

NINETY QUESTIONS + ANSWERS FROM THIRTEEN DESIGN THINKERS

IIT Institute of Design



design as choice    motivation    design strategy    piracy    design verses art

books    valuation of design    Apple    experience design    iPhone

markets    clients    communication    advertising    research

prototyping    community    systemic design    analytics    design, corporate management and    cross-disciplinary design    social change

culture    globalization    Flickr    design for social good    healthcare business

complexity    Facebook    experimentation    executives and design

collaboration    social network    non-profit    health

marketing    brands    organizational innovation

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BRANDON SCHAUER,  
AND DAVID VERBA    CHRIS MEYER    CLEMENT MOK    ROB PEW

**NINETY QUESTIONS + ANSWERS** FROM THIRTEEN DESIGN THINKERS

## Shaping Strategy

Increasingly, we see new examples of companies integrating design and strategy to help determine what businesses they should be in and how they will succeed.

According to Roger Martin and Michael Porter, the two key questions defining strategy are “Where to play?” and “How to win?” For example, in 2001 the CEO of a personal computer business was facing the decision of whether or not to play in the music business. On the surface, it was a crazy question—the music business was one of the very few industries worse off than the personal computer business, which was already being commoditized. If he looked only at the tangible value measured by the financials, it made no sense: there may have been slow growth in the PC world, but the major music labels had descended even further—to suing their own customers. Instead, he reframed the problem and thought of it more broadly than just selling MP3 players and albums, and it got more interesting. He looked at the intangible value of the activity of people enjoying music rather than the more measurable value of the players and disks people were buying. He looked at people’s whole experience, including how they shop and browse, how they share music, how they organize music, how they learn about new music, and other aspects of the activity that surround the products. Might there be a song in here somewhere?

Of course, I’m talking about Steve Jobs and Apple’s iPod and iTunes. Mr. Jobs is a rare entrepreneur, one who is great at both starting new companies and running large companies. He intuitively uses the way designers think to invent, reinvent, and build businesses. He does not take a situation as a given and

focus on how to optimize it. Instead he asks, “What if...?” and before jumping to implementation, works with his teams to design and prototype multiple options that show him how to win in the new category.

The story of Jobs gives rise to a key question: How do you replicate this in other companies? Does every company have to find a design genius for their CEO?

The good news is that there are principles emerging in the design field that can be described, taught, adopted, applied, and built upon. We are finally building a more structured body of first principles for design, and this is a major contributor to the adoption of design methods by leaders of large companies. One example of this is the way advanced design methods have been adopted at Steelcase. In this publication, Rob Pew, the chairman of the board at Steelcase, tells of his discovery of structured design methods and how they have been embedded throughout the company. In fact, Steelcase has gone a step further by always placing at least one designer in the corporate strategy office to work on creating new business and acquiring companies. This goes back to the issue of design’s ability to recognize the value of intangibles, which is often missed. Designers are experts at seeing intangible value and are increasingly competent at explaining it in financial terms, which leads to better businesses.

The first principles of any field come from the interchange between leading practitioners and astute observers, who together cut through the fog of project details and decipher the general patterns that lead to great work.

This publication is a delightful example of leading practitioners and thinkers cutting through the fog. Their insights about what makes great design and what makes viable businesses are interesting in and of themselves. However, their generalizations, particularly when taken together, form a remarkable set of ideas that one can imagine being useful to executives trying to decide where to play and how to win.

### PATRICK WHITNEY

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INTERVIEWEE	ANSWER	PAGE
<b>DAVID ARMANO</b>	A1 - A8	13
<b>BILL BUXTON</b>	A9 - A15	16
<b>JON CAMPBELL</b>		57
<b>VALERIE CASEY</b>	A16 - A24	21
<b>ROB FORBES</b>	A25 - A37	26
<b>BILL HILL</b>	A38 - A41	31
<b>TORE KRISTENSEN</b>	A42 - A46	33
<b>MATT MASON</b>	A47 - A51	35
<b>PETER MERHOLZ, BRANDON SCHAUER, AND</b>		
<b>DAVID VERBA</b>	A52 - A64	38
<b>CHRIS MEYERS</b>	A65 - A71	43
<b>CLEMENT MOK</b>	A72 - A78	47
<b>ROB PEW</b>	A79 - A90	52

