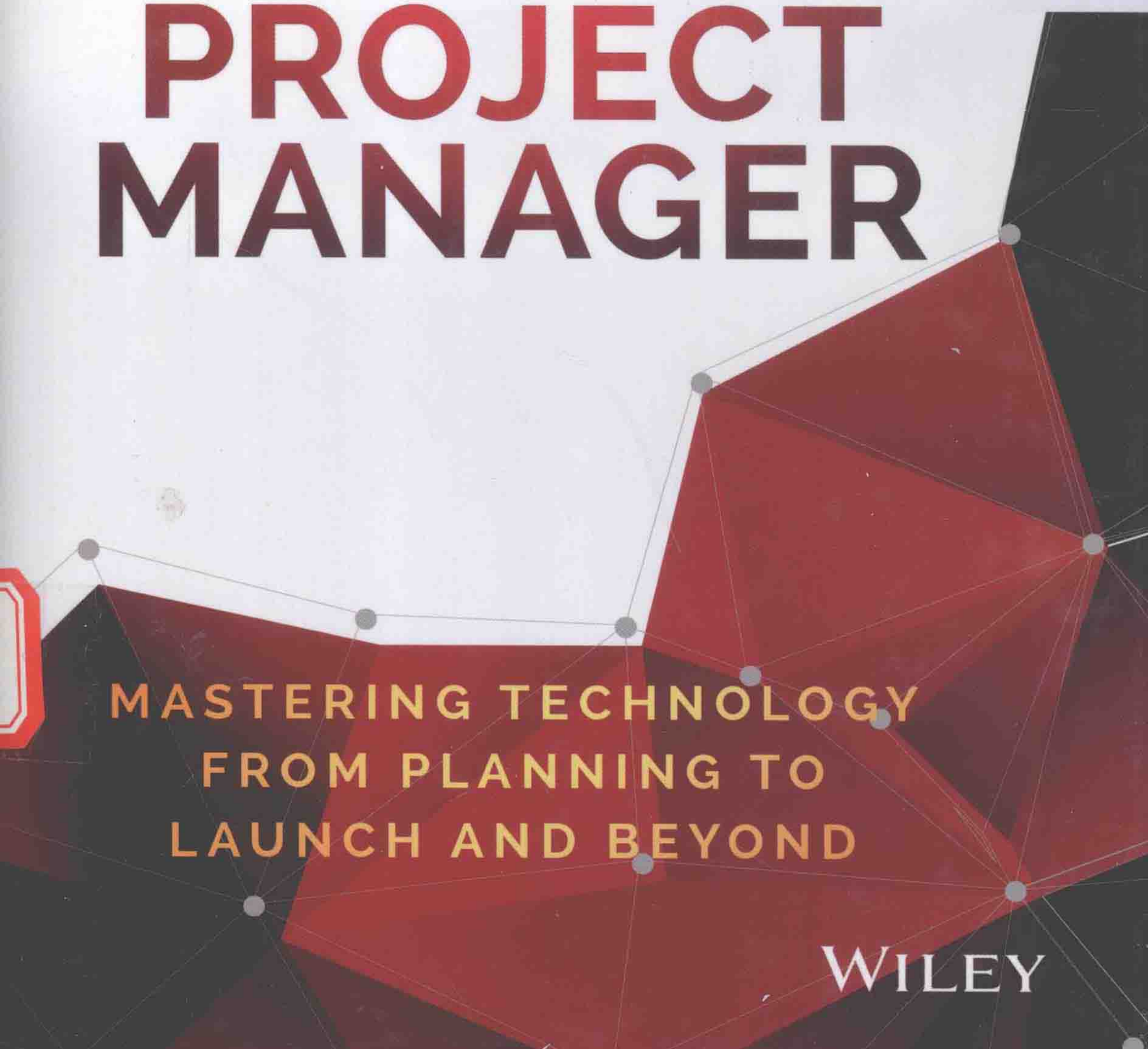
ANNA P. MURRAY

THE COMPLETE SOFTWARE PROJECT MANAGER



MASTERING TECHNOLOGY FROM PLANNING TO LAUNCH AND BEYOND

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ABOUT THE AUTHOR

Anna P. Murray is a nationally recognized technology consultant and the founder of emedia LLC, a certified women-owned business. She has consulted on and run large-scale software projects for Kellogg, Harvard Business Publishing, Time Out New York, Slate Group, The American Association of Advertising Agencies, National Cancer Institutes, *New York* magazine, and many others.

