The Simplicity Shift

Innovative Design Tactics in a Corporate World

Scott Jenson

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The trouble with the world is that the stupid are cocksure and the intelligent are full of doubt.

—Bertrand Russell

The Challenge

Designing innovative consumer products takes both passion and perspective. Passion to overcome the hundreds of problems that always crop up and perspective to know which problems are the most important to solve. Any product that's breaking new ground, almost by karmic definition, must break a few rules. Accepting status-quo design solutions will rarely result in superior products. Breaking new ground in a corporate environment is made even more difficult, however, because projects often have too little time and too little money. Not only must you innovate, but you must do it in half the time. This is the challenge that professional designers must live with every day.

The failure of most consumer products today is in how they meet this challenge. To deliver on extreme time-to-market and cost requirements, consumer products tend to be technology- and feature-driven, cramming in what they can as quickly and cheaply as possible. This inevitably creates cumbersome products – toys that can do much, but are rarely used.

Consumer electronics is becoming a crowded field. No longer is it enough to be there first or to have more features. Products must

be simple to understand and use on a daily basis. But, in an industry so often driven by cost reduction and technical novelty, companies are finding that just the desire for a better design isn't enough. Shipping a product requires running a gauntlet of challenges, each of which can compromise a product and make it more complex. *The Simplicity Shift* is about shifting a company culture to value Simplicity in design and to make it the company's most passionate goal. Simplicity is no different than time-to-market, quality, or cost reduction. Simplicity is a deep commitment that must be understood by management, communicated throughout the product process, and rewarded when it's achieved.

THE SOLUTION

The good news is this: the need for quality design is becoming more obvious and the use of "user interface" professionals is steadily increasing. The term User Centered Design (UCD) has started to become commonly used when discussing consumer products. Companies are finally starting to "get it" – design really does matter. Books such as *The Invisible Computer*, by Donald A. Norman (MIT Press, 1999) and *The Inmates are Running the Asylum: Why High Tech Products Drive Us Crazy and How to Restore the Sanity*, by Alan Cooper (Sams, 1999) have found their mark and corporations are rising to the challenge to start building humane products. Much like the quality movement that started in the 1970s, leading companies see an opportunity to differentiate themselves on the basis of usability. The forward-looking companies are starting to make user-centered design a major commitment. If you're not on the bandwagon, then you're behind your competition.

A growing maturity also exists in the UCD community about how to achieve this. Instead of the classic technology-led process, which is the base of most companies today, turn the whole process around. Replace the technology process with one based on understanding who the users are and what their needs are. Once this is understood, sculpt the product design around this understanding, bending technology to fit these well-grounded needs.

The Problem

Never has an approach been so intuitively correct. And never has an approach been so abysmally executed. Even when companies that "get it" do the user studies, upfront designs, and prototypes, much of it ends up on the floor, and the actual product becomes a pale shadow of the original design. My experience, both within companies as the director of the design department, and without, as a consultant, has shown me that companies can kill good design ideas in a hundred different ways. The most common cause is simple naiveté: the company doesn't understand the deep management commitment required to take an innovative new design and see it all the way through to final delivery.

Even more striking are the companies that hire the consultant or have an internal design department and refuse to choose a design because it appears too costly. This perceived cost usually comes in three forms. The first is the view that a simpler product has a high-opportunity cost. A new, simpler design is often seen as too radical, making too many assumptions about what the consumer needs. Fear exists that the power of the product is somehow diminished. Simple designs have a tendency to make product managers nervous because they view the design as not having enough features to be competitive. This is a bit odd to a designer. It seems to mean if a product doesn't look complex enough, it can't be used by real customers. This is a complete fallacy because designs can be simple, yet hide power features beneath the surface. Everyone can win.

