

3

Developing the Project Charter and Baseline Project Plan

CHAPTER OVERVIEW

Chapter 3 focuses on developing the project charter and project plan. After studying this chapter, you should understand and be able to:

- Describe the five project management processes and how they support each phase of the project life cycle.
- Define the project management knowledge area called project integration management and describe its role in project plan development, project plan execution, and overall change control.
- Develop a project charter and describe its relationship to the project plan.
- Identify the steps in the project planning framework introduced in this chapter and describe how this framework links the project's measurable organizational value (MOV) to the project's scope, schedule, and budget.

GLOBAL TECHNOLOGY SOLUTIONS

The quiet drive back to the office was a welcome respite for Tim Williams, even though he was catching the tail end of rush hour traffic. Traffic was moving well below the speed limit, so the time alone gave him a chance to reflect on the activities of the last few weeks. The business case for Husky Air was complete, and Tim had presented it to the company's senior management not more than thirty minutes ago.

Just as Tim was about to turn on the car's radio, his cell phone rang and he was immediately brought back to reality. Tim answered, and heard his business partner Kellie Matthews ask, "So, how did it go?"

"Not bad!" Tim replied. "In fact, senior management approved our recommendation and is willing make funds available for us to go on to the next step."

Kellie laughed and teased, "I guess that means we can pay the office rent next month. So what's our next step?"

The traffic had now come to a complete stop, so Tim didn't feel that talking on his cell phone was a distraction. "Now that we've completed the business case and Husky Air gave us the approval and funds, I would say that the first phase of our project methodology is complete," he said. "The next thing we need to do is develop a project charter and baseline plan that will outline what we're going to do, how we're going to do it, when we're going to do it, and how much it will cost."

"Wow," exclaimed Kelly, "I thought that was all outlined in the business case."

"The business case was a strategic plan, the project charter and baseline project plan are going to be our tactical plan," Tim explained. "This will also be a reality check to make sure that we can deliver the application to our client within the guidelines that were specified in the business case."

"Will this require another approval by Husky Air's management?" asked Kelly.

"Actually, there will be several more," answered Tim. "In fact, the CEO was pleased that our methodology has approval or review points throughout the project life cycle. He said that Husky Air hired a consulting firm a few years ago to develop an inventory system. The consultants never kept senior management informed after the project was approved. So the CEO was surprised to find out that the project was only half complete when the agreed upon project deadline arrived. Husky Air's management had only two choices: Cancel the project and take the loss, or bite the bullet and continue funding a project that would cost twice as much as originally planned. Needless to say, they never intend on hiring that consulting firm again."

"Well if the client is happy then we should be happy as well," Kelly said.

The traffic started moving again, and Tim said "I'll see you in the office tomorrow morning. We have a lot of work ahead of us."

Kellie agreed, and they both said good-bye before hanging up. Tim relaxed as the traffic started to move again. Even though there was still much work to be done before the actual work on the system would begin, he felt good that they had cleared the first hurdle. "What the heck," he thought. He turned off at the next exit and headed for his favorite Italian restaurant. "It's important to celebrate the small but important successes along the way," he told himself. "Pizza is perfect."

Things to Think About

1. Why is it important to have several status review and decision points throughout the project's life cycle?
2. Aside from *reality checks* what other purposes do status reviews and decision points throughout the project's life cycle provide?
3. How does a business case differ from the project charter/project plan?
4. Why is it important to celebrate the small but important successes?

INTRODUCTION

Up to this point, we have looked at IT project management from a very high or strategic level. The first phase of the IT project management methodology focuses on conceptualizing and initializing the project. The primary deliverable or work effort of this phase is the development of a business case. The business case defines the project's goal and value to the organization and includes an analysis and feasibility of several alternatives. Moreover, the business case plays an important role in the project selection process by providing sufficient, reliable information to senior management so that a decision whether the organization should support and fund the project can be made.

The basic question when conceptualizing and initializing the project is, What is the value of this project to the organization? Making the right decision is critical. Abandoning a project that will provide little real value to an organization at this early stage will save a great deal of time, money, and frustration. On the other hand, failure to fund a project that has a great deal of potential value is an opportunity lost.

The development of the business case and its subsequent approval represents an important milestone in the project's life cycle. Approval also represents closure for the first phase of the IT project methodology and the beginning of the next. This second phase, developing the project charter and plan, requires the review and approval of another project deliverable before even more time, resources, and energy are committed. At this point the question becomes, How should we do it? This requires a subtle yet important transition from a strategic mindset to a more tactical one.

Unfortunately, the knowledge, tools, and techniques required to develop a tactical project plan cannot be presented in a single chapter. Therefore, the next several chapters will focus on the human side of project management, defining and managing the project's scope, and on learning how to use or apply a number of estimation methods and project management tools.

Before we get to the details, this chapter provides an overview of the project planning process. This overview will include a more detailed discussion of the five project processes that were briefly introduced in Chapter 2 as part of the IT project methodology. More specifically, it explains how these processes are integrated with the various project management knowledge areas in order to support the development of the project's tactical plan. In fact, it will concentrate on one of the nine knowledge areas called project integration management. This particular area supports and coordinates: (1) project plan development, (2) project plan execution, and (3) overall change control.

The project charter and detailed project plan make up the project's tactical plan. The project charter defines the project infrastructure and identifies the project manager, the project team, the stakeholders, and the roles each will play within the project. In addition, the project charter formalizes the project's MOV, scope, supporting processes and controls, required resources, risks, and assumptions. This project infrastructure provides the foundation for developing a detailed project plan that answers four major questions: How much will the project cost? When will the project be finished? Who will be responsible for doing the work? And, what will we ultimately get at the end of the project?

In addition, a project planning framework will be introduced in this chapter that links the project's MOV to the project's scope, schedule, and budget. This framework outlines the steps necessary to create a detailed project plan so that management can determine whether the project's budget aligns with the cost analysis conducted in the business case. If the budget exceeds the overall cost envisioned in the business case, iterations to change the plan may be necessary to bring the project's scope, schedule, and budget in line. Cost cutting measures may require using less expensive resources or trade-offs in terms of reducing the scope and schedule. If the total cost of the project exceeds the expected organizational value, then the decision to cancel the project may be appropriate before more time, money, energy, and resources are committed to the next phase. However, once the project plan is approved, it then becomes the project's baseline plan that will be executed and used to benchmark actual progress.

