

Project management

Understanding project management basics.

Understanding project management processes

Understanding project stakeholders

Keys to successful project management

What is a project

There are two types of work performed by organizations: operations and projects.

An operation is a series of tasks that are routine, repetitive, and on going throughout the life of the organization.

Operations are typically necessary to sustain the business. (account receivables, shipping)

Projects are not routine or ongoing. They are unique and temporary and are often implemented to fulfill a strategic goal of the organization.

A project is a series of tasks that will culminate in the creation or completion of some new initiative, product or activity by a specific end date.

What is project management?

Project management is the coordinating to fulfill the goals of the project.

Project managers use knowledge, skills, tools, and methodologies to do the following:

- Identify the goals, objectives, requirements, and limitations of the project.
- Coordinate the different needs and expectations of the various project stakeholders, including team members, resource managers, senior management, customers, and sponsors.
- Plan, execute, and control the tasks, phases, and deliverables of the project based on the identified project goals and objectives.
- Close the project when completed and capture the knowledge accrued.

Project managers are also responsible for balancing and integrating competing demands to implement all aspects of the project successfully, as follows:

Project scope: Specifying the specific work to be done for the project.

Project time: Setting the finish date of the project as well as any interim deadlines for phases, milestones, and deliverables.

Project cost: Calculating and tracking the project costs and budget.

Project human resources: Signing on the team members who will carry out the tasks of the project.

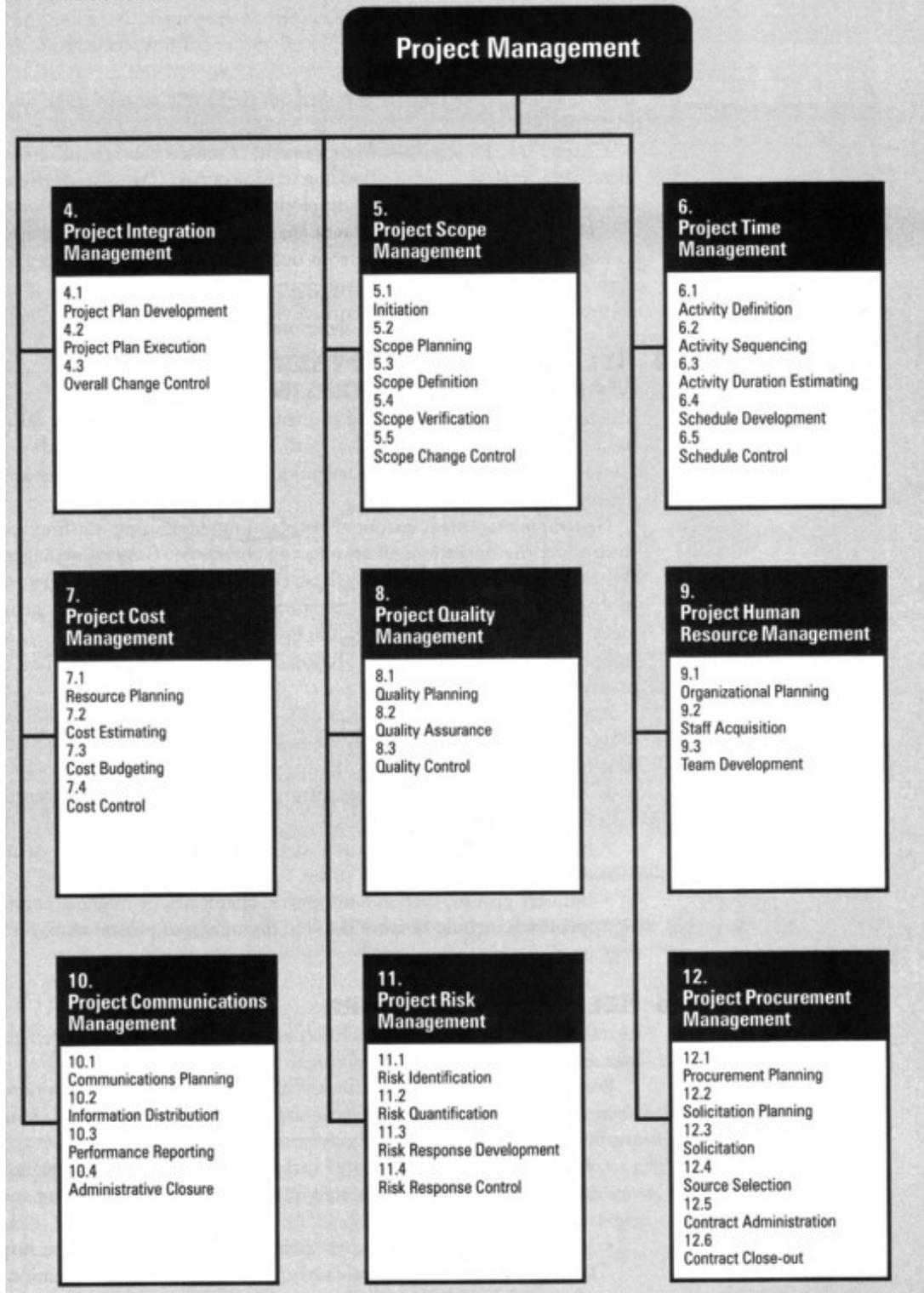
Project procurement: Acquiring the material and equipment resources with which to carry out project tasks.