#### KEYWORD INDEX, SORTED BY FREQUENCY

*valuation of design* A4, A42, A62, A78, A85, A87

*Apple* A7, A11, A13, A28, A84

*books* A10, A15, A37, A52

*community* A19, A20, A21, A22

*complexity* A56, A64, A65, A68

*cross-disciplinary design* A42, A65, A70, A86

*culture* A32, A39, A47, A68

*design, corporate management and* A3, A14, A74, A82

*globalization* A36, A68, A89, A90

*marketing* A73, A74, A76, A80

*prototyping* A5, A12, A54, A56

*advertising* A72, A75, A76

*collaboration* A18, A57, A70

*experience design* A2, A3, A54

*Facebook* A49, A74, A75

*Flickr* A3, A7, A56

*iPhone* A7, A54, A84

*social change* A6, A16, A24

*social network* A19, A51, A75

*systemic design* A5, A41, A80

*analytics* A72, A78

*APIs* A8, A75

*brands* A18, A84

*clients* A1, A53

*communication* A69, A70

*design as choice* A9, A10

*design, definition of* A26, A28

*design for social good* A18, A34

*design strategy* A1, A41

*design versus art* A44, A45

*executives and design* A13, A83

*experimentation* A44, A56

*health* A38, A41

*healthcare business* A40, A80

*Keeley, Larry* A40, A79

*markets* A47, A48

*Martin, Roger* A10, A13

*molecular science* A66, A67

*motivation* A17, A18

*non-profit* A51, A58

*organizational innovation* A59, A60

*piracy* A47, A48

*public design* A33, A35

*research* A44, A46

*Sapient, PGI and* A73, A74

*service design* A8, A55

*Southwest Airlines* A3, A59

*sustainability* A16, A18

*urbanization* A36, A68

*user-generated content* A50, A51

*wellness/wellbeing* A38, A40

*YouTube* A3, A76

*accountability* A21

*activism and design* A16

*adoption* A17

*agile development* A57

*Alessi* A28

*applications* A7

*attention economy* A7

*Bang & Olufsen* A43

*bicycles* A27

*Bierut, Michael* A13

*biomimicry* A66

*Cadillac* A13

*Central Park* A35

*Chouinard, Yvon* A15

*convergence* A40

*conversation* A20

*Craigslist* A8

*Creative Commons* A49

*creativity, definition of* A2

*customer loyalty* A63

*customization* A7

*Dell* A11

*democratization of design* A53

*design criteria* A64

*design process* A64

*design thinking* A4

*design, ubiquity of* A25

*digital agency* A77

*Doblin* A79

*DoubleClick* A74

*DVRs* A6

*education* A88

*e-mail fatigue* A6

*emotion* A2

*energy* A67

*engineering* A69

facilitation of design A61  
feature creep A58  
financial services A63  
Firefox A7  
frameworks A64  
GM A13  
Golden Gate Bridge A34  
Google A7  
government, design and A58  
guidelines A21  
history A37  
IDEO A13  
iMac A84  
infrastructure A27  
innovation A22  
intellectual property A49  
interactive A73  
leadership A19  
LEGO A43  
Loewy, Raymond A13  
Magnavox A84  
manufacturing A84  
Microsoft A14  
Millennium Park A34  
Motorola A3  
music industry A47  
Netflix A55  
Nintendo A11  
Nokia A43  
Oprah A39  
optimization and design A71

Owen, Charles A81  
Philips A84  
Prada A28  
product design A42  
RAZR A3  
San Francisco A27  
Scandinavian design A43  
Scrabulous A49  
sketching A12  
Sloan, Alfred A13  
Starck, Philippe A44  
Steelcase A79  
strategy, definition of A65  
structured planning A81  
Teague A13  
Tibet A39  
Tolle, Eckhart A39  
trademark A49  
Trader Joe's A3  
Twitter A6  
user experience A1  
user-centered design A41  
values A90  
Web n.0 A8  
Wedia A51  
work tools A80  
“wow” moments A63  
writing A70  
Yahoo! A74  
zones of influence/control A20

What is your favorite  
example of **INNOVATION**  
**FAILURE**, and why?