PROJECT MANAGEMENT PROCESSES

Processes are an integral component of project management. They support all of the activities necessary to create and implement the product of the project. As described in Chapter 2, project management processes are concerned with defining and coordinating

D'OH!

The Center for Project Management in San Ramon, California examined twenty-four IT projects and compiled a list of ten dumb mistakes. The center then presented this list to fifty conference attendees and asked them to grade their organizations on each mistake. The average grade was between a C+ and D.

<ol style="list-style-type: none"> 1. Mistaking every half-baked idea for a viable project. 2. Overlooking stakeholders, forgetting the champions, and ignoring the nemesis. 3. Not assessing the project's complexity. 4. Not developing a comprehensive project charter. 	<ol style="list-style-type: none"> 5. Not developing a comprehensive project plan. 6. Not designing a functional project organization. 7. Accepting or developing unrealistic or unachievable estimates. 8. Accepting status reports that contain mostly noise and not enough signal. 9. Looking back and not ahead. 10. Not following a robust project process architecture.
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SOURCE: Adapted from "F.Y.I.", *Computerworld*, February 26, 1996, <http://www.computerworld.com/news/1996/story/0,11280,14953,00>.

the activities and controls needed to manage the project. On the other hand, product-oriented processes focus on the tangible results of the project, such as the application system itself. The product-oriented processes require specific domain knowledge, tools, and techniques in order to complete the work. For example, you would need completely different subject matter experts (SME), tools, and methods to build a house than you would to build a spacecraft to land on Mars. As Figure 3.1 suggests, there must be a balance between project management processes and product-oriented processes. An emphasis or sole focus on the project management processes does not provide the expertise or ability to define the project's scope or develop a quality system. However, a more product-oriented focus does not provide the management or controls to ensure that the work is completed as required. Therefore, a balance is needed to complete an IT project successfully.

Project Management Process Groups

The five process groups were introduced briefly in Chapter 2. As illustrated in Figure 3.2, these process groups overlap within and between the different phases of the project life cycle since the outcome of one process group within a phase becomes the input or catalyst for a process group of the next phase.

Initiating The initiating process signals the beginning of the project or phase. It requires an organization to make a commitment in terms of time and resources. For example, the first phase of the IT project methodology recommends the development of a business case to identify several viable alternatives that can support a particular organization's strategy and goals. In short, the time and effort needed to develop the business case does not come without a cost. One can measure this cost directly in terms of the labor cost and time spent, and indirectly by the time and effort that could have been devoted to some other endeavor.

