Contents: Fall 2014

04 Q&A
John Maeda
John Maeda is a past president of Rhode Island School of Design and an internationally known designer. He’s now involved in helping entrepreneurs build design into their company cultures.

Steven Heller and Tim Hoover
Writer and educator Steven Heller pairs up with Tim Hoover, head of product and design at Canary, to talk about designer CEOs, start-ups, and cutting out the middleman.

10 Designing an Innovation Culture within an Entrepreneurial Environment
Apurva Kochargaonkar and John Boult
For a company that wants to be truly innovative, building the right corporate culture should be a matter of deliberate design.

17 Update from Hell
James Cooper
In which “iteration” becomes a four-letter word.

20 Validation in the Wild
Dave Sonders and Lauren Braun
We can ask, What should we create? The tough question is, How do we know it will succeed?

28 What Can Design Thinkers Learn from Entrepreneurs
Akhil Nigram
Here are two groups with so much in common and so much to teach each other.

30 Prescribing Design
TJ Parker
He was studying pharmacy, but design was his avocation. After graduation, he built a business.

34 Tech Startups Touching Hearts
Gulay Ozkan
“The 360 People” is what one analyst calls them. They are fed up with overconsumption, environmental crisis, and apathy. And they are young and online.
For this issue, I’ve been joined by IDEO partner Michael Hendrix. Michael serves as managing director of the Boston studio and guides the firm’s design directors in Boston, Chicago, and New York. Michael joined IDEO in 2008 and has built a robust creative community in the Boston area. He’s on the front line of the new world of design entrepreneurship, and I thank him for his input.

At the core of design thinking and entrepreneurship is a desire to build something new. So it’s not surprising that 2014 has seen so many designer-led start-ups and incubators. That’s not just because of a shared mindset, though. We’re living in a unique moment in which the cost of tools and technologies to get ideas into the world has dropped to near-nothing. Squarespace, Kickstarter, Shapeways, and similar sites have democratized access to marketing, capital, and production needs.

A plethora of new development services—many with a design mind—have popped up too. The start-up incubator has been rebranded as a convening platform to give access to talent, networks, funding, and community: General Assembly, Techstars, Betaworks, Hattery, and Y Combinator all represent different flavors of this phenomenon. Even established companies are getting into the business of launching new businesses. The “intrepreneur” is a fresh take on R&D, operating nimbly to get ideas to market faster. A recent collaboration of the Harvard iLab, Fidelity Investments, and IDEO is a prime example of this new kind of venture.

In this issue, we’ve asked design experts in the field to share what they’ve learned during the rise of the sharing economy. Gulay Ozkan shares what she has learned about some social implications. John Maeda points to principles every designer-entrepreneur should know, and Dave Sonders and Lauren Braun offer some thoughts about how to validate that new innovation. Steven Heller and Tim Hoover share their thoughts on how design.
The dmi:review is the world’s leading publication dedicated to design as a strategic business resource. The Review explores how design can be managed to provide long-term competitive advantage in a changing world, addressing such themes as cutting-edge innovation, compelling and differentiated brands, and more effective design and development processes. Every issue connects you with the latest insights on design thinking, strategy, methods, research, sustainability, and leadership. You’ll find a lively mix of articles, case studies, interviews, and opinion pieces written by today’s leading experts who are part of the DMI community. The Review was founded in 1989 and is published quarterly.

A subscription to the Review also includes the peer-reviewed Design Management Journal, founded in 2000 and published once per year. All DMI membership categories include a subscription to the Review and Journal, as well as access to all back articles.

education plays a role in this new era. T.J. Parker describes a design journey that led to a breakthrough in pharmacy services. And James Cooper shares a humorous op-ed about how democratization of technology can lead to gimmickry. We are well beyond a trend. We’re establishing a new set of behaviors for getting to market faster, and these essays and interviews point to the exciting future we are all making.

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[This is an] era in which those who can make things, services, experiences, can monetize their capabilities in a different way than was available to creatives in the past.

Steven Heller  Co-Chair and Co-Founder of MFA Designer as Author and Entrepreneur program at the School of Visual Arts, NY

Tim Hoover  Head of Product and Design at Canary

Today, people ask, “What are you working on?” not “Where do you work?.”
John Maeda has been a design partner at Kleiner Perkins Caufield & Byers since January 2014, helping entrepreneurs and portfolio companies to build design into their company cultures. He served as the president of Rhode Island School of Design for six years, through 2013, and also served as an associate director of research at the MIT Media Lab. Maeda has been a practicing designer since 1990, and his work is in the permanent collections of the Museum of Modern Art, San Francisco Museum of Modern Art, and the Cartier Foundation. He serves on the boards of several corporations, including Sonos and Wieden + Kennedy, and is chair of eBay’s Design Advisory Board. His four published books include *The Laws of Simplicity* and *Redesigning Leadership*. Maeda is the recipient of a variety of international awards for his creative work, including induction into the Art Director's Club Hall of Fame. In 2001, he received the White House National Design Award; in 2002, he received the Mainichi Design Prize in Japan; and in 2005 he was awarded the Raymond Loewy Foundation Prize in Germany. Maeda earned a BS and an MS from MIT in computer science and electrical engineering. He received a Ph.D. in design science from the University of Tsukuba Institute of Art and Design in Japan as well as an MBA from Arizona State University.

The rise of “maker culture” is rooted in the blurred lines of technology and art that you’ve championed for years. What factors do you believe created critical mass for this movement?

I think it’s a normal response to major cultural shifts. It happened with Ruskin and Morris at the start of the Industrial Revolution. It happened with Marinetti and the Futurists with the advent of the automobile. It’s a recurring pattern within the DNA of our culture—we tend to shift toward the abstract and detached for a phase, and then we swing back toward the concrete and hands-on for a phase. We’re in a making phase again, and we’ll be out of it again with time.

Continuing with convergence, design and designers are core to many successful new businesses: Airbandb, Kickstarter, Warby Parker, Nest, and Mailbox. This convergence of design and venturing seems very different from the start-up boom of the ’90s. Why do you think design thinking and entrepreneurial thinking have merged?

The difference is that the ’90s onward was about having a website. Then it was about having an app, when everyone already had a website. And then at some point, anyone could make an app or a website—and they didn’t need a gazillion dollars to get it set up and running. The barriers to entry were lowered around 2010 so that anybody could set up a storefront on the Internet. Add to this the fact that we can now 3D-print via Shapeways or MakerBot, 3D-sense the world via Kinect, or 3D-display via Oculus, and you realize that everyone can do a lot of things now that nobody could afford to do in the ’90s. It’s an era in which those who can make things, services, experiences, can monetize their capabilities in a different way than was available to creatives in the past.

Design schools are offering start-up curriculum and business schools are offering design thinking. Yet it still appears that leaders in the corporate world are slow to truly integrate the two. What strategies are you using to progress toward better integration?

I wrote a piece for the *Wall Street Journal* on three basic principles for using design in the technology industry.

1) Start with design; don’t just end with it. Design is most potent when seen as a competency that is built in at the very beginning and throughout the evolution of a technology-based product (Apple, Flipboard, and Square are great examples of this approach). It’s much more common to prototype and develop a technology to completion, and then later tack on design to “pretty it up.” This latter approach can compromise the delight of the ultimate user experience.

2) Let designers code and engineers design. In the early stages of a company, when roles are more fluid, there’s room to blur the definition of a designer as someone who can also code, and an engineer as someone who can make design decisions. Such people serve as unique bridges that can accelerate design and technology development. Though commonly referred to as elusive unicorns, these types are becoming less rare as coding becomes a more accessible skill.