The second perceived cost is the design isn't practical to implement. For example, the design could automate a previously complex sequence of tasks, but this automation might require some tricky programming. These types of design jumps, which require initially unknown amounts of programming work, don't fit within the previous obvious ways of doing things. At first blush, the design appears to be far too ambitious. This is also a fallacy because while designs might, indeed, have grand plans, a technical path nearly always exists that can achieve the essence of the design goal without too much pain.

The third, and final, perceived cost comes from the apparent cost and expense from using UCD in a product. This often comes from a

bad initial positioning because UCD hasn't been considered a first-class citizen. UCD is usually added near the end of a project when it's too late to change most things and design at this stage of a project usually finds more problems than it can fix. Even more difficult is this: when executed in this way, design appears to cause delays in the product and incur cost. Design is seen as expensive because it's set up to fail. It's done too late to have a positive impact on the product.

These perceived costs keep many companies from considering designs that could create innovative products and even cause some teams to actively avoid trying to use interaction designers. To be fair, many innovative designs require some additional work and might not be practical or make business sense. To achieve simple design, you must be able to discuss the issues deeply and make informed business tradeoffs. Companies do this all the time, of course, balancing difficult issues, such as time to market, quality, and cost. These traditional issues are critical to the company, often requiring difficult decisions and forcing strategic changes.

Design is no different. It affects business strategy just as forcefully as these traditional issues. Design must have equal weight and be valued by the entire product team from the beginning of the project.

Design Is Free

This situation with design today is similar to the role of quality in the 1960s when Philip Crosby wrote "Quality Is Free." At that time, numerous misconceptions existed about what quality was and how it was achieved. Quality was valued and attempts were made to improve the commitment of a company to quality. More often than not, however, new improvements were just as quickly lost. Quality simply wouldn't stick to a corporate culture.

Crosby's diagnosis was this: a company needed to pass through a clear management maturity scale to make quality, properly and permanently, an integral part of the company culture. Just wanting quality wasn't enough and establishing a quality department wasn't enough. A deep

cultural and managerial shift had to exist that reflected the commitment to quality. You couldn't treat quality as if it were a fad – something to be tacked on to the end of a project.

The same situation occurs today with Simplicity in design. Good, radically simple product design has value and most companies want this type of product. Just as with quality in the '60s, however, you don't get it through quick fixes. Companies need to mature their approach to design much like they did with quality. You don't get design by simply creating a design department. While this is a nice start, it only puts an artificial box around the problem. The real work comes in when you discuss how the design department informs the strategic planning of the company, how it helps the project management process, and how it works with the development team. Once design becomes an integral part of a company's development process, design – like quality – can become free.

The Simplicity Shift

The world is on the brink of taking UCD seriously. Companies have been inspired by the good examples and they're making a sincere effort to learn from them. Unfortunately, the path to complexity is paved with good intensions. Although many companies want a good, simple product, they end up getting much less. This isn't intentional. This is through a lack of maturity. Simple ideas are fragile ideas and a thousand things can turn them into a design disaster. Marketing has just decided to add three new requirements to the product. Development can't implement pop-up menus. Can't you use icons instead? The product cost is too high, so we'll have to reduce the screen size by half. Can you rework the screen shots by next week? Complexity is what fills the gaps in poor execution.

The Simplicity Shift is about closing the gap between the willing spirit and the weak body. Good design doesn't simply happen as an afterthought. You must make it your most passionate goal. You have to set up a managerial process that values design, resolves the issues it

raises, and then has the guts to carry the design through. You do this by making a shift in your company – a Simplicity Shift.

Simplicity goes beyond a term like "good user interface," which has become so broad, it has little clear meaning. Simplicity is a goal with precision. *Simplicity* means streamlining, pruning clutter, cleaning up presentation, and improving the initial experience with a product. But Simplicity is more than just making a cute product for technophobes. Simplicity streamlines and optimizes use, as well. Power users don't want to follow a complex sequence of steps any more than the novice user: Simplicity has value for everyone.

