



- Define the project
- Select a core team
- Maintain control

PROJECT MANAGEMENT



GARY R. HEERKENS



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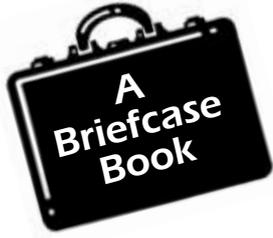
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Project Management

Gary R. Heerkens, PMP

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Preface

This book chronicles the exploits of Brad—a fictional character who’s been thrust into the wonderful world of project management. Just like many project management professionals I’ve met in my many years in the field, he was drawn into the battle reluctantly, but he emerged wanting more.

And as you will soon discover, project management is actually a curious combination of art and science. The artistry refers to the leadership part of the role, or the *people component*. The science—which we will explore with Brad—consists of the tools and techniques that form the underpinnings of the entire project management process. But instead of simply providing information on project management tools and their proper use, this book will explore the *principles* behind their use. This marriage of tools and the principles behind them yields a powerful, plain-language guide that not only explains *how* to do things, but *why* they need to be done.

The book presents a *realistic* view of project management—a very difficult, yet rewarding profession. The role of project manager is a particularly challenging job. Actually, many practicing project managers consider overcoming challenges to be the essence of their job. So this book explores project management from the standpoint of challenges. The very first chapter, in fact, explores the question of whether you should even take on the role at all! Don’t let me scare you though. This book—if you stick with it—will provide all of the tools and techniques you’ll need to overcome just about any problem related to the science of project management.

The first three chapters lay out everything you need to know about projects, project management, and the role of project

manager. Establishing a foundation of understanding in these areas will provide the context you need to better understand the world you (and Brad) are about to enter.

Brad's first big challenge unfolds in Chapter 4, as he tries to figure out exactly what he's supposed to do! All too often, project managers are given half-baked ideas that they must convert into viable, feasible, money-making ventures. This isn't easy. Chapter 4 will show you how to define your project so that everyone understands what it will accomplish, and agrees that it is a worthwhile undertaking.

Building and maintaining an effective team is always challenging. Chapter 5 offers a host of practical tips for getting the right people, providing the right amount of direction, and ensuring that people will be standing in line to work on your next project.

Few would argue against the understanding that planning is the heart of project management. Planning is so important, in fact, that I've devoted two chapters to this subject. Project managers are under tremendous pressure to "just get on with the work." Consequently, project planning is sometimes short-changed. Chapter 6 helps you understand the function and purpose of planning, and offers insights on the challenges you can expect to face as you strive to prepare your project plan. Once this groundwork of understanding is laid, Chapter 7 shows you the nuts and bolts of planning, step by step.

One of the biggest single challenges all project managers face is risk and uncertainty. By their very nature, projects are one-time events. This means that you don't really know what to expect or how things are going to turn out. Chapter 8 will show you how to address that challenge so as to, if not eliminate risk, manage it effectively.

Chapter 9 describes how you can stay in control while the project work is being done, even though there are many different people doing many different things. The key to tackling this challenge, as you will see, is information. And plenty of it.

Chapter 10 shows you how to manage the environment that surrounds your project. Just like Brad, you will discover that

there are a myriad of people and things trying to tug your project in different directions. In this chapter, you'll learn how to manage your project interfaces in an effective manner.

Effective communication and proper documentation are threads that bind the project together. The biggest challenge you'll face in this area, however, is likely to come from within. Many people do not communicate as effectively as they would like, and many try to avoid documentation. If either of these situations describes you, be sure to read Chapter 11. You'll find many tips and techniques that will enhance your understanding of communication and documentation from the project manager's perspective.

Eventually, your project will come to an end. Brad discovered that this part of the project is surprisingly challenging. Confusion and chaos are not unlikely in the waning days of the project. Chapter 12 shows you how you can cut through the chaos and drive your project to a successful conclusion.

Brad's adventure in managing Project Apex was an incredible learning experience for him, as I trust this book will be for you. Obviously, you can't learn everything there is to know about project management in a single book. That's OK. Most of what you will eventually learn about project management will come from your on-the-job experience. The intent of this book is to provide practical tips and techniques that will open the door for your self-development, and allow you to get the most from your experiences.

Being an excellent project manager requires years of practice. For many, however, getting started is the toughest part. This book, I am certain, will get you off to an excellent start.

Special Features

The idea behind the books in the Briefcase Series is to give you practical information written in a friendly person-to-person style. The chapters are short, deal with tactical issues, and include lots of examples. They also feature numerous boxed sidebars

designed to give you different types of specific information. Here's a description of the boxes you'll find in this book.

