A MIKE COHN SIGNATURE BOOK

Mike Cohn

Agile Product Management with Scrum

Creating Products that Customers Love

Roman Pichler

FOREWORD
BY JEFF SUTHERLAND

The product owner is a new role for most companies and needs this book's compelling and easily understandable presentation. When the first product owner was selected, I was a vice president at Object Technology, responsible for delivering the first product created by Scrum. The new product would make or break the company, and I had six months to deliver a development tool that would alter the market. In addition to creating the product with a small, carefully selected team, I had to organize the whole company around new product delivery. With only a few months until product shipment, it was clear that the right minimal feature set would determine success or failure. I found that I did not have enough time to spend talking with customers and watching competitors closely so that I could precisely determine the right prioritized feature set up front and break those features down into small product backlog items for the team.

I had already delegated my engineering responsibilities to the first ScrumMaster, John Scumniotales, but now I needed a product owner. I had access to any resource in the company, so I selected the best person from the product management team for the role I had in mind: Don Roedner. As the first product owner, Don had to own the vision for the product, the business plan and the revenue,

the road map and the release plan, and, most important, a carefully groomed and precisely prioritized product backlog for the team.

Don lived with the team half of his time and was on the road with customers the other half. His job was to deliver the right product, while I worked with the entire company on product naming and branding, marketing strategy and communications, and sales planning and training while simultaneously sitting in the Scrum meeting every day and being the primary impediment remover for the team. Don had to assume a bigger role than product marketing manager. All of a sudden he owned a new line of business. At the same time he was plunged into the engineering team, helping to explain and motivate the team on a daily basis. Being embedded in the market and embedded in the team at the same time was a total immersion experience.

A good product owner's intensity of focus and responsibility for success are clearly illustrated in this book but rarely seen in product companies or on IT teams. We need a compelling picture of a great product owner along with the specifics of how to execute the role, and Roman Pichler has provided an outstanding guide.

Jeff Sutherland,
Cocreator of Scrum

FOREWORD
BY BRETT QUEENER

There is a great movement taking place today throughout the software industry: the agile movement. Over the last two decades, many customers, partners, and employees have become disenchanted with the way we develop enterprise technology solutions. These solutions are often low in quality, take years to be brought to market, and lack the innovation necessary to solve real business problems.

At Salesforce.com, we aspire to be a different software company by focusing on customer and employee success. We knew that using traditional methods to deliver software just wouldn't work for our vision of a different kind of company. We had to rethink the model, throw out our assumptions, and find a better way. We asked ourselves: Is there a way to deliver high-quality software on time, every time? Is there a way to get value into our customers' hands early and often? Is there a way to innovate at scale as the company grows? In fact, there is.

As the chief product owner at Salesforce.com, I needed a way for my product managers to effectively connect the wants and needs of our customers and the business directly to the development teams in a highly dynamic and responsive way. Using Scrum allows us to put the product managers firmly in charge of delivering customer

value. It enables them to direct the team to build the most business-critical features first and to get them into the hands of our customers as soon as possible. It also provides them with the flexibility to respond quickly to changing market conditions and competitive pressures, or to deliver terrific new innovations emerging from our development teams. In *Agile Product Management with Scrum*, you'll see how a product owner differs from a traditional product manager having a greater level of responsibility for the success of the product. The book clearly outlines and contrasts the different behaviors between the traditional and the agile role.

Many have attempted to explain the product owner role, but none have been able to capture the essence of the role like Roman Pichler. This book offers compelling agile product management theories and practices that guide product owners, Scrum team members, and executives in delivering innovations. Roman provides plenty of real-world examples from highly competitive innovators like Salesforce.com along with simple explanations for building and delivering the minimum functionality to deliver innovations. He also outlines the common pitfalls and mistakes that many product owners make.

In today's dynamic and competitive environment, our customers' expectations and demands are greater than ever before. At Salesforce.com, our agile approach has provided dramatic results with our product owners delivering more innovation and value. If you're interested in similar success, this book is for you. The spot-on tools, techniques, and advice are the perfect guide to deliver wild success for your customers.

Brett Queener,
Senior Vice President, Products, Salesforce.com

PREFACE

Many excellent books have been written on agile software development and on product management. Yet to date, a comprehensive description of how product management works in an agile context does not exist. It is as if agilists have shied away from the subject, and the product management experts are still scratching their heads trying to figure out this brave new agile world. With more and more companies adopting Scrum, the question of how product management is practiced in a Scrum environment is becoming increasingly urgent. This book attempts to provide an answer.