Murray is a double winner of the Stevie Award for Women in Business, a recipient of a Mobile Marketing Association award for mobile app development, several Kellogg agency partner awards, and Folio's Top Women in Media Award. She has served as President and Vice President of the International Women's Writing Guild.

One of a rare species—a woman who owns a successful software-development company—she loves to combine her two passions: technology and writing. Anna writes on technology from a variety of vantage points, including its humorous impact on daily life, its serious business applications, and its role in changing the way people relate to one another.

After spending several years as a teacher and journalist, Murray founded emedia, one of the earliest web-development firms, in 1996. She holds a bachelor's degree from Yale and a master's in journalism from Columbia.

INTRODUCTION

The history of software development teaches us that between 30 and 40 percent of all software projects fail. A good majority of those are canceled completely and never see the light of day. It seems everyone has a different prescription for how to avoid this fate. There are shelves of books on how to improve the software development process—books on Agile methodology, Scrum, the Waterfall method, rapid application development, extreme programming, top-down versus bottom-up, and even something called the chaos model.

When a business is faced with a software development project, people don't have the time to become experts in software management and development theory. What you need is not theory, but rather a practical, hands-on guide to managing this complex process, written in a language you can understand.

Some undertakings—be it having kids, climbing Mount Everest, or, yes, software development—are just difficult. And sometimes the most helpful thing is to hear from someone who has been there before and walked the path. That person can tell you what you're going to encounter and what difficulties to expect. An experienced guide may not be able to take away the challenges, but she can prepare you for them.

About a year ago, I was working on a large implementation project. About halfway through, a young project manager came to me and said, "Anna, do you have a crystal ball? Because at the beginning of this project you sat us all down and told us what to expect. You gave us a list of many things and every single one of them has happened—and happened on schedule. Do you have that written down anywhere?"

Now I have it written down somewhere.

Software Project Management

This book is specifically about software project management. There are many other types of project management. Project management is needed for digging oil wells, building skyscrapers, and launching rockets.

Examples of software projects include

- Launching websites
- Installing a CRM (customer relationship management) tool
- Implementing a new accounting package
- Building a custom application for your business

Software is truly "its own animal." People tasked with managing software projects need processes and advice just for them.

A Holistic Approach

Many books on project management focus on what I call the "literal project manager," the person whose title is "project manager" on his business card. He or she may have a specific certification in the discipline of project management. In Chapter 5, we'll talk in depth about project teams and team members. For now, it's important to understand that the literal project manager is not the only one with project-management responsibilities. People might even be surprised learn how narrowly focused the project manager's job often is (Figure I.1).

Many books on project management concentrate only on the literal project manager. The purpose of many of these books is to help the project manager pass his or her certification tests, such as the PMP exam. That's great, if you are facing the exam. Unfortunately, this narrow focus leaves much out, not only for the literal project manager but for everyone else.

True project management extends to many people and to the entire business. There is the project sponsor, the program manager, the project manager, and programming teams as well as stakeholders in the broader business. Therefore, this book takes a holistic view of project management. It can be read by businesspeople, programmers, project managers, program managers, and CEOs—anyone who is involved in or affected by a software project (Figure I.2). Of course, it has critical information for people whose job titles are project manager and program manager.