Project communication: Conveying assignments, updates, reports, and other information with team members and other stakeholders.

Project quality: Identifying the acceptable level of quality for the project goals and objectives.

Project risk: Analyzing potential project risks and response planning.

-1. Overview of Project Management Knowledge Areas and Project Management Processes



Understanding project management processes

Project Management Processes

These are the four processes of project management, as well as the key elements within each process:

- Initiating and planning the project:
 - Examine the big picture
 - Identify the project's milestones, deliverables, and tasks
 - Develop and refine the project schedule
 - Identify skills, equipment, and materials needed
 - Executing the project:
 - Have assigned resources execute the project
 - Save a baseline plan for comparison
 - Track progress on tasks
 - Controlling the project:
 - Analyze project information
 - Communicate and report
 - Closing the project:
 - Identify lessons learned
 - Create a project template
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Planning the project

Look at the big picture: Before you get too far into the nuts and bolts of planning, you need a comprehensive vision of where you're going with your project.

You shape the vision by first identifying the project goals and objectives.

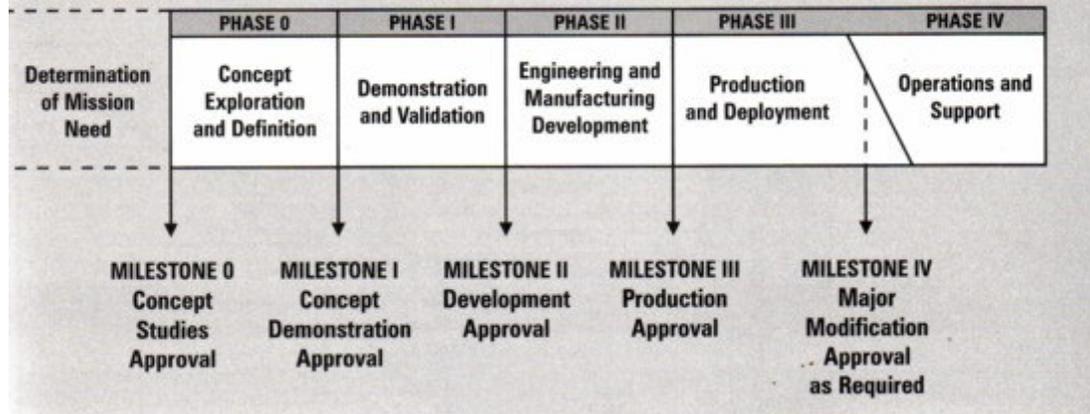
You set the scope of the project.

You learn the expectations, limitations, and assumptions for this project, and they all go into the mix.

You also identify possible risks and contingency plans for the project.

Identify the project's milestones, deliverables, and tasks.

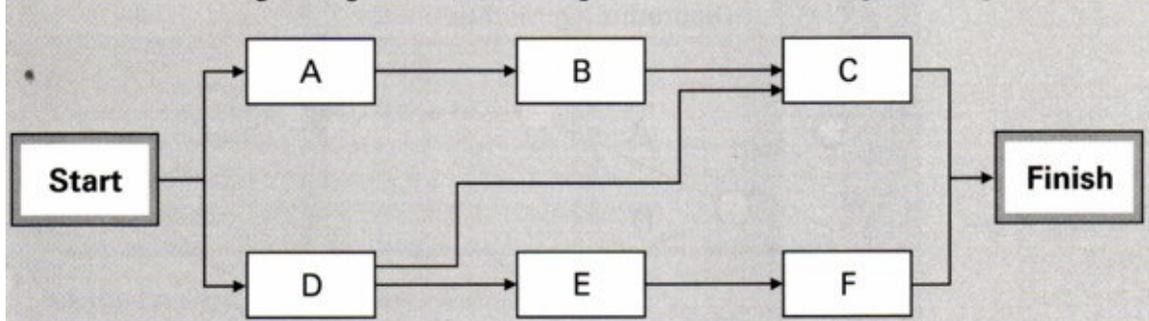
Figure 2-2. Representative Life Cycle for Defense Acquisition, per US DOD 5000.2 (Rev. 2/26/93)



Subdivide the project into its component tasks and then organize and sequence the tasks to accurately reflect the project scope.

Develop and refine the project schedule.

