

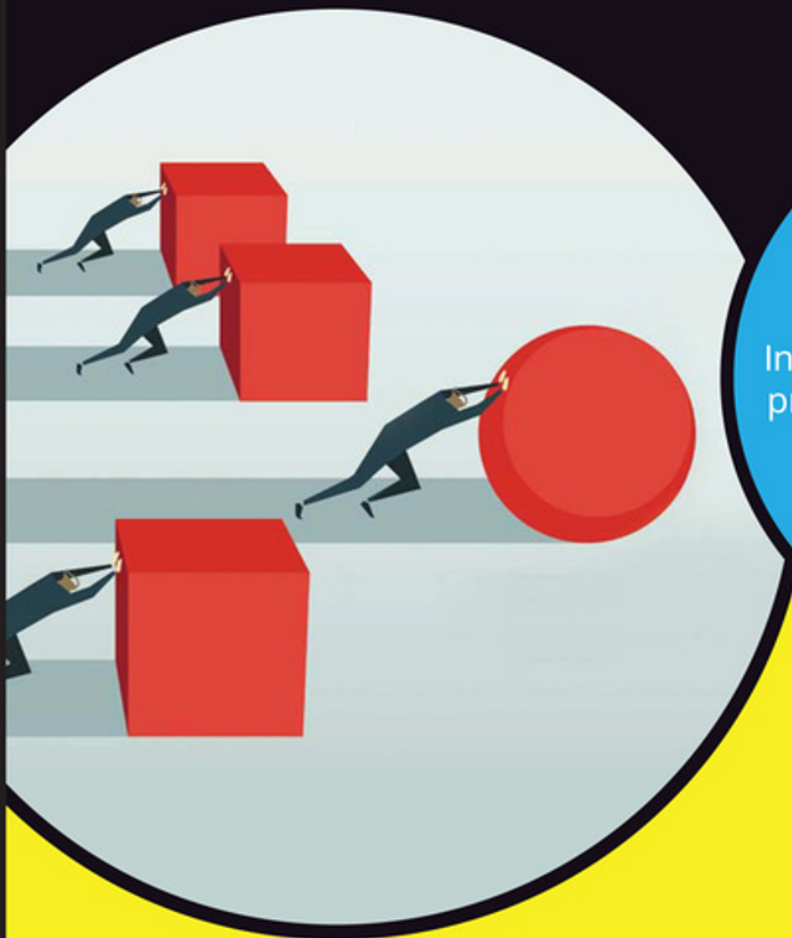
LEARNING MADE EASY



2nd Edition

Scrum

for
dummies[®]
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Discover what scrum offers project teams

Integrate scrum into your agile project management strategy

Plan a party or your retirement using scrum

Mark C. Layton

MBA², CST, PMP, SAFe SPC

David Morrow

CSP, ICP-ACC



Scrum

2nd Edition

by Mark C. Layton

MBA², CST, PMP, SAFe SPC

and

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Scrum For Dummies®, 2nd Edition

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Introduction

Welcome to *Scrum For Dummies*. Scrum is an agile project management framework with proven results in decreasing time to market by 30–40 percent, improving product quality, and heightening customer satisfaction — all while lowering costs 30–70 percent. Scrum accomplishes these results through integration of business and development talent, improved communication models, increased performance visibility, regular customer and stakeholder feedback, and an empirically based inspect-and-adapt mentality. You can manage even the most complex project more effectively by using scrum to increase your bottom line.

About This Book

The goal is to demonstrate explicitly how you can use scrum for any project, not just software development. This book is intended to be a field manual for the application of scrum in real-world situations. Although it covers scrum fundamentals in detail, this book also delves into how to get out and experience the amazing benefits of scrum.

Scrum is by design easy to explain, but application and mastery are often difficult. Old habits and organizational mindsets need to be shifted and new ways embraced. For this reason, we've included success stories so that you can see how scrum can fit into your situation.

