Introducing Project Management

CERTIFICATION OBJECTIVES

1.01 The PMBOK Guide, This Book, and the PMP Exam
1.02 Defining What a Project Is—and Is Not
1.03 Defining Project Management
1.04 Examining Related Areas of Project Management
✓ Two-Minute Drill
Q&A Self Test
Your PMP examination is based on your experience, your ability to problem-solve, and a strong foundation in project management. This chapter aims to explain how both this book and PMI’s *Guide to the Project Management Body of Knowledge* can help you grasp what you must know to pass the exam. From now on, references to *PMI’s A Guide to the Project Management Body of Knowledge* will be called the *PMBOK Guide*—fourth edition (pronounced pim-bok).

Besides learning about the *PMBOK Guide* and the exam, we’ll dive into what a project is, how project management works, the process itself, and knowledge areas regarding both project management and how project offices operate. We’ve lots to do, so let’s go!

### CERTIFICATION OBJECTIVE 1.01

**The *PMBOK Guide*, This Book, and the PMP Exam**

If you’ve ever sat down to read the *PMBOK Guide*, you’ve obviously had a lot of time on your hands, you were really curious about it, or someone told you it was required reading for passing the Project Management Professional (PMP) examination. Here’s the truth about the *PMBOK Guide*: It’s boring. My apologies to all my friends at Project Management Institute (PMI), but it’s true. The *PMBOK Guide* is, however, concise, organized, and an excellent reference manual. I use it all the time. But it’s not written to be a thriller.

The fourth edition of the *PMBOK Guide* will be referenced throughout this book. Why? Well, your PMP exam is largely based on the facts, figures, and subtleties of the *PMBOK Guide*. The good news is that unlike the *PMBOK Guide*—fine book that it is—the book you have in your hands is written in plain language. This book, unlike the *PMBOK Guide*, focuses on how to pass the PMP exam. It will also help you be a better project manager and explain some mysterious formulas and concepts, but its main goal is to get you over the hump toward those three glorious letters: PMP.
All About the *PMBOK Guide*

The *PMBOK Guide* is, as its abbreviated name suggests, a guide, not the end-all-be-all of project management. It’s based on what’s generally recognized as good practice on most projects most of the time. It’s not specific to IT, construction, manufacturing, or any other discipline, being applicable to any industry, any project, and any project manager.

For the most part, if you follow the *PMBOK Guide*, you’ll increase your odds of project success. That means you’ll be more likely to complete the project scope, reach the cost objectives of your project’s budget, and achieve those schedule commitments your project must adhere to. But there’s no guarantee.

*Throughout this book, you’ll see little tips like this one. These tips are here to cheer you on, get you moving, and remind you that you can do this. Create a strategy to study this book and the *PMBOK Guide*, and keep working towards your goal of earning the PMP.*

See the video *Earning the PMP.*

The *PMBOK Guide* readily admits that not everything in it should be applied to every conceivable project. That just wouldn’t make sense. Consider a small project to swap out all of the workstation lights in an office building versus that of building a skyscraper. Guess which one needs more detail and will likely implement more of the practices the *PMBOK Guide* defines. The skyscraper project, of course.

All About This Book

Your PMP examination is based largely on the *PMBOK Guide*. As mentioned, the *PMBOK Guide* is not a study guide. But this book is. The following explains what this book will do for you:

- Cover all of the objectives as set by PMI for the PMP examination
- Focus only on exam objectives
- Prep you to pass the PMP exam, not just take it
- Encapsulate exam essentials for each exam objective
- Offer 925 PMP total practice questions
- Serve as a handy project management reference guide
- Not be boring
Chapter 1: Introducing Project Management

Every chapter in this book correlates to a chapter in the PMBOK Guide. If you have a copy of the PMBOK Guide, blow the dust off it and flip through its 12 chapters. Now flip through this book, and you'll see that it covers the same 12 chapters in the same order. And there's a magical Chapter 13. Okay, it's not magical, but it explains in detail the Code of Ethics and Professional Conduct, which is a major exam objective. Chapter 13 covers leadership, motivation, and how to balance stakeholder interests. Chapter 13 also introduces the concept of project priorities and dealing with cultural issues.

Each chapter is full of exciting, action-packed, and riveting information. Well, that's true if you find the PMP exam exciting, action-packed, and riveting. Anyway, each chapter covers a specific topic relevant to the PMP exam. The first three chapters of this book offer a big-picture view of project management, while the remaining 10 chapters are the ones most specific to the PMP exam.

In each chapter, you'll find an Inside the Exam sidebar. This is what I considered to be the most important message from the chapter. At the end of the chapter, you'll find a quick summary, key terms, and a two-minute drill that recaps all the major points of the chapter. Then you'll be given a 25-question exam that's specific to just that chapter.

The questions in this book will give you some idea of what to expect on the actual PMP exam. Those contained here, though not the actual exam questions, are styled similarly to what you'll eventually run into. Focus on understanding why your answer to a question was right or wrong. The questions are part of the learning process. I have, I believe, written the questions in this book and on its accompanying CD to be tricky, pesky questions. My logic is that if you can make it through my exams, you should be able to get through the PMP, too.

All About the PMP Exam

Not everyone can take the PMP exam—you have to qualify to take it. And this is good. The project management community should want the PMP exam to be tough, the application process to be rigorous, and the audits to be thorough. All of this will help elevate the status of the PMP and ensure it doesn't fall prey to the “paper certifications” other professions have seen.
Here are the major details of the 2009 PMP examination:

- As of this writing, a score of 61 percent is required to pass the exam. The exam has 200 questions, 25 of which don’t actually count towards your passing score. These 25 questions are scattered throughout your exam and are used to collect statistics regarding student responses to see if they should be incorporated into future examinations. So this means you’ll actually have to answer 106 correct questions out of 175 live questions.
- Clear and factual evidence of project management experience must be shown in each process group. On your PMP exam application, you’ll have to provide specifics on tasks you’ve completed in a process group. (See Table 1-1 for specific examples from PMI.)
- Each application is given an extended review period. If your application needs an audit, you’ll be notified via e-mail.
- Applicants must provide contact information for supervisors on all projects listed on their PMP exam application. In the past, applicants did not have to provide project contact information unless their application was audited. Now each applicant must give project contact information as part of the exam application.
- Once the application has been approved, candidates have one year to pass the exam. If you procrastinate in taking the exam by more than a year, you’ll have to start the process over.
- PMP candidates are limited to three exam attempts within one year. If they fail each time during that period, they’ll have to wait one year before resubmitting their exam application.

Always check the exam details through the PMI website: www.pmi.org. They can change this information whenever they like.