3) Don’t view business as anathema to designers. Although it’s not uncommon for art schools and university design departments to view commercial success as selling out, there are scores of designers who see business as a vital constraint to reconcile. I recall in my own career evolution a time when people would tell me, “You’re a creative person, so you needn’t worry about things like money;” I subsequently got my MBA, and I have met many designers who get excited about strategic financial matters and organizational development challenges.

Steven Heller is co-chair and co-founder of the MFA Designer as Author and Entrepreneur program at the School of Visual Arts, in New York. He was the art director of The New York Times Book Review and now writes the VISUALS column for the NYTBR. He also writes “The Daily Heller” at Printmag.com, a weekly online design column for Atlantic magazine. He is author, co-author, and editor of more than 165 books on the history and practice of graphic design, illustration, and satiric art. His forthcoming books include 100 Classic Graphic Design Magazines (Laurence King Publishers) and Raw Data: The Process Behind Information Graphics (Thames + Hudson). Heller was the 2011 recipient of the Smithsonian National Design Award for “Design Mind.” He has also written two books on design entrepreneurship with Lita Talarico.

Tim Hoover is the head of product and design at Canary and co-author of Kern and Burn: Conversations with Design Entrepreneurs. He is also co-founder of The People’s Pennant, and a former partner at The InfanTree. He has also worked at Shake Law, Betaworks, and IDEO. He received his MFA in design from the Maryland Institute College of Art.

Why your books now? What changed in the cultural landscape?

Steven Heller: My books on design entrepreneurship were co-authored with Lita Talarico, with whom I co-founded the School of Visual Arts (SVA) MFA Designer as Author and Entrepreneur program 17 years ago. We believed that the next step for designers, especially given the digital tools available, was a form of authorship. When you add business plans to that idea, you have entrepreneurship. The cultural and economic landscape demands more making for public consumption—hopefully, with a minimum of waste.

Tim Hoover: Two amazing things: Airbnb, and designers who hustle. The founders of Airbnb, Joe Gebbia and Brian Chesky, are designers who went to Rhode Island School of Design and put their heads together to solve a problem they had in their own lives. At first, no one wanted to fund them because their idea seemed crazy—and because they were designers. (At the time, most founding teams consisted of an MBA and an engineer.) Despite their lack of business knowledge, they treated it as a design problem—and now Airbnb is a multibillion-dollar company based on empathy and human-centered design principles. Gebbia and Chesky made design-led choices within the entire user experience on both sides of their platform. And in doing so, they opened Silicon Valley’s eyes to design founders and paved the way for many who follow.

At that same time Airbnb is disrupting the hotel industry, thousands of designers are hustling to start their own side projects and publish them online. Designers aren’t quitting their jobs to become entrepreneurs overnight; they’re trying to make life better by building side projects on nights and weekends. Many of the projects attract communities of like-minded individuals—and some of these communities fund creative projects on platforms such as Kickstarter. My book Kern and Burn raised more than $18,000 on Kickstarter to print our first run. Without that support, Jess (my co-author) and I would have never been able to publish it. But even more important, Kickstarter allows creatives to validate their ideas before taking a risk.

A colleague of mine once tweeted, “Today, people ask ‘What are you working on?’ not ‘Where do you work?’ I think this change represents a shift in the cultural landscape. Designers no longer have to put their time in at a firm and climb the ranks to make an impact. They can work with their friends and build a side project that touches thousands of lives—whether or not it ever makes money.

At the beginning of the last decade, designers lamented that they weren’t at the boardroom table to give input to CEOs. Now designers are CEOs! Did a shift in education make this possible?

Heller: I believe it helped. Certainly our MFA program was designed to give designers more responsibility (and the confidence to demand that responsibility). By the same token, people like Steve Jobs understood the role of design better than the old-school CEOs.

Hoover: There are wonderful graduate programs, such as SVA and Maryland Institute College of Art (MICA) (where Jess and I went), that are focused on authorship—and that’s great, but I think it’s only a piece of the puzzle. The internet brings to the surface a new guard of design heroes who are creating businesses and looking at their careers as if they were design briefs. There’s
Tim Hoover
Head of Product and Design at Canary

no one way to make a successful career, and millennial designers are energized by that thought. They learn as they go, and their top skill is the ability to learn new skills. Their stories are inspiring an entire new generation of designers to create their own projects and learn what they need to know to realize them.

Designers are also building tools for one another that cut out the middleman from many transactions. Two friends and I took an idea, The People’s Pennant (thepeoplespennant.com), from a kitchen conversation to a business in under a month. That included raising a bit of seed money, securing a factory, collaborating with illustrators, producing inventory, designing the brand, and developing the site. These types of concept-to-quick-business projects happen every single day. Some succeed, most fail, but they are not hypothetical projects that are critiqued in a bubble by other designers. They are critiqued by real people in the market. I hope more programs like the ones at MICA and SVA encourage students to make real things and put them into the world.

What trends have you noted in designer startups? Are there particular challenges that are more suited to them?

Heller: We’ve seen an upswing in apps for obvious reasons. But one of our best-known students, Deborah Adler, “invented” the Target prescription drug bottle, which helped her launch her own medical products design business. Designers are looking for things that will make life a little better—or at least I hope they are.

Hoover: Airbnb grew into a billion-dollar company, but some of my favorite “designer startups” are the small ones—the ones that are monetized side projects. I get excited when I learn that a designer found a way to provide value that people are willing to pay for. Kern and Burn tells the stories of these people, from commercial illustrators who wrote their own children’s books and graphic designers who started clothing brands to web designers who make their entire income from their blog that teaches other designers how to code.

I love when designers solve unsexy problems in a human-centered way. Photo sharing and curation can only be reinvented so many times. My favorite startup stories revolve around problems like commercial real estate, dry cleaning, or the legal system. These types of problems are amazing opportunities. They are often industries in which empathy for the end user is lacking, and incentives for producers and consumers are misaligned.

At Canary, where I am head of product and design, we’re building a home-security device. It’s not a sexy problem, but when I first learned about
the vision, I knew I had to be involved. It’s an opportunity to apply design and make a simple hardware, software, and services solution in an over-priced and complicated industry.

Intrapreneurs—that is, startups within corporations—are gaining momentum. Have you learned anything from these design entrepreneurs that might help develop a more design-savvy approach for these new corporate ventures?

Heller: Wasn’t this once called R&D? Most forward-thinking corporations had in-house development teams. Now they have a new digital-age name. I think the one thing design entrepreneurs and design intrapreneurs have in common is the principle of making making making.

Hoover: These may all be cliches, but I believe them to be true. Try things and be willing to learn as you go. Prototype experiences with real users from the very beginning, and start small. Much of the lean startup conversation is around getting user feedback early and often, which comes naturally to designers. It’s important to learn things as quickly as possible and be willing to admit when your assumptions are wrong. This agility and freedom can be especially difficult in a corporate setting.

Progressive VCs have added design coaching and support to their services. Have you seen heightened investment interest in designer startups?

Heller: Indeed, we have. Lita brought in IDEO to work with our students. But we’ve always had VC coaches work with the students. Our belief is that a good idea is nothing if it just stays in the classroom.

Hoover: Definitely, but not only at the founder level. As software gets easier, faster, and cheaper to build, design becomes one of the biggest differentiators for any product or venture. VC’s understand, and they want their portfolio companies to be able to compete from a design perspective as much as they do from an engineering one. I believe there are a lot of good product designers, but not enough to fill open needs at startups. VC design coaching may be trying to fill the gap until more traditionally trained designers realize the opportunities available to them in the startup world.

I would love to see digital product design become a larger part of design education. I don’t think there is a single program specifically focused on this type of designer. These designers exist, but they aren’t learning their skills in the classroom yet. This is something Jess and I are interested in helping to change.

Any advice for designers considering taking the leap out on their own as entrepreneurs? Is passion enough?

