can align their expectations accordingly. Second, engaged stakeholders are more likely to provide necessary resources such as funding, expertise, or approvals. Regular involvement and updates help uncover potential conflicts, risks, or issues early, enabling the project manager to be proactive in solutioning. Finally, collaborative engagement builds trust, making stakeholders more invested in the project's success.

Engaging stakeholders involves consistent communication, feedback loops, and updates from the project management team. Meetings, dashboards, and reports are common ways to deliver updates to stakeholders.

Impact of Resources and Constraints on a Project

Project managers must carefully assess a project's resources and constraints during the planning process so that a realistic and achievable project plan can be developed. This involves understanding the budget, team, and tools that are available, as well as constraints such as time, scope, and project risks.

The project manager creates a project budget based on the costs of resources so that funds are allocated to pay for labor, tools, and materials. The budget must also cover any necessary training to fill skill gaps that the team might have.

Constraints like timelines, project scope, and risks are also important. Market timing and regulatory requirements are external factors that can impact on the project schedule. The project manager uses tools like Gantt charts to sequence tasks and manage time dependencies. The scope is essential to align deliverables with stakeholder expectations, while a thorough risk assessment identifies potential issues so that the project manager can devise mitigation strategies.

Resources and constraints impact the project. For example, insufficient funding may require scope adjustments, while team skill or availability gaps can delay tasks or reduce quality. Outdated tools and methods can hinder productivity. Tight deadlines may force prioritization or increase costs. By balancing resources and constraints, project managers can create project plans that are practical, efficient, and aligned with the goals of the organization.

The Importance of Communication Planning in Project Management

Effective communication is the backbone of successful project management. A good communication plan ensures that information is flowing among stakeholders, team members, and other parties involved in the project. Poor communication leads to conflict and missed deadlines, jeopardizing project success. A structured communication plan brings clarity and collaboration. A communication plan keeps everyone informed, gathers

feedback in response to updates, and helps the project team adapt to changing circumstances throughout the project life cycle.

To create a communication plan that is effective, project managers need to identify project stakeholders and categorize their communication needs based on influence and interest in the project. A stakeholder matrix is a good document to begin with for this purpose. Not all stakeholders need every piece of information, and not all stakeholders will need to receive updates in the same way. Senior leaders might need high-level progress reports each month while team members require daily updates via collaboration tools such as Teams or Slack.

Next, project managers should define the objectives of project communications. This includes clarifying what information to convey to stakeholders, when to deliver communications, and what the outcomes or goals of the communication should be. Documenting decisions about each of these details is important and is done in the project's communication plan. This plan should be reviewed and updated as necessary as the project evolves so that it remains relevant and effective.

The communication plan contains several key components. The stakeholder list identifies all individuals or groups that are involved in the project or impacted by its outcomes. Communication goals and objectives describe the purpose of communication, such as ensuring transparency or generating buy-in. The plan should outline what types of communication are required, including status updates, progress reports, risk assessments, or issue escalations. It will also include methods of communication, from emails and video calls to in-person meetings and project management software.

Frequency and timing of communication should also be included in the plan so that stakeholders receive information when needed without overloading them unnecessarily. A responsibility matrix might also be included, detailing who is responsible for preparing and sending specific communications. A feedback mechanism will allow stakeholders to provide input or request more details if they need to.

Soft Skills in Project Management

While project sponsors and customers contribute to the vision of a project, it's up to the project manager to convey that vision to the project team. Later the project manager must show that the project's results match the needs of the sponsor. To get to that step, the project manager must provide a clear project vision and help the team understand their roles and contributions and the tasks that must be completed.

Project managers must be strong leaders, capable of problem-solving between team members, stakeholders, and partners. The project manager keeps the team aligned with deadlines, contributing ideas and encouraging others to do the same when a challenge emerges. Project managers must also be confident decision-makers, detecting risks early and taking timely action to avoid delays.

Identifying team members with the right blend of domain-specific know-how and an ability to work collaboratively with others is another top soft skill for project managers. No one wants to work with an otherwise brilliant, but utterly difficult team member. And when interpersonal conflict does arise, the project manager must be able to help the team navigate issues and settle disputes.