The PMP exam will test you on your experience and knowledge in six different areas, as Table 1-1 shows. You’ll have to provide specifics on tasks completed in each knowledge area of your PMP examination application. The following domain specifics and their related exam percentages are taken directly from PMI’s website regarding the PMP examination. While this information is correct as of this writing, always hop out to www.pmi.org and check their site for any updates as you prepare to pass the PMP exam.
# Chapter 1: Introducing Project Management

## TABLE 1-1

<table>
<thead>
<tr>
<th>Exam Domain</th>
<th>Domain Tasks</th>
<th>Percentage of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiating the Project</td>
<td>Conduct Project Selection Methods</td>
<td>11.59 percent</td>
</tr>
<tr>
<td></td>
<td>Define Scope</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Document Project Risks, Assumptions, and Constraints</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identify and Perform Stakeholder Analysis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Develop Project Charter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Obtain Project Charter Approval</td>
<td></td>
</tr>
<tr>
<td>Planning the Project</td>
<td>Define and Record Requirements, Constraints, and Assumptions</td>
<td>22.7 percent</td>
</tr>
<tr>
<td></td>
<td>Identify the Project Team and Define Roles and Responsibilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Create the Work Breakdown Structure (WBS)</td>
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<tr>
<td></td>
<td>Develop a Change Management Plan</td>
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<tr>
<td></td>
<td>Identify Risks and Define Risk Strategies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Obtain Plan Approval</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conduct Kick-off Meeting</td>
<td></td>
</tr>
<tr>
<td>Executing the Project</td>
<td>Execute Tasks Defined in Project Plan</td>
<td>27.5 percent</td>
</tr>
<tr>
<td></td>
<td>Ensure Common Understanding and Set Expectations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implement the Procurement of Project Resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manage Resource Allocation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implement a Quality Management Plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implement Approved Changes</td>
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</tbody>
</table>

The Six Domains of Experience Needed to Pass the PMP Exam
<table>
<thead>
<tr>
<th>Exam Domain</th>
<th>Domain Tasks</th>
<th>Percentage of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring and Controlling the Project</td>
<td>Implement Approved Actions and Workarounds</td>
<td></td>
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<tr>
<td></td>
<td>Improve Team Performance</td>
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<tr>
<td></td>
<td>Measure Project Performance</td>
<td>21.03 percent</td>
</tr>
<tr>
<td></td>
<td>Verify and Manage Changes to the Project</td>
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<tr>
<td></td>
<td>Ensure Project Deliverables Conform to Quality Standards</td>
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<tr>
<td></td>
<td>Monitor All Risks</td>
<td></td>
</tr>
<tr>
<td>Closing the Project</td>
<td>Obtain Final Acceptance for the Project</td>
<td>8.57 percent</td>
</tr>
<tr>
<td></td>
<td>Obtain Financial, Legal, and Administrative Closure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Release Project Resources</td>
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<tr>
<td></td>
<td>Identify, Document, and Communicate Lessons Learned</td>
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<tr>
<td></td>
<td>Create and Distribute Final Project Report</td>
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<td></td>
<td>Archive and Retain Project Records</td>
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<tr>
<td></td>
<td>Measure Customer Satisfaction</td>
<td></td>
</tr>
<tr>
<td>Professional and Social Responsibility</td>
<td>Ensure Individual Integrity</td>
<td>8.61 percent</td>
</tr>
<tr>
<td></td>
<td>Contribute to the Project Management Knowledge Base</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enhance Personal Professional Competence</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Promote Interaction Among Stakeholders</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>TOTAL</td>
<td>100.00 percent</td>
</tr>
</tbody>
</table>

The Six Domains of Experience Needed to Pass the PMP Exam (continued)
CERTIFICATION OBJECTIVE 1.02

Defining What a Project Is—and Is Not

Projects are endeavors. Projects are temporary. A project creates something, provides a service, or brings about a result. I know, I know, it sounds like some marriages.

To define a project, you only have to think of some work that has a deadline associated with it, involves resources besides you, has a budget to satisfy the scope of the project work, and you can state what the end result of the project should be. So, projects are temporary work assignments, with a budget, that require some amount of resources, some amount of time to complete, and create a definite deliverable, service, or environment.

Let's look at project characteristics in more detail.

Projects Are Temporary

Regardless of what some projects may feel like, they are usually temporary. Like a good story, projects have a beginning, a middle, and an end. Projects end when the scope of the project has been met—usually. Sometimes projects end when the project runs out of time or cash or when it becomes clear that the project won't be able to complete the scope objectives, so it's scrapped.

The goal of a project will vary based on what the project's deliverable is, but typically, the result is to create something that'll be around longer than the process it took to create it. For example, if you're managing a project to create a skyscraper, you expect the skyscraper to be around much longer than the time it took to build it.

So temporal usually means that the project is temporary, not the deliverable. Notice the word usually? You can have a project to host a giant picnic for your entire organization and its customers. The project's logistics, invitations, and coordination of chefs may take months to complete, but the picnic will only last for a few hours. However, you could argue that although the picnic event was temporary, the memories and goodwill your picnic created could last a lifetime. (That had better be one good picnic!)

Sometimes temporary describes the market window. We've all seen fads come and go over the past years: pet rocks, the dot.com boom, streaking, and more. Projects can often be created that capitalize on fads, which means projects have to deliver fast before the fad fades away and the next craze begins. Fads and opportunities are temporary; projects that feed off these are temporary as well.
When’s the last time you managed a project where the entire project team stuck with the project through the entire duration? It probably doesn’t happen often. Project teams are often more temporary than the project itself, but typically, project teams only last as long as the project does. Once the project is complete, the team disbands and the project team members move on to other projects within the organization.

Projects Create Unique Products, Services, or Results

This one isn’t tough to figure out. Projects have to create a thing, invent a service, or change an environment. The deliverable of the project—a successful project, that is—satisfies the scope that was created way, way back when the project got moving. Projects create the following:

- **Things** Projects can create a thing such as a skyscraper, which is the end of the project. Or projects can create components that contribute to other projects or things, such as a project to install all of the glass windows in a skyscraper.

- **Services** A project creating a service could establish a new call center, an order fulfillment process, or a faster way to complete inventory audits.

- **Results** Projects can be research-driven. Consider a research-and-development project with a pharmaceutical company to find a cure for the common cold.

Projects are unique. This means that every project you ever do is different from all the other projects you’ve done in the past. Even if it’s the same basic approach to get to the same end result, there are unique factors within each project, such as the time it takes, the stakeholders involved, the environment the project takes place in, and on and on the uniqueness goes. Basically, all projects are unique, even if your company does the same type of project repeatedly. Lucky you.

Progressive Elaboration

All projects begin as a concept. A project concept to create a new product or service typically includes a broad vision of what the end result of the project will be. The temporary project results in the unique product or service through progressive elaboration. Progressive elaboration is simply developing in steps and continuing
by increments. For example, you’d take the project scope, decompose it to the work breakdown structure (WBS), then make an activity list, and so on. This is just one example of progressive elaboration.

As a project moves closer to completion, the identified needs that launched the project are revisited and monitored. Complete understanding of the needs—and the ability to fulfill those needs—comes from progressive elaboration. Progressive elaboration is an iterative process designed to correctly and completely fulfill the project objectives. This is evident in how the planning and execution processes each contribute to one another. A similar example can be seen in the process to create a WBS. The WBS begins with the project vision, which is then elaborated upon to create the project scope, and then expanded again into the WBS, and so on.

Consider a concept to construct a new building that would handle the manufacturing and shipping of blue jeans. The headlines of this project would be planning and then the construction, with materials delivered, assembly equipment, and the outward-bound shipping bays.

As the project team continues to research the needs and expectations of the project, the project vision would be refined, honed, and polished to a detailed outline of what the project would deliver. As you can see in Figure 1-1, through incremental steps, the project plan is developed and the unique project deliverables are created.
Projects vs. Operations

Meet Jane. Jane is a project manager for her organization. Vice presidents, directors, and managers with requests to investigate or to launch potential projects approach her daily—or so it seems to Jane. Just this morning, the sales manager met with Jane because he wants to implement a new direct-mail campaign to all of the customers in the sales database. He wants this direct-mail campaign to invite customers to visit the company website to see the new line of products. Part of the project also requires that the company website be updated so that it’s in sync with the mailing. Sounds like a project, but is it really? Could this actually be just a facet of an ongoing operation?