Heller: Passion's a good start. But there are lots of necessary ingredients. Good ideas and the wherewithal to make them are essential. A willingness to work with others is useful. And an ability to do the hard research and development legwork in testing and prototyping is key. Also, it’s good to have a sense of self. Whatever it is, it’s only a project.

Hoover: Start small, and don’t quit your job right away. Build something during nights and weekends and see what happens. You really never know what the response will be until you put something into the world.

Passion is important, but definitely not enough. It helps you get started. It helps you come up with an idea and it gets you excited. But providing value to others is what gets you through the hard parts.

Another great tip is to identify and solve a problem for yourself because chances are there are hundreds or thousands or millions of people like you. Worse case scenario is no one uses what you’ve made. But you’ve learned a lot and made your own life better.

It’s also great to read about other designers who have taken the leap. It’s an honor to be answering questions beside Steven, and I read his The Design Entrepreneur book years ago. Between The Design Entrepreneur and Kern and Burn there’s enough inspiration to make anyone start a project. ■
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Finance, marketing, branding, new product development, and networking are all important to a new company that wants to innovate. But corporate culture is the air that all of them breathe.

Designing an Innovation Culture Within an Entrepreneurial Environment

Designers are natural partners of entrepreneurs. In the UK, for example, nearly two-thirds of designers can be classed as freelancers or work for consultancies with fewer than five employees. Designers, as well as entrepreneurs, tend to have limited resources, and both are passionate about their work. There should be, and often is, a strong mutual cultural understanding. There is also a traditional relationship between designers and entrepreneurs from the perspective of working with graphic, product, digital, and environmental solutions in their earliest stages. But in this age of design maturity and design thinking, are designers offering as much as they could to help create successful and sustainable entrepreneurial enterprises?

If we are entering an age of anything, it could be rightly called the age of the entrepreneurial enterprise. There has been a notable upsurge in the number of entrepreneurship started around the world. Both specialist publications and the national press highlight this growth and go on to suggest some underlying reasons for it—for instance, dissatisfaction with available employee roles, a dislike of corporate culture and values, or perhaps a need for the kind of self-realization gained by going it alone. From another direction, observers and writers like Clayton Christensen and Vijay Govindarajan refer to the importance of entrepreneurs as a source of fledgling and working ideas that large corporates find so difficult to create and nurture. So get it right as an entrepreneur, and a waiting partner is out there to scale and fund your business.

Not surprisingly, national and regional governments are keenly aware of the employment, financial, and economic benefits of a thriving entrepreneurial economy. According to Forbes magazine, 50 percent of the global working population works in small businesses, and these businesses have generated 65 percent of new jobs across the globe. Consequently, governments expend considerable sums in developing entrepreneurial activity. In the last 10 to 15 years, some of these schemes, such as the Designing Demand program developed and run by the UK’s
Design Council, have actively promoted the role of design. Some promote design as something that should be considered; others, such as Designing Demand, promote design as an essential driver for strategy and output. But how many design consultancies actively offer to help build an innovation capability and, specifically, culture?

**Innovation culture: The heart of contemporary innovation**

“Innovate or die,” a quote commonly attributed to Penn State University’s Dr. Jack V. Matson, neatly encapsulates the belief that organizations need to continually refresh, improve, and invent new offers and ways of doing things in order to survive highly competitive business environments.

How this is to be done is less than universally agreed upon or practiced, but there is a consistent and growing body of research that finds innovation has more to do with the culture of a company than, say, technological excellence. As long ago as 2003, research from a study by Cheskin and designers Fitch:Worldwide used terms such as connectivity and cultural blending when identifying what makes innovation work in organizations. Culture has become an observable and increasingly codified element of innovation.

Almost all the evidence for an innovation culture comes from the study of large organizations, but start-ups face just as much competition (with one another, as well as against larger companies). Obviously, innovation lies at the heart of every start-up and is just as critical a differentiator for young entrepreneurs as for the mature organization. But the real issue is about continual innovation (or even re-innovation) and about how to practice innovation everywhere, not just in product or service development.

Insights on innovation culture emanate from a broad range of industries and organizations. Lou Gerstner was at the helm of IBM at a critical turnaround moment and became the architect of cultural change, famously stating, “Culture isn’t just one aspect of the game, it is the game.” The Google company claims that it consistently maintains a spirit of innovation year after year because it nurtures a culture that allows innovation. It goes on to say that it strives to maintain the type of culture that fosters innovation and creativity, even in the face of intense competition.

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of open culture often associated with start-ups, in which everyone is a hands-on contributor and feels comfortable sharing ideas and opinions. Well-documented activities such as the weekly all-hands TGIF meetings, as well as email or direct contact in the café, allow Googlers to question Larry Page, Sergey Brin, and other execs about any number of company issues. The company’s offices and cafes are designed to encourage interactions among Googlers within and across teams and to spark conversation about work, as well as play.

However, even for Google, the inspiration for an enabling environment came from an external designer. Clive Wilkinson, the architect behind the office design at Google’s Silicon Valley headquarters, tells how he convinced the internet giant to move away from “humiliating, disenfranchising, and isolating” work cubicles. Google’s offices across the globe exhibit innovative characteristics (see Figure 1), and other companies, such as the UK’s Innocent (Figure 2), also place considerable store in the important role that environmental (space) design plays in nurturing and developing its innovative capability.

BMW, as well as its wholly owned subsidiary DesignworksUSA, is a consistent winner of design and innovation awards. The company attributes its success to maintaining an entrepreneurial culture with an agile network of true believers and few hierarchical barriers to obstruct innovation. Chris Bangle, former chief of design at BMW, has noted that “creativity is always happening, but what you do with it depends on your culture.”

Fail at achieving a culture of innovation, and the consequences are predictable and observable all around us.

**What we teach entrepreneurs**

As part of a nearly completed dissertation research project at UK’s Brunel University, interviews and workshops were undertaken with entrepreneurs and also aspiring entrepreneurs. The aim of the dissertation research is to create design-led guidelines for young entrepreneurs/start-ups to help them build an innovation culture. Innovation culture is variously described as an organizational culture where innovation
Fail at achieving a culture of innovation, and the consequences are predictable and observable all around us.

can thrive and employees are encouraged to be creative not only in the pursuit of new products or services but across all aspects of their business. The questionnaires had multiple objectives including trying to understand what priority actions or tasks entrepreneurs believe they have to tackle first. A closed-ended questionnaire was used to gain direct answers from entrepreneurs. Notoriously loath to respond to surveys, the entrepreneurs were specifically engaged through personal contacts and via known start-up organizations. Eventually 30 people responded from both India and the UK. The industries represented by the sample were varied and included building construction, real estate, internet and computer services, engineering, manufacturing, and fashion, among others.

When respondents were asked to rank what was most important to their start-up and its future success, not surprisingly finance, marketing, branding, new product development, and networking were the top five responses. Probed about what disciplines or activities will be important for future growth, the survey responses suggested that 47 percent of entrepreneurs think innovation is extremely important, but fewer than 13 percent of them think innovation culture is important. Face-to-face interviews with a small group of entrepreneurs confirm the key roles of finance, marketing, branding, new product development, and networking, but fail to draw any connection among these factors, their successful adoption and execution, and culture. In other words, most respondents do not realize or articulate that it is culture itself that can ensure the smooth working of all these functions.

A detailed analysis of websites and other published information for a sample of organizations offering support to start-ups in the USA, UK, and India showed that finance, marketing, branding (visual identity and communication), new product development, and networking were common areas of support. Design was addressed, but almost exclusively as a tool for aesthetics and visual communication. Again, innovation culture fails to get any real mention—and when it is discussed, it seems to be in terms of “lack of skillful brainstorm facilitation.” It is also interesting—or saddening, depending on your viewpoint—to note that one of the biggest movements transforming entrepreneurship today, the Lean Start-up, fails to emphasize the importance of innovation culture (or culture at all) as a component to success.

