



# Some Different Approaches to Making Stuff

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Published in  
Steve Portigal's  
column, "True Tales,"  
*interactions*  
Nov/Dec 2008

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Business case studies are the ultimate in reductionism: A complex business activity rooted in a specific context of people, company culture, time, and place is boiled down to a few key ideas. Consultants, designers, students, and people who read Malcolm Gladwell are especially prone to this form of simplification. Don't get me wrong—these simplified stories can be helpful as touchstones. We just need to remember that they are often apocryphal archetypes more than investigative summaries.

With that in mind, I propose an incomplete framework for how companies go about making stuff (products, services, miscellaneous). In characterizing this as incomplete, I hope to hear about other approaches that will flesh out the framework.

Let's call the first approach "Be a Genius and Get It Right." The poster child for this is James Dyson. Dyson famously spent five years and built 5,127 prototypes in developing his Dual Cyclone

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vacuum cleaner. He reimaged the architecture and performance of a commodity product and built a premium brand around his approach to innovation. The company has developed other vacuum-cleaner innovations, such as The Ball, and has explored (so far without success) other home-appliance categories, such as refrigeration and clothes washing. More recently, it has thrown some redesign effort at the vertical-slot-you-thrust-your-hands-into bathroom hand dryers common in Asia, launching the Airblade. Regardless of how these products were really developed, a significant element of the Dyson brand involves the narrative of the single individual—a “genius” who brings powerful clarity of vision and an ability to execute.

In contrast, there's “Be a Genius and Get It Wrong.” A strong example is Dean Kamen's Segway. Kamen's audacious vision for personal transportation in modern cities and Segway's

amazing technology captured everyone's imagination when the device was first introduced. But the “best” technology doesn't always win. Literature on innovation is filled with stories of path dependence and explanations for the failures of technologies like Sony's consumer Betamax, the Dvorak Simplified Keyboard, or HP's 100VG networking protocol. In Segway's case, Kamen failed to understand the crucial importance that we place on how we look to others in a new behavior. The gestural language of Segway didn't evoke the appropriate response. The gyrostabilized device itself rapidly became a comedy touchpoint on TV shows like “The Simpsons,” reaching an almost-literal tipping point when George Bush fell off one in 2003. Since then, it's become a niche device, associated with uncool nerds offering tours to a tallest-to-shortest queue of family vacationers, or as the technology of choice for aspirational cybercop

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deployments like China’s Olympic Anti-Terror Forces.

Meanwhile, Dean Kamen has developed another amazing technology: Luke (think Skywalker and the hand that his father sliced off), a mind-control prosthetic robot arm. This could potentially offer amputees (and anyone else) a more learnable, precise, and intuitive prosthetic. But current prototypes of Luke evoke “Phantom Menace” more than phantom limbs and seem to deny the importance of cosmesis, where artificial limbs are being made out of realistic-looking materials. Will Kamen eventually acknowledge the necessity of partnering form with function for our personal technologies? With Segway, sheer “genius” still led to a failed attempt at making stuff; let’s hope that Kamen avoids that pitfall with Luke.

Another common approach is “Don’t Ask Customers If This Is What They Want.” In 2006 the

NBA and Spalding introduced a redesigned basketball. Replacing the traditional leather with the latest in material technology (i.e., synthetic microfiber), the ball was supposed to be easier to grip, more durable, and wear more consistently. The NBA did not consult players in the development of the ball or in the decision to adopt it, and they were understandably put off. Despite official insistence that the new ball was documented to be measurably better, the players gave voice to their objections. Player Raja Bell was quoted in the Arizona Republic as saying “It sucks.” Anthony Johnson told the Dallas Morning News, “I go to sleep every night dreaming that we’ll have that leather ball back sooner or later.” Eventually, NBA Commissioner David Stern reinstated the old ball, in a Coke Classic-like move. There may have been an opportunity to improve the ball’s design, but in refusing to involve users in making a change, that chance

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was squandered and next time could be that much more difficult.

Frequently seen in software, especially in enterprise software where there may be a small number of key customers, is the "Do Whatever Any Customer Asks" approach. We encountered this recently with a company that provides software for trading in financial markets. These applications present an enormous amount of real-time numerical data (and are often used alongside other equally data-dense programs over multiple monitors). Our client was the initial player but lately had seen their key competitors launch elegant and easy-to-read updates to their platforms. This company was very frustrated because they felt they were working hard to be user-centered and not seeing the expected results. But their version of user-centeredness was to respond to customer requests by (where possible) implementing changes exactly as requested.

This company hadn't really realized that users are not designers; that a request for a solution is an expression of a need. For example, when a customer says, "I want a handle," they're really telling you that "I need a way to move this from one place to another." In working with these traders, we were able to ask for, infer, and ultimately understand why they were requesting certain changes. Additionally, we were able to look at how widespread those concerns were. We encouraged our client to bring a design step into their process, in order to architect a coherent solution. In fact, by taking a step back and looking at the way the tools were being used, we found some fascinating aspects of trading culture that the tools on the market were failing to fully serve. Since other traders can see all transactions, there is a practice of misdirection and second-guessing: Entering a number in a field in the software isn't as

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straightforward as the interface suggests. The goal may not be to complete a transaction using that number, but to influence others for a certain period of time. There's a wonderful opportunity to innovate here that can't be addressed by simply fulfilling requests: How might this indirect and influential behavior be acknowledged and supported by the tool? An organization will need to move beyond implementing customer requests in order to take advantage of these insights.

The final approach in this framework is "Understand Needs and Design to Them." Needs, as considered in this approach, can be functional, like when a design firm discovered women shoveling snow more than men and redesigned the ergonomics of a snow shovel for this typically smaller user. Needs can also be emotional, such as when Sunbeam studied the backyard-grilling process and realized that the grill itself was associated

with family moments and social connectivity rather than a set of meat-cooking features. Sunbeam then worked with Continuum to design the Coleman Grill to connote nostalgic camping cookouts. Needs can deal with shifting mental models of common behaviors, too. Work by B/R/S for Colgate identified that brushing teeth is seen by people as a way to maintain their entire mouth, not just scouring the surface of the teeth. This led to Colgate Total, which promises "Superior Oral Health." Indeed, the product's website now draws a connection—with copy presumably approved by lawyers—to diabetes, stroke, and other non-mouth health concerns.

In this article, I've proposed an incomplete framework, articulating how companies go about making stuff:

- 1. Be a Genius and Get It Right**
- 2. Be a Genius and Get It Wrong**
- 3. Don't Ask Customers If This Is What They Want**
- 4. Do Whatever Any Customer Asks**
- 5. Understand Needs and Design to Them**

Examples of all five of these approaches can be found in corporations today, yet not all five of these approaches guarantee that

the stuff will be successful.

We can group this framework into two chunks: i) the seductive myth of the genius inventor, where getting it wrong happens more often than getting it right, and ii) the difficulty of doing the right thing for customers, where thinking you know best or doing whatever you are asked is the darker side of asking questions and designing solutions. If you can look at your own organization and diagnose the approaches you see, you are better prepared to help move them toward the final approach: understanding needs and designing to them.

**Steve Portigal** is the founder of Portigal Consulting, a boutique agency that helps companies discover and act on new insights about their customers and themselves.

Steve has been studying customer behavior and corporate culture for more than a decade and has advised dozens of clients on the creation of new products, services, and innovation processes.

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