The main thrust of understanding scrum lies in the three roles, three artifacts, and five events that form its foundation and that we cover thoroughly. We also include common practices that we use and that others in the field use so that you can choose what works best for your project.

Scrum isn't technical. In fact, its basic tenet is common sense. In many cases, we've wrapped this information within the world of technology and have used technical terms to help explain this. Where useful, we've defined these terms.

We also cover common practices from scrum experts throughout the world. You can learn so much from others who use this framework in a seemingly limitless spectrum of projects.

Scrum falls under an umbrella of project management called *agile project management*. Neither scrum nor agile practices is a proper noun. *Scrum* is a framework for organizing your work, whereas *agile* is an adjective used to describe a variety of practices that conform to the values of the Agile Manifesto and to the 12 Agile Principles. Scrum and agile are not identical or interchangeable, but you frequently see them written in many sources, especially online, interchangeably. In this book, you will see terminology from both descriptions, because scrum is a frequently used subset of agile practices.

Foolish Assumptions

Several books about scrum are available, but this one differs in its practicality. Each of the authors has more than a decade of experience with agile methods and scrum, and we bring this experience to you in a practical guide. We make no assumptions about what you already know: You don't need to be a rocket scientist or a whiz programmer; all you need are a project and passion to get it done in the best way possible. We give you examples from building jet fighters to a family organizing a vacation. We focus on the steps necessary to get scrum's magic working for you.

Our audience includes code programmers, sales professionals, product manufacturers, executives, and midtier managers, as well as educators who are looking for a way to engage their students.

If you're in a technology industry, you've probably heard the terms *agile* and/or *scrum*. Maybe you've even worked in a scrum environment but want to improve your skills and vocabulary in this area and to bring others in your firm along with you. If you're not in technology, you may have heard that scrum is a great way to run projects, which is true. Perhaps scrum is new to you, and you're searching for a way to make your project more accessible, or maybe you have a great idea burning inside and don't know how to bring it to fruition. Whoever you are, an easy way exists to run your project, and that way is called scrum. Within these pages, we show you how to use it.

Conventions Used in This Book

If you do an online search, you may see the words *agile* and *scrum*, roles, meetings, and documents and various agile methodologies and frameworks (including scrum) capitalized. We shied away from this practice for a couple of reasons.

To start, none of these items are really proper nouns. *Agile* is an adjective that describes a number of items in project management: agile projects, agile teams, agile processes, and so on. But it is not a proper noun, and except in chapter or section titles, you will not see us use it that way.

For readability, we did not capitalize agile-related roles, meetings, and documents. Such terms include agile project, product owner, scrum master, development team, user stories, product backlog, and more. You may, however, see these terms capitalized in places other than this book.

Some exceptions exist. The Agile Manifesto and the Agile Principles are copyrighted material. The Agile Alliance, Scrum Alliance, and Project Management Institute are professional organizations. A Certified ScrumMaster and a PMI-Agile Certified Practitioner are professional titles.

Icons Used in This Book

The following icons in the margins indicate highlighted material that we think will be of interest to you.



TIP

Tips are ideas that we'd like you to take note of. These ideas are usually practical advice that you can apply to the given topic.



WARNING

This icon is less common than the others in this book. The intent is to save you time by bringing to your attention some pitfalls that you're better off avoiding.



TECHNICAL
STUFF

If you don't care much about the technical stuff, you can skip these paragraphs without missing much. If technical stuff is your thing, you may find these sections fascinating.



REMEMBER

This icon marks something we'd like you to take special note of, such as a concept, idea, or best practice that we think is noteworthy.

Beyond the Book

You can find an online Cheat Sheet for this book at www.dummies.com. The Cheat Sheet covers the Agile Manifesto; the principles behind scrum and the Agile Manifesto; the roadmap to value that we reference frequently throughout this book; a snapshot of various definitions for roles, artifacts, and activities related to scrum; and a summary of resources you can find in the scrum community. Go to www.dummies.com and type the title of the book into the search field to find the Cheat Sheet.