Looking at the issue from a different perspective, a workshop with aspiring entrepreneurs was undertaken in May 2014. This involved 14 participants, each of whom had expressed an interest in starting a business. They were from nine countries—the USA, the UK, India, Indonesia, Thailand, Korea, France, Italy, and China. None had formally set any activities in motion; some had looked to the internet for ideas on what might be involved; others had spoken to friends who ran small businesses. All had experienced some exposure to current business teaching. The participants were drawn from master’s-degree students in design disciplines, as well as from business-school subject areas.

The purpose of the idea creation activity was to understand the likely approach and behavior of potential entrepreneurs—and particularly to determine the priorities of a future entrepreneur and to find whether building a culture of innovation is among those priorities. Participants were paired off and asked to jointly go through the process of setting up a company, playing the role of founding entrepreneurs for a business of their choice, and mapping out their first priorities on an activity sheet (Figures 3 and 4). These priorities, in descending order of recurring importance, were:

- Branding
- Background research; product/service development; company location and environment; talent recruitment
- Funding; marketing
- Collaboration and partnerships; networking
- Legal formalities; prototyping and validation
- Defining values

Although culture was not specifically identified, some of the raw building blocks were
clearly present. But it can be argued that unless these are connected and managed, they are unlikely to realize their potential.

A further test was undertaken in which the discussion groups were shown pictures of various office building exteriors and interiors. Respondents were asked questions such as: Which do you think is the most innovative company? Which company is more likely to employ creative or innovative people? Which would you like to work for? Almost without exception, participants picked interestingly designed and creative buildings and interiors.

**Design, culture, and entrepreneurs: Opinions from all sides**

The few design-led programs or consultancies offering advice to entrepreneurs tend to focus only on the tangible benefits of design. Consequently, benefits other than the direct success of a designed product, brand, or service do not really feature in published material. When program outcomes have been formally recorded, mapped, and published—usually because public funding is involved, for example the UK’s Design Demand and now Leadership program—cultural change rates highly.

Reference has been made, in the past, to the unintended consequences of design action. By this we mean that at times, designers successfully work with a company on a project, and when executives from the client company are later interviewed, they mention the value gained from the designers but note that these improvements were ones that neither designer nor client had seen as part of the brief. For example, Gavin Cawood, writing about the work of the Welsh Design Advisory service, observes that, traditionally, design consultants tend to be called in to address a specific product or graphic development task rather than to contribute to any change in an organization’s design and innovation culture. He then describes one case study in which an enthusiasm for innovation and design is sustained even after the work is finished. Later research undertaken by Feldman and Boult specifically sought evidence of effects designers might have on a client that were neither sought nor offered. The Feldman-Boult research demonstrated that the use of design tools has a salient impact on clients and is effective in catalyzing culture change toward a culture of innovation. But design consultancies are often unaware that they are the precipitator for that change, and in fact almost never offer or intend change as part of their work for a client.

In an online discussion (LinkedIn Pulse, April 24, 2014), Brian Chesky, the founder and CEO of Airbnb, notes, “A company’s culture is the foundation for future innovation. An entrepreneur’s job is to build the foundation.” Chesky believes that nurturing an innovation culture is something an entrepreneur needs to undertake early on to be able to generate innovative ideas in the future. He also notes that although it is easy for an entrepreneur to become consumed by various business functions, those functions are relatively short-term, whereas a culture is “forever.”

In a series of interviews and discussions held between May and July, 2014, by Apurva Kochagaonkar, with practitioners and commentators from all sides of the topic area, strong views were given as to the nature and value of innovation culture.

From a designer’s perspective, Sam Stone, creative director at Identica, a UK brand strategy and design agency, argues that “building an innovation culture is important, but so is maintaining it. Design experts think strategically and can create a manifesto to help build the right spirit for the company.”

PDD Product and Service Design Innovation Consultancy, one of the UK’s longest established agencies, has worked with start-up companies, as well as with large corporates, for more than 30 years. Simon Lamason, principal design strategist at PDD, reflects that “a culture of innovation is probably more important than the idea itself. It would be difficult for an entrepreneur to focus on

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**Notes**

A culture of innovation may not eliminate the fear of failure but will certainly help manage the fear.

building a culture during the implementation-return phase. But having a culture in the pipeline will only help fight competition and respond promptly to market needs in the next phase. A culture of innovation may not eliminate the fear of failure but will certainly help manage the fear.”

Similar views are expressed by other designers, as well as by entrepreneurial experts. “Entrepreneurs want a successful business, and an innovation culture is a part of the support system that makes a business successful,” says Simon May of August Associates, which has worked with the UK Design Council and other organizations in the development of programs for entrepreneurs. Andy Gribb of Gribb Design, a consultancy that also has launched a standalone new business supplying bespoke inspirational spaces, adds that “culture is very similar to internal brand alignment.” Putting the argument in even stronger terms, Julie Anxter, an author and speaker on the topic of commercial innovation, notes that “without an innovation culture, what you get is fear of change.”

**Designing an innovation culture**

Innovation culture is not offered, advised, or taught to entrepreneurs as a key start-up component. Entrepreneurs do not see it as a contributory factor for their start-up businesses, yet some of its constituent parts do feature in their must-do lists. Entrepreneurial cultures are often little more than an extension of the beliefs of their founders, so they’re usually not crafted to get the best out of whatever business proposition they are pursuing. The result is that culture is a product of happenstance and not something that is strategically considered.

Start-ups today have access to a myriad of resources through social media, government schemes, crowd-funding, incubators, and so on, which contributes to making the life of an entrepreneur both easier (“There’s certainly no shortage of advice here!”) and harder (“What advice should I pursue?”). Although designers are often called in at early stages and trust is placed
in them to maximize the impact and usability of a product or the communications around the product, relatively few instances exist (or are at least publicized) in which a deliberate or contractual arrangement occurs to help build a culture of innovation. This is certainly a strong argument for commercial interest on the part of designers, as it could easily represent a new revenue stream. There is also reason to believe that if design is present in the beginning of an activity (in this case, organizational design), then it will not be ignored in the development phase (that is, the future life of the company).

One discussed and debatable reason for little apparent activity might be that the large design organizations are simply not interested and the smaller, more relevantly sized agencies might see the language used by many in design around the concept of design thinking and the use of design to pursue goals involved in business change as overcomplex, not relevant, and generally impenetrable.

Analyzing culture academically, and also looking at the comments of the experts above and elsewhere, throws light on a lot of areas in which designers have expertise and influence. These include tangible elements, such as buildings, space, and choice of equipment, and brand elements and communication, as well as products and services. On the intangible side, influential areas range from internal branding and the vision, attitudes, and skills of employees to developing an ability to communicate across disciplines and up and down the hierarchy. Although there is a lot of discussion about the latter, the former is apparently overlooked because it just seems obvious—and, finally, there seems to be no easy model or mantra for combining the two.

A conclusion of our work to date suggests that the challenge is for the design industry to create an accessible and plausible set of how-to guidelines that explain the value of designing an innovation culture. Aimed particularly at smaller agencies, it would need to work in a language appropriate for entrepreneurs and explain clearly the value of an innovation culture.

As with building brands—a process in which designers have taken the lead—an innovation culture can become a way of life. As is also true with brands, creating a culture of innovation is not a quick fix. It has to be conscientiously pursued, but it does result in an advantage that cannot be replicated by others. In other words, it’s a strategy worth pursuing.

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There’s a difference between updates that represent true improvement and updates that only function as a way of getting in the customer’s face.

By James Cooper

Can we enjoy products knowing there is a better version around the corner?

Whether it’s that little red circle with the white number hovering ominously above most of the apps on my iPhone or the Updates Available pop-up I get on my MacBook every... single... day, updates, or iterations as they are now fashionably called, are beginning to ruin rather than improve a product.

