The Art of
Project
Management
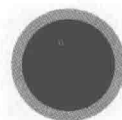
项目管理艺术（影印版）

Scott Berkun 著

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Praise for The Art of Project Management

"As someone who alternatively manages a worldwide team of open source developers and works in a much smaller role inside a large corporation, I found Berkun's practical, intelligent, and multi-disciplined approach to the art and science of getting things done in groups immediately applicable and extremely effective. Highly recommended for CEOs, project managers, and hackers alike."

—*Matt Mullenweg, Founder and Lead Developer, Wordpress.org*

"...Its strengths are its basis in experience; the inclusion of many illustrative stories; and the thoughtful sections on specs, making good decisions, and politics... an excellent resource for someone trying to make sense of project management."

—*Kent Beck, Author of* Extreme Programming Explained: Embrace Change

"This book is useful to anyone involved in ongoing projects, regardless of whether they have an official leadership role. I'm a designer, not a project manager, and I found more practical information on how to get work done in a software company than any other book I've read."

—*Chad Thornton, Interaction Designer, Google Inc.*

"In *The Art of Project Management*, Scott combines his veteran experience inside the world's most famous software company with his unique and empathetic understanding of human behavior. The result is an amazingly practical and proven set of tools, tactics, and techniques for navigating the thorny waters of project management, people management, and software development. Written in the clear, concise, and often comedic voice his readers have come to expect, *The Art of Project Management* is an unflinching guide to anyone managing, influencing, or participating in the process of software development."

—*Bob Baxley, Director of Design, Yahoo! Search*

"A successful software application is a mixture of programming, designing, scheduling, marketing, testing, some black magic, and a lot of luck. Engineers see it as a technical problem; designers see it as a usability problem; marketers see it as a specifications problem; but nobody sees it as 100% their problem. This book is written for the people who take on the burden of making the whole problem their problem."

—*Steve Capps, CEO of onedoto.com and Former Apple Fellow*

"This is in fact a down-to-earth book about a tough job, the management of large, complex projects, with an emphasis on high tech and software...this eminently practical book will be of use to anybody who wants advice on approaching serious project management professionally."

—NETSURFER DIGEST, *JUNE 2005*

"As a software engineer, the observations in *The Art of Project Management* resonated deeply with my own experiences. Scott's book gave me a new appreciation for the difficulty and risks, and the tremendous rewards, of good project management. This book provides the knowledge and the incentive to become a better project contributor, whether you are managing or being managed. Any stakeholder in a software project will benefit from reading this book."

—*MARTIN FRANKEL, SENIOR SOFTWARE ENGINEER, TiVo INC.*

"Scott Berkun delivers an extremely readable book on the pitfalls to avoid and the techniques to pursue in software program management. He writes with obvious real-world experience and demystifies everything from marketing's requirements to bug triage in a way that is useful to all members of the development team. This book offers a whisper of advice into your ear whenever you have a moment of program management uncertainty."

—*CHAD MCDANIEL, LEAD SOFTWARE DEVELOPER*

"How I managed so long without this book baffles the mind."

—*RICHARD STOAKLEY, GROUP PROGRAM MANAGER, MICROSOFT CORPORATION*

"In *The Art of Project Management*, Scott draws from not only his personal experience leading recent high-profile projects at Microsoft, but also lessons from many other fields. Like the broad foundation of the author's insights, this book applies to a wide range of situations, whether in developing software, running a business or any organization."

—*E. CASTEDO ELLERMAN, VICE PRESIDENT, BEAR STEARNS & CO.*

"Of all the many books on project management, *The Art of Project Management* is by far the most easy to read and entertaining. Scott Berkun's insights, knowledge, and sense of humor deliver an exceptional book that no project manager can do without."

—*MICHAEL VIOLA, SENIOR CONSULTANT, IBM*

"I wish I had this book when I started managing projects. Scott shows us the heart and soul of project management: planning the project, keeping the momentum going, developing a solid relationship with the team, working in an organization. All of these are illustrated with plenty of great examples— both successes and failures—from his own career as a project manager at Microsoft."

—ANDREW STELLMAN, STELLMAN-GREENE CONSULTING

"Berkun conveys his considerable experience managing projects for Microsoft, while eschewing the technical jargon which plagues most books of this kind. He provides solid advice on how to make your next project go more smoothly. Over and over, I found myself thinking, 'Oh yeah, *that's* how it should be done' and 'Wow, that makes perfect sense—why didn't I look at it that way before?'"