When I first came across agile practices in 1999, I was struck by the close collaboration between business and technical people. Until then, I had considered software development as something techies would take an interest in but not businesspeople. When I coached my first agile project in 2001, the biggest challenge was to help the product mangers transition into the agile world. Since then, product ownership has consistently been the major challenge and success factor in the companies I've consulted—not only in developing successful products but also in making Scrum stick. To say it with the words of Chris Fry and Steve Greene (2007, 139), who guided the agile transition at Salesforce.com:

> *Throughout our initial rollout we heard from many experts*
> *that the Product Owner role was key to the success of our*
> *agile transformation. Although we intuitively understood*
> *this we didn't truly understand the significant changes that*
> *the Product Owners would experience in their roles.*

WHY AGILE PRODUCT MANAGEMENT IS DIFFERENT

Scrum-based agile product management differs from old-school product management approaches in a number of areas. Table P.1 provides a summary of the most important distinctions.[1]

TABLE P.1 Old-School versus New-School Product Management

Old School	New School
Several roles, such as product marketer, product manager, and project manager, share the responsibility for bringing the product to life.	One person—the product owner—is in charge of the product and leads the project. Find out more about this new role in Chapter 1 and Chapter 6.
Product managers are detached from the development teams, separated by process, department, and facility boundaries.	The product owner is a member of the Scrum team and works closely with the ScrumMaster and team on an ongoing basis. Find out more in Chapter 1, Chapter 3, and Chapter 5.
Extensive market research, product planning, and business analysis are carried out up front.	Minimum up-front work is expended to create a vision that describes what the product will roughly look like and do, as discussed in Chapter 2.

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1. Note that I use the Scrum role names stated in Schwaber (2009).

TABLE P.1 Old-School versus New-School Product Management *(Continued)*

Old School	New School
Up-front product discovery and definition: requirements are detailed and frozen early on.	Product discovery is an ongoing process; requirements emerge. There is no definition phase and no market or product requirements specification. The product backlog is dynamic, and its contents evolve based on customer and user feedback. Find out more in Chapter 3.
Customer feedback is received late, in market testing and after product launch.	Early and frequent releases together with sprint review meetings generate valuable customer and user feedback that helps create a product customers love, as discussed in Chapter 4 and Chapter 5.

Agile methods including Scrum embrace an age-old truth: They see change as the only constant. "If a company's own research does not make a product obsolete, another's will," wrote Theodore Levitt famously in his article "Marketing Myopia," published in 1960. And Christensen (1997) argues that disruptive innovation will eventually occur in every industry. Only how soon and how frequently it is going to happen remain uncertain. Companies not able to adapt quickly will go out of business—even if their profits are healthy today. Luckily, Scrum's empirical nature makes it well suited to deal with newness and innovation, to cope with complex situations where flux and unpredictability are dominant forces. If your business is characterized by change, you are likely to find a powerful ally in Scrum.

WHAT THIS BOOK OFFERS AND WHO SHOULD READ IT

This book is for anyone interested in agile product management, particularly those readers working as product owners or transitioning into the role. The book discusses the role of the product owner along with essential product management practices. These include envisioning the product, stocking and grooming the product backlog, planning and tracking the release, leveraging the Scrum meetings, and transitioning into the new role. This practical guide enables you to apply agile product management techniques effectively in Scrum. It focuses on products involving software—from a simple software application to complex products like mobile phones.

Note that this book is not a product management primer. It is not a Scrum primer, either. And it certainly is no product management panacea. In fact, there are many product management aspects this book does not cover. Instead, this book focuses on the product management concepts and practices specific to Scrum.

The book assumes that you are familiar with Scrum and that you have a working product management knowledge. A description of Scrum can be found in Schwaber and Beedle (2002) and Schwaber (2004).

My hope is that this book will help you create products that customers love—products that are beneficial to their users and are developed in a healthy, sustainable way.

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UNDERSTANDING THE PRODUCT OWNER ROLE

I once worked on a new health-care product destined to replace its predecessor. The new system was intended to provide more value for the customers and leapfrog the competition. After over two years of development, the new product was launched with great expectations — and bombed.

What went wrong? Somewhere between the idea and the launch, the product vision was lost amid the many handoffs. Product marketing performed the market research, wrote the product concept, and passed the concept on to the product manager. The product manager wrote the requirements specification and handed it off to the project manager, who passed it on to the development teams. There was no single person responsible for leading the effort to create a winning product, and no shared vision of what the product should look like and do. Everyone involved had a different view, a different vision.

What's the solution? Putting one person, called the product owner, in charge of the product. This chapter explores the role of the product owner. It explains the role's authority and responsibility as well as how the role should be applied.