In some organizations, everything is a project. In other organizations, projects are rare exercises in change. There’s a fine line between projects and operations, and often, these separate entities overlap in function. Consider the following points shared by projects and operations:

- Both involve employees
- Both typically have limited resources: people, money, or both
- Both are hopefully designed, executed, and managed by someone in charge

In the preceding example, Jane has been asked to manage a direct-mail campaign to all of the customers in the sales database. Could this be a project? Sure—if this company has never completed a similar task and there are no internal departments that do this type of work as part of their regular activities. Often, projects are confused with general business duties: marketing, sales, manufacturing, and so on. The tell-tale sign of a project is that it has an end date and that it’s unique from other activities within the organization. Some examples of projects include:

- Designing a new product or service
- Converting from one computer application to another
- Building a new warehouse
- Moving from one building to another
- Organizing a political campaign
- Designing and building a new airplane

The end results of projects can result in operations. For example, imagine a company creating a new airplane. This new airplane will be a small personal plane (like one of those bubble cars from *The Jetsons*) that would allow people to fly to different destinations with the same freedom they use in driving their car. The project team will
have to design an airplane from scratch that’d be similar to a car so consumers could easily adapt and fly to Sheboygan at a moment’s notice. The project to create a personal plane is temporary, but not necessarily short-term. It may take years to go from concept to completion—but the project does have an end date. A project of this magnitude may require hundreds of prototypes before a working model is ready for the marketplace. In addition, there are countless regulations, safety issues, and quality control concerns that must be pacified before completion.

Once the initial plane is designed, built, and approved, the end result of the project is business operations. As the company creates a new vehicle, they would follow through with the design by manufacturing, marketing, selling, supporting, and improving the product. The initial design of the airplane is the project—the business of manufacturing it, supporting sold units, and marketing the product constitutes the ongoing operations part of business.

Operations are the day-to-day work that goes on in the organization. A manufacturer manufactures things, scientists complete research and development, and businesses provide goods and services. Operations are the heart of organizations. Projects, on the other hand, are short-term endeavors that fall outside of the normal day-to-day operations an organization offers.

Let’s be realistic. In some companies, everything’s a project. This is probably true if you work in an organization that completes projects for other companies. That’s fine and acceptable, however, since you’re participating in management by projects.

Once the project is complete, the project team moves along to other projects and activities. The people who are actually building the airplanes on the assembly line, however, have no end date in sight and will continue to create airplanes as long as there’s a demand for the product.

Projects and Strategic Planning

Sometimes, if not always, projects are weird. I say weird because projects often don’t fit into the normal day-to-day operations of an organization. Maybe weird isn’t the best word after all. How about unique? They’re unique because they don’t fit into the regular operations of a company and there’s been some special reason why the project has been created. Work and deliverables that don’t fit into the normal day-to-day operations but still have merit for the organization are logical opportunities for a project.
The PMP exam is not for rookies. The application process alone can filter out the unqualified and the merely curious. You've purchased this book to find more information on how to pass the exam, what the exam entails, and to prep for your exam—a wise decision. Now, make another wise decision: Begin completing your PMP exam application. The application process can be lengthy, since you'll have to track down past information relating to projects you've completed.

By starting sooner rather than later in completing your exam application, you'll be focusing more on completing your exam studies than on completing the exam application. In addition, response time from the Project Management Institute (PMI) to accept and approve your application can vary from a few days to weeks. Start now and you'll be on your way.

You will be presented with scenario-based questions that will test your project management abilities. The chapter exams and the exams on the CD have been written to be tricky, tough, and to make you think. Practice these exams repeatedly, and they'll help you prepare to pass your PMP exam.

Besides answering practice questions, you'll want to focus on how the project manager should react in different scenarios. Specifically, you'll need to know how the project manager works through the project processes. You should be familiar with the project management process groups, what a project deliverable is, and the requirements of a project scope.

All projects are bound by the Triple Constraints of Project Management: time, cost, and scope. Quality is affected by the balance of these three components. The Triple Constraints model is also known as the Iron Triangle, as shown in the following illustration. If any one angle of the triangle changes, the other two should change as well—if not, quality will suffer.

Know that the project moves through phases to reach completion. The project manager oversees the project work as it moves through phases, but the project customer must approve the work. Specifically, the results of phases must pass through scope verification, which is the formal acceptance of the project work.
Consider the reasons why a project is created:

- **Opportunity**  Your company is growing so quickly that a project is launched to create a sales- and order-fulfillment application.

- **Problems**  All of the computers are older than Moses, so a project is launched to replace all of the computers and standardize office applications.

- **Customers**  Many organizations, such as IT integrators, construction companies, architects, and dozens more, complete projects for other people. Customers drive new projects.

- **Technology**  Technology changes so quickly that there are constantly new technical projects within an organization.

- **Lawyers**  Laws can cause a new project to launch. Consider the recent Sarbanes-Oxley requirements, for example. This new law spurred many projects to adhere to the new privacy requirements. Laws and regulations within different industries can also spur new projects—consider pharmaceutical, insurance, health care, and on and on. Regulations are required, but standards are guidelines.

**CERTIFICATION OBJECTIVE 1.03**

**Defining Project Management**

Project management is the supervision and control of the work required to complete the project vision. The project team carries out the work needed to complete the project, while the project manager schedules, monitors, and controls the various project tasks. Projects, being the temporary and unique things that they are, require the project manager to be actively involved with the project implementation. They are not self-propelled.

Project management is comprised of the following nine knowledge areas. Chapters 4 through 12 will explore these knowledge sections in detail.

- **Project integration management**  This knowledge area focuses on creating the project charter, the project scope statement, and a viable project plan. Once the project is in motion, project integration management is all about monitoring and controlling the work. If changes happen, and we know they will, you have to determine how that change may affect all of the other knowledge areas.
Defining Project Management

- **Project scope management**  This knowledge area deals with the planning, creation, protection, and fulfillment of the project scope. One of the most important activities in all of project management happens in this knowledge area: creation of the work breakdown structure. Oh, joy!

- **Project time management**  Time management is crucial to project success. This knowledge area covers activities, their characteristics, and how they fit into the project schedule. This is where you and the project team will define the activities, plot out their sequence, and calculate how long the project duration will actually take.

- **Project cost management**  Cost is always a constraint in project management. This knowledge area is concerned with the planning, estimating, budgeting, and control of costs. Cost management is tied to time and quality management—screw either of these up and the project costs will increase.

- **Project quality management**  What good is a project that’s done on time if the scope isn’t complete, the work is faulty, or the deliverable is horrible? Well, it’s no good. This knowledge area centers on quality planning, assurance, and control.

- **Project human resource management**  This knowledge area focuses on organizational planning, staff acquisition, and team development. You have to somehow acquire your project team, develop this team, and then lead them to the project results.

- **Project communications management**  Ninety percent of a project manager’s time is spent communicating. This knowledge area details how communication happens, outlines stakeholder management, and shows how to plan for communications within any project.

- **Project risk management**  Every project has risks. This knowledge area focuses on risk planning, analysis, monitoring, and control. You’ll have to complete qualitative analysis and then quantitative analysis in order to adequately prepare for project risks. Once the project moves forward, you’ll need to monitor and react to identified risks as planned.

- **Project procurement management**  Projects often need things and services in order to reach closing. This knowledge area covers the business of project procurement, the processes to acquire and select vendors, and contract negotiation. The contract between the vendor and the project manager’s organization will guide all interaction between the project manager and the vendor.
Project Management Application Areas

Project management application areas are projects that fit into different disciplines, but the approach to project management is similar. For example, an application area is construction. Another application area is information technology management. Another is manufacturing. Each application has specific approaches, disciplines, and characteristics that are totally different from any other application in the world.