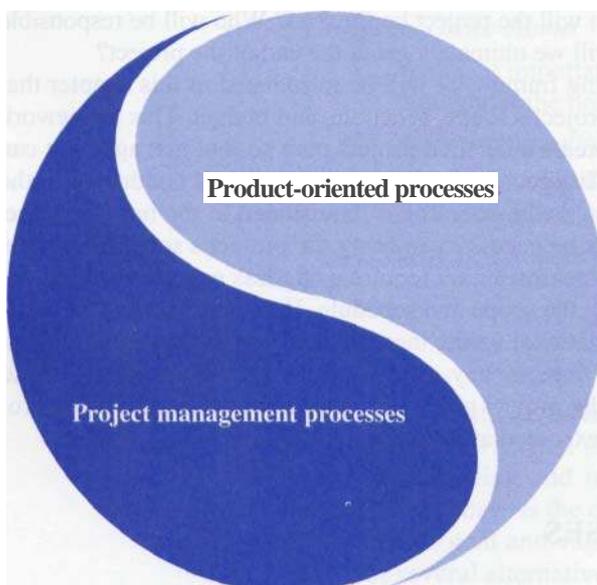


Figure 3.1 Project Processes

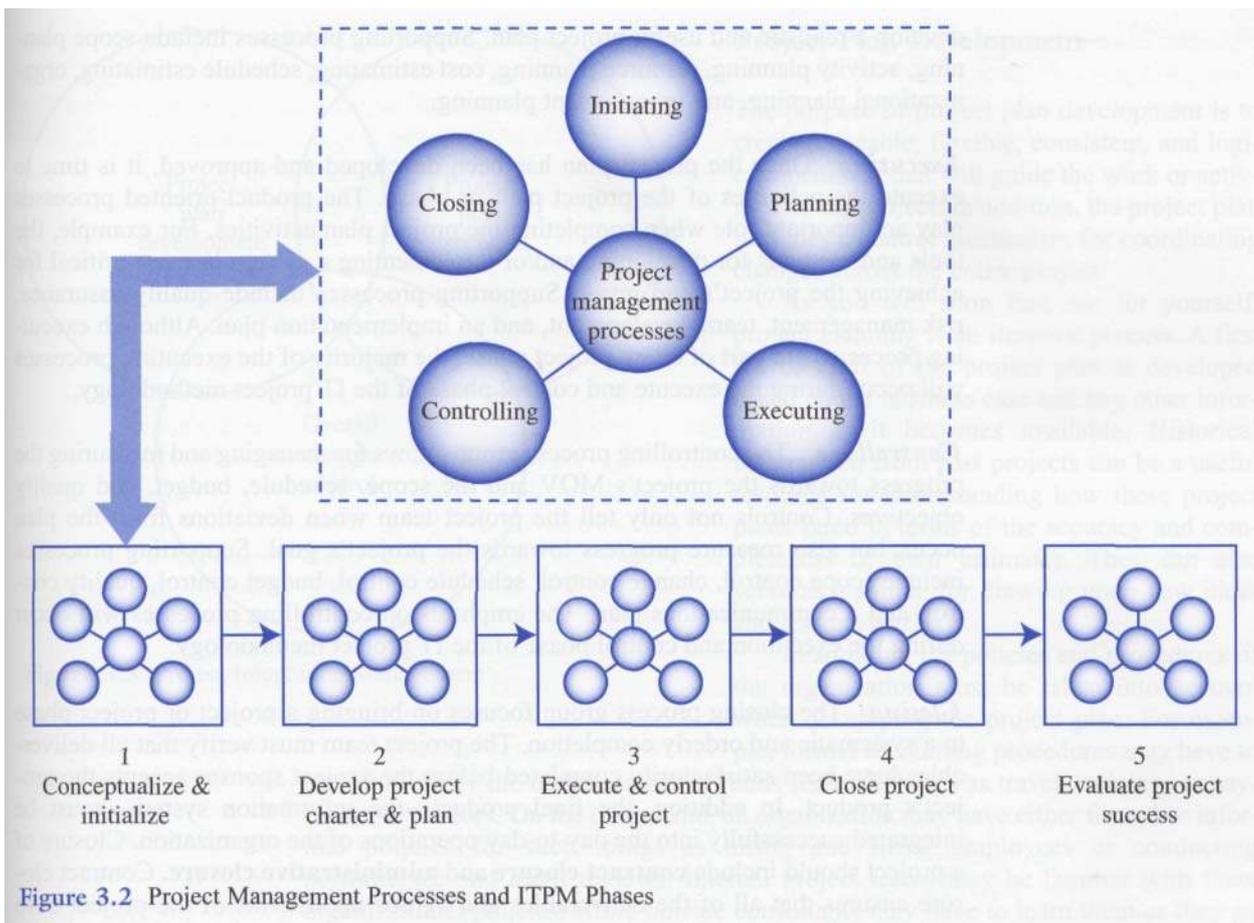


Figure 3.2 Project Management Processes and ITPM Phases

Therefore, some type of organizational commitment is needed even during the earliest stages of a project.

Similarly, a business case recommendation, once approved, becomes a project. This decision requires an even greater commitment in terms of time and resources; however, the next phase, when the actual work on the project commences, requires a commitment of even more time and resources. Although all phases of the project should have some type of initiating process, the first phase of the IT project methodology, conceptualize and initialize, requires the most detail and attention.

Planning Since projects are undertaken to create something of value that generally has not been done before, the planning process is of critical importance. The planning process should be in line with the size and complexity of the project—that is, larger, complex projects may require a greater planning effort than smaller, less complex projects. Although planning is important for each phase of the project, the second phase of the IT project methodology, developing the project charter and project plan, requires the most planning activities. In addition, planning is usually an iterative process. A project manager may develop a project plan, but senior management or the client may not approve the scope, budget, or schedule. In addition, planning is still more of an art than a science. Experience and good judgment are just as important as, and perhaps even more important to quality planning than, using the latest project management software tool. It is important that the project manager and project team

develop a realistic and useful project plan. Supporting processes include scope planning, activity planning, resource planning, cost estimating, schedule estimating, organizational planning, and procurement planning.

Executing Once the project plan has been developed and approved, it is time to execute the activities of the project plan or phase. The product-oriented processes play an important role when completing the project plan activities. For example, the tools and methods for developing and/or implementing a system become critical for achieving the project's end result. Supporting processes include quality assurance, risk management, team development, and an implementation plan. Although executing processes are part of every project phase, the majority of the executing processes will occur during the execute and control phase of the IT project methodology.

Controlling The controlling process group allows for managing and measuring the progress towards the project's MOV and the scope, schedule, budget, and quality objectives. Controls not only tell the project team when deviations from the plan occur, but also measure progress towards the project's goal. Supporting processes include scope control, change control, schedule control, budget control, quality control, and a communications plan. The emphasis on controlling processes will occur during the execution and control phase of the IT project methodology.

Closing The closing process group focuses on bringing a project or project phase to a systematic and orderly completion. The project team must verify that all deliverables have been satisfactorily completed before the project sponsor accepts the project's product. In addition, the final product—the information system—must be integrated successfully into the day-to-day operations of the organization. Closure of a project should include **contract closure** and **administrative closure**. Contract closure ensures that all of the deliverables and agreed upon terms of the project have been completed and delivered so that the project can end. It allows resources to be reassigned and settlement or payment of any account, if applicable. Administrative closure, on the other hand, involves documenting and archiving all project documents. It also includes evaluating the project in terms of whether it achieved its MOV. Lessons learned should be documented and stored in a way that allows them to be made available to other project teams, present and future. Although each phase must include closing processes, the major emphasis on closing processes will occur during the close project phase of the IT project methodology.

PROJECT INTEGRATION MANAGEMENT

The Project Management Body of Knowledge (PMBOK) views project integration management as one of the most important knowledge areas because it coordinates the other eight knowledge areas and all of the project management processes throughout the project's life cycle. It is up to the project manager to ensure that all of the activities and processes are coordinated in order for the project to meet or exceed its MOV. All of these knowledge areas and processes must come together to support the development of the project plan, its execution, and overall change control. As Figure 3.3 illustrates, project integration management includes: (1) project plan development, (2) project plan execution, and (3) overall change control. This section describes how these processes and various knowledge areas interact with each other.

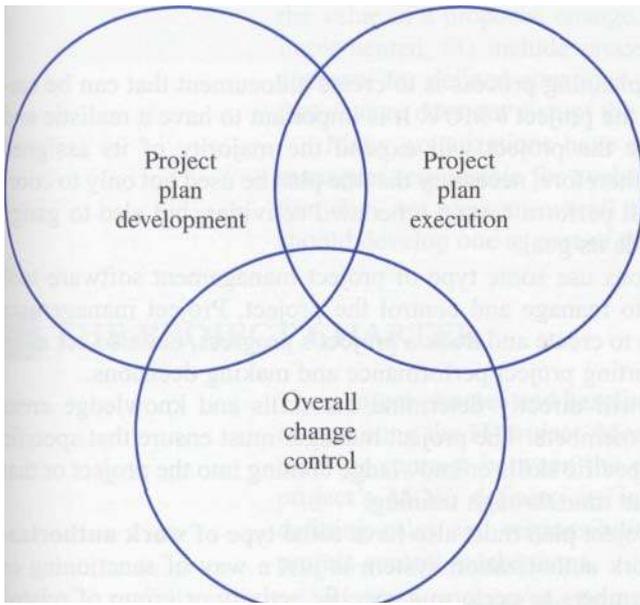


Figure 3.3 Project Integration Management

Project Plan Development

The purpose of project plan development is to create a useable, flexible, consistent, and logical document that will guide the work or activities of the project. In addition, the project plan provides a control mechanism for coordinating changes across the entire project.

As you will soon find out for yourself, project planning is an iterative process. A first cut or draft of the project plan is developed based on the business case and any other information as it becomes available. Historical information from past projects can be a useful resource for understanding how these project plans fared in terms of the accuracy and completeness of their estimates. They can also serve as a source for drawing upon new ideas and lessons learned.