—MARK STUTZMAN, MANAGER OF INFORMATION SERVICES, FTS INDUSTRIES

"*The Art of Project Management* is unique because of its human approach. Berkun understands that people are at the heart of projects, and this makes the book both highly readable and instantly useful."

—RICH GRUDMAN, IT PROJECT MANAGER

"Berkun provides valuable insight into how to accomplish projects without subscribing to a specific software engineering strategy. His discussions are supported with examples from projects he personally managed and include numerous citations from other works on philosophy, organizational behavior, and project management. This book should be required reading for anyone involved with development, from a single programmer in a small company to a vice-president of a large corporation."

—SAMUEL GREENFIELD, MANAGER OF SYSTEM DEVELOPMENT, SPORTS ILLUSTRATED MAGAZINE

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PREFACE

My favorite word in the English language is how. How does this work? How was this made? How did they do this? Whenever I see something interesting happen, I'm filled with questions that involve this small but powerful little word. And most of the answers I find center on how people apply their own intelligence and wisdom, rather than their knowledge of specific technologies or theories.

Over years of building things and comparing my experiences to those of other managers, programmers, and designers, I've developed beliefs and conclusions about how to manage projects well. This book is a summation of those ideas. It includes approaches for leading teams, working with ideas, organizing projects, managing schedules, dealing with politics, and making things happen, even in the face of great challenges and unfair situations.

Despite the broad title of this book, most of my working experience comes from the tech sector, and in particular, Microsoft Corporation. I worked there from 1994 to 2003, leading teams of people on projects such as Internet Explorer, Microsoft Windows, and MSN. For a few years I worked in Microsoft's engineering excellence group. While there, I was responsible for teaching and consulting with teams across the company, and was often asked to lecture at public conferences, corporations, and universities. Most of the advice, lessons, and stories in this book come from these experiences.

Although I come from a software and web development background, I've written this book broadly and inclusively, calling on references and techniques from outside the engineering and management domains. There is great value here for people in the general business world. I'm convinced that the challenges of organizing, leading, designing, and delivering work have much in common, regardless of the domain. The processes involved in making toaster ovens, skyscrapers, automobiles, web sites, and software products share many of the same challenges, and this book is primarily about overcoming those challenges.

Unlike some other books on how to lead projects and teams, this book doesn't ascribe to any grand theory or presumptively innovative philosophy. Instead, I've placed my bet on practicality and diversity. I think projects result in good things when the right combination of people, skills, attitudes, and tactics is applied, regardless of their origin or (lack of) pedigree. The structure of this book is the most sensible one I found: focus on the core challenges and situations, and provide advice on how to handle them well. I've bet heavily on picking the right topics and giving good advice on them, over all other considerations. I hope you find that I've made the right choice.

Who should read this book

Your best bet in seeing if this book is for you involves flipping back to the Table of Contents, picking a topic you're interested in, and skimming through what I have to say about it. I generally don't trust prefaces much, and I recommend you don't either; they rarely have the same style or voice as the rest of the book. But here goes anyway.

The book will be most valuable for people who fit themselves into one or more of the following categories:

- **Experienced team leaders and managers.** This book is well suited for anyone playing a leadership role, formally or informally, on any kind of project. The examples are from software development, but many concepts apply easily to other kinds of work. You might be the official team leader, or simply one of the more experienced people on the team. While some of the topics of the book may be very familiar to you, the direct and practical approach the book takes will help you to clarify and refine your opinions. Even if you disagree with points I make, you will have a clear foundation to work against in refining and improving your own point of view.

- **New team leaders and managers.** If you look at the topics listed in the Table of Contents, you'll find a solid overview of everything leaders and managers on projects actually do. Each chapter provides coverage of the common failures and mistakes even experienced people make, with explanations as to why it happens and what tactics can be used to avoid or recover from them. The book provides you with a broader view and understanding of the new responsibilities you've taken on, and the smartest ways to go about managing them. Because most chapters take on big topics, they often include annotated references to deeper sources.

- **Individual programmers and testers, or other contributors to projects.** This book will improve your understanding of what you're contributing to, and what approaches and ideas you can use to be effective and happy in doing so. If you've ever wondered why projects change directions so often or seem to be poorly managed, this book will help you understand the causes and remedies. If nothing else, reading this book will help you to frame your individual contributions in a larger context, and increase the odds that your work will make a difference (and that you will stay sane while doing it). If you are interested in eventually managing or leading teams yourself, this book will help you explore what that will really be like and whether you are cut out for it.