Now, within each application area, you have a project management approach. In terms of the PMP exam, the project management approach is basically the same. The project work itself, however, is unique. In other words, and these are good words, you won’t have to know much about application areas to pass your PMP exam. You will, however, need to know all about project management to pass the exam.

The following are some examples of application areas:

- Sales, law, manufacturing, marketing, and any other functional disciplines you’d find in just about any company
- Technical disciplines, such as mechanical engineering, architectural design, software development, and more
- Management categories, such as consulting, research and development, and community development

Management by Projects

In today’s competitive, tight-margin business world, organizations have to move and respond quickly to opportunities. Many companies have moved from a functional environment—that is, organization by function—to an organization, or management, by projects. A company that organizes itself by job activity, such as sales, accounting, information technology, and other departmental entities, is a functional environment. A company that manages itself by projects may be called a projectized company.
An organization that uses projects to move the company forward is using the Management by Projects approach. These project-centric entities could manage any level of their work as a project. These organizations, however, apply general business skills to each project to determine its value, efficiency, and, ultimately, the return on investment. As you can imagine, some projects are more valuable, more efficient, or more profitable than others.

There are many examples of organizations that use this approach. Consider any business that completes projects for their clients, such as architectural, graphic design, consulting, or other service industries. These service-oriented businesses typically complete projects as their business.

The following are some other examples of management by projects:

- Training employees for a new application or business method
- Marketing campaigns
- The entire sales cycle from product or service introduction, proposal, and sales close
- Work completed for a client outside of the organization
- Work completed internally for an organization

Understanding the Project Environment

The project environment is more than where the project work will take place—though that should also be considered. The project environment is a term to describe the impact the project will have, good or bad, on the cultural, political, and physical environments. The project manager must examine the project environment and consider the influence of each environment on the project's success—and vice versa. Consider the influence and impact of each of the following:

- **Physical environment** Before a project begins, the project manager should ensure that project team members or consultants evaluate the effect of the project on the physical environment where the project will take place—and how the physical environment will affect the project's success. The ecology, geographical makeup, and the health of the environment must be considered as part of the project planning processes.

- **Cultural and social environment** This one isn't pleasant. Every project manager should examine how the project might affect the cultural and social environment, and how the cultural and social environment might affect the project. Consider a technical project that will move all of an organization's
computer operating systems to a standard operating system (OS). What if the majority of the employees don’t like the OS that’s been selected? There’ll be complaints, work slowdown, a decline in morale, and challenges throughout the project implementation. In addition, the project manager (PM) must understand the autonomy he or she has within an organization and the affect the level of power will have on the project’s success.

- **International and political environment** Projects that span multiple countries require knowledge of the laws and customs of each environment the project influences. Project managers must also consider the political consideration of international projects. Finally, the environment also includes time zone differences, holidays, travel logistics, face-to-face and teleconference meetings, currency exchanges, and language barriers.

A nice way to term a “cultural issue” is to call it cultural achievability. It’s a way to describe the unhappiness and unrest that often accompany an unpopular or unpleasant project. It means it’s difficult to gain consensus and buy-in on the project’s value in an organization.

The environment that affects the ability of a project to operate is something every project manager must consider when a new project is launched. The specific conditions of the environment are called enterprise environmental factors. You’ll see this term often throughout this book and probably on your PMP exam. The term enterprise environmental factors is just a nice way of describing the conditions, rules, policies, and culture that the project must operate within. Some enterprise environmental factors can constrain the project manager, while other factors can be a boon to the project.

**Relying on General Management Skills**

You cannot be an effective project manager without some abilities as a manager. Makes sense, right? Get this: Management is focused on results. So, to get your project team, vendors, and stakeholders to create project results, you should rely on the following:

- Planning for project strategy, tactics to achieve objectives, and operational planning
- Accounting and cash flow management
Defining Project Management

- Sales and marketing (within your organization and to stakeholders outside of the project)
- Procurement processes, including contracting procedures
- Logistics for travel, schedule, supply chain, and order fulfillment
- Human resource practices and procedures, including working within organizational structures; managing team personnel, compensation, and benefits; and helping project team members reach their career goals
- Industry-specific health and safety practices
- Working with information technology

Relying on Interpersonal Skills

Having interpersonal skills doesn’t mean you’re the “nice guy” everyone takes advantage of. Interpersonal skills are your abilities as a project manager to get along with stakeholders, be somewhat likeable, and work with others to reach an outcome on disagreements, problems, and challenges within the project. Interpersonal skills include the following:

- **Problem solving**  Part of being a good project manager is the ability to problem-solve. Even the PMP exam is a good example of problem solving.
- **Motivating**  You need to have the ability to motivate your project team to move forward with the project and their work and to energize your project team to excel.
- **Communicating**  Communication is a huge part of the project manager’s job, so you’ll have to be able to communicate effectively with your project team and stakeholders.
- **Influencing the organization**  You know there are undercurrents of politics, procedures, and other influences that affect your project’s ability to move forward. The ability to influence the organization is how you operate within stated and implied confines to get things done.
- **Leadership**  A good project manager is a good leader. Leadership involves motivating and inspiring the project team and stakeholders to move forward.
- **Negotiations**  It’s not unusual for conflicts to arise within a project. The project manager must be able to negotiate, solve conflicts, and keep the project moving forward.
CERTIFICATION OBJECTIVE 1.04

Examining Related Areas of Project Management

Project management is the administration of activities to change the current state of an organization into a desired future state. It is a complex organization of decision-making, planning, implementation, control, and documentation of the experience from start to finish. In addition to traditional project management, there are related areas you may encounter, have encountered, or are actively participating in. These related aspects often are superior to individual project management, are part of project management, or equate to less than the management of any given project.

In this section, we’ll dissect the related areas of project management and see how they tie together to change a current state to a desired future state.

Program Management

Program management is the management of multiple projects all working in unison toward a common goal. Consider all of the work that goes into building a skyscraper. Within the overall work, several projects may lead to the result, as demonstrated in Figure 1-2. You could have a project for the planning and design of the building. Another project could manage the legal, regulatory, and project inspections.

Program

- Project A
  - Deliverable A1
  - Deliverable A2
  - Deliverable A3

- Project B
  - Deliverable B1
  - Deliverable B2
  - Deliverable B3
  - Deliverable B4

- Project C
  - Deliverable C1
  - Deliverable C2
  - Deliverable C3
  - Deliverable C4

FIGURE 1-2

Programs consist of multiple projects working together toward a common goal.
that would be required for the work to continue. Another project could be the physical construction of the building, while other projects might entail electrical wiring, elevators, plumbing, interior design, and more. Could one project manager effectively manage all of these areas of expertise? Possibly, but probably not.

A better solution could be to create a program that is comprised of multiple projects. Project managers would manage each of the projects within the program and report to the program manager. The program manager would ensure that all of the integrated projects work together on schedule, on budget, and ultimately towards the completion of the program.

In other instances, the program is an ongoing effort that really does not have an end in sight. Consider the publication of a newspaper, newsletter, website, or magazine. Essentially, the workers of these publications do the same activities for each issue, but each issue is unique and different from the last.

Another example is NASA’s space program. It’s an organization developed to explore space, and it is comprised of individual projects within that program. Each project under the program has its own goals, initiatives, and objectives that are in alignment with the overall mission of the space program. Programs are a collection of individual projects working in alignment towards a common end.