“ ”

innovators

early  
adopters

early  
majority

late  
majority

*Bud.TV*

I'm always interested in the intersection of things, particularly how design intersects with marketing and vice versa. Because of this, I closely watched the ambitious Bud.TV initiative launched over a year ago—a mostly digital effort which placed niche content in a branded environment. Initially the effort was lauded by the press but then quickly degraded as traffic didn't even come close to early estimates, and I was skeptical from the beginning. Bud.TV was a highly produced, slick environment that required users to register in order to view the content. In a fragmented digital world where content distribution channels such as YouTube rule the day, this came across as an old model trying to be relevant in a brave new world. How could this have been avoided? I believe a combination of consumer empathy combined with beta testing of rough prototypes would have been a good start. Had Budweiser launched much less ambitious efforts or understood the change in the digital space better, things may have gone differently. In addition, the “designers” of the program never really solved the legal issue. Forcing users to register because of legal reasons satisfies the lawyers but not the users.

At the core, case studies like this reinforce that whether we want to think of ourselves as designers, marketers or other, the most important skill set we may have to offer is

our ability to solve complex problems—  
all this, in an age when the problem you  
are trying to solve may actually change  
before you can finish resolving it.

Divorce logic from emotion and you provide an incomplete experience, but combine them and you have a chance at providing something that's not only memorable but serves a purpose.

*Pen computing*

One of my favorite examples of failure is pen computing. Therein lie the corpses of numerous companies and products, including the GO, Magic Cap, and Windows for Pen Computing operating systems, the EO, Momenta, NCR Notepad, the Dauphin DTR-1, and TelePad. Perhaps at the head of the class was the Apple Newton, launched in August 1993 and killed in February 1998.

Now imagine yourself trying to raise money for another pen-based PDA venture, circa 1994. Anyone you approach has probably read every Doonesbury comic strip savaging the Newton, and on top of all of this is the emerging promise of the next great thing: the Internet. One would seem to have to be a fool to fund such a start-up, and you would need a lot of gall to ask for it. Yet in this climate, along came Palm and hit the ball out of the park. How did they do it? By realizing that it was not about the many things the device *could* do, it was about the things it left *out*. It did what it did, and that was all that it did. It was also about mitigating the risk of losing the device, by letting you make a complete backup to your PC in less than a minute with the push of a button.

Palm understood that engineering or technology on its own was not enough for success.

Palm understood people as much as  
they understood technology.

The failure of prior companies was actually a valuable and free (for Palm) education. So, yes, you had to be a fool to have invested in Palm—but if you sold at the right time, you would be a very rich fool.

Design is choice, and there are two places where you can exercise creativity: (a) in the creativity/innovation/insight that you bring to enumerating the alternatives from which you chose, and (b) in the creativity/innovation/insight reflected in the criteria/heuristics...

*Nau*

Nau, the outdoor apparel company, which closed in May 2008 after little more than a year in business. It was launched with great fanfare as a revolutionary concept offering fashionable, environmentally friendly clothing through low-inventory “webfront” stores. Several variables led to its failure, including the high cost of sustainable product design, and cutthroat competition in the fashion and retail industries. But let's ask a few fundamental questions:

Did anyone really need this? Is there a pain point or a void in people's lives that Nau would fill? Were consumers clamoring for a sustainable outdoor apparel company with alternate methods for going to market? Or was this a solution in search of a problem?

Was there sufficient prototyping? Nau's business model relied on webfront stores that allowed consumers to try out products in person and then order them online. The resulting lower inventory boosted profit margins, but is a webfront a viable model from the consumer's point of view? In surveys people said they would be inclined to shop this way, but in practice no one did. Prototyping a webfront experience with actual users could have uncovered this problem early.