In addition, the policies and procedures of the organization must be taken into account when developing the project plan. For example, formal accounting procedures may have to

be followed for the disbursement of funds for such things as travel, training, or payments to vendors. On the other hand, an organization may have either formal or informal policies for such things as hiring and firing employees or conducting performance and merit reviews. Internal project teams may be familiar with these organizational policies, while outside consultants may have to learn them as they go along. Regardless of whether the project team is internal or external to the organization, it is important that the project manager and team learn, understand, and follow these policies, because they can impact the project plan estimates.

Various constraints and assumptions must also be taken into consideration and documented when developing the project plan. **Constraints** are things that can limit the project and usually can have an impact on scope, schedule, budget, or quality. For example, the project may have to be completed by a specific date or within a predefined budget. On the other hand, **assumptions** can be thought of as things that must go right in order for the project plan to be completed as planned. Assumptions can be, for example, a skilled and experienced programmer being available by a specific date or a vendor delivering hardware and/or software in time for a development activity to begin. Constraints and assumptions are closely related to risk. The development of a risk management plan should be part of the project plan.

A method for project planning is a critical element for developing a project plan, all projects should follow a structured process. Various software tools, such as Microsoft Project, can be useful for developing the project plan.

A software tool, however, cannot create the perfect project plan by itself. The project manager should engage various stakeholders throughout the planning process. These stakeholders can be managers or subject matter experts (SME) who can contribute valuable knowledge or expertise to refine the project plan. In short, the project plan should also consider who will be needed, when they will be needed, and how they will be needed to help create the product of the project.

Project Plan Execution

The purpose of the project planning process is to create a document that can be carried out in order to achieve the project's MOV. It is important to have a realistic and usable project plan because the project will expend the majority of its assigned resources executing it. It is, therefore, necessary that the plan be used not only to coordinate the resources that will perform certain scheduled activities, but also to gauge the project's progress towards its goal.

Today, most organizations use some type of project management software tool such as Microsoft Project to manage and control the project. Project management software tools not only help to create and track a project's progress, but also act as an information system for reporting project performance and making decisions.

The project's product will directly determine the skills and knowledge areas needed by the project team members. The project manager must ensure that specific team members either have specific skills or knowledge coming into the project or that they will acquire them in due time through training.

The execution of the project plan must also have some type of **work authorization system** in place. A work authorization system is just a way of sanctioning or authorizing project team members to perform a specific activity or group of related activities to ensure that the right things are done in the proper sequence.

Depending on the size and complexity of the project, the work authorization system can be either formal or informal. For smaller projects, a work authorization system may be nothing more than the project manager giving a project team member verbal approval to begin working on a specific activity outlined in the project plan. On the other hand, activities on larger, more complex projects may require a more formal approval because each team member may be working on a piece of the application system. In turn, their activities may depend upon the activities of someone else or some other group. The project manager must have the larger picture in mind, and specific activities must be verified as being complete before other activities can begin. For example, one set of activities for an IT application system may be the gathering and documenting of requirements during the systems analysis phase. Several individuals or groups may work on this activity together. Design and programming activities should not begin until the information requirements are complete and verified; otherwise, time and resources will be wasted if changes must be made later. Experience has shown that the cost of making changes or correcting errors in the later stages of a project is more expensive.

Status review meetings are a useful tool for coordinating the project processes and activities. Status review meetings are regularly scheduled meetings that the project manager and project team members have with key stakeholders. The purpose of these meetings is to keep everyone informed as to the status of the project. Project status meetings can be formal or informal and can include different levels of stakeholders. Regularly scheduled status meetings not only keep everyone informed, but help focus the project team's attention on meeting key deadlines for deliverables. Meetings with project stakeholders tend to go more smoothly when the project is progressing as planned.

Overall Change Control

Status review meetings provide a catalyst or at least an opportunity for change. For instance, a project stakeholder may introduce an idea that would change or expand the scope of the project. Regardless whether this change increases or decreases the project's value to the organization, the project must have controls in place to manage change. Overall change controls must: (1) ensure that a process is in place to evaluate

the value of a proposed change, (2) determine whether an accepted change has been implemented, (3) include procedures for handling emergencies—that is, automatic approval for defined situations, and (4) help the project manager manage change so that change does not disrupt the focus or work of the project team.

Many organizations have a Change Control Board (CCB) made up of various managers responsible for evaluating and approving change requests. If an organization does not have an overall change control process in place, the project manager should develop one as part of the project charter.

THE PROJECT CHARTER

The project charter and baseline project plan provide a tactical plan for carrying out or executing the IT project. More specifically, the project charter serves as an agreement or contract between the project sponsor and project team—documenting the project's MOV, defining its infrastructure, summarizing the project plan details, defining roles and responsibilities, showing project commitments, and explaining project control mechanisms.

- *Documenting the Project's MOV*—Although the project's MOV was included in the business case, it is important that the MOV be clearly defined and agreed upon before developing or executing the project plan. At this point, the MOV must be cast in stone. Once agreed upon, the MOV for a project should not change. As you will see, the MOV drives the project planning process and is fundamental for all project-related decisions.
- *Defining the Project Infrastructure*—The project charter defines all of the people, resources, technology, methods, project management processes, and knowledge areas that are required to support the project. In short, the project charter will detail everything needed to carry out the project. Moreover, this infrastructure must not only be in place, but must also be taken into account when developing the project plan. For example, knowing who will be on the project team and what resources will be available to them can help the project manager estimate the amount of time a particular task or set of activities will require. It makes sense that a highly skilled and experienced team member with adequate resources should require less time to complete a certain task than an inexperienced person with inadequate resources. Keep in mind, however, that you can introduce risk to your project plan if you develop your estimates based upon the abilities of your best people. If one of these individuals should leave sometime during the project, you may have to replace them with someone less skilled or experienced. As a result, you will either have to revise your estimates or face the possibility of the project exceeding its deadline.
- *Summarizing the Details of the Project Plan*—The project charter should summarize the scope, schedule, budget, quality objectives, deliverables, and milestones of the project. It should serve as an important communication tool that provides a consolidated source of information about the project that can be referenced throughout the project life cycle.
- *Defining Roles and Responsibilities*—The project charter should not only identify the project sponsor, project manager, and project team, but also when and how they will be involved throughout the project life cycle. In addition, the project charter should specify the lines of reporting and who will be responsible for specific decisions.