Where to Go from Here

To start getting scrum working for you, you can begin applying it on smaller projects to get the feel of it. Soon, you'll be handling your most important projects in the same way. This book applies to a diverse set of readers and is organized in a way that allows you to find specific areas of interest that are relevant to you. Each chapter can be a reference any time you have a technical question or want to see an example of scrum in real life.

If you're new to scrum, begin with Chapter 1 to understand introductory concepts and terminology; then work your way through Chapter 7 to find out about the entire framework. As you continue past Chapter 7, you see how to apply scrum in any situation.

If you're familiar with scrum and want to find out more about how it applies to many industries, check out Chapters 8 through 11, and read about scrum being practiced in a variety of industries.

If you're a product owner, scrum master, or business leader and want to know more about scrum on a larger scale, start by reading Chapter 13 and all of Part 6 for valuable resources.

If you're familiar with scrum and want to know how it can help you address daily life, read Chapters 17 and 18 to get inspiration and examples.

1

Getting Started with Scrum

IN THIS PART . . .

Connect scrum with the principles of agile project management.

Use constant feedback through transparency and quantification to elevate success rates of projects.

Become tactically flexible to create strategic stability.

- » Seeing essential scrum principles
- » Identifying useful scrum values and structure

Chapter **1**

The Basics of Scrum

Scrum is an empirical exposure model, which means that people who employ the scrum model have gained knowledge from real-life experience and make decisions based on that experience. It's a way of organizing your project — whether it be releasing a new smartphone or coordinating your daughter's fifth-grade birthday party — to expose whether your approach is generating intended results. If you need to get something done, scrum provides a structure for increased efficiency and faster results.

Within scrum, common sense reigns. You focus on what can be done today, with an eye toward breaking future work into manageable pieces. You can immediately see how well your development methodology is working, and when you find inefficiencies in your approach, scrum enables you to act on them by making adjustments with clarity and speed.

Although empirical exposure modeling goes back to the beginning of time in the arts — in sculpting, for example, you chisel away, check the results, make any adaptations necessary, and chisel away some more — its modern-day usage stems from computer modeling. The empirical exposure model means observing or experiencing actual results rather than simulating them based on research or a mathematical formula and then making decisions based on these experiences. In scrum, you break your project into actionable chunks and then observe your results every step of the way. This approach allows you to immediately make the changes necessary to keep your project on the best track possible.

The Bird's-Eye Basics

Scrum isn't a methodology; it's a new way of thinking. It isn't a paint-by-numbers approach in which you end up with a product; it's a simple framework for clearly defining roles and organizing your actionable work so that you're more effective in prioritizing work and more efficient in completing the work selected. Frameworks are less prescriptive than methodologies and provide appropriate amounts of flexibility for processes, structures, and tools that complement them. When this approach is used, you can clearly observe and adopt complementary methods and practices, and quickly determine whether you're making real, tangible progress. You create tested, usable results within weeks, days, or (in some cases) hours.

Like the process of building a house brick by brick, scrum is an iterative, incremental approach. It gives you early empirical evidence of performance and quality. Roles are distinct and self-ruling, with individuals and teams being given the freedom and tools required to get the job done. Lengthy progress reports, redundant meetings, and bloated management layers are nonexistent. If you just plain want to get the job done, scrum is the approach to use.



Scrum is a term that comes from the rough-and-tumble game of rugby. Huddles, or scrums, are formed with the forwards from one side interlocking their arms, heads down, and pushing against the forwards from the opposing team who are also interlocking arms with their heads down. The ball is then thrown into the midst of this tightly condensed group of athletes. Although each team member plays a unique position, all team members play both attacking and defending roles, and work together to move the ball down the field of play. Like rugby, scrum relies on talented people with varying responsibilities and domains working closely together in teams toward a common goal.