Were there meaningful differences? The core of Nau's brand -- sustainably produced outdoor apparel -- had little or no difference from existing brands like Patagonia and The North Face. One highly touted marketing message was Nau's donation of 5% of revenue to charity -- but Patagonia started this in 1985 with their 1% For The Planet initiative.

Will consumers really switch brands  
because one donates 4% more to charity?

Our penchant for living always for the next financial quarter is a huge hindrance to our ability to think of the big picture, take calculated risks, and develop disruptive innovations...

*Segway*

I have a lot of favorite examples that fit this category, but one of the most important lessons can be learned from the one I hate to hate: the Segway. I think I hold a personal grudge against the Segway because for months before its release, I breathlessly awaited the unveiling of the invention that was to change the world (or at least that's what I remember about the hype). As a radical early adopter, I knew I would get one the first week it was sold, if not the first day.

I didn't buy one then and would not now because of a very basic flaw: the Segway ignores the social aspect of design. The user of any successful product actually completes that product. On the Segway, the user is an uncomfortable appendage at best, and at worst, a moving target for stares, sneers, and—once in San Francisco—an exciting challenge for some water-gun toting kids.

Design should be empowering  
but adaptive to typical behavior,  
challenging but respectful of social  
and physical context.

The Segway fails at both, not because it's new and people aren't used to it, but because it failed to design the human with the hardware.

22 The problems of climate change and social justice seem intractable, and the idea of making incremental improvements is not very inspiring, especially in an industry where we are rewarded—financially and culturally—for major innovations.

*Transportation*

I guess transportation is on all of our minds these days, given the oil price increase, as is the reality that the U.S. finally has to pay for its suburban car culture model. I do see many daily examples of unfortunate attempts to implement good design ideas. It's around us all the time in the Bay Area with transportation design, and I notice it especially regarding the encouragement of bicycles as one element to reduce urban congestion.

We have public transportation (sort of) in the form of BART, a commuter rail system. Bicycles are encouraged on BART except that there is no place to store them intelligently in the trains, and they are not allowed on the trains during commute hours!

There are myriad hilarious examples of street signage used to encourage cycling. Here is a typical one:

First note that the graphics are so small that you cannot really read them at all from a car. Even from a bike they are difficult to see them until you are on top of them, and then you do not know what they mean, even if you are an experienced road cyclist.

I look at these ludicrous design solutions and see the dysfunction within civic departments. It is nearly comical yet tragic. We hear talk at high levels about the crumbling infrastructure in the U.S.—and can only wonder if the solutions will be superficial or meaningful—and about how we highlight examples of good design to educate our decision makers.

The fact is that there are many  
examples of good design solutions  
in this area, around the country, and  
around the world, but we usually  
choose to ignore them until there is a  
crisis or unless a renegade group like  
Critical Mass takes to the streets.



29 Most design is seen in the context of our homes and workplaces, i.e., in our private environments. Another context is the one that deals with design for the public, e.g., design that has a social purpose and is connected to community.



## 31 BILL HILL

### *NeXT*

NeXT as a hardware product was a beautiful piece of design and engineering, but it had serious flaws in how people could use it (no floppy drive at the time, only an expensive optical drive), even though it was an amazing software development platform and had a stunning high-res grey scale monitor. For a graphic designer, this screen and the use of display PostScript was the closest thing to paper yet, but without tactical user-centered needs, there was not enough of a market to sustain its life as a product.

What can we learn from this? Ultimately, the resurgence of Apple came in large part from the software (and the development team) that was developed for NeXT. Without the commitment Steve Jobs made to create this possibility, perhaps his return to Apple would not have been so successful.

For me, it is to trust that the real value is not in the physical design as thing, but as a system that may take multiple incarnations to reveal.

32 Thinking about user-centered design as beginning with “you,” the ultimate user, includes everyone on the planet in some respect. Certainly in the U.S., with significant issues facing the healthcare industry, the opening for personal sustainability seems obvious.