ARE IT PROJECTS DIFFERENT?

Many organizations view project management as an investment to improve the likelihood of success of IT projects. However, Gopal K. Kapur believes that the principles and practices of project management have been developed by the engineering profession. Based upon his experience, first as a civil engineer and then as an IT project manager, Kapur strongly believes that IT projects are more difficult to manage than engineering projects. For IT project management to work, the IT profession must adapt and expand the engineering Project Management Body of Knowledge. Kapur lists seven key differences:

1. The engineer uses artists' renderings, architectural models, and drawings that describe clearly the final product or end state *before* construction begins. However, the final product or end state of an IT project is not always clearly defined or known until the later stages of the project.
2. The phases of a construction project are more linear, and the boundaries for each phase are well defined. On the other hand, the phases of an IT project are more complex because they tend to overlap or spiral.
3. The construction process for engineering projects is based on fabricating the end product from pretested and predesigned components, while the code for most IT projects must be developed or written from scratch.
4. The deliverables for most engineering projects are defined precisely in terms of specifications. Deliverables for IT projects, however, are seldom defined as precisely and may be open to interpretation by various stakeholders.
5. Engineering projects often have extensive data bases that contain accurate cost information that are available to estimators. IT estimation generally is based on best guess estimates because there are few sources that can provide historical information.
6. In engineering projects, the roles and responsibilities of team members are generally well defined (e.g., carpenters, plumbers, electricians, painters, and so forth), while a single person on an IT project may have to take on several roles or responsibilities.
7. Engineering drawings and specifications make use of standardized symbols, terms, and text. Little confusion arises from blueprints that depict electrical wiring or a map of the landscape. IT vendors, on the other hand, tend to try to create new terms, symbols, or text in order to distinguish themselves from their competition.

SOURCE: Adapted from Gopal K. Kapur, Why IT Project Management is So Hard to Grasp, *Computerworld*, May 3, 1999, <http://www.com-puterworld.com/managementtopics/management/project/story/0,1080,1,35529,00.Jrhtml>.

- *Showing Explicit Commitment to the Project*—In addition to defining the roles and responsibilities of the various stakeholders, the project charter should detail the resources to be provided by the project sponsor and specify clearly who will take ownership of the project's product once the project is completed. Approval of the project charter gives the project team the formal authority to begin work on the project.
- *Setting Out Project Control Mechanisms*—Changes to the project's scope, schedule, and budget will undoubtedly be required over the course of the project. But, the project manager can lose control and the project team can lose its focus if these changes are not managed properly. Therefore, the project charter should outline a process for requesting and responding to proposed changes.

In general, the project charter and project plan should be developed together—the details of the project plan need to be summarized in the project charter, and the infrastructure outlined in the project charter will influence the estimates used in developing the project plan. It is the responsibility of the project manager to ensure that the project charter and plan are developed, agreed upon, and approved. Like the business case, the project charter and plan should be developed with both the project team and the project sponsor to ensure that the project will support the organization and that the goal and objective of the project are realistic and achievable.

What Should Be in a Project Charter?

The framework for a project charter should be based on the nine project management knowledge areas and processes. Although the formality and depth of developing a project charter will most likely depend on the size and complexity of the project, the fundamental project management processes and areas should be addressed and included for all projects. This section presents an overview of the typical areas that may go into a project charter; however, organizations and project managers should adapt the project charter based on best practices, experience, and the project itself.

Project Identification It is common for all projects to have a unique name or a way to identify them. It is especially necessary if an organization has several projects underway at once. Naming a project can also give the project team and stakeholders a sense of identity and ownership. Often organizations will use some type of acronym for the project's name. For example, instead of naming a project something as mundane as the Flight Reservation System in 1965, American Airlines named its system SABRE. Today, SABRE has become a well-recognized product that connects travel agents and online customers with all of the major airlines, car rental companies, hotels, railways, and cruise lines.

Project Stakeholders It is important that the project charter specifically name the project sponsor and the project manager. This reduces the likelihood of confusion when determining who will take ownership of the project's product and who will be the leader of the project. In addition, the project team should be named along with their titles or roles in the project, their phone numbers, and e-mail addresses. This section should describe who will be involved in the project, how they will be involved, and when they will be involved. Formal reporting relationships can be specified and may be useful on larger projects. In addition, including telephone numbers and e-mail addresses can provide a handy directory for getting in touch with the various participants.

Project Description The project charter should be a single source of information. Therefore, it may be useful to include a description of the project to help someone unfamiliar with the project understand not only the details, but the larger picture as well. This may include a brief overview or background of the project as to the problem or opportunity that became a catalyst for the project and the reason or purpose for taking on the project. It may also be useful to include the vision of the organization or project and how it aligns with the organization's goal and strategy. Much of this section could summarize the total benefits expected from the project that were described in the business case. It is important that the project description focus on the business and not the technology.

Measurable Organizational Value (MOV) The MOV should be clear, concise, agreed upon, and made explicit to all of the project stakeholders. Therefore, the project's MOV should be highlighted and easily identifiable in the project charter.

Project Scope The project's scope is the work to be completed. A specific section of the project charter should clarify not only what will be produced or delivered by the project team, but also what will *not* be part of the project's scope. This distinction is important for two reasons. First, it provides the foundation for developing the project plan's schedule and cost estimates. Changes to the project's scope will impact the project's schedule and budget—that is, if resources are fixed, expanding the amount work you have to complete will take more time and money. Therefore, the creation of additional work for the project team will extend the project's schedule and invariably increase the cost of the

project. Formal procedures must be in place to control and manage the project's scope. Secondly, it is important for the project manager to manage the expectations of the project sponsor and the project team. By making the project's scope explicit as to what is and what is not to be delivered, the likelihood of confusion and misunderstanding is reduced. For example, the project team and several users may have several discussions regarding the scope of a project. One user may suggest that the system should allow for the download of reports to a wireless personal digital assistant (PDA). After discussing this idea in depth, management may decide that the cost and time to add this wireless PDA capability would not be in the organization's best interest. In this case, it would be a good idea to explicitly state in the project charter that wireless PDA capability will not be part of the project's scope. Although *you* may be clear on this issue, others may still have different expectations. The project's scope should, therefore, define key deliverables and/or high-level descriptions of the information system's functionality. The details of the system's features and functionality will, however, be determined later in the systems development life cycle when the project team conducts an information requirements analysis.

