INTRODUCTION

In the mid 1980s, I was a young software developer working for HP on a high-profile product. It was when Artificial Intelligence was all the rage, and I was fortunate enough to be working at one of the industry's best companies, as part of a very strong software engineering team (several members of that team went on to substantial success in companies across the industry). Our assignment was a difficult one: to deliver software on a low-cost, general-purpose workstation that until then required a special-purpose hardware/software combination that cost over $100,000 per user—a price few could afford.

We worked long and hard for well over a year, sacrificing countless nights and weekends. Along the way, we added several patents to HP's portfolio. We developed the software to meet HP's exacting quality standards. We internationalized the product and localized it for several languages. We trained the sales force. We previewed our technology with the press and received excellent reviews. We were ready. We released. We celebrated the release.

Just one problem: No one bought it.

The product was a complete failure in the marketplace. Yes, it was technically impressive, and the reviewers loved it, but it wasn't something people wanted or needed.

The team was of course frustrated with this outcome. But soon we began to ask some important questions: Who decides what products

we should actually build? How do they decide? How do they know that what we build will be useful?

Our young team learned something very profound—something I'm sure many teams have discovered the hard way: *It doesn't matter how good your engineering team is if they are not given something worthwhile to build.*

More generally, we learned that it's not enough to do a good job engineering a product. At least as important is *discovering a product that is valuable, usable, and feasible.*

When trying to track down the root cause of our failure, I learned that the decisions about what to build came from a "Product Manager"—someone who generally resided in the marketing organization and who was responsible for defining the products we built. But I also learned that Product Management wasn't something HP was particularly good at. I later learned that most companies weren't good at this, and in fact most still aren't.

I promised myself that never again would I work so hard on a product unless I knew the product would be something that users and customers wanted.

Over the next 20 years, I had the very good fortune to work on some of the most successful high-tech products of our time—first at HP during the rise of personal computers, then at Netscape Communications/AOL during the rise of the Internet where I served as vice-president of platform and tools, and finally at eBay during the rise of e-commerce where I served as the senior vice-president of product management and design.

Not all of the product efforts have been as successful as others, but I am happy to say that none were failures, and several became loved and used by millions of people around the world.

Soon after I left eBay, I started getting calls from product

organizations wanting to improve how they produced products. As I began working with these companies, I discovered that there was a tremendous difference between how the *best* companies produced products, and how *most* companies produced them. I realized that *the state of the art was very different from the state of the practice.* Most companies were still using old and inefficient ways to define and create products. I also discovered that there was precious little help available, either from academia, including the best business school programs, or from industry organizations, which seemed hopelessly stuck in the failed models of the past—just like the one I worked in at HP.

I have had some great rides, and I am especially thankful that I have had the chance to work for and with some of the best product minds in the industry. The best ideas in this book are from these people. You will find a list of many of them in the acknowledgements. I have learned from them all and I am grateful to each one of them.

I chose this career because I wanted to work on products that customers love; products that inspire and provide real value. I find that most product leaders also want to create inspiring and successful products. Yet most products are not inspiring, and life is too short for bad products.

My hope in writing this book is that it will help share the best practices of the most successful product companies, and that the result will be more products that are truly inspiring—products that customers love.

Who This Book Is For

This book is specifically written for those members of *software product teams*—especially Internet software product teams—both consumer and business, who are *responsible for defining the products to be built.* Often these product leaders are called "product managers," but they may be company founders, executives, lead engineers, or designers.

In addition to product managers, this book is for user experience designers, software engineers and architects, project/program managers, product marketing managers, and the managers of the different parts of the product organization.

In my experience, the information described here is applicable to a wide variety of product development teams:

Your company may be a startup, or a very large business with many products, or something in between. You may be working on an all-new 1.0 product, or working on incremental improvements to an existing product. Your product development team may be using an *Agile* method such as *Scrum*, or conventional Waterfall-based methods.

Your product may be an Internet service, shipped software, a device, or a platform. It may be for consumers, small businesses, or enterprises. For instance, the products could be e-commerce Web sites, fantasy sports or game sites, consumer electronics, hosted services for businesses, or platforms for enabling specific types of Internet applications and services such as social networking or video sharing.

One caveat I have to make is that the book is not intended for those working on non-software products, such as pharmaceuticals, and also for non-product software efforts, such as custom software projects. That's not to say that the methods and strategies I describe won't work in other environments, but I developed these concepts and practiced them in the product software world, so they may not be as effective outside of it.