**Project Portfolio Management**

Often, projects are lumped into a portfolio rather than into a program. A program is a collection of projects that work together for a common cause. For example, a program could be a collection of projects to build a skyscraper. A portfolio describes the collection of investments in the form of projects and programs in which the organization invests capital. The project manager and, if applicable, the program manager report to a portfolio review board on the performance of the projects and programs. The portfolio review board may also direct the selection of projects and programs.

Portfolio projects could be interdependent, but they don’t have to be. A portfolio is not the same as a program, but it is a collection of projects. The projects in a portfolio could be within one line of business, based on the strategies within an organization, or follow the guidance of one director within an organization.

*Project selections may pass through a project selection committee, where these executives will look at the return on investment, the value of the project, risks associated with taking on the project, and other attributes of the project. This is all part of project portfolio management.*
Chapter 1: Introducing Project Management

Subproject Implementation

Subprojects are an alternative to programs. Some projects may not be wieldy enough to require the creation of a full-blown program, yet they may still be large enough that some of the work can be delegated to a subproject. A subproject exists under the parent project, but it follows its own schedule to completion. Subprojects may be outsourced, assigned to other project managers, or managed by the parent project manager but with a different project team. The following illustration shows a project containing multiple subprojects.

Subprojects are often areas of a project that are outsourced to vendors. For example, if you were managing a project to create a new sound system for home theaters, a subproject could be the development of the user manual included with the sound system. You would thus hire writers and graphic designers to work with your project team. The writers and designers would learn all about the sound system and then retreat to their own space to create the user manual according to their project methodology. The deliverable of their subproject would be included in your overall project plan, but the actual work done to complete the manual would not be in your plan. You’d simply allot the funds and time required by the writers and graphic designers to create the manual.

Subprojects do, however, follow the same quality guidelines and expectations of the overall project. The project manager has to work with the subproject team regarding scheduling, value, and cost to ensure the deliverables and activities of the subproject integrate smoothly with the “master” project.

Working with a Project Management Office

A project management office (PMO) organizes and manages control over all projects within an organization. A PMO is also known as a program management office,
project office, or simply the program office. (And I’m sure some project managers have other names for them that won’t be on the PMP exam.)

PMOs usually coordinate all aspects, methodology, and nomenclature for project processes, templates, software, and resource assignment. Ideally, a PMO creates a uniform approach within an organization so that all projects, regardless of their discipline, technology, or purpose, are managed with the same approach.

Besides creating a uniform approach to project management within an organization, a PMO provides support to the project managers. The support they give will vary, of course, from organization to organization. Typically, project managers that act within a PMO can expect training, software, templates, standardized project management approaches, and mentoring for project managers.

PMOs have an advantage over decentralized project management: risk and communication centralization. All projects have risks, and a PMO can centrally track and monitor all risks within all projects and take advantage and prepare for risks that may, or may not, come to fruition. Thus, a PMO can create a risk database to track pending and past risks and plan accordingly.

On the communications front, a PMO can centralize communication among project managers, project sponsors, managers, and other stakeholders. A centralized communication center can alleviate the demand on project managers to communicate with stakeholders, as all communications can flow through the PMO rather than the individual project manager.

**CERTIFICATION SUMMARY**

This chapter covered the fundamentals of project management and the expectations for the PMP examination. The PMBOK Guide is an excellent book that documents the ideal processes and procedures for project management. The PMP exam is based on the PMBOK Guide, and this book (the one you’re reading now) focuses on the key exam essentials to help you pass your PMP exam.

We discussed what a project is and is not. Projects are temporary endeavors to create a unique thing, product, or service. An operation, on the other hand, is a series of activities that go on and on, like manufacturing a car, writing a newspaper column, or running a business. Many businesses complete projects for other people or organizations, and those are their operations.

The PMP exam will focus on the function of the project manager, which covers the nine knowledge areas of project management: integration management, time, cost, scope, quality, human resources, communications, risk, and procurement.
Chapter 1: Introducing Project Management

Each of these knowledge areas will be discussed in detail in Chapters 4 through 12 in this book. We’ll also cover the PMP Code of Ethics and Professional Conduct.

Finally, we discussed how projects may exist within large entities called programs and PMOs. Recall that programs are a collection of projects working toward a common goal, whereas a PMO coordinates projects within an organization. Programs are led by a program manager that the project manager reports to. PMOs may be led by a chief project officer.

**KEY TERMS**

To pass the PMP exam, you will need to memorize the following terms and their definitions. For maximum value, create your own flashcards based on these definitions and review them daily.

- **application areas** The areas of discipline that a project may center upon. Consider technology, law, sales, marketing, and construction, among many others.

- **deliverable** A thing that a project creates; projects generally create many deliverables as part of the project work.

- **Iron Triangle** A term used to describe the three constraints of every project: time, cost, and scope. The sides of the Iron Triangle must be kept in balance or the quality of the project will suffer.

- **Management by Projects** An organization that uses projects to move the company forward is using the Management by Projects approach. These project-centric entities could manage any level of their work as a project.

- **operations** The ongoing work of the business. Operations are a generic way to describe the activities that support the core functions of a business entity.

- **PMBOK Guide** The abbreviated definition for PMI’s *A Guide to the Project Management Body of Knowledge*.

- **PMP** Your goal. A PMP is certified by the Project Management Institute as a Project Management Professional.

- **programs** A collection of projects working in unison to realize benefits that could not be achieved by managing each project independently of one another.
progressive elaboration  The process of starting with a large idea and, through incremental analysis, actions, and planning, making the idea more and more specific. Progressive elaboration is the generally accepted planning process for project management, wherein the project management team starts with a broad scope and works towards a specific, detailed plan.

project  An undertaking outside of normal operations to create a unique product, service, condition, or result. Projects are temporary, while operations are ongoing.

project communications management  One of the nine project management knowledge areas; it is the planning and management of communication among project stakeholders. (See Chapter 10 for more information on this topic.)

project cost management  One of the nine project management knowledge areas; it is the estimating, budgeting, and controlling of the project expenses. (See Chapter 7.)

project human resource management  One of the nine project management knowledge areas; projects are completed by people, and the project manager generally oversees the management of the human resources on the project team. (See Chapter 9.)

project integration management  One of the nine project management knowledge areas; this knowledge area coordinates the activities and completeness of the other eight knowledge areas. (See Chapter 4.)

project management  The management of the projects within an organization. It is the initiation, planning, executing, monitoring and controlling, and closing of the temporary endeavor of the project.

project management office (PMO)  Organizes and manages control over all projects within an organization. A PMO also may be known as a program management office, project office, or simply the program office. Coordinates all aspects, methodology, and nomenclature for project processes, templates, software, and resource assignment.

project manager  The individual who manages the project’s activities for an organization.

project portfolio management  A management process to select the projects that should be invested in. Specifically, it is the selection process based on the need, profitability, and affordability of the proposed projects.
Chapter 1: Introducing Project Management

**project procurement management**  One of the nine project management knowledge areas; this knowledge area oversees the purchasing and contract administration for a project. (See Chapter 12.)

**project quality management**  One of the nine project management knowledge areas; this knowledge area defines quality assurance, quality control, and the quality policy for the project. (See Chapter 8.)

**project risk management**  One of the nine project management knowledge areas; project risk management defines the risk identification, analysis, responses, and control of risk events. (See Chapter 11.)

**project scope management**  One of the nine project management knowledge areas; this knowledge area defines the project requirements, scope creation, and control. (See Chapter 5.)