THE PRODUCT OWNER ROLE

In the "Scrum Guide" (Schwaber 2009, 5), Ken Schwaber writes about the product owner:

> *The Product Owner is the one and only person responsible for managing the Product Backlog and ensuring the value of the work the team performs. This person maintains the Product Backlog and ensures that it is visible to everyone.*

This definition sounds rather harmless until we consider its implications. The product owner leads the development effort to create a product that generates the desired benefits. This often includes creating the product vision; grooming the product backlog; planning the release; involving customers, users, and other stakeholders; managing the budget; preparing the product launch; attending the Scrum meetings; and collaborating with the team. The product owner plays a crucial part not only in bringing new products to life but also in managing the product lifecycle. Having one person in charge across releases ensures continuity and reduces handoffs, and it encourages long-term thinking. A survey at SAP AG revealed more benefits: The employees working as product owners felt more confident, more able to influence, more visible, better organized, and better motivated in the new role (Schmidkonz 2008).

Being the product owner is no solo act. The product owner is part of the Scrum team and closely collaborates with its other members. While the ScrumMaster and team support the product owner by jointly grooming the product backlog, the product owner is responsible for making sure that the necessary work is carried out.

It may be tempting to compare the role of the product owner to traditional roles, such as product manager or project manager. Any comparison fails to do it justice, though. The product owner is a new, multifaceted role that unites the authority and responsibility traditionally scattered across separate roles, including the customer

or sponsor, the product manager, and the project manager. Its specific shape is context-sensitive: It depends on the nature of the product, the stage of the product lifecycle, and the size of the project, among other factors. For example, the product owner responsible for a new product consisting of software, hardware, and mechanics will need different competencies than one who is leading the effort to enhance a web application. Similarly, a product owner working with a large Scrum project will require different skills than one collaborating with only one or two teams.

For commercial products, the product owner is typically a customer representative, such as a product manager or marketer. An actual customer tends to assume the role when the product is being developed for a specific organization, for instance, an external client who requires a new data warehouse solution or an internal client (e.g., the marketing department) asking for a web site update. I have worked with customers, users, business line managers, product managers, project managers, business analysts, and architects who filled the product owner role well in the given circumstances. Even CEOs can play the product owner role. Take the example of Ript, a visual planning tool that lets users cut and paste images and text from one application to another. The software was the brainchild of Gerry Laybourne, CEO of Oxygen Media, who subsequently took on the product owner role for the software's first release (Judy 2007).

DESIRABLE CHARACTERISTICS OF A PRODUCT OWNER

Choosing the right product owner is crucial for any Scrum project. Successful product owners I have worked with share the characteristics that follow. Since the product owner is a new role, individuals often need time and support to transition into the role and to acquire the necessary skills. A common challenge is finding employees with the necessary breadth and depth of knowledge and

experience to do the job well. (I'll discuss transitioning to the role and developing product owners in Chapter 6.)

Visionary and Doer

Writer Jonathan Swift observed, "Vision is the art of seeing things invisible." The product owner is a visionary who can envision the final product and communicate the vision. The product owner is also a doer who sees the vision through to completion. This includes describing requirements, closely collaborating with the team, accepting or rejecting work results, and steering the project by tracking and forecasting its progress. As an entrepreneur, the product owner facilitates creativity; encourages innovation; and is comfortable with change, ambiguity, debate, conflict, playfulness, experimentation, and informed risk taking.

Leader and Team Player

"Good business leaders create a vision, articulate the vision, passionately own the vision, and relentlessly drive it to completion," says Jack Welch, GE's former chairman and CEO. The product owner is just such a leader. As the individual responsible for the product's success, the product owner provides guidance and direction for everyone involved in the development effort and ensures that tough decisions are made. For instance, should the launch date be postponed or should less functionality be delivered? At the same time, the product owner must be a team player who relies on close collaboration with the other Scrum team members, yet has no formal authority over them. We can think of the product owner as *primus inter pares*, first among peers, regarding the product.

The dual nature of the product owner as a leader and team player is a hard line to toe. By no means should the product owner dictate decisions, yet at the same time neither should the product owner be indecisive or employ a laissez-faire management style.

Instead, the individual should act as a shepherd for the innovation process, guiding the project and seeking team consensus in the decision-making process. Making decisions about the product collaboratively ensures the team's buy-in, leverages the team's creativity and knowledge, and results in better decisions. Working this way requires facilitation and patience because team members often have to disagree and argue first before a new solution can be synthesized from the different ideas and perspectives. Kaner and his coauthors provide useful information on collaborative decision making and related facilitation techniques (1996).

The Entrepreneurial Team

We sometimes focus on an individual as the amazing entrepreneur or the outstanding leader—think of Bill Gates, Steve Jobs, and other celebrity leaders. In reality, very few innovations are a stroke of genius attained by one person. And even if the product owner is Mrs. or Mr. Innovation, the individual still needs a team to bring the product to life. No entrepreneurial genius can make all the right decisions. In fact, neuroscientific research reveals that even the best-qualified person in the right job at the right place can make wrong decisions—if that person decides alone. Finkelstein and his coauthors attribute this to the way human cognition works (2009). They recommend using at least one other person as a sounding board. A team provides plenty of sparring partners to test ideas and arrive at the right decision. Ed Catmull, president of Pixar (2008, 68), says this:

> ... if you give a mediocre idea to a great team, they will either fix it or throw it away and come up with something that works.