*QWERTY*

My favorite design failure is the QWERTY system. As Paul David has shown, it was obsolete only a few years after it was designed. It was designed to slow the writing process, due to the fragile mechanical mechanism of the time, but soon this became remedied. By then the QWERTY system was established and became “locked-in.”

*Transportation*

The American national transportation system is a complex but incredibly important problem we’re going to be working on for the next hundred years. Especially given the rising price of oil, we need a new national transportation policy. The major airlines this year are ending service to regional airports, and they’re even cutting 75% of flights to large cities like St. Louis and Memphis.

This is an innovation failure not  
of any particular firm or agency,  
but a system-wide policy failure,

which is mounting into a true crisis of unsustainability. A major policy shift in this area is essential as catalyst for the needed change. Personally, I’m optimistic. As a British expat, I am continually struck by the ability Americans have to work remarkably quickly and entrepreneurially to solve big problems like this, so I think progress will be made, but not until we run out of the usual options.

*Pallotta TeamWorks*

A favorite design/innovation failure is Pallotta TeamWorks. PTW is the company behind the initial success of fundraising events such as the Avon Breast Cancer 3-Day Walks and the AIDS Ride. As a for-profit fundraiser, it worked on behalf of charities to create and operate events that drew attention and funds to these charities’ causes. By embracing the modern marketing, design, and business practices that charities had been ignoring, PTW raised tens of millions of dollars in 2001 and introduced a new category of immersive experiences to the world of fundraising. By 2002 PTW closed the doors on its headquarters in Los Angeles, no longer able to operate a viable business.

What happened? As PTW became more and more successful it began to promote its own brand so heavily to fundraisers that the brand began to interfere with and block the altruistic pleasures being “purchased” by the fundraisers. As a result, the company became an easy target for determined detractors, causing its charity clients to defect in droves.

What can we learn from it?

Innovation and design are approaches  
to create meaningful products,  
services, and experiences that attract  
and keep customers. Innovation and  
design are not sufficient solutions in  
and of themselves.

34 I think that this may remove design from the scene of art and illusion and put it into the practical toolbox companies where could use it.

36 We do have to think about piracy as a competing business model.

40 Systemizing experimentation, however, creates a way to innovate by regularly trying out new ideas and pushing through to stuff that’s really a breakthrough experience.

*Blind momentum*

How about the firm Avenue A | Razorfish ( a.k.a. USWeb + CKS + Scient + iXL + Emerald Solutions + Lante + Xcelerate + Whitman-Hart + Razorfish + Avenue A )? This is an example of the intentions of reinventing the consulting service category with “blind momentum” as the guiding principle.

Blind momentum: A condition created by the embrace of a great idea and a desire to move expeditiously without careful assessment of the “how” in getting there. “We build it and they will come” is the modus operandi of this condition. Blind momentum is operating without a roadmap and often without real indicators whether one is moving in the right direction or not. This “figuring things out” (time, resource and money allocation) along the way has worked well for some start-ups, but for a firm with different disciplines, drivers, and value proposition to clients,

moving fast without understanding  
the operational support to enable  
innovation can and has proven to  
be detrimental.