How did we get into such a mess? Like it or not, we are in the “age of innovation.” Small, scrappy start-ups are continually biting at the heels of boring behemoths. Innovate or die, they are told, and in many cases this is true. I had Blockbuster Video as a client in 2004. They knew about Netflix then, so it’s not like they were blindsided—and yet Netflix won the day, and without much of a fight. Airbnb keeps finding itself in court because it’s ruffling the feathers of big industry. Even within

our little internet world—which, let’s not forget, has only existed for about 25 years—we constantly see new start-ups eating the lunch of previous startup darlings: Facebook with Myspace; Google with Yahoo and Lycos.

So no CEO or aspiring CEO can avoid our modern mantras: innovate or die; iterate, iterate, iterate; fail faster. (As an aside: Are business mantras a new thing? If workers had cubicles when the first Ford car rolled off the conveyor belt, would they have made a nice screenprint of Any Color So Long As It’s Black to proudly display to their co-workers?) It might just be that social media has made it easier to share mantras. This is the age of the social soundbite, and we must respond. So—we update, innovate, and iterate.

I’m not certain when the constant updating became a problem for me. I know it’s harder than ever to “stay in flow,” to concentrate on one
thing while avoiding Twitter or whatever. It’s no coincidence that in my world—advertising—the standards of creative work have nosedived since Twitter and Facebook began. Social media has made it easier to have ideas because there are now so many ideas floating around that creative people are able to make more unexpected connections (that’s all we really do—make better connections than “non-creative” people). But the hard bit is executing ideas—making them happen. It’s really tough. Remember how, when you were a kid, you would find any excuse to put off studying, including doing the dishes? Social media and updating technology are the modern equivalent of doing the dishes.

The updates I get on my Mac break my flow. If you don’t want to go through a cumbersome restart, the only option is to get rid of that pop-up (remember when people bitched about advertising pop-ups?) by clicking “Remind me in an hour, tonight or tomorrow.” So I click tomorrow because it seems farther away—knowing that the same time tomorrow I’ll do the same thing and feel exponentially more annoyed. Of course, I probably should just do the install, but where a few years ago this seemed like the safe thing to do—most updates are “security” updates these days—post-Snowden, any security update makes me a little more suspicious, not more safe. Can’t there be a button I click for “Remind me in a year—I’ll risk missing out in return for some peace and quiet?”

One way I try to concentrate is to listen to music. But even that has been ruined by constant updates. Whenever I open Spotify, I have an annoying little bar at the top telling me to install the new version. I just want to listen to some music without being interrupted. At home, in fact, I have reverted to listening to only vinyl. You can’t skip the track, and you have to get up to turn the record...
over. A turntable doesn’t run out of power or beep suddenly, and I can’t tweet from it. It has improved my relationship with music considerably.

Most Spotify users don’t seem to like any of the new updates. So why do they continue? I was thinking the same thing about the new Guardian app. (I am English. Even though I have lived in New York for six years, the Guardian is still my daily paper.) I was perfectly happy with the old app, but the most recent update is terrible. It takes too long to load, and the ads never load—they just display a grayed-out box that says advertisement. The content is just a long list. As you scroll down, the articles are repeated, sometimes four or five times. That’s not how a newspaper works. I don’t like it; it’s too hard to find the football scores. So when the World Cup was on, I started looking at ESPN. Let me repeat: A diehard Guardian user stopped using the new app because of the update and went to ESPN. It seems things that just work are no longer good enough.

Given that my colleagues at Betaworks are, of necessity, deep into the world of consumer-facing media, I took my complaints down the hall. I found differences of opinion. Patrick Moberg, the creator of the “Dots” iPhone game, suggested that “each iteration, no matter how well intended, opens the opportunity to introduce an unintended fuck-up.” But Paul Murphy, who was on the front lines at Microsoft, firmly believed that the only way to protect a big business is “to regularly punch it in the face.” In other words you have to destroy to rebuild.

Alex Kolundzija, CEO of music collaboration platform Blend, simply distinguished between “improvements” that are based on reliable feedback and data, and “refreshes” that are based on intuition or worse, boredom. At Betaworks, we are rigorous testers of our products. A simple A/B test or releasing an app in the Australian iTunes store before we send it to the US has saved us from a few potholes and is generally worthwhile.

Timing is also important. I recently updated the Betaworks corporate identity for the first time since the company was founded in 2007. The original logo was based on a drawing of an analytical engine that Charles Babbage made in the 1870s. The update still uses that drawing as its inspiration. But no one seems to mind the spruce-up.

There are ways to immunize yourself against update hell, of course. You can change your settings to auto update. But then the choice is completely taken away from you.

I recently saw a tweet from a phone salesman who preferred the Android over iOS because he hadn’t had to update it in two years. Is that where we’re headed? Will we find ourselves buying something to actively avoid updates, even in a world rife with the fear of missing out? Will it ever be possible to truly enjoy a product when you are constantly told there is a better version of it available?
Validation in the Wild

Why is successful innovation so rare? How do you predict success for a product that has never been seen before? The odds can be improved.

By Dave Sonders and Lauren Braun

Validation in the Wild
When it comes to innovation and growth, there are two fundamental questions: 
1) What should we create? and
2) How do we know it will succeed?

In large companies, the first question is increasingly answered by design-driven innovation—most often referred to as design thinking. The process boils down to a fairly common set of methods executed in a roughly consistent order:

- Conduct qualitative user research to build empathy.
- Synthesize observations into insights.
- (Re)frame opportunity areas.
- Brainstorm with cross-functional teams.
- Prototype ideas and refine them through user feedback.
- Define vision for a new offering.
- Pitch it to company leadership.

Using this now widely adopted process, large organizations have radically improved their ability to come up with compelling answers to Innovation Question #1 (What should we create?). Although this is a fantastic stride forward, far too many promising ideas fail to make it into the market. And of those that do, the vast majority fall short of expectations. Some estimates place the new product failure rate at 90 percent or more. So why is successful innovation so rare?

First, we have to acknowledge that innovation is inherently uncertain and that design-driven methods are not a panacea. But there’s another problem lurking in plain view—a fatal but mostly overlooked bug in the operating system of corporate innovation. We believe that companies have no idea how to answer Innovation Question # 2. Today’s most widely accepted validation tools simply can’t provide good answers when project sponsors inevitably ask, “How do we know this idea will succeed?” The problem is that these tools were not designed for uncertain and ambiguous situations. By definition, this is what you’re facing if you’re trying to do something innovative. Bold new ideas without clear precedent are inherently unpredictable. If the success of a new idea can be predicted based on what we already know (that is, extrapolated from the past), then traditional validation techniques are great. If not, these tools are inappropriate.
The problem with traditional validation

“You can’t put into a spreadsheet how people are going to behave around a new product.” – Jeff Bezos

In order to validate new ideas and mitigate risk, large companies employ a number of methods, including sales forecasts, internal rate of return, net present value, and consumer surveys. Often these methods rely on market research data modeling to predict a new product’s odds of success. These predictions are fairly reliable, given two specific conditions:

1) The new product is clearly related to something consumers already know.
2) It delivers tangible benefits that are easy to understand without direct experience.

Most new product and service concepts fit these criteria nicely—a new flavor of potato chip, a softer paper towel, a faster way to withdraw cash at the ATM (Figure 1). For these types of ideas, consumer surveys are great tools for answering the How do we know? question. But when a new concept is substantially different from offerings already on the market and/or a big part of its value is tied up in the experience of using it, traditional validation tools are woefully inadequate.