**project time management**  One of the nine project management knowledge areas; this knowledge area defines the approach to time estimating, scheduling, and control of the project activities. (See Chapter 6.)

**subprojects**  A subproject exists under a parent project, but follows its own schedule to completion. Subprojects may be outsourced, assigned to other project managers, or managed by the parent project manager but with a different project team.

**Triple Constraints of Project Management**  Describes the required balance of time, cost, and scope for a project. The Triple Constraints of Project Management is also defined by the Iron Triangle of Project Management.

**work breakdown structure**  The visual decomposition of the project scope. It represents all of the deliverables the project promises to create.
TWO-MINUTE DRILL

The *PMBOK Guide, This Book, and the PMP Exam*

- The PMP Exam is based on your experience and the fourth edition of PMI’s book *A Guide to the Project Management Body of Knowledge*.
- This book, the one you’re reading now, explains project management in plain language and helps you prepare to pass the PMP exam.
- Not everyone can take the PMP exam—you have to qualify for the test first.

**Defining What a Project Is—and Is Not**

- Projects are temporary, unique, and create a product or service.
- Projects move from concept to completion through progressive elaboration.
- Not all projects get selected. The decisions to choose one project over another may vary from organization to organization. The process, however, may be called project portfolio management.
- Projects have a definite beginning, middle, and ending; operations do not.
- Project management offices standardize the project management approach within an organization.

**Defining Project Management**

- Within the project management framework are nine knowledge areas, which span the project management life cycle.
- The focus of project integration management is managing all of the interactions of project components, processes, and knowledge areas.
- The focus of project scope management is on protecting, fulfilling, and delivering the project scope.
- The focus of project time management is on scheduling activities, monitoring the project schedule, and working with the project team and stakeholders to ensure the project completes on time.
- The focus of project cost management is on estimating and maintaining project costs.
The focus of project quality management is on setting the quality expectations and then delivering the project product with the expected level of quality.

The focus of project human resources management is on developing the project team to work together to deliver the project as expected.

The focus of project communications management is on delivering needed information to the correct parties at the correct time. Much of project communications is on keeping the stakeholder informed of the project issues, risk, progress, and overall performance.

The focus of project risk management is on identifying, mitigating, and managing project risks.

The focus of project procurement management is soliciting, selecting, and managing vendors to complete project work or supply project materials.

Examining Related Areas of Project Management

Projects often operate under the auspices of a PMO or a program. A program is a collection of projects working together for a common goal.

A project manager must have multiple skills to be successful, including the ability to communicate, manage a budget, be organized, negotiate, and provide leadership for the project.

Project managers in different sectors of business and nonprofit entities will encounter situations unique to their area of expertise. For example, a project manager of a construction project will have different issues and concerns than a project manager of a manufacturing project.

Project managers require organization, problem solving, communication, and leadership skills and management abilities.
SELF TEST

1. Which one of the following is not an attribute of a project?
   A. Definite starting date
   B. Has no definite end date
   C. Creates a product, service, or result
   D. Requires resources

2. You are a project manager for Johnson Keyboards, Inc. Your organization has adapted the PMBOK Guide as a standard tool for how projects should operate, and you are involved in shaping the standardization for all future projects. In light of this information, what is the recommended course of action for the processes and procedures in the PMBOK Guide?
   A. Not all processes and procedures in the PMBOK Guide are actually required on all projects.
   B. All processes and procedures are to be followed as defined in the PMBOK Guide.
   C. Not all processes and procedures are needed, unless the PMBOK Guide states the process or procedure is a requirement for the project type.
   D. All processes and procedures are to be followed as identified in the PMBOK Guide; otherwise, the PMP is in violation of the PMP Code of Ethics and Professional Conduct.

3. Nancy is the project manager of the INCORP1 Project. She and the stakeholders created a scope two months ago, but since then, the scope has evolved and now provides much more detail about the project. The process of the scope evolving is also known as which one of the following terms?
   A. Decomposition
   B. Scope verification
   C. Scope creep
   D. Progressive elaboration

4. You are explaining to a junior engineer the difference between a project and operations. Which one of the following is true only of operations?
   A. They are performed by people.
   B. They are constrained by limited resources.
   C. They are ongoing.
   D. They are planned, executed, and controlled.
Chapter 1: Introducing Project Management

5. You are the project manager for your company, Mark Manufacturers. Your company has a large client that has requested a special component be created for one of their test engines. Your organization agrees and creates a standard contract with the customer, and your manager assigns you to manage this project. The project was launched because of which one of the following?
   A. A customer request
   B. A change in the technology your customer is creating
   C. A legal requirement (contractual)
   D. An organizational need

6. Project managers are not responsible for which one of the following in most organizations?
   A. Identifying the project requirements
   B. Selecting the projects to be initiated
   C. Balancing demands for time, cost, scope, and quality
   D. Establishing clear and achievable project objectives

7. You and William, a project stakeholder, are discussing risks within your project. Which one of the following best describes risk?
   A. Any event that can cause your project to fail
   B. Any event that may have a positive or negative effect on your project’s team
   C. An uncertain event that may have a positive or negative effect on your project
   D. An event that will cause time and cost constraints to be broken

8. You are the project manager for a large software development project. You have concerns that one of the components of the Iron Triangle is slipping. Your project sponsor, Jim Bob, is not familiar with the Iron Triangle, so you explain the concept to him. What will be affected if any angle of the Iron Triangle is not kept in balance?
   A. Cost
   B. Quality
   C. Time
   D. Scope

9. Which knowledge area includes the creation of the project charter?
   A. Project scope management
   B. Project cost management
   C. Project integration management
   D. Project communications management

10. You and your project team are located in Des Moines, Iowa, but your project execution will take place in Mexico. You have valid concerns about the interactions with the stakeholders; time zone differences; language barriers; the different laws that could affect your project; and
the logistics of travel, face-to-face meetings, and even teleconferencing. Which of the following project environments are you concerned with most?

A. Cultural and social  
B. International and political  
C. Physical  
D. Organizational structure

11. Which one of the following is not a general management skill?

A. Motivating the project team  
B. Purchasing and procurement  
C. Sales and marketing  
D. Contracts and commercial law

12. Smith Construction has won a contract to build a 77-story condominium building in downtown Chicago. The building will have 650 condos, a parking garage, indoor and outdoor pools, two floors for retail, two floors of offices, and several shared community rooms. Mary Anne Kedzie has elected to create a program for the creation of the building. Which one of the following best describes a program?

A. A standardized approach to project management within an organization  
B. A standardized approach to project management with multiple projects coordinated together  
C. A collection of related projects managed in coordination to gain control that would not necessarily be available if the projects were managed independently  
D. A collection of related projects all contributing to one deliverable

13. You are the project manager for an architectural design company. Your company consistently completes projects for other companies. Within your organization, the project managers have the highest level of authority on a project. You are likely operating within what type of company?