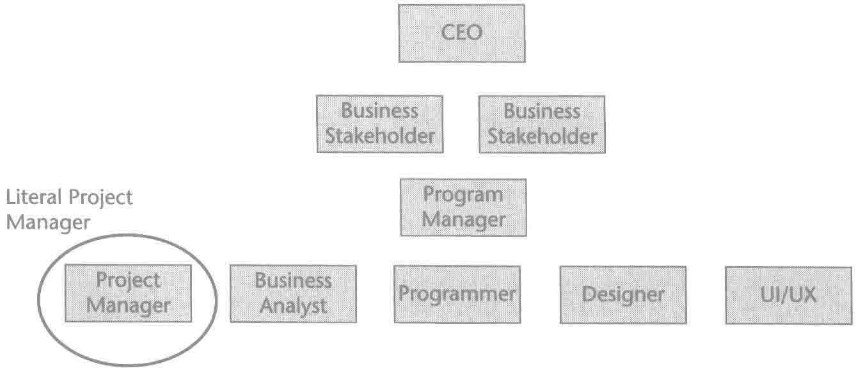

Figure I.1

FOREWORD

A generation ago, Internet pioneer Carl Malamud took issue with people who complained about bulky computers, byzantine interfaces, and buggy software: "A lot of this 'too hard to use' stuff will go away. Radio was so messy for the first 20 years, it wasn't funny. Cars, ditto—you had to be a mechanic to drive one." Computers, he prophesied, would one day be as easy to use and reliable as automobiles had become, and the electronic frontier would become as simple to navigate as an Interstate with a road atlas.

That day came, of course—including Google Maps to replace the road atlas—but it brought along a paradox. The simplicity, power, and awesomeness that users and executives take for granted disguise the very technical, messy, and difficult work that happens behind the scenes. Gremlins lurk under the lid of your laptop; krakens crouch behind the scrim of your Cloud. A lot of what seems to gleam is the shimmer of WD-40 on duct tape.

Amateurs cheerfully rely on smoothly running software for business and pleasure, but the work of IT is no place for an amateur. Creating and designing systems, maintaining them, and running projects to install, fix, rip out and replace, upgrade, and integrate them—these are complicated tasks. They rarely go according to plan, because they invariably run into some obstacle that could not possibly be foreseen. Even professionals in the industry can be seduced by a project's progress into thinking, "No problem," when they should be thinking, "Oh, this is hairy." And, of course, finger-pointing is the consequence of problems, with IT blaming the business, the business blaming IT, and everybody blaming the consultants and software companies.

Anna Murray's book is an extraordinary accomplishment: It speaks as clearly to the IT professional as it does to executive civilians like me. (I'm an English major with a Mac.) For the professional, it is an experienced, no-nonsense guide: the mentor you wish you had. Anna tells you how to put an IT project into the strategic framework that is right for your organization, how to scope a project, how to communicate and plan with stakeholders; she tells you how to assemble your tools and team; she explains how to find, select, and manage vendors; and she tells you how to cook and eat crow when you need to—as you almost certainly will.

The strategic point is particularly valuable. IT long ago migrated from the glass house to the desktop, but it is now part of every nerve and sinew of an organization: It is in the skin that touches customers, in the brain that analyzes performance, in the heart that pumps resources where they are needed. Technologists don't need to be strategists, but they can no longer be strategically ignorant. Anna shows how to connect strategy and IT, how to ask the right questions, and how to frame the trade-offs and decisions that complex IT projects require in a way that business leaders can understand.

This is, at the same time, the book IT managers should give to their nontechnologist colleagues, bosses, and internal customers. Her distinction among IT projects that are simple, complicated, and complex is worth the price of admission by itself. I can think back to half a dozen cases where the business-IT relationship got into trouble because the nontechnologists did not know or could not understand what their IT colleagues were up against. Any executive who reads this book will ask better questions, get better answers, and have a better understanding of the answers.

Thomas A. Stewart
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Fisher College of Business
The Ohio State University

ACKNOWLEDGMENTS

This book grew out of a two-decades-long conversation with my colleagues and with the many clients we are privileged to serve. Starting back in the Windows 3.1 days, we have grappled with the complexities of technology and survived the numerous inevitable crises that accompany software development. My work has provided me with incredible opportunities to collaborate with and learn from these exceptional professionals.

I am grateful for Denise Mitchell and Rebecca Harrigan, incomparable technology leaders, partners, and clients, and for the great team at Kellogg Corporation. Also, for the executive group and the great IT, BA, and PM teams at Harvard Business Publishing. I also owe a debt of gratitude to my own team, from whom I am always learning: Frank G. Andrews, Pedro Garrett, Atsushi Tatsuoka, and Steve Vance.

Thanks goes as well to fellow technology writer Mike Barlow, who showed such generosity of spirit and time in championing this book. To Sheila and Gerry Levine, whose wise counsel has supported me through everything from content to contracts. And, to the International Women's Writing Guild, whose sisterhood of writers and teachers filled all kinds of gaps from craft to the business of writing.