We want to emphasize, and have written two thirds of this book on, an overlooked concept of scrum: its amazing versatility. People who know about scrum commonly think that it's customized for software, information technology (IT), or tech use, but that's just the tip of the scrumberg. Absolutely any project — large, small, tech, artistic, social, personal — can be productively placed within the scrum framework. In Chapters 8 through 18, we show you how. Be forewarned! Scrum is such an addictive framework that you'll be using it to coach your kid's soccer team, plan your Neighborhood Watch, and even ratchet up your exercise routine.

Roadmap to value

Throughout this book, we discuss techniques some expert scrum practitioners apply as common practice extensions to scrum. These techniques complement, not replace, the scrum framework. We point out the differences when they occur.

All the common practices that we include and recommend are tried and tested — always with the clear understanding that these practices are outside of the basic scrum framework and are suggested for your consideration in your own situation.

We call this aggregation of scrum and vetted common practices the “roadmap to value.” This roadmap consists of seven stages that walk you through the vision stage of your project to the task level and back again in a continual process of inspection and adaptation. In other words, the stages help you see what you want to achieve and progressively break that vision into pieces through an efficient cycle that leads to real results every day, week, and month.

You know that billion-dollar idea that’s been lurking in the back of your head for years? Follow the seven stages. They show you the feasibility and fallacy of your idea and where to make your improvements — step by step, piece by piece.

Figure 1-1 shows a holistic view of the roadmap to value. This figure shows that you begin with the vision; work through planning; and then enter the cyclical world of sprints, reviews, and retrospectives.

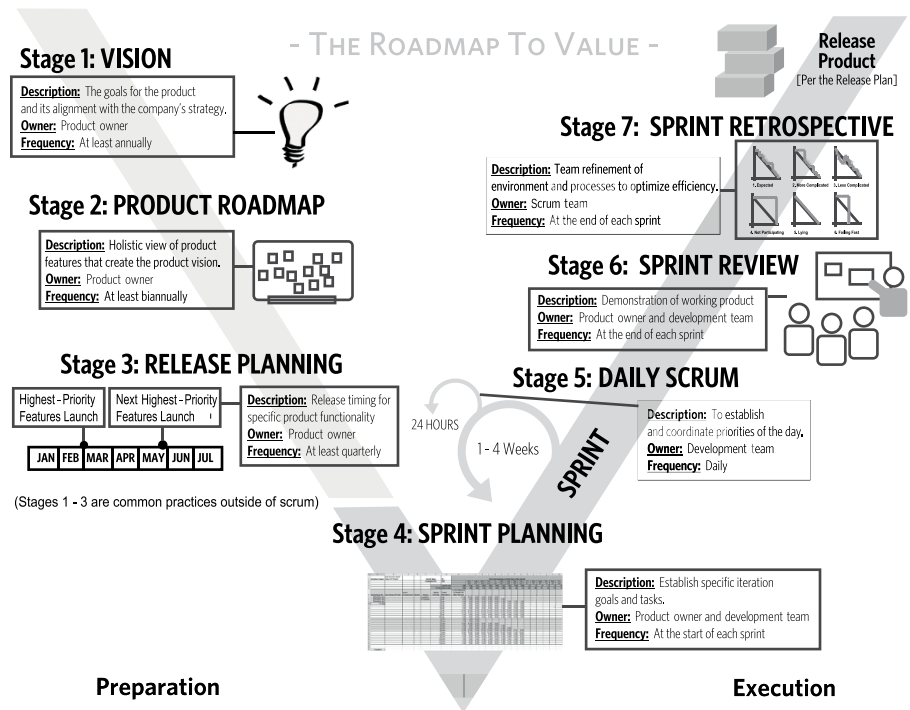


FIGURE 1-1:
The seven stages in the roadmap to value.

Scrum overview

The process of scrum is simple and circular, with constant and transparent elements of inspection and adaptation. First, a ruthlessly ordered to-do list — called a *product backlog* — is created and maintained. Then top-priority items are selected for a fixed, regular time period — called a *sprint* — within which the scrum team strives for a predetermined and mutually agreed upon goal.

Figure 1-2 shows an overview of scrum.