 Smart Managing	These boxes do just what they say: give you tips and tactics for being smart in the way in which you plan and execute the management of your project.
	These boxes provide warnings for where things could go wrong during every phase of the project management process.
	Here you'll find the kind of how-to hints the pros use to make your project go as smoothly as possible.
	Every activity has its special jargon and terms. These boxes provide definitions of these concepts.
	Look for these boxes for examples of principles and practices described in the text.
	Here you'll find specific procedures and techniques you can use to manage your project more effectively.
	How can you be sure you won't make a mistake sometime as you manage your project? You can't. But if you see a box like this, it will give you practical advice on how to minimize the possibility.

Acknowledgments

The ideas and learnings expressed in this book were shaped from countless discussions with project management profes-

sionals and many other associates willing to share their experiences, insights, and opinions. Unfortunately, I cannot list all of the people who helped me learn how to manage projects, or all of my friends and colleagues in the Project Management Institute who have helped to broaden my knowledge. But I do appreciate them nonetheless.

And I would be remiss if I did not acknowledge the contribution of the many students who have attended my seminars, and were willing to discuss the problems and issues confronting them—they have provided some of the most valuable insights of all.

I would also like to acknowledge the contribution of Don Lindsay, a visionary leader who shaped my thinking and professional behavior more than any other organizational manager throughout my long career.

For helping me improve the product, I'd like to thank Frank Saladis, PMP, for his willingness to review my manuscript and offer his insights and suggestions. I'd also like to thank Mary Russo for her help in transcribing my marginally successful attempt at trying to make this part of the "books on tape" series!

I'd also like to thank John Woods from CWL Publishing Enterprises for recruiting me to write this book and for his perseverance and latitude. He kept telling me that I'd be pleased and proud when I was done. He was right. Bob Magnan, also of CWL, was responsible for much of the final editing, and I appreciate the polish he put on this work.

Finally, I wish to thank my wife, Sandra, and sons, Gregory and Russell, for their support, patience, and understanding through some difficult periods—and throughout the countless hours of solitude they allowed me to impose on myself, and the countless hours of silence I imposed upon them.

About the Author

Gary R. Heerkens, PMP, PE is a consultant, trainer, lecturer, and author in the field of project management. He is the president of Management Solutions Group, a Rochester, New York based company that specializes in providing project management educational solutions and organizational development support.

Prior to founding Management Solutions Group, Gary managed a wide variety of project types and sizes for 20 years at a *Fortune* 100 company. He designed and taught several project management training programs, helped develop project process methodology, and acted as an internal project management consultant across the company.

In addition to teaching and consulting, Gary is a contributing editor to *Successful Project Management*, a nationally circulated newsletter, and a member of the review committee for the Project Management Institute's (PMI) *A Framework for Project Management* seminar.

He is a frequent speaker at international project management conferences. He has been certified as a Project Management Professional (PMP), and as a licensed Professional Engineer in New York State. He served as the president of the Rochester Chapter of PMI from 1998-2001. He holds BSME and MBA degrees from the Rochester Institute of Technology. You can reach Gary via his company's site on the Internet, www.4msginc.com.



Congratulations ... You're the Project Manager!

Brad picks up the phone before the second ring. It's his boss, Susan. "Brad, I'd like you to stop by my office right after lunch today."

Brad is not really sure why the boss is calling him into her office, which makes for a long lunch hour. He knows he's been doing a good job lately. As a matter of fact, he knows that he's probably the most technically capable person in the group.

Brad's mind begins to race.... Maybe it's an award? Could it be a promotion?

"No, wait," he says to himself in a frenzy of self-doubt.

"Maybe I did something I wasn't supposed to? Or maybe I didn't do something I should have?"

Countless positive and negative scenarios run through Brad's overworked mind until one o'clock finally rolls around and he cautiously enters Susan's office.

"Brad, I've got some great news for you," Susan begins.

"Since it's so closely related to what we do here, Project Apex has been assigned to our group." Brad smiles without knowing why.

Susan continues, “You’re one of the best engineers I have.” Brad’s smile widens in anticipation. And then—without warning—Susan utters those fateful words. “Congratulations, Brad, I’m assigning you as the project manager for Project Apex.”

Great news? Did she say great news? “What do I know about managing projects?” Brad thinks to himself.

As Brad begins to leave Susan’s office, she delivers the knockout punch. “By the way, Brad,” Susan says with a curious inflection in her voice, “I think you should be aware ... management is *really* going to be watching closely. There’s an awful lot resting on the success of your project.”