The wisdom of many is preferable to the brilliance of one.

Communicator and Negotiator

The product owner must be an effective communicator and negotiator. The individual communicates with and aligns different parties, including customers, users, development and engineering, marketing, sales, service, operations, and management. The product owner

is the voice of the customer, communicating customer needs and requirements and bridging the gap between "the suits" and "the techies." Sometimes this means saying no and other times negotiating a compromise.

Empowered and Committed

The product owner must have enough authority and the right level of management sponsorship to lead the development effort and to align stakeholders. At mobile.de, Germany's biggest online auto marketplace, senior management selects product owners, provides support, and acts as their escalation partner. This close collaboration has allowed the management team to better understand the progress of the individual projects and to kill unsuccessful projects early.[1]

An empowered product owner is essential for leading the effort to bring the product to life. The product owner must have the proper decision-making authority—from finding the right team members to deciding which functionality is delivered as part of the release. The product owner must be someone who can be entrusted with a budget and at the same time has the ability to create a work environment that fosters creativity and innovation. The product owner must be committed to the development effort. A successful product owner is confident, enthusiastic, energetic, and trustworthy.

Available and Qualified

The product owner must be available and qualified to do a great job. Being the product owner is usually a full-time job. It is important to give product owners enough time to sustainably carry out their responsibilities. If the individual is overworked, the project's progress suffers and the resulting product may be suboptimal.

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1. Personal communication with Philip Missler, CTO at mobile.de, June 18, 2009.

Being adequately qualified usually requires an intimate under-standing of the customer and the market, being passionate about the user experience, and the ability to communicate needs and describe requirements, to manage a budget, to guide a develop-ment project, and to be comfortable working with a cross-func-tional, self-organizing team.

The Product Owner at PatientKeeper

Jeff Sutherland, cocreator of Scrum and former CTO of PatientKeeper, Inc., a leading provider of integrated health-care information systems, explains the required qualifications and authority of product owners at the company:

> [A product owner] must be a domain expert, preferably a practic-ing physician a couple of days a week in one of the leading hos-pitals in Boston … an engineering expert, preferably [having] written some apps themselves. … an expert in user stories, use cases, and software specifications in general and healthcare in particular … really good with customers and sales people to elicit requirements and recruit physician experts to test-drive prototypes of new functionality … [and] own the business, the revenue, the customer and sales relationship with respect to features, the physi-cal creation of user stories and any additional specification of the product including all analysis that is related to what the customer wants. [Our product owners] have no help other than developers and other members of the product owner team. The first couple of hires we made couldn't do this. Repeated training, coaching and getting the right person in the job made it happen.[2]

WORKING WITH THE TEAM

As mentioned earlier, the product owner is a member of the Scrum team and relies on collaboration with the ScrumMaster and team. The team itself is self-organizing, cross-functional, and small. It should include all roles required to bring the product to life. All

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2. From a posting by Jeff Sutherland on the Yahoo! scrumtrainers list on October 2, 2008, and personal communication with Jeff Sutherland on December 16, 2008.

members of the Scrum team must form a close and trusting relationship, a symbiosis, and work together as peers. There must be no *us and them*. There can only be *us*.

To allow the Scrum team to flourish, minimize any changes to it within and across releases. It takes some time for a group of individuals to become a true team—a tightly knit unit with members who trust and support each other and who work together effectively. Changing the team's composition makes the team-building process start all over again, and as a result, productivity and self-organization suffer. Additionally, establish a long-term partnership between a Scrum team and its product; every product should be developed by one or more dedicated teams. This not only facilitates learning, but it simplifies the allocation of people and resources.

Since the product owner, ScrumMaster, and team need to closely collaborate on an ongoing basis, it is desirable to colocate *all* Scrum team members. Take the example of mobile.de. Colocating the product owners with the ScrumMaster and team increased productivity and morale.[3] If the product owner cannot be permanently colocated with the team, have as many face-to-face meetings as possible. Remote product owners can benefit from partial colocation, working on-site with the team for several days in each sprint. For product owners working on the same site but not yet colocated with their teams, I often suggest the one-hour rule: Product owners should spend at least one hour per day with their teams in the team room.

The team room should be conducive to creative and collaborative work. It should be an environment that facilitates communication and interaction, makes work enjoyable, and allows displaying key artifacts as information radiators (the vision statement, high-priority product backlog items, a software architecture diagram, the sprint backlog, and the release and sprint burndown). The best team rooms balance teamwork with the need for privacy and working in small groups by providing breakout rooms.