How This Book Is Structured

When I first moved into senior management roles at Netscape, I found my day-to-day tasks fell into three distinct areas: *People, Process,* and *Product:*

Great Products by Design

I do not believe inspiring products happen by accident. In every case, behind every successful, inspiring product, I find that there are certain truths. Here are ten such truths that I try to keep in mind on every product effort:

1. The job of the product manager is to *discover* a product that is valuable, usable, and feasible.
2. Product discovery is a collaboration between the product manager, interaction designer, and software architect.
3. Engineering is important and difficult, but user experience design is even more important, and usually more difficult.
4. Engineers are typically very poor at user experience design—engineers think in terms of implementation models, but users think in terms of conceptual models.
5. User experience design means both interaction design and visual design (and for hardware-based devices, industrial design).
6. Functionality (product requirements) and user experience design are inherently intertwined.
7. Product ideas must be tested—early and often—on actual target users in order to come up with a product that is valuable and usable.
8. We need a high-fidelity prototype so we can quickly, easily, and frequently test our ideas on real users using a realistic user experience.
9. The job of the product manager is to identify the *minimal* possible product that meets the objectives—valuable, usable and feasible—minimizing time to market and user complexity.
10. Once this minimal successful product has been discovered and validated, it is not something that can be piecemealed and expect the same results.

I continue to talk to far too many product teams stuck in old, failed ways of creating products. Coming to terms with these truths is what this book is all about.

People refers to the product organization, and the roles and responsibilities of the members of the team as they define and develop the product.

Process refers to the processes, activities and best practices used to repeatedly discover and build inspiring and successful products.

Product refers to the defining characteristics of these inspiring products.

All three of these areas are essential to discovering and creating inspiring products. Everything starts with the people, but the process is what enables these people to consistently produce inspiring and successful products.

I have organized this book into these same three parts. Each part is broken up into several independent topics. The order within each of these parts is generally not important—you can jump from one topic to another. Each topic is meant to be self-contained. At the end of the book, I sum everything up by describing what I think are the 10 most important practices and techniques.

Many of the topics discussed in this book reveal the best practices applied by some of the best companies in the world. Others are based on interviews with some of the best product minds in our industry. And yet others are based on my own experiences in the companies I have worked for and with.

Remember: This book is only useful if it helps you deliver better products, so the intention is for each and every topic to be thought provoking, relevant, and actionable.

It is my hope that this information will help you create more successful products, and I would love to hear about your experiences. Please visit me online at the Silicon Valley Product Group site (www.svpg.com) and let me know what you think.

Here's to your success, and to the discovery of inspiring products that customers love.

Examples

I am a big believer in the power of examples, both good and bad. But, because our industry changes so quickly, one of the challenges in a book like this is providing timely and relevant examples. Another problem is that including my favorite examples would add more than one hundred extra pages to this book.

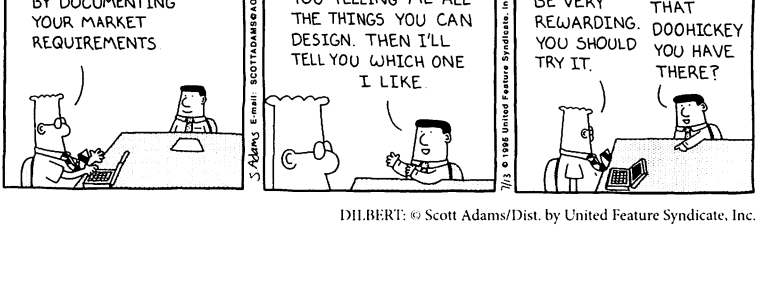
I therefore put many of the examples on the Silicon Valley Product Group web site (www.svpg.com/examples). This way I can continue to update and add to the examples without needing to update the content of the book. As with all of the material on the site, there is no fee or registration required.

The online examples include opportunity assessments, product principles, product strategies, product roadmaps, product specs, prototypes, personas, and prototype testing questions and tasks.

I apologize that this means that you will need Internet access to see many of the examples, and I realize that this breaks the flow of reading a book, but I hope you find the benefits of this approach outweigh the inconvenience.

You will find references in the chapters that follow to the examples on the site.

PART 1 – **PEOPLE**



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The Product Organization

Every product begins with the people on the product team. How you define the roles, and who you select to staff the team, will very likely prove to be a determining factor in its success or failure.

In this section we will describe the key roles and responsibilities of modern software and Internet product teams.

This is an area where many product teams fall short, stuck in old models of the past. For many organizations the roles and responsibilities discussed here represent significant differences from what they're used to.