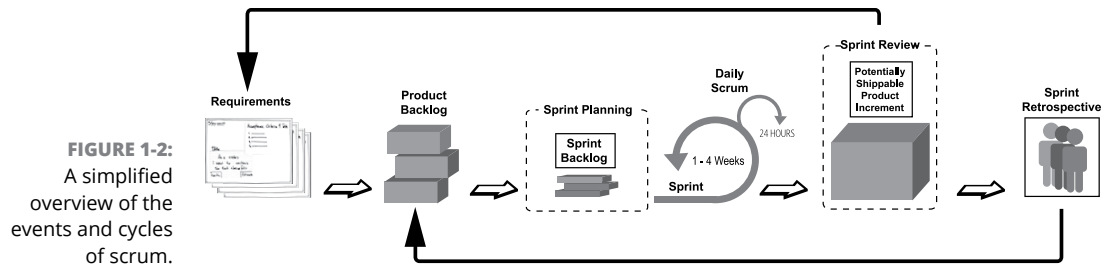


FIGURE 1-2: A simplified overview of the events and cycles of scrum.

The scrum process allows you to adapt quickly to changing market forces, technological constraints, regulations, new innovations, and almost anything else you can think of. The key is the ongoing process of working on the highest-priority items to completion. Each of the highest-priority items gets fully developed and tested through the following steps:

1. Requirement elaboration
2. Design
3. Development
4. Comprehensive testing
5. Integration
6. Documentation
7. Approval



REMEMBER

The seven steps to fully build the scope of each requirement are performed for every item. Every requirement taken on during a sprint, no matter how small or large, is fully built, tested, and approved or rejected.

When a requirement is accepted and therefore deemed shippable, you know that it works. Hope and guesswork are taken out of the equation and replaced by reality. You build your product increment by increment and showcase these tangible

increments to stakeholders for feedback. This feedback generates new requirements that are placed in the product backlog and prioritized against existing known work.



TIP

What's more important: efficiency or effectiveness? Hands down, it's effectiveness. Don't worry about efficiency until you figure out how to be effective. A very efficient development team working on the wrong things is a waste of time. A super-effective development team, however, can easily learn efficiency. Always work on the *right* things first. As economist and management author Peter F. Drucker said, "There is nothing so useless as doing efficiently that which should not be done at all."

The scrum cycle is run again and again. The constant flow of feedback and emphasis on developing only the highest-priority items helps you reflect what your customers are looking for, deliver it to them faster, and deliver it with higher quality.

Scrum teams

No matter what the scope of your scrum project is, your scrum team will have similar characteristics. The sizes of development teams vary somewhat, but the roles remain the same. We discuss the specific roles in detail throughout this book. Figure 1-3 depicts a scrum team.

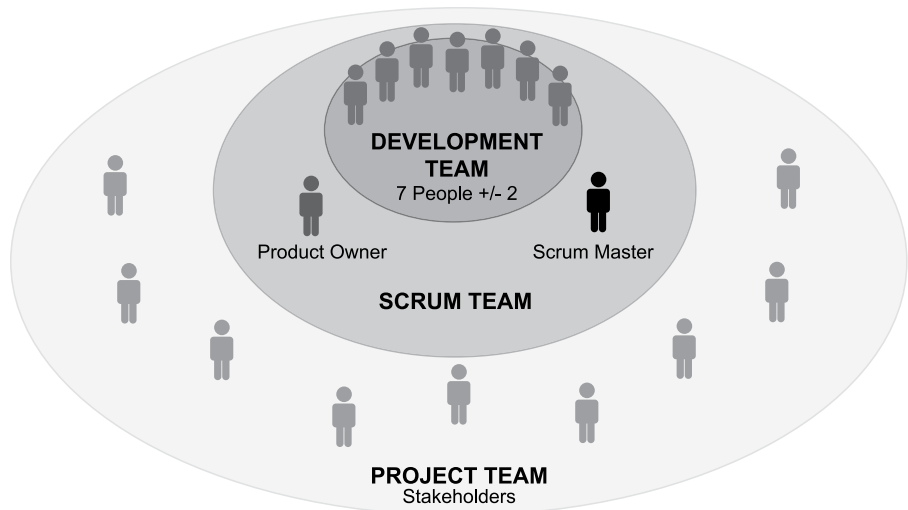


FIGURE 1-3: A scrum team has the development team at its core.