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3. Personal communication with Philip Missler, CTO at mobile.de, on June 22, 2009.

COLLABORATING WITH THE SCRUMMASTER

Just as a sports team requires a coach to play consistently at the highest level, so every Scrum team needs a ScrumMaster.[4] The ScrumMaster supports the product owner and team, protects the team and the process, and intervenes appropriately when required to ensure that the pace of work is sustainable, that the team stays healthy and motivated, and that no technical debt is incurred.[5]

The product owner and ScrumMaster roles complement each other: The product owner is primarily responsible for the "what"—creating the right product. The ScrumMaster is primarily responsible for the "how"—using Scrum the right way. The two aspects are depicted in Figure 1.1. Only when the right product is created with the right process is enduring success achieved.
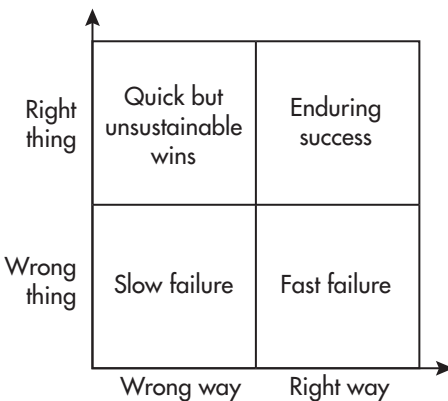
FIGURE 1.1 Doing the right thing the right way

4. Professional rugby teams, for instance, have several coaches, including an attack coach, a forwards coach, a defense coach, a scrum coach, a kicking coach, and the head coach.

5. Technical debt and sustainable pace are discussed in detail in Chapter 4 and Chapter 5, respectively.

Since the product owner and ScrumMaster roles are designed to balance each other, playing both roles is overwhelming and unsustainable. One individual should never be both ScrumMaster and product owner.

WORKING WITH CUSTOMERS, USERS, AND OTHER STAKEHOLDERS

The customer, who is the person purchasing the product, and the user, who is the individual using the product, determine the success or failure of the product. Only if enough customers buy the product and the users find it beneficial will the product be a success in the marketplace. Notice that the customer and the user may not be the same person. They may also not have the same needs. Take the example of an electronic spreadsheet. The needs of its users might include ease of use and high productivity. The company purchasing the product, on the other hand, might be concerned about the total cost of ownership and data security.

To create a winning product, the product owner, ScrumMaster, and team must develop an intimate understanding of customer and user needs, and how these needs can best be met. The best way to do this is to involve customers and users early and continuously in the development process. Asking customers to provide feedback on prototypes, inviting customer representatives to sprint review meetings, and releasing software early and frequently are great ways to learn from customers. Teams should bear in mind that the product is only a means to an end—to help the customer and to generate the desired benefits for the company developing it, not an end in itself. As Theodore Levitt famously put it, "People don't want a quarter-inch drill, they want a quarter-inch hole." It is only when we focus on the customer that we develop the best possible solution.

In addition to customers and users, product owners should involve other stakeholders, such as representatives from marketing, sales, and service, early and regularly by asking them to attend the sprint review meetings. The meetings allow the representatives to see the product grow, to interact with the Scrum team, and to share questions, concerns, and ideas. Bryson (2004) provides an overview of helpful techniques to identify and analyze stakeholders.

Product Marketers and Project Managers

Some companies distinguish between strategic and tactical product management aspects and employ separate roles for each, a product marketer and a (technical) product manager. Product marketers tend to be outward-facing; their primary responsibility is to understand the market, manage the product road map, and look after the cumulative profits across releases. Product managers tend to be inward-facing; their responsibilities consist of detailed feature description, prioritization, and collaboration with the development team. In Scrum, the product owner takes on all of these responsibilities. For strategic product management aspects, the product owner may receive support from a portfolio manager, from a vice president, or even from the CEO, depending on the size of the company and the importance of the project. For help with pricing and marketing communications, the product owner may turn to a product marketer and senior salesperson. For the tactical aspects, the product owner can count on the ScrumMaster's and team's support. Uniting the two product management aspects achieves end-to-end authority and accountability. We avoid handoffs, waiting, and delays as well as miscommunication and defects.

You may have noticed that I have not mentioned the role of the project manager on a Scrum team. There is a reason: Project management responsibilities are no longer exercised by one person. They are split across the members of the Scrum team instead. The product owner, for instance, is responsible for managing the release scope and date, managing the budget, communicating progress, and managing the stakeholders. The team takes on the task of identifying, estimating, and managing the tasks. The project manager role is therefore redundant. This does not mean that

the individuals working as project managers are no longer needed. The opposite is true. Former project managers often become great ScrumMasters. I have also seen project managers successfully transition into the product owner role.