What could be more valuable to a writer than an editorial partner with skill, wit, and wisdom? Hilary Poole, writer and editor extraordinaire, was one of the original collaborators on this project. Thank you for all your help from tidied-up commas to slashed technology jargon.

To the incredible team at Wiley: Sheck Cho, Pete Gaughan, Connor O'Brien, Michael Henton, and Caroline Maria Vincent. Your professionalism and collaboration are all any author could hope for.

And finally, to Chris Moschovitis, whose brilliance in technology and so many other things awes me every day. I am lucky to go to work with you each morning and to come home to you each night.

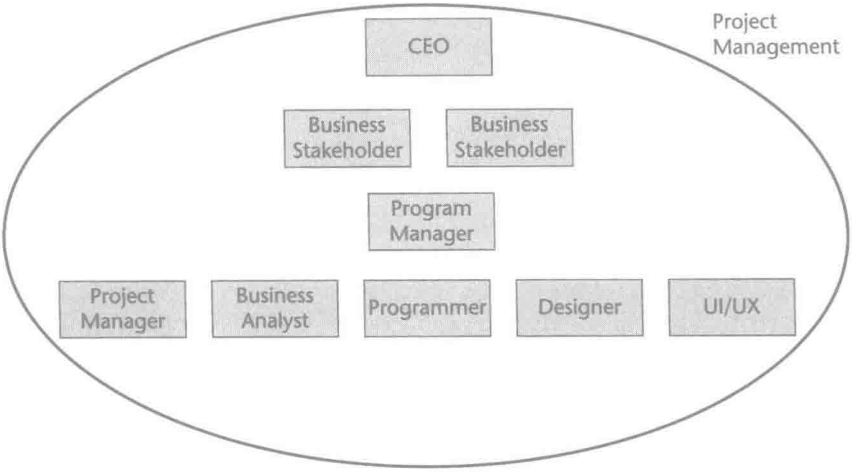

Figure I.2

For Medium-to-Large Projects

Project management looks different depending on the size of the project. The sort of project management involved in putting up your personal WordPress blog likely happens all in your own head. Inside of businesses most projects that last more than a couple of weeks require some kind of external project management.

For this book, I will be giving processes and advice appropriate for medium-to-large projects. This generally means projects that take at least three months and may last as long as two years. The reason I've chosen to focus on projects of this size is they are the most common. Also, smaller projects, as noted earlier, probably don't need much project management at all. Finally, I have found that once people understand the fundamentals of managing medium-to-large size projects, they are able to scale the processes and recommendations both up and down to suit their needs.

Agile vs. Waterfall

For those of you who don't know these terms, don't worry. We'll talk more about this in Chapter 2. Many people familiar with modern software development want to know right up front: Are you talking about project management practices for Agile development or for Waterfall?

This book assumes the incorporation of key Agile methodologies, while acknowledging that most businesses cannot adhere to a purely Agile style. In fact, the issue of Agile vs. Waterfall is a major reason I wrote this book. After running hundreds of software projects inside many different types of businesses, I discovered that good project management is a blend. It must be "agile enough."

Why Listen to Me?

As the CEO of emedia (www.emediaweb.com), I have been developing software and managing software teams since 1994. I am proud to say that we have a superb track record in delivering software development projects, from large database implementations to small business websites, on time and on budget.

I've managed website launches, database migrations, finance system replacements, custom application development, content management system implementations, and packaged software deployments. The dollar value of these projects has ranged from the small thousands to the tens of millions. It's allowed me to see the commonalities among many software development endeavors and to develop strategies to improve the process.

I am also proud to say that the majority of my customers have been with me for years—a decade or longer in some cases. When you have a challenging undertaking, you want a partner you trust.

Who Is This Book For?

If you're inside an organization undertaking a software development project, this book is for you. If you are a consultant or vendor who rolls out software for customers, this book is for you, too. If you are a business leader, programmer, project manager, or program manager, this book is also for you.

This book has chapters on all the pragmatic stuff you need to know: organizing and staffing a project; the common conflicts that crop up; planning; risk management; and, of course, budgeting. There's even a chapter for people who are midway through a project and are encountering problems. If you read from start to finish, the book will take you through the life cycle of a software development project. Or, you can dip into the chapter based on your particular interest or area of challenge.

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