Project Schedule Although the details of the project's schedule will be in the project plan, it is important to summarize the detail of the plan with respect to the expected start and completion dates. In addition, expected dates for major deliverables, milestones, and phases should be highlighted and summarized at a very high level.

Project Budget A section of the project charter should highlight the total cost of the project. The total cost of the project should be summarized directly from the project plan.

Quality Issues Although a quality management plan should be in place to support the project, a section that identifies any known or required quality standards should be made explicit in the project charter. For example, an application system's reports may have to meet a government agency's requirements.

Resources Because the project charter acts as an agreement or contract, it may be useful to specify the resources required and who is responsible for providing those resources. Resources may include people, technology, or facilities to support the project team. It would be somewhat awkward for a team of consultants to arrive at the client's organization and find that the only space available for them to work is a corner table in the company cafeteria! Therefore, explicitly outlining the resources needed and who is responsible for what can reduce the likelihood for confusion or misunderstanding.

Assumptions and Risks Any risks or assumptions should be documented in the project charter. Assumptions may include things that must go right, such as a particular team member being available for the project, or specific criteria used in developing the project plan estimates. Risks, on the other hand, may be thought of as anything that can go wrong or things that may impact the success of the project. Although a risk management plan should be in place to support the project team, the project charter should summarize the following potential impacts:

- *Key situations or events that could significantly impact the project's scope, schedule, or budget.* These risks, their likelihood, and the strategy to overcome or minimize their impact should be detailed in the project's risk plan.
- *Any known constraints that may be imposed by the organization or project environment should be documented.* Known constraints may include

such things as imposed deadlines, budgets, or required technology tools or platforms.

- *Dependencies on other projects internal or external to the organization.* In most cases, an IT project is one of several being undertaken by an organization. Subsequently, dependencies between projects may exist, especially if different application systems or technology platforms must be integrated. It may also be important to describe the project's role in relation to other projects.
- *Impacts on different areas of the organization.* As described in Chapter 1, IT projects operate in a broader environment than the project itself. As a result, the development and implementation of an IT solution will have an impact on the organization. It is important to describe how the project will impact the organization in terms of disruption, downtime, or loss of productivity.
- *Any outstanding issues.* It is important to highlight any outstanding issues that need further resolution. These may be issues identified by the project sponsor, the project manager, or the project team that must be addressed and agreed upon at some point during the project. They may include such things as resources to be provided or decisions regarding the features or functionality of the system.

Project Administration Project administration focuses on the controls that will support the project. It may include:

- *A communications plan* that outlines how the project's status or progress will be reported to various stakeholders. This plan also includes a process for reporting and resolving significant issues or problems as they arise.
- *A scope management plan* that describes how changes to the project's scope will be submitted, logged, and reviewed.
- *A quality management plan* that details how quality planning, assurance, and control will be supported throughout the project life cycle. In addition, a plan for testing the information system will be included.
- *A change management and implementation plan* that will specify how the project's product will be integrated into the organizational environment.
- *A human resources plan* for staff acquisition and team development.

Acceptance and Approval Since the project charter serves as an agreement or contract between the project sponsor and project team, it may be necessary to have key stakeholders sign off on the project charter. By signing the document, the project stakeholder shows his/her formal acceptance of the project and, therefore, gives the project manager and team the authority to carry out the project plan.

References In developing the project charter and plan, the project manager may use a number of references. It is important to document these references in order to add credibility to the project charter and plan, as well as to provide a basis for supporting certain processes, practices, or estimates.

Terminology Many IT projects use certain terms or acronyms that may be unfamiliar to many people. Therefore, to reduce complexity and confusion, it may be useful to include a glossary giving the meaning of terms and acronyms, allowing all the project's stakeholders to use a common language. Figure 3.4 provides a template for a project charter. Feel free to adapt this template as needed.

PROJECT PLANNING FRAMEWORK

In this section, a project planning framework will be introduced. This framework is part of the IT project methodology and provides the steps and processes necessary to develop the detailed project plan that will support the project's MOV. A project plan attempts to answer the following questions:

- *What* needs to be done?
- *Who* will do the work?
- *When* will they do the work?
- *How long* will it take?
- *How much* will it cost?

The project planning framework illustrated in Figure 3.5 consists of several steps and processes. We will now focus on each of these steps to show how the project's schedule and budget are derived.

D.

Project Name or Identification

Project Stakeholders

- Names
- Titles or roles
- Phone numbers
- **E-mail addresses**

Project Description

- Background
- Description of the challenge or opportunity
- Overview of the desired impact

Measurable Organizational Value (MOV)

- Statement or table format

Project Scope

- What will be included in the scope of this project
- What will be considered outside the scope of this project

Project Schedule Summary

- Project start date
- Project end date
- Timeline of project phases and milestones
- Project reviews and review dates

Project Budget Summary

- Total project budget
- Budget broken down by phase

Quality Issues

- Specific quality requirements

Resources Required

- People

- Technology
- Facilities
- Other
- Resources to be provided
 - * Resource
 - « Name of resource provider
 - Date to be provided

Assumptions and Risks

- Assumptions used to develop estimates
- Key risks, probability of occurrence, and impact
- Constraints
- Dependencies on other projects or areas within or outside the organization
- Assessment project's impact on the organization
- Outstanding issues

Project Administration

- Communications plan
- Scope management plan
- Quality management plan
- Change management plan
- Human resources plan
- Implementation and project closure plan

Acceptance and Approval

- Names, signatures, and dates for approval

References

Terminology or Glossary

Appendices (as required)

Figure 3.4 Project Charter Template

The MOV

The first step of the project planning framework entails finalizing the definition of and agreement on the project's measurable organizational value or MOV. Although an in-depth discussion of a project's MOV was provided in Chapter 2, it is important here to focus on a few salient points. First, it is important that the project's MOV be defined and agreed upon before proceeding to the other steps of the project planning framework. The project's MOV provides a direct link to the organization's strategic mission; however, as Figure 3.5 illustrates, a project's MOV links directly to the project plan. Therefore, a project's MOV acts as a bridge between the strategic mission and objectives of the organization and the project plans of individual projects it undertakes. The MOV guides many of the decisions related to scope, schedule, budget, and resources throughout the project's life cycle.