SCALING THE PRODUCT OWNER ROLE

Before I describe product ownership practices for large Scrum projects, here's a general warning: Avoid large projects. Start small and quickly develop a product with the minimum functionality, as discussed in Chapter 2. If you have to employ a large project, scale slowly and grow the project organically by adding one team at a time. Starting with too many people causes products to be overly complex, making future product updates time-consuming and expensive.[6]

The Chief Product Owner

Large Scrum projects consist of many small teams. Each team needs a product owner, but one product owner can look after only a limited number of teams. How many teams a single product owner can support without being overworked or neglecting some responsibilities depends on a number of factors. These include the product's newness, its complexity, and the domain knowledge of the teams. My experience suggests that a product owner usually cannot look after more than two teams in a sustainable manner. Consequently, when more than two teams are required, several product owners have to collaborate. This seems to create a dilemma: The product owner is one person, but we require several product owners on a large Scrum project. The solution is to put

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6. This insight is captured in Conway's Law (Conway 1968). It states that the structure of the organization developing a product is likely to influence the architecture of the product. If a project starts with three teams, for instance, chances are that the architecture will consist of three major subsystems.

one person in charge of creating and implementing the product vision. In doing so, we introduce a hierarchy of collaborating product owners with an overall or chief product owner at the top—similar to chefs in a restaurant working together with one cook as the chef de cuisine, the head chef.[7]

The chief product owner guides the other product owners. This individual ensures that needs and requirements are consistently communicated to the various teams, and that the project-wide progress is optimized. This includes facilitating collaborative decision making as well as having the final say if no consensus can be reached. If the project grows organically by starting off with one team, the very first product owner typically becomes the chief product owner.

Product Owner Hierarchies

Product owner hierarchies vary from a small team of product owners with a chief product owner to a complex structure with several levels of collaborating product owners. Let's have a look at the two options, starting with the simpler one.

The project organization depicted in Figure 1.2 consists of three teams and three product owners. Each product owner looks after one team. The product owners form a product owner team with product owner B acting as the chief product owner. Even though there is a chief product owner, the product owner hierarchy is flat. Here is an example of how the project organization can be applied: A client of mine employs a product owner team responsible for a web portal and its applications. Four product owners and a chief product owner collaborate closely. Each product owner looks after an individual application. The chief product owner is in charge of the entire product, comprising all applications and the portal.

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7. The top-level product owner is not always called *chief product owner*. Schwaber uses the term *overall product owner* (2007); Larman and Vodde call the chief product owner simply *product owner* (2009).
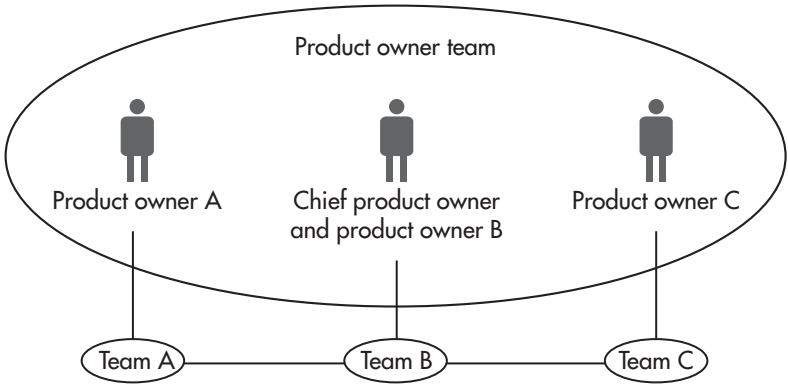
FIGURE 1.2 Simple product owner hierarchy