- **Students of business management, product design, or software engineering.** I use the word *students* in the broadest sense: if you have a personal interest in these topics or are formally studying them, this book should be of great interest to you. Unlike much of the textbook coverage of these topics, this book is heavily situation and narrative focused. The experiences and stories are real, and they are the basis for the lessons and tactics: not the other way around. I deliberately avoid drawing lines between different academic subjects because in my experience, those lines neither

help projects nor contribute to understanding reality (the universe is not divided in the same way universities tend to be). Instead, this book combines business theory, psychology, management tactics, design processes, and software engineering in whatever way necessary to offer advice on the outlined topics.

Assumptions I've made about you in writing this book

- **You are not stupid.** I assume that if I've picked the right chapters and write them well, you won't need me to spend time slowly constructing elaborate frameworks of information. Instead, I will get to the point and spend time there. I assume you're something of a peer—perhaps with more, less, or different experience—who has dropped by for some advice.

- **You are curious and pragmatic.** I draw on examples and references from many disciplines, and I assume you'll find value in pulling lessons from outside of web and software development. This won't get in the way, but pointers for curious minds will surface, sometimes just in footnotes. I assume you want to learn, are open to different ideas, and will recognize the value of well-considered opinions—even if you don't agree with them.

- **You do not like jargon or big theories.** I don't think jargon and big theories help in learning and applying new information. I avoid them, except where they provide a path to useful information or provide structure that will be useful later on.

- **You don't take yourself, software, or management too seriously.** Software development and project management can be boring to read about. While this book won't be a comical romp or satire (although a book by Mark Twain or David Sedaris that explains software engineering has potential), I won't hesitate to make jokes at my expense (or someone else's expense), or use examples that make a point through comedic means.

How to use this book

I wrote this book with consideration for people who like to skip around and read chapters individually. However, there is some benefit to reading it straight through; some of the later concepts build on earlier ones, and the book does roughly follow the chronological order of most projects. Of course, you'd never know this unless you read it straight through, so if you choose to skip around, you'll have to trust me on this one.

The first chapter is the broadest in the book and has a deeper tone than the rest. If you're curious about why you should care about project management, or what other important people have said about it, then you should definitely give it a shot. If you try it and hate it, I definitely recommend giving another chapter a try before abandoning ship.
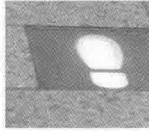
All of the references and URLs listed in the book, as well as additional notes and commentary, are online at *www.scottberkun.com/books/artofpm/*. The web site has a discussion forum and other resources for those of you who are interested in going beyond the topics in this book.

And now, because you were smart and patient enough to read this entire introduction, I'll assume you're up to speed on the other mechanics of book reading (page numbers, footnotes, and all that) and just get out of your way.

Cheers,

—**Scott Berkun**
Redmond, WA

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A brief history of project management
(and why you should care)

I **n many organizations,** the person leading a project doesn't have the job title project manager. That's OK. Programmers, managers, team leaders, testers, and designers all manage projects in their daily work, whether they are working alone or leading a team. For the moment, these distinctions are not important. My intent in this book is to capture what makes projects successful and how the people who lead successful projects do it. These core ideas and strategies don't require specific hierarchies, job titles, or methods. So, if you work on a project and have at least some responsibility for its outcome, what follows will apply to you. And should your business card happen to say project manager on it, all the better.

This book is designed to be useful in three ways: as a collection of individual topic-focused essays, as a single extended narrative, and as a reference for common situations. Each chapter takes on a different high-level task, provides a basic framework, and offers strategies and tactics for successfully completing the task. However, in this opening chapter, I need to take a different approach: there are three broader topics that will make the rest of the book easier to follow, and I will present them now.

The first is a short history of projects and why we should learn from what others have done. The second is some background on the different flavors of project management, including some notes from my experience working at Microsoft. And the third is a look at the underlying challenges involved in project management and how they can be overcome. Although these points will be useful later on, they are not required to understand the following chapters. So, if you find the approach in this first chapter too wide for your liking, feel free to move on to Chapter 2 and the core of this book.

Using history

Project management, as an idea, goes back a very long way. If you think about all of the things that have been built in the history of civilization, we have thousands of years of project experience to learn from. A dotted line can be drawn from the software developers of today back through time to the builders of the Egyptian pyramids or the architects of the Roman aqueducts. For their respective eras, project managers have played similar roles, applying technology to the relevant problems of the times. Yet today, when most people try to improve how their web and software development projects are managed, it's rare that they pay attention to lessons learned from the past. The timeline we use as the scope for useful knowledge is much closer to present day than it should be.

The history of engineering projects reveals that most projects have strong similarities. They have requirements, designs, and constraints. They depend on communication, decision making, and combinations of creative and logical thought. Projects usually