Define the Project's Scope

Once the project's MOV has been defined and agreed upon by the project's stakeholders, the next step of the project planning framework is to define the project's scope.

The Project Management Body of Knowledge defines scope as the product or services to be provided by the project and includes all of the project deliverables. One can think of scope as the work that needs to be completed in order to achieve the project's MOV. Project scope management is one of the nine project management knowledge areas and entails the following processes:

- *Initiation*—Once the project's MOV has been defined and agreed upon, the organization must make a commitment, in terms of time and resources, to define the project's scope in order to create the project plan.
- *Planning*—The project team must develop a written statement that defines the work to be included, as well as the work not to be included in the project plan. The scope statement will be used to guide future project-related decisions and to set stakeholder expectations.
- *Definition*—The project's scope must be organized into smaller and more manageable packages of work. These work packages will require resources and time to complete.

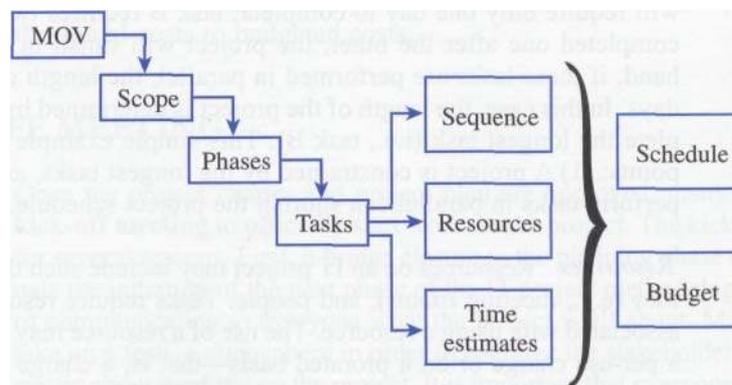


Figure 3.5 The Project Planning Framework—Defining the MOV

Verification—Once the project's scope has been defined, the project team and stakeholders must verify it to ensure that the work completed will in fact support the project in achieving its MOV.

Change Control—Controls must be in place to manage proposed changes to the project's scope. Scope changes can either move the project closer to its MOV or result in increased work that drains the project's budget and causes the project to exceed its scheduled deadline. Proper scope control procedures can ensure that the project stays on track.

Subdivide the Project into Phases

Once the project's scope has been defined and verified, the work of the project can be organized into phases in order to deliver the project's product. Phases are logical stages. Although the IT project methodology defines five high-level phases, IT projects should be further divided into subphases that follow the phases of the systems development life cycle (SDLC).

Breaking a project down into phases and subphases reduces complexity and risk. In many cases it is easier to focus on the pieces instead of the whole; however, it is important to never lose sight of the big picture. More specifically, each phase should focus on providing at least one specific deliverable—that is, a tangible and verifiable piece of work. In addition, a milestone is a significant event or achievement that provides evidence that that deliverable has been completed and that the phase or sub-phase is complete.

Tasks—Sequence, Resources, and Time Estimates

Once the project is divided into phases, tasks are then identified. A task may be thought of as a specific activity or unit of work to be completed. Examples of some tasks in an IT project may be to interview a particular user, write a program, or test links in a Web page. When considering tasks, it is important to consider sequences, resources, and time.

Sequence Some tasks may be linear—i.e., have to be completed in a particular sequence—while others can be completed in parallel—i.e., at the same time. Performing parallel tasks often provides an opportunity to shorten the overall length of the project. For example, assume that a project has two tasks—A and B. Task A will require only one day to complete; task B requires two days. If these tasks are completed one after the other, the project will finish in three days. On the other hand, if these tasks are performed in parallel, the length of the project will be two days. In this case, the length of the project is determined by the time it takes to complete the longest task (i.e., task B). This simple example illustrates two important points: (1) A project is constrained by the longest tasks, and (2) any opportunity to perform tasks in parallel can shorten the project schedule.

Resources Resources on an IT project may include such things as technology, facilities (e.g., meeting rooms), and people. Tasks require resources, and there is a cost associated with using a resource. The use of a resource may be accounted for by using a per-use charge or on a prorated basis—that is, a charge for the time you use that resource. For example, a developer earns \$50,000 a year and is assigned to work on a task that takes one day to complete. The cost of completing that particular task would be prorated as \$ 191 (assuming an eight-hour, five-day work week).

Time It will take a resource a specific amount of time to complete a task. The longer it takes a resource to complete a specific task, however, the longer the project will take to finish and the more it will cost. For example, if we plan on assigning our developer who earns \$50,000 a year to a task that takes two days, then we would estimate the cost of completing that task to be approximately \$400. If the developer completes the task in one half the time, then the cost of doing that task will be about \$200. Moreover, if the developer were then free to start the next task, our schedule would then be ahead by one day. Unfortunately, the reverse is true. If we thought the task would take two days to complete (at a cost of \$400) and it took the developer three days to complete, the project would be one day behind schedule and \$200 over budget. However, if two tasks could be performed in parallel, with our developer working on Task A (one day) and another \$50,000/year-developer working on Task B (two days), then even if Task A takes two days, our project schedule would not be impacted—as long as the developer working on Task B completes the task within the estimated two days. While this parallel work may save our schedule, our budget will still be \$200 over budget because task A took twice as long to complete. Understanding this relationship among tasks, resources, and time will be important when developing the project plan and even more important later if it is necessary to adjust the project plan in order to meet schedule or budget constraints.

Schedule and Budget—The Baseline Plan

The detailed project plan is an output of the project planning framework. Once the tasks are identified and their sequence, resources required, and time-to-complete estimated, it is a relatively simple step to determine the project's schedule and budget. All of this information can be entered into a project management software package that can determine the start and end dates for the project, as well as the final cost.

Once the project plan is complete, it should be reviewed by the project manager, the project sponsor, and the project team to make sure it is complete, accurate, and, most importantly, able to achieve the project's MOV. Generally, the project plan will go through several iterations as new information becomes known or if there are compromises with respect to scope, schedule, and budget. In addition, many of the details of the project plan are summarized in the project charter in order to provide a clearer picture as to how the plan will be carried out. Once the project plan is approved, it becomes the baseline plan that will serve as a benchmark to measure and gauge the project's progress. The project manager will use this baseline plan to compare the actual schedule to the estimated schedule and the actual costs to budgeted costs.