As Brad slips out of Susan’s office, the same two words keep ringing in his ears—“*your project.*”

The Accidental Project Manager

The story above is not an isolated incident. Every day, engineers, salespeople, technicians, and countless others are thrust into the role of project manager. They’re very good at what they



Project “A temporary endeavor undertaken to create a unique product or service,” according to the Project Management Institute.

Project manager The person ultimately responsible for the success or failure of a project.

Accidental project manager A person who is placed into the role of project manager by organizational necessity and chance, rather than by design or through choice of career path.

do. In fact, they’re typically the most technically knowledgeable engineers or the most successful salespeople. Now they’re about to become project managers.

Actually it’s probably appropriate to refer to them by their more popular (however informal) name—*accidental project managers*. An accidental project manager is a person who is placed into the role by organizational

necessity and chance, rather than by design or through choice of career path.

The Pros and Cons of Becoming a Project Manager



Pros:

- It can often be a steppingstone to promotion.
- It provides a strong sense of accomplishment.
- There's considerable variety: no two days are alike.
- There's significant freedom of choice.
- It affords the opportunity to effect change across the organization.

Cons:

- It requires significant tolerance for politics.
- It requires significant tolerance for ambiguity and uncertainty.
- There's a lot of responsibility, but little or no authority.
- You may feel "disconnected" from your technical discipline.
- You may be perceived by some as not having "a real job."

If you're an accidental project manager, one of the first things you should do is pause to consider whether or not you're cut out to be a project manager and try to determine whether it's what you really want to do. Why? Because if you do a reasonably good job leading your first project, chances are you'll be asked again. And again. And again. In other words, if you're finding yourself in the same position as Brad, you might be embarking upon a new career. You'd be wise to consider some of the pros and cons before saying yes to that career move.

The information, tools, and techniques presented in this book will move you well along in understanding the mechanics of managing projects. But it's important that you enter this new world with your eyes wide open. With that thought in mind, let's take a closer look at what you might expect to experience as a project manager.

What Can You Expect to Encounter "Out There"?

Although you won't often see it addressed in project management reference books, the reality is that *mental preparedness* may prove to be just as critical to your ultimate success as a project manager as your knowledge base or skill set. And gaining a sound understanding of what's involved in this new role is

a critical step toward being mentally prepared. So let's explore those pros and cons in a bit more detail by describing the life of a typical project manager—assuming there is such a thing.

However Brad may feel about taking on his first project, the truth is that life as a project manager can be extremely rewarding. You'll find it to be different from most any other thing you've ever done. It's complex, varied, and interesting. If done well, it can lead to a very strong sense of accomplishment. These are among the aspects that project managers identify as the main draws to the job.

At the same time, however, being a project manager will test you in ways you may not be able to imagine now. You will become a focal point in the organization. Everyone will look to you for the answers, but you must be careful not to try to provide all the answers; after all, that's why you have a team.

And speaking of the team, one of the biggest shifts in behavior (and thinking) you'll encounter will be the need to rely upon others to get things done. In most cases, that's your team. You'll quickly discover that there's far too much for you to do alone, yet delegation will prove to be a challenge for you. Empowering others, and then trusting them to follow through,

may be a bit unsettling. You'll find yourself uncomfortable with the idea that others are doing things for which you will be held responsible.

You'll have lots of responsibility, but you'll be missing the authority often perceived as being required to discharge that responsibility. You'll have to get things done through the people on your team without having any *direct* control over them. Among



Smart Managing

Hang in There, Baby!

If you can get experienced project managers to let their guard down for a few moments, they'll probably admit that their first few projects didn't go very well—and that's the sugar-coated version. So be prepared for a rough start as you begin to manage projects. But if you hang in there, you'll find yourself moving up the learning curve rapidly. In the world of project management, experience is a particularly powerful and effective teacher.

your most valued tools will be the ability to persuade and influence, as you seek to form a group of diverse personalities into a unified team with commonality of purpose.

Unfortunately, not everyone on your team will be as knowledgeable and skilled as you would like. Nonetheless, you've got to get the job done using whatever resources have been provided. Project management lore is full of tales of project managers who were able to take "the hand that was dealt" and turn it into project success. For you to succeed, you'll have to rely on your ability to coach, mentor, and motivate in order to get the level of performance you need from those assigned to work on your project.