Procter & Gamble’s original Swiffer, for example, tested poorly on consumer surveys. BASES tests predicted low repeat rate that would never meet P&G’s hurdle rate of $100 million. However, the brand team’s experience and positive user feedback suggested a much rosier picture. When Swiffer launched in 1999 it was the team, not the test, which was proved right. Swiffer generated $100 million in sales in just four months. Some tools use data about existing
products to predict consumer response to new products. But Swiffer was not just an incremental improvement on the mop and bucket—it offered an entirely new way to clean.

The Swiffers of the world can’t be accurately simulated with quantitative models and other traditional validation tools because the tools measure what people say, not what they do. To many in the corporate innovation space, this fact is obvious but irrelevant: “Of course we use imperfect tools—the product doesn’t exist yet!” And therein lies the root of the problem: The new product does not yet exist. It’s just an idea, and asking people what they think about an idea is a lot different from seeing how they react to a new item on the shelf or a new service experience.

It’s a catch 22. We can’t know how people will react to a new innovation until it’s real, and we don’t want to invest millions of dollars to make it real until we know how people will react. This is why the How do we know? question has remained such a thorny issue for innovators.

**The Micro Pilot**

“Make a little. Sell a little. Learn a lot, and fail cheap.” - P&G Chairman–CEO Durk Jager

There is a better way to approach the How do we know? question. Rather than rely on surveys and data extrapolation to guide decisions, we can invest small amounts of time and money to test limited versions of new offerings. These limited versions allow us to see how consumers behave in real life, not just what they say in a focus group or a survey. This approach has gained momentum in the startup world—spreading through the vernacular of Lean Startup, minimum viable
**TYPES OF MICRO PILOTS**

Several forms of experiments are starting to coalesce into a preliminary toolkit for startups and progressive corporate innovation teams. The following micro pilot examples are not about efficiency, scale, or profitability. They are targeted experiments that test the underlying business model hypotheses about a new product or service concept.

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**CROWDFUNDING CAMPAIGNS**

Platforms like Kickstarter have revolutionized the way inventors and entrepreneurs secure funding to pursue their vision. Crowdfunding has also become a fantastic way for startup teams to test the waters to see if there really is demand for a new product. With a few images, a description of your idea, and maybe a video, you can ask consumers to back your project with real money. These campaigns are a great proxy for consumer demand because you’re asking people to vote with their wallets.

Chicago-based startup Scout Alarm is disrupting the home security market with a simple, customizable, and design-forward security system. Founders Dan Roberts and Dave Shapiro ran a crowdfunding campaign to see if they could get customers to express interest in buying their system. With a rough prototype and an amateur product video, the team secured more than 1,500 pre-orders. This was enough to give the team (and their would-be investors) the confidence they needed to move into final development and production.

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**FALSE DOORS**

You’ve probably been part of a “false door” test without knowing it. A false door is typically a simple web page that describes a new product or service and involves some kind of call to action—often a button that asks us to buy now or sign up for the free beta. When we click that button, we get a message that politely thanks us for our interest but informs us that the product is not yet available. Behind the scenes, the people running the test are tracking how many people are finding their way to the page and how many of them are clicking that button. Many false doors also collect email addresses to build a prospect list for the time the product goes on to development.

One early example of a false door was Redfin, the innovative online real estate brokerage. When the company was in its infancy, most (possibly all) people who clicked the “I’m interested” button on Redfin’s landing page were told that the service was not yet available in their area. Whether it was available in any area was irrelevant. The team was able to measure interest across the entire country before investing millions to build and scale the business.

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**CONCIERGE MVP**

The term concierge MVP (minimum viable product) comes straight from the Lean Startup movement. The basic idea is that you deliver, by hand, whatever the ultimate product or service would do automatically. Simulating the experience allows you to test the central value proposition with customers without having to build something automated and scalable.

The founders of dress-sharing service Rent the Runway developed three different concierge MVPs to test the central hypothesis of their business model—that women would rent a dress without trying it on. First, they purchased several dresses at retail and offered them in-person to Harvard undergrads. Women could try them on and, if they wanted, rent a dress for the night. This test helped the team gauge acceptance of the rental model, as well as get a sense for preferences around color, cut, brand, and price point. The founders ran a second test as a trunk show, but eliminated the try-on option. For their third test, they took orders from a PDF email showing dress options.

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**WIZARD OF OZ**

Like a concierge MVP, a Wizard of Oz experiment simulates the experience of a new offering without automating it. But in this case, the customer has no idea that the service is not automated. In fact, there are people behind the curtain pulling levers and pushing buttons to make the service work.

Before Zappos became the internet’s most dominant shoe store, the founding team ran an ingenious experiment to find out if people would order shoes from a website. They put up a simple online retail page and took orders for shoes. But rather than building a fully automated e-commerce business with warehouses and sophisticated order fulfillment, the founders simply ran out to a store, purchased shoes on a credit card, and shipped them to customers.
product, and customer development—but is still relatively unknown in most large companies. At Gravitytank, we refer to these real-world product experiments as micro pilots (Figure 2, p23).

A micro pilot is a quick, inexpensive experiment that allows us to validate ideas and business models with real consumer behavior. Every micro pilot is custom-built to test a specific hypothesis. It is a fast and efficient way to pressure-test crucial elements of a new offering—typically, the most risky and uncertain elements—before committing to a bigger investment. At Gravitytank we still use traditional concept validation techniques when appropriate, but we have found that micro pilots are an extremely valuable addition to our toolset, and a better way to de-risk innovation in many situations.

CONSIDER THE STORY OF ZIPCAR
In 2000, the term sharing economy did not exist, but Zipcar founders Antje Danielson and Robin Chase had a bold vision—a vast network of shared cars, available any time and nearly everywhere. The car-sharing idea was potentially disruptive to automakers and car rental companies, but it was also extremely uncertain. No one knew whether consumers would embrace the service because there was no precedent for it in the US (the most car-obsessed market in the world). The Zipcar team didn’t conduct surveys or focus groups to test their idea. Instead, they bought a green VW Beetle and parked it at Chase’s house. They recruited about 20 neighbors to share the car, using an online calendar for scheduling and a notepad in the glove box to record time and mileage. When someone wanted to take it out for a spin, they would sneak into her backyard and find the car key hiding beneath a cushion on the porch. This is how people used Zipcar for the first three months.

This experiment proved to the founders that they could find customers who were interested in trying a car sharing service, and that users could be trusted to contribute to a car’s ongoing operating needs (refilling the gas, keeping reasonably accurate records, not leaving trash, and so on). Think about the investment in time and money it took to run this simple but effective test. The only real capital expense was the car (about $16,000 at the time). Other than that, the financial cost was basically zero. And the team didn’t write a single line of code or even put up a landing page. Now consider what it would have cost the founders to launch a full pilot test, even in just one city—dozens of cars, corporate insurance, car access systems (for example, RFID cards), website, marketing campaign, customer service.

KEY PRINCIPLES FOR CONDUCTING MICRO PILOTS

FACTS OVER OPINIONS
Don’t get hung up debating the merits of an idea. Replace opinions with facts by moving quickly from concept to experiment.

SURGICAL STRIKES
Focus on the most uncertain and riskiest parts of the business model. For instance, if your model assumes a specific user acquisition cost and conversion rate, conduct a small marketing campaign to see if you can hit the required numbers.

GET TANGIBLE
Potential users need something tangible to react to. Build lightweight versions of the offering to test with real consumers in the wild either by making it (build something that you intend to use later) or faking it (use a smoke-and-mirrors approach to simulate part of the experience).

BUILD AS LITTLE AS POSSIBLE
Don’t build new assets just because you can. Prototypes are wonderful, but only if they help you learn.

SKIP THE ACCOUNTING
Focus solely on the amount of learning your test will produce for the investment of time and money. There’s no reason to optimize for cost, scalability, or profit margin before you know if people want what you are selling.