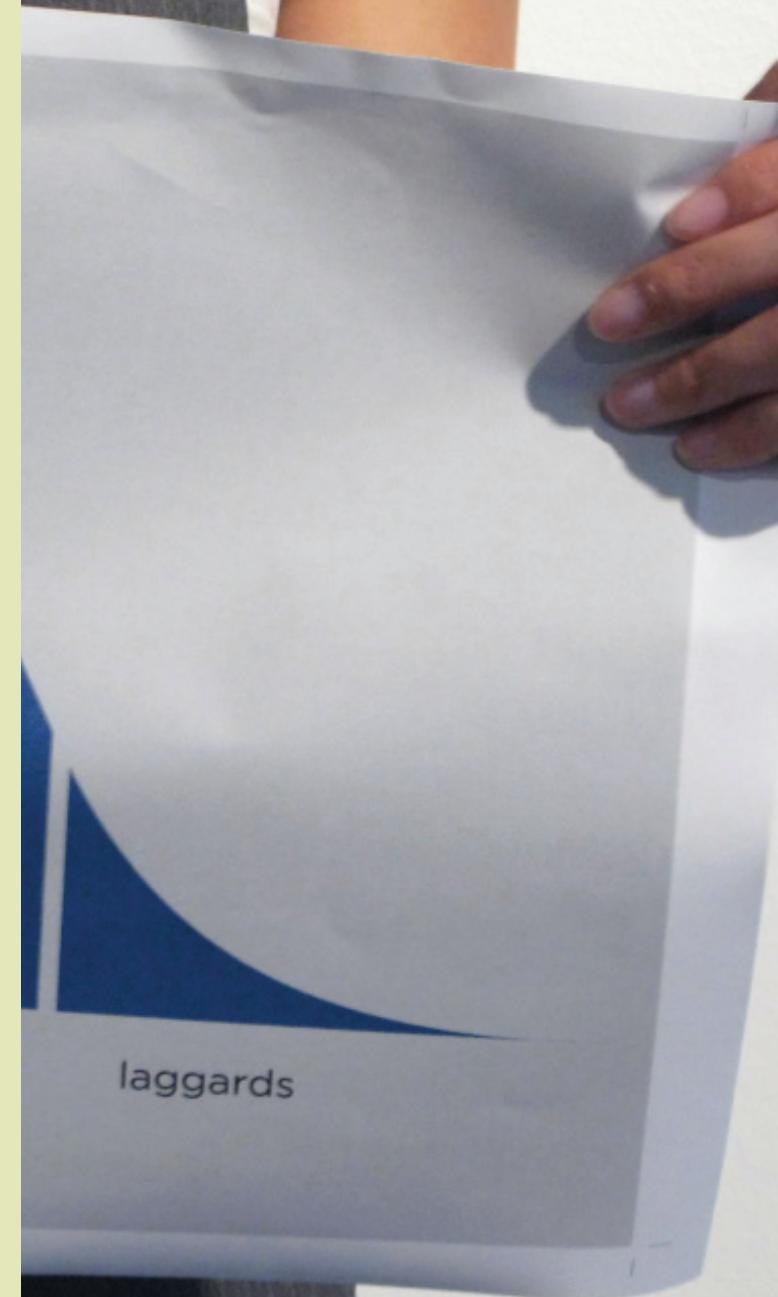
It took 10 years before they finally got the formula right.

*Iraq war*

The worst design and innovation example I can come up with is the war in Iraq. While the attack seemed well planned, the aftermath was un-thought of. Good design incorporates thinking through outcomes.

50 It depends on what the definition of advertising is. If you think of it as the action of calling something to the attention of the public, the opportunity is wide open with a lot of room to invent.

55 I think as we become more and more cross-disciplinary and combine business and design, you will begin to see the business reasons for design a little more clearly.



## ACKNOWLEDGMENTS

You hold in your hands a publication of the IIT Institute of Design ([www.id.iit.edu](http://www.id.iit.edu)), a graduate school of the Illinois Institute of Technology in Chicago. Since its founding as the New Bauhaus in 1937, the Institute of Design has grown into the largest full-time graduate design program in the U.S., with over 150 students from around the world. The school offers a professional Master of Design with areas of study in communication design, interaction design, product design and development, strategic design, systems thinking, and user research; a dual Master of Design/MBA with the IIT Stuart School of Business; and the Master of Design Methods, a nine-month executive program. The Institute of Design created the country's first Ph.D. design program in 1991.

This book was inspired by the conversations and presentations at the school's annual Strategy Conference ([www.id.iit.edu/events/strategyconference](http://www.id.iit.edu/events/strategyconference)), at which several of the interviewees have been featured speakers and regular attendees. Bruce Nussbaum, innovation and design editor for *BusinessWeek*, describes the conference this way:

*The Institute of Design's Strategy Conference is the singular event you must attend if you are serious about knowing the latest leading thinking in the discipline of innovation. As the global business culture shifts from a management philosophy of maximizing efficiencies to maximizing possibilities, the intersection of strategy and design is the space you must be in.*

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