Figure 6-2. Network Logic Diagram Drawn Using the Precedence Diagramming Method



To turn the task list into a workable project schedule, specify task durations and relate tasks to each other.

You can create task dependencies: a model of how the start of one task depends on the completion of another task.

If you have specific dates for deliverables, you can enter them as deadlines.

Identify skills, equipment, and materials needed.

After the tasks are identified, you can:

- determine the skills, equipment, and materials needed to carry out the work for those tasks.
- Obtain the needed resources and assign them to the appropriate tasks.
- Calculate when the project can be completed and how much it will cost.
- Make the necessary adjustment.

The last three phases.

Executing the project.

Controlling the project.

Closing the project.

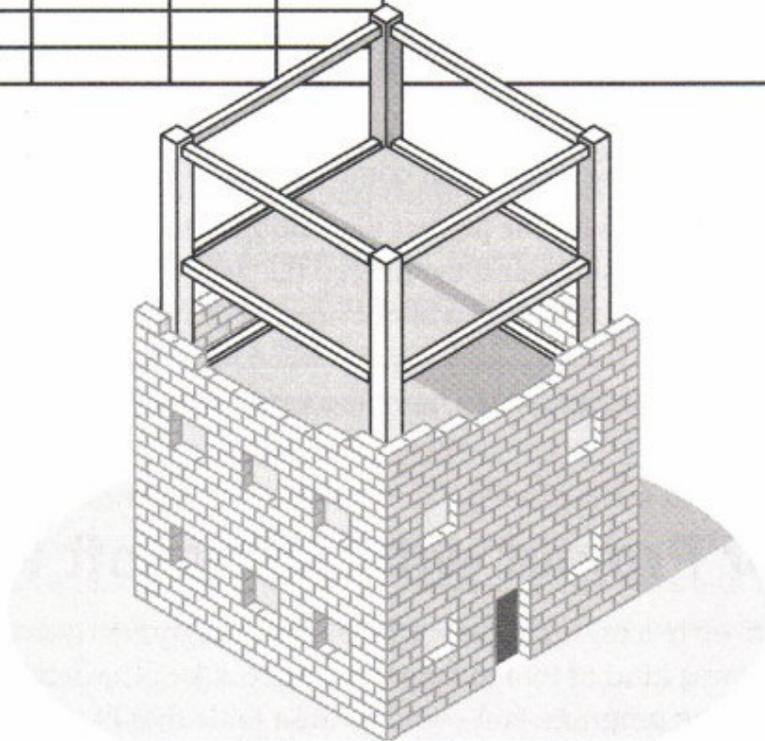
Facilitating your project with a project software

Because a project involves a myriad of tasks, resources, assignments, dates, and more you need some kind of tool to help you keep track of details.

You need to perform the following functions:

- Calculate the start and finish dates for you.
- Indicate whether assigned resources are actually available.
- Inform you if assigned resources are underallocated or overworked.
- Alert you if you have an upcoming deadline
- Calculate how much of the budget you've spent so far.
- Draw your project tasks as a Gantt chart or network diagram so you can get a visual picture of your project.

Task Name	Duration	Start	Finish	



Keys to Successful Project Management

Being well-versed in project management processes and using a powerful tool such as Microsoft Project puts you well ahead in the project management game. For an even greater edge toward a successful project, follow these guidelines:

Develop the goals and objectives. Know the overarching goals as well as the specific, measurable objectives of your project. They are your guiding principles.

Learn the scope. Know the scope (including tasks, quality, and deliverables) of your project and exactly what is expected of it. The scope includes how much you're doing (quantity) and how well you're doing it (quality).

Know your deadlines. Find out any deadlines—final as well as interim milestone and deliverable deadlines. If these deadlines are up to you to suggest, lucky you. But often this isn't your luxury. Often, you might propose one reasonable date only to have upper management or your customers suggest another, not-so-reasonable date. The sooner you learn about these dates, the better you can plan for them by adjusting the scope, the budget, and the resources.

Know your budget. If the project finish date is not your limitation, the budget might very well be. Again, it might be up to you to tell upper management how much the proposed project will cost. But it's also likely that the budget will be imposed upon you, and you'll need to be able to fulfill the goals of the project within a specific and unrelenting dollar amount. Again, the sooner you know the real budget of the project, the more realistic and accurate your plan can be. You can adjust scope, time, and resources in order to meet the budget.

Find the best resources. Gather input about who the best candidates for certain tasks are so you can get the best resources. Although the more experienced resources will likely be more expensive, they'll also be more likely to complete tasks more quickly and with a higher level of quality (likewise with equipment or consumable material resources.) Determine the acceptable level of quality for the project, balance this determination with your budget constraints, and procure the best you can get.