PUT IT OUT IN THE WORLD
Behavioral economics research has demonstrated that people are really bad at predicting their own behavior—so don’t ask them to. Put your offering out into the world and see what happens, gathering empirical evidence along the way. Someone choosing to buy your product is the ultimate feedback.

MEASURE RESULTS
One of the most important parts of your experiment design is defining what metrics will validate your hypotheses (for example, trial rate, viral coefficient, user acquisition cost), and also how to capture those metrics (for example, web clicks, in-store interactions, behavior over a period of time).

RINSE AND REPEAT
Don’t expect to answer all your questions with a single micro pilot. Use what you learn from each micro pilot to refine your hypotheses and run new experiments.
staff.... Instead, Zipcar ran a small-scale test with a handful of customers and a single car, allowing them to validate their value proposition at a fraction of the time and expense. All it took was a bit of hustle, some imagination, and a few willing neighbors. This is the essence of micro pilots.

A micro pilot is essentially the scientific method applied to innovation (Figure 3). And like scientists pursuing new discoveries, innovation teams must be prepared for failed experiments. More precisely, they must be prepared for unexpected results. Much of the time, our experiments will not pan out the way we anticipate because our hypotheses and assumptions are wrong. Finding the flaws in our business model before scaling up is incredibly valuable. Each failed experiment allows us to tweak our hypotheses and try again. In this way, we steadily replace uncertainty with understanding, fog with clarity. And the faster we go, the better our chances of creating a sustainable new business before we run out of funding, time, or passion.

Rewiring the corporate innovation process

“We’re a collection of dozens of internal startups. This is now the standard practice.... How many weeks after having the idea can you get a version into users’ hands that tests key hypotheses? We call it leadership by experiment.” - Scott Cook, Intuit founder

A handful of large companies have started to transition toward a culture of experimentation. But the vast majority of corporate innovation teams are shackled to techniques that snuff out the most ambitious and potentially groundbreaking ideas. In the typical corporate innovation process, the final pitch marks the end of prototyping and iteration—a handoff from the idea people to the development people. According to this philosophy, idea validation is all or nothing (pass = invest; fail = kill it). But the notion that you can simply run one test to see if something is a good idea is deeply flawed when it comes to innovation. Just because an idea fails its first test doesn’t mean it’s not a good idea. Many of the biggest innovations of our time went through major iterations before finding just the right mix of features, benefits, positioning, and pricing. The first incarnation of Starbucks had no chairs, baristas in bowties, menus written mostly in Italian, and nonstop opera music. Twitter started out as a platform for creating and sharing podcasts. YouTube was originally intended to be a video-dating site!

Successful innovations are most often the result of continued evolution—multiple iterations that gradually nudge a promising idea toward success. Micro piloting allows innovation teams to systematically refine and validate their hypotheses until they are confident that they have a sustainable, scalable business model. With micro pilots, there is no final pitch, no politicking, no committee that decides the fate of an idea on a whim. For teams empowered to use micro pilots to test their ideas “in the wild,” the only objective is to learn how consumers actually behave, iterating and shaping their way to success over a series of small experiments. And when sponsors ask Innovation Question #2, How do we know it will succeed? there’s no need to speculate. We know because we’ve seen it work, and we have the data to prove it.

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FIGURE 3

Micro pilots are based on the scientific method.
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TAKE THE SURVEY  GET RESULTS
Let’s teach designers to be a little more resourceful and a little less deliberate. Sometimes the best solutions come from unexpected places.

What Can Design Thinkers Learn from Entrepreneurs

By Akhil Nigam
What Can Design Thinkers Learn From Entrepreneurs

**Designers and Entrepreneurs Focus**

Entrepreneurs and designers both rely heavily on collaboration and problem solving, but they differ when it comes to the process they use to make this happen.

Entrepreneurs often apply design thinking as they prepare their products for market. They do this by testing their products and redesigning based on customer feedback. Designers systematically research the ways customers engage with products. The main difference in these processes is time. Entrepreneurs and their startup companies operate with limited resources and rigid time constraints, making the decision process more efficient. Designers, on the other hand, create multiple iterations and test each variable; in some cases, this process can take months or even years.

Knowing this, what can designers learn from entrepreneurs?

1) **Time constraints can be a good thing.** Designers often tackle a problem from multiple angles. Entrepreneurs have to test as they grow. Every minute counts in the life of a startup, so spending many months testing an idea is not an option. To an entrepreneur, even obstacles can create an opportunity. The success of a startup company relies heavily on the entrepreneur-founder’s ability to cut through all the questions and options and ultimately make a decision that leads to the best path. Less time spent weighing the options means more time spent tackling bigger issues.

2) **Don’t wait for conditions to be perfect.** When launching a product, startups are forced to work in less than ideal conditions. Entrepreneurs may find themselves scrapping their original plans to address unforeseen dilemmas. Sometimes, this means changing the company structure, or it can mean redesigning your product MacGyver-style due to limited resources. Bootstrapping a startup forces entrepreneurs to become masters of resourcefulness. Often, the best solutions are derived from unexpected places; and the simplest solution may be staring you in the face.

3) **Small teams empower individuals.** For both designers and entrepreneurs, the team dynamic is crucial to a project’s success. Something that startups do well is choose employees not just for skill set but also for their ability to work well within the team. Often, one person’s role covers multiple seemingly unrelated needs, as when the operations manager also acts as the marketing director. By asking employees to go beyond their defined role, you empower them to be the best version of themselves.

We live in a rapid-fire world in which today’s innovations can be obsolete tomorrow. It’s important for designers to stay ahead of the curve by learning from entrepreneurs and iterate quickly.

Akhil Nigam is the founder and president of MassChallenge, the world’s largest startup accelerator. MassChallenge awards more than $1 million in cash prizes annually to winning startups, with zero equity taken. Additional benefits for startups include world-class mentorship and training, free office space, access to funding, legal advice, media attention, and more than $30 million of in-kind support. In the past four years, MassChallenge alumni have raised more than $470 million and have generated more than $890 million in revenue.

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It was only a matter of imagining himself as one of his customers. And after all, how many of us have been pharmacy customers? It didn’t take long to see the flaws in the system, and correct them.

By T.J. Parker
Claire is tapping her foot at the pharmacy counter near the back of her local CVS. She has just finished sorting through a complicated prescription pick-up: a med for her thyroid condition, two for her hypertension, and another to fight her pre-diabetes, as well as an inhaler for her son’s asthma. She’s handed over her driver’s license, two insurance cards, a flexible spending card, and a customer loyalty card. There are three people in line behind her and two more waiting by the magazine rack. Four of her meds are ready, but the fifth needs a refill that was never called in. She’ll need to come back in a few days.

Across the counter, a pharmacy technician drawls out her total: “Thirty-five sixteen. Do you have any questions for the pharmacist?”

The scene here is frustratingly familiar to anyone in modern America.

While it’s unlikely that Claire would have asked her pharmacist for much more than a receipt, I’ve been personally questioning this entire interaction, from start to finish, for more than a decade.

Why is Claire forced to discuss her health questions in the middle of a busy retail store? Why does she have to come back week after week, constantly chasing refills and renewals? How are customers meant to piece together the dosing instructions for four, five, six medications? Is Claire’s iron supplement contraindicated with her thyroid medication? Who will catch that? How can she get more information once she gets home?

These questions have been left unanswered by retail pharmacies for decades, contributing to a system that wastes hundreds of billions a year on medical issues related to mismanaged medications.
As a pharmacy student, I spent as much time as possible learning about the history and principles of design. I began to realize that at its core, pharmacy wasn’t irreparably broken, but rather suffering from an abject lack of design thinking.

Tim Brown, CEO of IDEO, defines design thinking as “… a system that uses the designer’s sensibility and methods to match people’s needs with what is technologically feasible and what a viable business can convert into consumer value and market opportunity.”