Figure 1.3 shows another option suitable for larger Scrum projects, which is based on Schwaber (2007, 70–73).
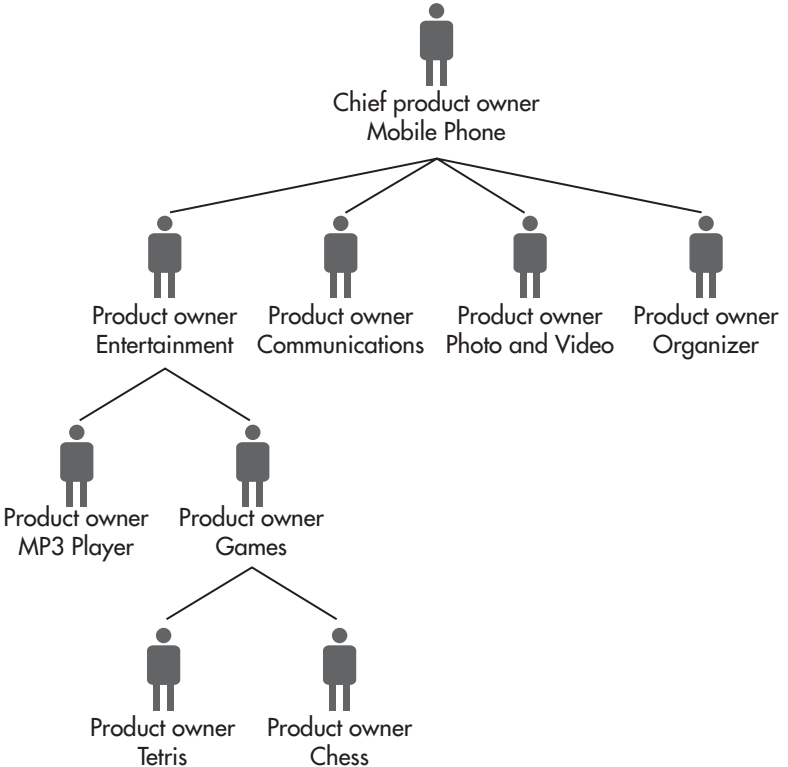
FIGURE 1.3 Complex product owner hierarchy

The project organization partially depicted in Figure 1.3 consists of four layers and nine product owners.[8] Each product owner guides and assists lower-level colleagues. The top-level product owner is the chief product owner in charge of the entire development effort and is responsible for the product's success. The product owners now form a rather extensive hierarchy.

Note that a complex product owner hierarchy introduces a certain specialization of the individual product owner jobs. The chief product owner leads the overall development effort, coordinating with customers and other stakeholders. The lower-level product owners are more focused on their features or subsystems and work closely with the development teams. Schwaber (2007, 72) notes:

> *The Product Owner plans, composes, distributes, and tracks work from his or her level down. ... The higher the level is, the harder the Product Owner's ... job is. The responsibility of Product-level jobs usually requires someone with Vice President-level or Director-level title and authority.*

Choosing the Right Product Owners

Finding the right person to fill the product owner role is challenging enough when only one product owner is needed. How do we choose the right product owners on large projects? Understanding the different ways we can structure the teams on a large project helps answer the question. There are two ways to organize teams that are creating product increments: as feature teams or as component teams (Pichler 2008, Larman and Vodde 2009). A feature team implements a cohesive set of requirements, such as one or more

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8. Schwaber (2007, 71) suggests that each product owner forms part of an Integration Scrum Team with the ScrumMaster and team as additional members. Each Integration Scrum Team supports its lower-level teams. In Figure 1.3, the Scrum Integration Team "Games" would support the Scrum teams "Tetris" and "Chess," for instance.

themes or features. The result is an executable vertical slice that cuts across major parts of the software architecture. A component team creates a component or subsystem.

Both team setups are orthogonal: Feature teams are organized around product backlog items, component teams around the software architecture. Both have advantages and disadvantages. Component teams, for instance, ensure architectural integrity and reuse. Unfortunately, they often cannot consume product backlog items expressed as user stories or use cases but instead require detailed technical requirements. In addition, they have to integrate their work results to create a product increment. Both properties create overhead. Feature teams, on the other hand, can usually work in parallel. They encounter fewer integration issues and can consume the requirements stated in the product backlog. Ensuring architectural integrity and reuse can be a challenge, though. As a rule of thumb, organizations should employ feature teams whenever possible and use component teams only if they must.

Since the product owner of a component team has to help translate product backlog items into technical requirements, the best individual to serve in that role is usually an architect or a senior developer rather than a product manager. If a project consists of three feature teams and one component team, for instance, it is likely to require three product managers and one architect to fill the product owner roles—assuming that one of the product owners is the chief product owner.

COMMON MISTAKES

Applying the product owner role means entering new territory for many organizations. And the path to effective product ownership is littered with pitfalls and traps. This section will help you avoid some of the most common mistakes.

The Underpowered Product Owner

A project with an underpowered product owner is much like a car with an underpowered engine: The car runs, but it struggles when the going gets tough. An underpowered product owner lacks empowerment. There may be several causes: The product owner does not have enough management attention; the sponsorship comes from the wrong level or the wrong person; management does not fully trust the product owner or finds it difficult to delegate decision-making authority. As a consequence, the product owner struggles to do an effective job, for instance, to align the Scrum team, stakeholders, and customers or to exclude requirements from the release. A product owner of a new-product development project I worked with, for instance, had to consult his boss, the head of the line of business, for every major decision. Not surprisingly, this caused delays and eroded the team's confidence in the product owner. Ensure that the product owner is fully empowered and receives support and trust from the right person.