1 THE KICK-OFF MEETING

Once the project charter and project plan are approved, many organizations have a **kick-off meeting** to officially start work on the project. The kick-off meeting is useful for several reasons. First, it brings closure to the planning phase of the project and signals the initiation of the next phase of the IT project methodology. Second, it is a way of communicating to everyone what the project is all about. Many kick-off meetings take on a festive atmosphere in order to energize the stakeholders and get them enthusiastic about working on the project. It is important that everyone starts working on the project with a positive attitude. How the project is managed from here on will determine largely whether that positive attitude carries through.

CHAPTER SUMMARY

Processes are important to project management because they support all of the activities needed to develop and manage the development of an IT solution. Product-oriented processes focus on the development of the application system itself and require specific domain knowledge, tools, and techniques. On the other hand, project management processes are needed to manage and coordinate all of the activities of the project. A balance of both product-oriented processes and project management processes is needed; otherwise, the result may be a solution that is a technical success but an organizational failure. In addition, five project management process groups were introduced that support both the project and each phase of the project. These include: (1) initiating, (2) planning, (3) executing, (4) controlling, and (5) closing.

Project integration management is one of the most important Project Management Body of Knowledge areas. It coordinates and integrates the other knowledge areas and all of the project processes. Project integration management is concerned with three areas: (1) project plan development so that a useable, flexible, and consistent project plan is developed, (2) project plan execution so that the project plan is carried out in order achieve the project's MOV, and (3) overall change control to help manage change so that change does not disrupt the focus of the project team.

The project charter serves as an agreement and as a communication tool for all of the project stakeholders.

The project charter documents the project's MOV and describes the infrastructure needed to support the project. In addition, the project charter summarizes many of the details found in the project plan. A well-written project charter should provide a consolidated source of information about the project and reduce the likelihood of confusion and misunderstanding. In general, the project charter and project plan should be developed together—the details of the project plan need to be summarized in the project charter, and the infrastructure outlined in the project charter will influence the estimates used to develop the project plan.

The project plan provides the details of the tactical plan that answers these questions: What needs to be done? Who will do the work? When will they do the work? How long will it take? How much will it cost?

A project planning framework was introduced and recommended a series of steps to follow in order to develop a detailed project plan. The details with respect to carrying out these steps will be the focus of subsequent chapters. Once the project charter and plan are approved, the project plan serves as a baseline plan that will allow the project manager to track and access the project's actual progress to the original plan. A kick-off meeting usually brings closure to the second phase of the IT project methodology and allows the project team to begin the work defined in the plan.

REVIEW QUESTIONS

1. What are project management processes? Give one example.
2. What are product-oriented processes? Give one example.
3. Why must a balance exist between project management processes and product-oriented processes?
4. Describe the initiating processes. Give one example of an initiating process to support a particular phase of the IT project methodology.
5. Describe the planning process. Give one example of a planning process to support a particular phase of the IT project methodology.
6. Describe the executing process. Give one example of an executing process to support a particular phase of the IT project methodology.
7. Describe the controlling process. Give one example of a controlling process to support a particular phase of the IT project methodology.
8. Describe the closing process. Give one example of a closing process to support a particular phase of the IT project methodology.
9. Describe how the output of project management process groups in one phase becomes the input or catalyst for the process group in the next phase. Provide an example.
10. What is the difference between contract closure and administrative closure?
11. Describe project integration management and its relationship to the other eight Project Management Body of Knowledge areas.
12. Describe project plan development and its importance to the second phase of the IT project methodology.
13. Describe project plan execution and its importance to project plan development.

14. Describe overall change control and its importance to the project team.
15. What is the purpose of a project charter?
16. Why can a project charter serve as an agreement or a contract?
17. Why is a project charter a useful communication tool?
18. Why should the project charter and project plan be developed together?
19. How does the project charter support the project plan?
20. How does the project plan support the project charter?
21. Describe the project planning framework.
22. Why is it important that the project's MOV be cast in stone.
23. Describe how the project's MOV supports the development of the project's scope, schedule, and budget.
24. What is a project's scope?
25. Why should a project be divided into phases?
26. What is a deliverable? What is the relationship between phases and deliverables?
27. What is a milestone? Why are milestones useful?
28. What is a task? Provide three examples of some typical tasks in an IT project.
29. What impact can the sequence of tasks have on a project's schedule?
30. How can resources impact the schedule of a project?
31. What is a baseline plan? What purpose does it serve once the project team begins to execute the project plan?
32. What is a kick-off meeting? What purpose does it serve?

EXTEND YOUR KNOWLEDGE

1. You have just been hired by a local swim team to develop a Web site. This Web site will be used to provide information to boys and girls between the ages of six and eighteen who are interested in joining the team. In addition, the Web site will provide information about practices and the swim meet schedule for the season. The team would also like to be able to post the meet results. The head coach of the swim team is the project sponsor. He would also like the Web site to include pictures of the three assistant coaches and of the different swimmers at swim meets and practice. The swim team is supported largely by an association of parents who help run the swim meets and work the concession stand. Several of the parents have asked that a volunteer schedule be part of the Web site so that the parent volunteers can see when they are scheduled to work at a particular meet. The head coach, however, has told you that he believes this project can wait and should not be part of the Web site now. Two people will be helping you on the project. One is a graphic artist; the other is person who is very familiar with HTML, Java, Active Server Pages (ASP), and several Web development tools. Based upon the information provided, develop the basics of a project charter. Although you will not be able to develop a complete project charter at this point, you can get started on the following:
 - a. Come up with a name for the project.
 - b. Identify the project stakeholders, their roles, and their titles.
 - c. Provide a brief description of the project.
 - d. Develop a MOV for this project.
 - e. Specify the project's scope in terms of the high-level features or functionality that should be included in the Web site.
 - f. Specify what should not be included in the project's scope.
 - g. Specify the resources that will be required and provide an estimated cost for each resource. (Be sure to include a reference or sound basis to justify the cost for each resource).
 - h. Identify some of the risks associated with this project.
 - i. You are free to make assumptions as needed, but be sure to document them!
2. Suppose a company is interested in purchasing a call center software package to improve its customer service. Describe the project management processes that would be needed to support the first two phases of the IT project methodology.
3. Plan a kick-off meeting for a project team.