What will you have to know as a project manager? Well, you'll have to know a little bit about just about everything. You'll have to learn to pay attention to the details, but not get wrapped up in them. You'll have to make countless decisions with insufficient information and despite conflicting signals. You'll have to condition yourself to seek *acceptable* solutions, rather than *perfect* ones. You'll have to blend technical expertise with a keen sense of human nature. You'll have to handle administrative matters.

And while you're busy doing your own thing, you'll have to cultivate and maintain a smooth working relationship with *many* other people, both inside and outside your organization. Unfortunately, as you seek to carry out the objectives of the project, it's unlikely that everyone you encounter will be an ally. Organizational politics and reality dictate that not everyone will like project management or project managers (that's you!). Many people will admire your role, respect your position, and appreciate your involvement; others will not. You will need to figure out who's who—real fast.

But at the end of the project, you'll be able to look back and feel a deep sense of pride that comes with producing a successful outcome and creating positive change. Project leadership requires the use of many different skill sets. It involves tasks of limitless variety. You must live by a curious combination of



Uncovering the Potholes on the Road to Success

Be proactive in determining who's likely to work with you and who's likely to work against you by arranging informal chats with key individuals within your organization. Initiate a casual discussion about the discipline of project management. In many cases, it won't take very much time to figure out whether you can expect your relationship with that individual to be relatively smooth or to be rocky.

process compliance and individual judgment, of gut feelings and data, of people and things. The challenge is enormous.

So if you feel *mentally* prepared to accept this challenge, you're well on your way to becoming a successful project manager. The only thing left is to learn how to do it the right way.

Throughout this book, we'll tell you and show you how to do project management the right way. And although we'll focus primarily upon the process, we'll never lose sight of the importance of the interpersonal aspects as well as the environmental aspects—the people and things that surround your project. Together, the process and the people form the art and science of project management.

About the Art and Science of Project Management

Project management has two major aspects:

- the art—leading the people on the project
- the science—defining and coordinating the work to be done

The art of project management relates to the fact that projects are really about people getting things done. Project management requires a keen knowledge of human behavior and the ability to skillfully apply appropriate interpersonal skills.

The second aspect—and the focus of this book—involves the knowledge, understanding, and skillful application of a prescribed *project management process*. This process is intended to guide project managers and project teams in effectively performing key process steps, such as identifying the true need,

defining the project objective, creating an execution schedule, and maintaining control throughout the entire project. The basic premise of the process is the development of a set of graphic tools, documents, and techniques, all aimed at facilitating project success. Among the graphic tools and documents are the Requirements Document, the Work Breakdown Structure, and the Network Diagram (all covered in chapters to come). Among the many techniques we'll cover will be calculating Net Present Value, preparing a comprehensive proposal, and conducting a Make vs. Buy Analysis.

About This Book

As we focus on the tools and techniques of project management throughout this book, we'll be making a few key assumptions intended to represent the most common conditions for practicing project managers today. First, we'll assume that you are the person leading the project—irrespective of your position within the organizational hierarchy. Second, we'll assume that you are managing projects within a *matrix environment*. This means that the project requires the efforts of individuals from a number of functional departments, such as Marketing, Engineering, Human Resources, Operations, etc. Finally, we'll assume that you do not have direct control over these people; in other words, you are *not* their immediate supervisor.

However, even if you're not a practicing project manager, if you're a manager of project managers or an executive, this book will be of great value to you. It will provide you with a wealth of knowledge and insight relative to the life of a project manager. This knowledge and insight will greatly help you develop a meaningful support structure for the project managers *and* project teams within your organization. Few would deny that project managers stand a much better chance of effectively applying the tools and techniques covered in this book and therefore succeeding with their projects when they operate within a supportive organizational environment. And if you're a supervisory manager or organizational executive, you

play a primary role in ensuring that a supportive environment is provided for project managers—like Brad.

Project Manager's Checklist for Chapter 1

- ❑ Project management is both an art and a science. The art is strongly tied to the interpersonal aspects—the business of leading people. The science (which this book will focus on) includes understanding of processes, tools and techniques.
- ❑ All project managers are expected to be very well versed in the science of project management. You cannot survive without being knowledgeable in this area.
- ❑ If you're an accidental project manager (put into the role rather than choosing it voluntarily), you'd better pause to think about whether you're cut out to be a project manager before getting too involved. Although it can be personally satisfying, it's a tough job that requires a thick skin. If you do a good job, you'll probably be asked to lead many more projects, so you'd better be OK with the role, or your life will not be much fun
- ❑ Generally speaking, the project manager's job is not intellectually challenging, but it is complex and broad. It requires a large variety of different skills—many of which will be new to you.

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