A. A company using a functional structure  
B. A company using a matrix structure  
C. A company using Management by Projects  
D. A company using an ISO 9000 program

14. Who is usually responsible for portfolio management within an organization?

A. Project managers  
B. Project sponsors  
C. Stakeholders  
D. Senior management
15. You are the project manager of a large project to install 1,900 kiosks throughout college campuses in North America. The kiosk will collect applications for credit cards, phone services, and other services marketable to college students. The bulk of your project is focused on the information technology integration, the wide area network (WAN) connections from each kiosk, security of the data transferred, and the database of the information gathered. For ease of management, you have hired local contractors to install the kiosks that you will ship to each campus. The contractors on each campus will be responsible for the WAN connection, the electrical connection, the security of the kiosk, and all testing. The local contracted work could be called what?
   A. Risk mitigation
   B. Operations
   C. Subprojects
   D. Management by Projects

16. Where can a project manager expect software, templates, and standardized policies?
   A. A project management office
   B. With the stakeholders
   C. Human resources
   D. The project budget

17. Which of the following is likely to be part of an operation?
   A. Providing electricity to a community
   B. Designing an electrical grid for a new community
   C. Building a new dam as a source for electricity
   D. Informing the public about changes at the electrical company

18. Of the following, which one is not part of project integration management?
   A. The creation of the project plan
   B. The interaction between project teams
   C. The execution of the project plan
   D. The documentation of changes to the project plan

19. Which one of the following describes the physical environment for a construction project?
   A. The terrain where the construction will take place
   B. The approval of the blueprints for the building
   C. The demographics of the community where the construction will take place
   D. The laws that govern where the building may take place
20. Which document will guide the interaction between the project manager and a selected vendor on a project?
   A. The project plan
   B. The statement of work (SOW)
   C. The procurement management plan
   D. The contract

21. What is the difference between a standard and a regulation?
   A. Standards and regulations are the same.
   B. Standards are regulated by specific industries; regulations are laws.
   C. Standards are optional; regulations are required.
   D. Standards are required; regulations are laws.

22. The project manager typically devotes the most amount of time to which of the following tasks?
   A. Communications
   B. Budget management
   C. Project organization
   D. Management of team negotiations

23. You have an excellent idea for a new project that can increase productivity by 20 percent in your organization. Management, however, declines to approve the proposed project because too many resources are already devoted to other projects. You have just experienced what?
   A. Parametric modeling
   B. Management by exception
   C. Project portfolio management
   D. Management reserve

24. Which one of the following is an interpersonal skill a project manager must have to be successful?
   A. Sales and marketing
   B. Leadership
   C. Health and safety practices
   D. Information technology experience

25. Of the following, which is the most important stakeholder involved with a project?
   A. The project manager
   B. The project sponsor
   C. The chief executive officer (CEO)
   D. The customer
SELF TEST ANSWERS

1. Which one of the following is not an attribute of a project?
   A. Definite starting date
   B. Has no definite end date
   C. Creates a product, service, or result
   D. Requires resources
   - B. A project does have a definite end date; operations do not.
   - A, C, and D are all incorrect choices because projects do have a definite starting date; they do create a unique product, service, or changes to an environment; and all projects require resources.

2. You are a project manager for Johnson Keyboards, Inc. Your organization has adapted the PMBOK Guide as a standard tool for how projects should operate, and you are involved in shaping the standardization for all future projects. In light of this information, what is the recommended course of action for the processes and procedures in the PMBOK Guide?
   A. Not all processes and procedures in the PMBOK Guide are actually required on all projects.
   B. All processes and procedures are to be followed as defined in the PMBOK Guide.
   C. Not all processes and procedures are needed, unless the PMBOK Guide states the process or procedure is a requirement for the project type.
   D. All processes and procedures are to be followed as identified in the PMBOK Guide; otherwise, the PMP is in violation of the PMP Code of Ethics and Professional Conduct.
   - A. Not all information in the PMBOK Guide should be applied uniformly to all projects. It is the responsibility of the project management team to determine what practices are appropriate for each project.
   - B, C, and D are all false statements regarding the implementation of the PMBOK Guide.

3. Nancy is the project manager of the INCORP1 Project. She and the stakeholders created a scope two months ago, but since then the scope has evolved and now provides much more detail about the project. The process of the scope evolving is also known as which one of the following terms?
   A. Decomposition
   B. Scope verification
   C. Scope creep
   D. Progress elaboration
   - A. Decomposition
Self Test Answers

D. Progress elaboration is a term used to describe the development that happens in incremental steps. The project scope is the most common example of progress elaboration, but the WBS, product description, and even the project plan can pass through progressive elaboration. A is incorrect, as decomposition is the term used to describe the creation of the work breakdown structure. B, scope verification, is incorrect, as this term describes the process to verify that the deliverable matches what the scope promised to create. C, scope creep, is a term to describe small, unauthorized changes to the project scope.

4. You are explaining to a junior engineer the difference between a project and operations. Which one of the following is true only of operations?
A. They are performed by people.
B. They are constrained by limited resources.
C. They are ongoing.
D. They are planned, executed, and controlled.

C. Projects are temporary; they do not go on forever. A, B, and D are all incorrect, as projects and operations are performed by people; are constrained by limited resources; and are planned, executed, and controlled.

5. You are the project manager for your company, Mark Manufacturers. Your company has a large client that has requested a special component be created for one of their test engines. Your organization agrees and creates a standard contract with the customer, and your manager assigns you to manage this project. The project was launched because of which one of the following?
A. A customer request
B. A change in the technology your customer is creating
C. A legal requirement (contractual)
D. An organizational need

A. This project was launched because the customer requested the new component. B is incorrect because the project is not a response to a change in technology, but a customer request. C, a legal requirement, is not correct because this actually refers to a law or mandated regulation that has been created. D, an organizational need, typically refers to a project to behoove the performance of the organization.
Chapter 1: Introducing Project Management

6. Project managers are not responsible for which one of the following in most organizations?
   A. Identifying the project requirements
   B. Selecting the projects to be initiated
   C. Balancing demands for time, cost, scope, and quality
   D. Establishing clear and achievable project objectives

   ☒ B. Project managers typically do not select which projects are to be initiated. The project selection committee, customers, or project sponsors are typically responsible for this.
   ☒ A, C, and D are all incorrect choices because the project manager is responsible for these activities.

7. You and William, a project stakeholder, are discussing risks within your project. Which one of the following best describes risk?
   A. Any event that can cause your project to fail
   B. Any event that may have a positive or negative effect on your project’s team
   C. An uncertain event that may have a positive or negative effect on your project
   D. An event that will cause time and cost constraints to be broken

   ☒ C. Risk is an uncertain event that can have positive or negative effects on your project.
   ☒ A, B, and D are characteristics of risk, but the best choice is C because risk is uncertain and may have a positive or negative effect on the project.

8. You are the project manager for a large software development project. You have concerns that one of the components of the Iron Triangle is slipping. Your project sponsor, Jim Bob, is not familiar with the Iron Triangle, so you explain the concept to him. What will be affected if any angle of the Iron Triangle is not kept in balance?
   A. Cost
   B. Quality
   C. Time
   D. Scope

   ☒ B. If any angle of the Iron Triangle is changed, the quality of the project will suffer.
   ☒ A, C, and D are incorrect choices, as these are the three sides of the Iron Triangle. These three sides must be kept in balance or quality will suffer.
9. Which knowledge area includes the creation of the project charter?
   A. Project scope management
   B. Project cost management
   C. Project integration management
   D. Project communications management

   [✓] C. Project integration management, which focuses on the coordination of all components of project management, includes the development of the project charter.
   [✗] A is incorrect, as project scope management focuses on the creation and control of the project scope. B, project cost management, is incorrect, as its role is to manage, control, and respond to the financial concerns within the project. D, project communications management, focuses on who needs what information, when is it needed, and in what modality.

10. You and your project team are located in Des Moines, Iowa, but your project execution will take place in Mexico. You have valid concerns about the interactions with the stakeholders; time zone differences; language barriers; the different laws that could affect your project; and the logistics of travel, face-to-face meetings, and even teleconferencing. Which of the following project environments are you concerned with most?
   A. Cultural and social
   B. International and political
   C. Physical
   D. Organizational structure

   [✓] B. All of the concerns listed fall into the international and political environment.
   [✗] Cultural and social, choice A, describes the demographic, educational, and ethical environment. C, physical, is concerned with the ecology and geography affected by the project. D, organizational structure, is not a project environment.