One would be hard pressed to find an industry more in need of design thinking than pharmacy. Although the major pharmacy retailers claim to care about customer service, the four worst retailers in the country, when ranked by customer satisfaction, are all pharmacies. I decided to start my own pharmacy because I knew there had to be a better way. I knew customers were unhappy with their existing pharmacy experience, and if we could create a well designed and thoughtful experience and clearly articulate what we do differently, it would result in droves of happy customers and a thriving business.

That idea would end up becoming PillPack, a full-service pharmacy that now ships all across the country. Rather than dispense medications in separate bottles, we pre-sort and package them in individual packets based on when they are taken throughout the day—one for each dose. This personalized PillPack is automatically delivered to the customer’s home in a convenient recyclable dispenser every two weeks. In addition, we have modern web and mobile tools to manage customers’ accounts online and chase their refills for them, and our pharmacists are available 24/7 via phone, email, and online chat.

Shortly after the company was founded, we spent four months working with a team of designers from IDEO. During this time, we got to know our customers, spending time in their homes and trying to understand their core frustrations related to managing meds. We then took what we had learned and mapped out the entire customer journey—from the first visit to the site, to signing up, to receiving that first shipment, to communicating costs and side effects. Each of these touch-points is as critical to our success as our ability to process an insurance claim or fill a prescription.

Design is an integral part of our business strategy, influencing every aspect of what we do. In order to enable the customer experience we knew was best, we had to re-think everything—from the way we bill to the frequency of our shipments, the way we organize medications in our user interface, and the way we write the copy on our marketing materials and notifications.

The result is this that in our company, design can’t be offloaded to an individual or a department; everyone in the company has to approach problems as a designer might. The first thing a new team member learns about PillPack when he or she comes on board is our core set of design principles, which are rooted in empathy, convenience, and communication. These principles help keep our product development, marketing initiatives, and pharmacy operations rooted in a larger mission that prioritizes customer experience over everything else.

We also encourage the whole company to understand the issues our customers face. Every email, phone call, and chat is an important signal about how we’re doing. By placing these communications and experiences at the center of our internal communications, we make sure that every member of the team can empathize with our customers and bring that understanding to bear in their own decision-making.

Our use of design thinking is what differentiates us from the competition and the reason our customers switch to and stay with PillPack. It’s the reason we’re able to make quick, smart decisions about new features and marketing initiatives. And it’s the reason we continue to have happy customers who send us thank-you notes and tell their friends about PillPack.
Tech startups have the potential to affect millions, even billions, of people, and their customer base is frequently made up of socially aware youth. Here is an excerpt from a book in progress: the subject is “social-minded tech entrepreneurship.”

In the past couple of years, hundreds of thousands, if not millions, of people have marched on the streets of the US, Brazil, Argentina, Turkey, Greece, Spain, and around the world to demand better economic, social, and ecological conditions. They were voicing their growing rage at overconsumption, environmental crisis, and economic disparity. Many people are acutely aware of these problems and many do not want to consume in endless and thoughtless ways anymore.

These are the 360° people, as the founder of the Freelancers Union, Sara Horowitz, calls them. They are becoming increasingly conscious of their ecological, societal, and economic impact and want to connect with one another in more meaningful ways. Recognizing this trend is imperative for entrepreneurs who want to partake in the next economy, especially if they want to start companies that aim to embrace the 360° people as either customers or employees. Indeed, being able to satisfy these “edge profiles” will enable startups to address other people too.

This is true for all types of startups. However, tech startups are especially important because of the exponential impact they can have on millions and even billions of people. In addition, an important portion of the customer base of the tech startups is comprised of socially aware youth, which obliges tech entrepreneurs to pay extra attention to these issues.

The ways in which companies are built have substantial ecological, economic, and societal impacts on society, as well as on world resources. That’s why the tech entrepreneurs of the next economy should think consciously about building human-centric startups, with special attention to these impacts—startups that can touch people’s hearts.
Technology as a strong enabler

In the latter half of the twentieth century, many governments made technology a central pillar of economic growth, and in some cases, postwar recovery. Scalability, connectivity, and accessibility brought exponential growth to such tech companies as Microsoft, IBM, Samsung, Apple, Google, Amazon, and more recently, Facebook and Twitter. These companies have become the new focal points of power and have created powerful social and financial impacts on how we live, think, work, and interact with each other—even how we sense.

Technology democratizes the sources of power to change the world and makes resources such as healthcare and education exponentially accessible, as Peter Diamandis, the chairman of Xprize, puts it. Technologies, specifically exponential technologies such as robotics, artificial intelligence, nanotechnology, digital manufacturing, and bioinformatics, may solve some of the major problems of the world, as Singularity University, an education group headquartered in NASA’s Ames Research Center in California, points out.

The necessity of understanding context for tech entrepreneurs

The impact of technology and its role in the economy have created a context in which it has been presented as a panacea. However, from an end-user perspective, there is a flipside to the advantages of technology. Although it is a powerful tool in enabling change exponentially, technology developers and companies usually overlook the human experience and, more important, the context.

Context is not a word that comes up a lot in the tech startup world (Marco van Gelderen and Enno Masurel’s Entrepreneurship in Context may be an exception). Many issues surrounding entrepreneurship are talked about as if they are universally valid. Even more customer-centric methodologies, such as the lean startup—although it is a powerful methodology for building startups in ambiguous conditions—only talk about a product-market fit but say nothing about context or human-centricity. An important way that design can contribute to entrepreneurship is with an understanding of the human context.

According to a study by the Cincinnati-based research agency AcuPoll, as many as 95 percent of new products introduced each year fail. This is mainly because they do not address human needs. This is exactly why design—not just visual design but the understanding of design as complex problem-solving and a strong enabler for addressing human needs by introducing context and meaning—needs to be at the center for the new generation of technology startups.

Although it may sound simplistic, introducing and embedding the terms context and meaning into the tech startup discourse is one of the main targets of this book—and probably the most essential.

A call to all social-minded entrepreneurs

Human-centricity in a startup, especially a technology startup, is often associated with social entrepreneurship or doing something “for good.” Nonetheless, should only social entrepreneurs be responsible for social issues? How about other entrepreneurs? “Among some entrepreneurs, it’s not popular to talk of rights. We speak, instead, of ‘product’ and ‘brand.’ Patients and students—children!—become ‘clients’ or even ‘customers.’ The notion of ‘sustainability’ becomes a blunt instrument used against the poor. I’ve seen it time and time again,” said anthropologist and physician Paul Farmer in his speech at the Skoll World Forum in 2008.

Instead of expecting certain “social” entrepreneurs to save the world—and the rest to disrupt the world in any way that suits them—with this book, I make a call to consider social-mindedness as one of the basic pillars of entrepreneurship and to train entrepreneurs accordingly. —

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This excerpt is from an upcoming book, Tech Startups Touching Hearts, that aims to build a network of entrepreneurs, designers, engineers, researchers, and professionals who wish to bring human-centricity into the tech space. People who would like to contribute by sharing their ideas or simply join the network are encouraged to contact the author at gulay. ozkan@geds.com.tr. The network map is public and can be seen here: graphcommons.com/graphs/2222.

Gulay Ozkan is the founder of GEDS, an Istanbul-based design and innovation consultancy. Her design-driven entrepreneurship concept, The GO Program, was recognized by Behance Network, in New York, in 2012. Ozkan is an advisor to several international organizations, including the Design Management Institute, and is listed in the European Union’s Global Board Women Ready project. Her articles appear on Atlantic Medias’s “Quartz” news outlet in the US and in several other outlets in English, Japanese, Arabic, and Turkish. She was recently invited to the Singularity University GNPI’s program at NASA Ames Research Park in Silicon Valley.
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