Enter accurate project information. You can enter tasks and durations, link them together, and assign them to resources, making it seem like you have a real project plan. But suppose the data you entered doesn't reflect the real tasks that will be done, how much time resources will really be spending on these tasks, and what needs to be done before each task can start. Then all you have is a bunch of characters and graphics on a screen or in an impressive-looking report. You don't have a project plan at all. The "garbage-in, garbage-out" maxim applies. As you're planning the project, draw upon previous experience with a similar type of project. Solicit input from resources already earmarked for the project—they can provide excellent information about which tasks need to be done, how long they take, and how tasks relate to each other.

Adjust the project plan to meet requirements. Look at the plan's calculated finish date and the total cost. See if they match your limitations for project deadline or budget. If they do not, make the necessary adjustments. This must all be done before you actually start the project—probably even before you show the project plan to any of your managing stakeholders.

Save a baseline and go. After you have a project plan that solidly reflects reality, take a “snapshot” of the plan and begin project execution. This snapshot, which is called the baseline, is the means for determining whether you’re on track and how far you might have strayed if you need to recover the schedule later.

Track progress. Many project planners take it only this far: They enter and calculate all the tasks, durations, relationships, and resources to where they can see a schedule and budget. They say “go” and everyone charges, but the plan is left behind. As project variables change (and they always do), the project plan is now useless as a blueprint for managing the project. If you want the project plan to be useful from the time you first enter, assign, and schedule tasks until the time you close the project on time and on budget, you need to maintain the project plan as a dynamic tool that accompanies you every step of the way. Maintaining the plan means tracking progress information. Suppose a task planned for 5 days takes 10 days instead. You can enter that the task actually took 10 days, and the schedule will be recalculated. Your plan will still work, and you’ll still be able to see when succeeding tasks should be completed.

Make necessary adjustments. As project variables change during project execution, you can see whether an unplanned change affects key milestones, your resources’ schedules, your budget, or your project finish date. For example, suppose that 5-day task took 10 days to complete, and it changes the project finish date and also causes the project to exceed its budget. If this happens, you can take steps well ahead of time to make the necessary adjustments and avert the impending crisis. Use the power of Microsoft Project to recalculate the project plan when actual project details vary from the plan. Then you can analyze the plan, decide on the best course of action to keep the project on track, and take action. This action might be within the project plan or outside the confines of the plan in the real world of the real project itself.

Communicate. Make sure that your team members know what’s expected of them. Pay attention when they alert you to potential problems with their tasks. Keep upper management and customers informed of your progress and of any changes to the original plan.

Close the completed project and capture information. When a project goes well, we’re often so happy that we don’t think to capture all the information we should. When a project is completed with much difficulty, sometimes we’re just relieved that we’re done with it and can’t wait to get on with the next project and forget about this unhappy nightmare. But whether a project is simple or difficult, a radiant success or a deplorable failure, there’s always much to be learned. Even if you’re not involved in any other projects of this type, other people might be. It’s important to record as much information about the project as possible. Narrative and evaluative information can be captured through a postmortem or “lessons learned” document. Project information such as tasks, resources, durations, relationships, and calendars can be recorded in a project plan itself. If the project went very well, you can even save your project plan as a template to be used for future similar projects, thereby enabling future project managers to benefit from your hard-won experience.

Project Management Terminology

The following is a list of project management–related terms:

- Baseline.** A snapshot of key project information for tasks, such as their start dates, finish dates, durations, and costs. With baseline information, you have a means of comparison against actual progress on tasks.
 - Date Constraint.** A specific date associated with a specific task. A date constraint dictates that a task must be finished by a certain date, for example, or started no earlier than a certain date.
 - Deliverable.** A tangible outcome, result, or item that must be produced to mark the completion of a project or a project phase. Often, the deliverable is subject to approval by the project sponsor or customer.
 - Dependency.** The reliance of one task upon another. When one task cannot start or finish until a related task starts or finishes, the tasks are dependent upon one another, or related. Also referred to as a *task link* or *task relationship*.
 - Gantt Chart.** A graphic representation of a project. The left half of a Gantt chart is a table listing task names and other task-related information. The right half of the Gantt chart is a bar chart along a timeline in which each bar represents a task, its start and finish date, and its duration. Links to other tasks can also be represented.
 - Milestone.** A significant event in the project, often the completion of a major deliverable or phase. Milestones are represented as part of a project’s task list.
 - Network Diagram.** A graphic representation of a project, characterized by nodes representing tasks and link lines showing the relationship among the tasks. Also sometimes called a PERT (Program Evaluation and Review Technique) chart.
 - Phase.** A grouping of tasks that represents a major stage in the life cycle of the project. The outcome of a phase is typically a major deliverable.
 - Scope.** The specific work that needs to be done in a project to deliver the product or service.
 - Stakeholders.** Individuals or organizations who have a vested interest in the outcome of the project and who can influence those project outcomes. Stakeholders include the project manager, members of the project team, the sponsoring organization, and customers.
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