The Overworked Product Owner

Being overworked is not just unhealthy and unsustainable on a personal level; overworked product owners quickly become bottlenecks and limit the project's progress. Symptoms of an overworked product owner include neglecting product backlog grooming, missing sprint planning or review meetings, and not being available for questions or giving answers only after a long delay. Overworked product owners are at odds with the Agile Manifesto's concept of sustainable pace. "Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely" (Beck et al. 2001).

There are two main causes of product owner overburden: not enough time to perform the role and not enough support from the team. Availability tends to be an issue when the product owner role is just one of many jobs competing for time and attention or when

the product owner looks after too many products or teams. Not enough support from the team is rooted in a wrong understanding of product ownership: Even though there is one product owner, most of the product owner work is carried out collaboratively. The team and ScrumMaster must support the product owner.

To avoid an overworked product owner, try the following: First, free the individual from all other responsibilities. Start with the assumption that being a product owner is a full-time job, and that one product owner can look after only one product and one team. Second, ensure that the team makes time in every sprint to collaborate with the product owner. Scrum allocates up to 10% of the team's capacity in every sprint for supporting the product owner (Schwaber 2007). Not only does collaboration spread the work across many shoulders; it also leverages the team's collective knowledge and creativity.

The Partial Product Owner

Some organizations split the product owner role and distribute its duties across several people, for instance, by employing a product manager and a "product owner." The product manager takes care of the product marketing and product management aspects, owns the vision, is outward-facing, and keeps in touch with the market. The "product owner" is inward-facing, drives the sprints, and works with the team. In these cases, the so-called product owner is little more than a product backlog item writer. This approach reinforces old barriers, blurs responsibility and authority, and causes handoffs, delays, and other waste.

Instead of splitting the product owner role, organizations should face the challenge of applying the role properly. One person should be in charge of the strategic and the tactical product management aspects. This may well require organizational changes, including adapting job roles and career paths and developing individuals to take on a rich set of responsibilities, as discussed in Chapter 6.

The Distant Product Owner

A distant product owner works separately from the team. Distance may evoke images of a globalized world with the product owner on one continent and the team on another. But distance comes in many forms and degrees. It starts with working on the same site in different rooms, and it ends with product owner and team being separated across continents and time zones (Simons 2004). I have found recurring issues with distant product owners, including mistrust, miscommunication, misalignment, and slow progress. There is a reason: "The most efficient and effective method of conveying information to and within a development team is face-to-face conversation" (Beck et al. 2001).

Avoid distant product owners by colocating all Scrum team members. As mentioned earlier, mobile.de experienced a significant productivity and morale increase after colocating its product owner, ScrumMaster, and team. If colocation is not an option, the product owner should spend as much time as possible in the same room as the rest of the Scrum team. Remote product owners should be on-site at least for the sprint planning, the review, and the retrospective meetings. Moving from a distant to a colocated product owner often takes time. It may require hiring and training a local product owner. In some cases, it may also require rethinking the company's product strategy, including where the company develops its products.

The Proxy Product Owner

A proxy product owner is a person acting as a placeholder for the actual product owner. I have found proxy product owners used to compensate for overworked, partial, and distant product owners. At a client of mine, the vice president of product management was asked to take on the product owner role for a business-critical product. Even though he was ideally suited for the job, he struggled to spend enough time with the team. The business analyst on the

team consequently stood in as a proxy product owner when the real product owner could not be there. The proxy did most of the product owner work without being empowered. The actual product owner ultimately decided about product backlog prioritization, release planning, and whether to accept or reject work results. What followed was an increase in conflicts and miscommunication, a slowdown in decision making, and a decrease in productivity and morale.

Using a proxy product owner is an attempt to superficially treat a systemic issue. Rather than employing a quick fix, organizations should address the underlying issues. This might require freeing up the product owner from other obligations; colocating the product owner, ScrumMaster, and team; or even finding a new product owner.

The Product Owner Committee

A product owner committee is a group of product owners without anyone in charge of the overall product. There is no one person guiding the group, helping to create a common goal, and facilitating decision making. A product owner committee is in danger of getting caught in endless meetings with conflicting interests and politics—something also referred to as "death by committee." No real progress is achieved; people stop collaborating and start fighting each other. Always ensure that there is one person in charge of the product, an overall or chief product owner who guides the other product owners and facilitates decision making, including product backlog prioritization and release planning.

REFLECTION

The product owner role is a cornerstone of successfully applying agile product management in Scrum. The days of the lonesome product manager locked away in her room and racking her brain to

come up with perfect requirements are over. The product owner is a member of the Scrum team and as such is committed to close and ongoing collaboration. The following questions can help you apply the product owner role successfully:

Who represents customers and users at your company?

Who identifies and describes customer needs and product functionality?

Who leads the visioning activities, and who leads the activities that bring the vision to life?

What roles do teamwork and collaborative decision making play?

What would it take to implement the product owner role, as described in this chapter?

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