The Shift comes in the culture surrounding a product. A company doesn't get a simple product only by hiring good user-interface designers. While that's a nice start, a designer's best efforts have a difficult path to final release. To conquer the previously described complexity, a company must appreciate the difficulties involved in designing, and then shipping a simple, breakthrough product. The Simplicity Shift is about the tools necessary to shift a company's culture to accomplish this.

The Four Types of Company Blindness

Companies today have little insight into what Simplicity is in a consumer product and how it can be achieved. In my experience, most companies today have four stages of blindness that prevent them from seeing what they should be doing: user blindness, feature blindness, innovation blindness, and implementation blindness. These types of blindness are the root misconceptions and bad practices that set up product teams to fail before they even start.

User blindness comes from thinking you know who the user is. Some people implicitly assume the user is someone just like themselves, others – often marketing managers – assume it's a conglomeration of all users, a multiuser who requires everything under the sun. Both approaches prevent you from seeing the true user and understanding what that user needs from your product.

Feature blindness comes from being awash in sophisticated features. Usually, so many must be crammed into the product, the design becomes muddled and hard to understand. While the sheer number of features is a large part of the problem, the real cause of the trouble is the implied need to show them all at once. By creating a cornucopia of features, the product ends up overwhelming the users, so they don't know where to start with the product.

Innovation blindness comes in two forms. The first is the team not realizing they're surrounded by design defaults that restrict their thinking and prevent consideration of new ideas. Once these new ideas make it on the table, however, they aren't considered because they're seen as too hard to achieve. Innovative ideas happen surprisingly often. They're simply killed off much too quickly.

Implementation blindness comes from not understanding that a complete design is only the first major milestone. Getting the product shipped is where the real work begins. Many companies don't see that a product design can lose its path a thousand times over when moving from design to shipping. The design that usually makes it out the door rarely matches the vitality of the original concept.

Once a company has been cured of these types of blindness, a new product culture can arise. A culture that can discuss and discover Simplicity, make difficult decisions as to what should go in or out of the product, execute those decisions, and, finally, bring them to market.

What This Book Is Not About

This isn't a book about design tips and tricks. I won't tell you how to use white space effectively or about clever ways to use fonts and color to increase information density. I also won't cover techniques to improve your user-testing reports or new discoveries in field research. These topics have already been covered in many good books. An appendix at the back of the book refers you to books that cover these topics in more detail.

What This Book Is About

This book is about design insight and management. It focuses on the design tools that companies must share with management, project team and team members, to ensure that everyone works together to make the project successful.

The initial two chapters layout a few terms and concepts that need to be established before we can begin. The remainder of the book is organized around the types of design blindness, explaining each and giving examples. Each blindness will have insights that are specific actions you can take to improve your company's ability to understand problems, discuss them, and make decisions that create Simplicity in your products. Intermixed between these chapters are Design Breaks which show how these insights can be used in real world situations.

Who This Book Is For

Most experienced designers will be well versed in the insights I reference in this book. Knowing the tools isn't all that counts, though. Using the tools with the right people at the right time makes all the difference.

I hope this book has value to both designers and managers. How to do design is becoming well understood. How to manage design still has a long way to go. I find designing consumer products an exciting and rewarding activity because the potential is great. You can design products that will make a difference.

I also hope this book will be useful to small companies without much of an established design culture. Big companies tend to have design expertise. Their problems lie in learning how to unlock the power of these internal groups. Small companies have little to start with and feel that good design is only for the big boys. Small companies must realize that most bad design comes not from a lack of design experience, but from a series of bad management decisions. Bad products are usually set

up to fail from the beginning. If you can get the management cleaned up, you can make amazing products.

I truly feel design can be free. While throwing money at any problem can certainly help, most of the techniques described in this book can be done with moderate cost and still make a large impact on a product's Simplicity. I hope this book can encourage small companies to start to Think Simple and create that internal creative spark that enables them to make breakthrough products, using only their common sense and a passion to create meaningful products.