The heart of a scrum team is the development team — the folks who work together to create the product itself. They work directly with a product owner and scrum master, who align business and development priorities for the organization and eliminate distractions so that the development team can focus on developing a quality result.

Stakeholders aren't scrum roles, but we include them in Figure 1-3 because they affect your project. Stakeholders can be internal or external. Marketing, legal, compliance team members, and especially customers are examples of stakeholders.

The scrum team itself has ultimate accountability. Team members figure out how to achieve their objectives within the environment in which they find themselves.

Governance

Scrum has three roles that are equal in status yet separate and independent in function:

- » **Product owner:** The *what* and the *when* (not *how much*)
- » **Development team:** The *how* and the *how much*
- » **Scrum master:** The *process*

Each role has a defined purpose directly designed to enhance the productivity of the team.

The creators of scrum didn't happen devise these roles by chance, but through years of experience in working with all kinds of project teams. They saw good, bad, and ugly combinations, and found that the best results came from these three roles.



TIP

We prefer that each person in a scrum role be a full-time participant dedicated solely to the scrum team's project. Don't thrash your team members across several projects or use part-time players. How many major-league football teams have part-time players or those who play for several teams? None that are successful.



REMEMBER

In scrum, no single person or role is above another. Everyone is a peer; no one is a boss or underling. *We* is the operative word rather than *I*.

Scrum framework

Scrum is a framework rather than a methodology. It provides clarity of responsibilities through roles, visibility through artifacts, and opportunities for inspection and adaptation through events. Within this structure, scrum is a container for other processes and tools that are appropriate for meeting the specific needs of a team, organization, or product.



REMEMBER

A Scrum project has a 3-3-5 framework:

- » Three roles
- » Three artifacts
- » Five events

Each framework element fits within the scrum process, which is iterative and incremental. You incrementally create and improve your product, and you incrementally improve your process with this simple framework, as follows:

» Roles

- Product owner
- Development team
- Scrum master

» Artifacts

- Product backlog
- Sprint backlog
- Product increment

» Events

- Sprint
- Sprint planning
- Daily scrum
- Sprint review
- Sprint retrospective



TECHNICAL
STUFF

In the scrum world, *artifacts* are lists of work to be done or work products that have been done and are deemed shippable. Unlike archaeological artifacts, scrum artifacts aren't set in stone. The scrum process requires you to continually review and assess artifacts to make sure that you're digging in the right direction.

Each role, artifact, and event in scrum has a set purpose. You place your project in the scrum framework, moving through the seven stages of the roadmap to value (discussed earlier in this chapter), but the actual tools and techniques for accomplishing your goals are your own. Scrum doesn't tell you how to achieve your goal; it merely provides a framework within which you can clearly see what you're doing.

In concept, scrum is simple, but it can be complicated to implement. Scrum is much like getting into shape physically. In concept, you need to exercise more and take in fewer calories; in practice, the process can be complex.

Following are some common practices that complement scrum (extra elements in italics) and have produced incredible successes. Here, we've switched to a 5-6-7 framework:

» **Roles**

- Product owner
- Development team
- Scrum master
- *Stakeholders*
- *Scrum mentor*

» **Artifacts**

- *Vision*
- *Product roadmap*
- Product backlog
- *Release plan*
- Sprint backlog
- Product increment

» **Events**

- *Project planning*
- *Release planning*
- Sprint
- Sprint planning
- Daily scrum
- Sprint review
- Sprint retrospective

The framework is still simple, but with additional roles, artifacts, and events designed to smooth the process. We discuss these roles, artifacts, and events in detail throughout the book.