11. Which one of the following is not a general management skill?
   A. Motivating the project team
   B. Purchasing and procurement
   C. Sales and marketing
   D. Contracts and commercial law
A. Motivation is actually an interpersonal skill that the project manager must have to inspire and energize the project team.

B, C, and D are all incorrect choices, as these are general management skills the project manager must have in order to successfully manage a project. Management skills are always about getting the project work done. Interpersonal skills, sometimes called soft skills, are about inspiring, leading, and directing the project team and people to do what’s required of them.

Smith Construction has won a contract to build a 77-story condominium building in downtown Chicago. The building will have 650 condos, a parking garage, indoor and outdoor pools, two floors for retail, two floors of offices, and several shared community rooms. Mary Anne Kedzie has elected to create a program for the creation of the building. Which one of the following best describes a program?

A. A standardized approach to project management within an organization
B. A standardized approach to project management with multiple projects coordinated together
C. A collection of related projects managed in coordination to gain control that would not necessarily be available if the projects were managed independently
D. A collection of related projects, all contributing to one deliverable

C. A program is a collection of related projects managed and coordinated to gain a higher level of control.

A, B, and D do not accurately describe a program. Note that D is not the best choice because programs typically create many deliverables and benefits—rarely just one deliverable.

You are the project manager for an architectural design company. Your company consistently completes projects for other companies. Within your organization, the project managers have the highest level of authority on a project. You are likely operating within what type of company?

A. A company using a functional structure
B. A company using a matrix structure
C. A company using Management by Projects
D. A company using an ISO 9000 program
C. Your company is likely using Management by Projects. Management by Projects may also be called a projectized organization.

A is incorrect since functional describes an organization that is arranged by function, such as sales, marketing, finance, and IT. B is incorrect because a matrix-structured organization uses resources from around the organization and the project manager has a low level of authority. D is incorrect because ISO programs describe a certified method of completing work the same exact way over and over.

14. Who is usually responsible for portfolio management within an organization?
A. Project managers
B. Project sponsors
C. Stakeholders
D. Senior management

D. Senior management is responsible for portfolio management.
A is incorrect because project managers are responsible for a project’s success, but not for the portfolio. B, project sponsors, authorize projects. C, stakeholders, is an incorrect choice, as stakeholders is too vague of an answer to be acceptable.

15. You are the project manager of a large project to install 1,900 kiosks throughout college campuses in North America. The kiosk will collect applications for credit cards, phone services, and other services marketable to college students. The bulk of your project is focused on the information technology integration, the wide area network (WAN) connections from each kiosk, security of the data transferred, and the database of the information gathered. For ease of management, you have hired local contractors to install the kiosks that you will ship to each campus. The contractors on each campus will be responsible for the WAN connection, the electrical connection, the security of the kiosk, and all testing. The local contracted work could be called what?

A. Risk mitigation
B. Operations
C. Subprojects
D. Management by Projects

C is the best choice because work that is subcontracted out for ease of management, as in this situation, becomes subprojects.
A is incorrect, as risk mitigation describes when a project manager takes measures to reduce or eliminate risks. The scenario did not give enough information to determine what risks would have been mitigated. B, operations, is incorrect since it does not describe this scenario at all. D, Management by Projects, is incorrect, as this term describes a company that operates through projects. There is no indication that this is true with the scenario presented.
16. Where can a project manager expect software, templates, and standardized policies?
   A. A project management office
   B. With the stakeholders
   C. Human resources
   D. The project budget

   ☑ A. The project management office (PMO) supports the project manager through templates, standardized policies, and software.
   ✗ B, C, and D do not fully answer the question, so these answers are incorrect.

17. Which of the following is likely to be part of an operation?
   A. Providing electricity to a community
   B. Designing an electrical grid for a new community
   C. Building a new dam as a source for electricity
   D. Informing the public about changes at the electrical company

   ☑ A. An electrical company’s primary operation is to provide electricity.
   ✗ B and C are projects. While D, providing information, could potentially be part of an ongoing operation, choice A is still the best answer presented.

18. Of the following, which one is not part of project integration management?
   A. The creation of the project plan
   B. The interaction between project teams
   C. The execution of the project plan
   D. The documentation of changes to the project plan

   ☑ B. Project integration management focuses on the project plan and its implementation.
   ✗ While B could, in some instances, be considered accurate if the project plan had some interaction with other project teams, the assumption cannot be made in this question. A, C, and D are all part of project integration management, so they are not valid answers.

19. Which one of the following describes the physical environment for a construction project?
   A. The terrain where the construction will take place
   B. The approval of the blueprints for the building
   C. The demographics of the community where the construction will take place
   D. The laws that govern where the building may take place
20. Which document will guide the interaction between the project manager and a selected vendor on a project?
   A. The project plan
   B. The SOW
   C. The procurement management plan
   D. The contract

   D. The contract between the organization and the vendor supersedes all other work-related documents.
   The project plan will guide the project manager and the project team to completion, but it will not supersede contracts. The SOW (statement of work), while needed and necessary, is not as important as a contract. The procurement management plan explains how project procurement takes place.

21. What is the difference between a standard and a regulation?
   A. Standards and regulations are the same.
   B. Standards are regulated by specific industries; regulations are laws.
   C. Standards are optional; regulations are required.
   D. Standards are required; regulations are laws.

   C. Standards are optional and may sometimes be called guidelines. Regulations are not optional and are typically enforced by laws.
   A, B, and D are all incorrect because they do not accurately describe standards and regulations.

22. The project manager typically devotes the most amount of time to which of the following tasks?
   A. Communications
   B. Budget management
   C. Project organization
   D. Management of team negotiations

   A. The physical environment describes the effects on and by the ecology and geography of the area where the project will take place.
   B describes the requirements and technical documents for the project plan. C describes the cultural and social environment of the project. D describes the international and political environment of where the project will take place.
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- A. It’s been said that project managers spend 90 percent of their time communicating.
- B, C, and D are all incorrect because these do not accurately describe a project manager’s time.

23. You have an excellent idea for a new project that can increase productivity by 20 percent in your organization. Management, however, declines to approve the proposed project because too many resources are already devoted to other projects. You have just experienced what?
   A. Parametric modeling
   B. Management by exception
   C. Project portfolio management
   D. Management reserve

- C. Project portfolio management is the process of choosing and prioritizing projects within an organization. An excellent project idea can still be denied if there aren’t enough resources to complete the project work.
- A is incorrect, as it is a model to estimate costs, such as cost per ton or cost per hour. B is incorrect because this is a management theory to manage people and problems. D is incorrect, as it is an amount of time and money reserved for projects running late or over budget.

24. Which one of the following is an interpersonal skill a project manager must have to be successful?
   A. Sales and marketing
   B. Leadership
   C. Health and safety practices
   D. Information technology experience

- B. Leadership is the only interpersonal skill listed.
- A, C, and D are incorrect, as these are general management skills and not interpersonal skills.

25. Of the following, which is the most important stakeholder involved with a project?
   A. The project manager
   B. The project sponsor
   C. The CEO
   D. The customer

- D. Customers, internal or external, are the most important stakeholders in a project.
- A is incorrect because the project manager manages the project for the customer. B is incorrect, since the project sponsor authorizes the project. C is incorrect because the CEO may not even know about the project—and even then he would be interested in the success of the project for the customer.