

# BUSINESS

# BY

**TECHNOLOGY AND GLOBALIZATION ARE LEADING TO MORE AND FASTER DISRUPTION THAN EVER. TO STAY AHEAD, SMART COMPANIES ARE TURNING TO DESIGN TO BETTER CONNECT WITH CUSTOMERS AND FIND THEIR COMPETITIVE ADVANTAGE. HERE, WE FEATURE 25 COMPANIES FROM A RANGE OF INDUSTRIES THAT ARE GETTING DESIGN RIGHT. (YES, WE'RE INCLUDING APPLE.)**

# DESIGN



**WHEN AIRBNB'S FOUNDERS** tell their origin story, they often hark back to the moment in 2009 when Paul Graham, head of startup incubator Y Combinator, gave them four crucial words of advice.

At the time, Airbnb had fewer than a thousand registered hosts. Founders Brian Chesky, Joe Gebbia, and Nate Blecharczyk were hunkered down in Silicon Valley, scrambling to scale the business by

poring over data and revamping the website. After a promising start, revenue had flatlined at \$200 per week. To figure out what wasn't working, Graham pressed the trio for information about Airbnb's users. Where were they, exactly? In *The Airbnb Story*, *Fortune's*

Leigh Gallagher recounts Graham's reaction upon learning that the largest concentration of them resided in New York City: "[He] paused and repeated back to them what they had just told him: 'So, you're in Mountain View, and your users are in New York?' he asked. They looked at each other, then back at him. 'Yeah,' they said. 'What are you still doing here?' Graham said to them. 'Go to your users.'"

That exhortation—to fly across the country and hang out with customers—defied a fundamental tenet of Silicon Valley wisdom: that data and technology are the solution to every problem. And yet, for Airbnb, heeding Graham's advice led to key breakthroughs. Among them: Helping hosts produce better photos of their properties would boost business. (For more on Airbnb and design, see Gallagher's Q&A with Gebbia on page 66.)

A decade on, "user experience" is among the tech industry's most overused buzz phrases. But the underlying idea—that there is power in empathy—has never been more profound.

That's true for at least two reasons: One is that the great forces of the modern age, globalization and digitization, are removing traditional barriers to entry. Large firms can no longer rely on great manufacturing capacity, a superior supply chain, and established distribution networks to defend their market position from challeng-

ers. The rise of China and other emerging economies, combined with newfangled technological developments like big data, the Internet of things, platform economies, A.I., and automation are combining to flatten and commodify traditional back-end defenses. A second reason is complexity. Design can help bring order and coherence to the chaos of our hyper-connected world.

In this new landscape, smart corporate leaders are embracing the idea that design—channeling insight to delight and truly connect with customers and users—can be a crucial differentiator.

The result is a major design moment. *Fortune* 500 companies are hiring chief design officers and investing heavily in design centers and innovation centers. Professional services firms, too, have joined the fray. In 2013, Accenture acquired Fjord, a leading design firm, while PwC snapped up BGT, a digital creative consultancy. In 2015, McKinsey & Co. purchased Lunar, a Silicon Valley-based design firm. In October, Indian software giant Wipro acquired design agency Cooper, adding to its 2015 purchase of Designit. Meanwhile a host of top business and design schools have introduced interdisciplinary programs to help MBAs think more like designers and vice versa.

In the "Business by Design" package on the following pages, *Fortune* highlights some two dozen companies that have turned a commitment to design into a competitive advantage. To identify them, *Fortune* surveyed the design community, grilled executives, and searched for evidence of true corporate commitment. The result is not a completely scientific list. (Design, for the most part, is not quantitative.) And it's not a truly comprehensive list. (Too many companies are betting on design

these days to include in one issue of the magazine.) But all of the companies that made the cut are at the forefront of the movement to create smarter, more thoughtful products and experiences.

No company tops Apple for demonstrating the strategic power of great design and learning to "think different." While there is a raging debate about whether or not Apple has lost some of its design mojo in recent years, as the story preceding this one explores, the world's most valuable company continues to push boundaries. Meanwhile, a host of other leading companies, including Alphabet, Amazon, and Nike, have achieved success by expanding design capabilities. The phrase "design thinking," coined back in 2003 by IDEO cofounder David Kelley, has become synonymous with taking a user-centric approach to creating products and services.

The sudden enthusiasm for design and design thinking has its detractors. Pentagram partner Natasha Jen sparked a lively debate at a New York design conference early in 2017 with a presentation titled "Design Thinking Is Bullshit." Her main complaint: that practitioners too often neglect to call out bad design. Gadi Amit, a technology designer who has worked on Fitbit trackers and the Lytro camera, frets that design thinking's obsession with empathy leads to wasted time and is out of step with the breakneck pace of modern product cycles.

It's a debate worth having. And one that *Fortune* will continue this March in Singapore, in collaboration with colleagues at *Time* and *Wallpaper\**, at a new conference we're launching called Brainstorm Design.

One thing is clear, though: Business is almost always better by design. —Clay Chandler

**Design can help bring coherence to the chaos of our hyper-connected world.**

# DYSON

WHEN IS A HAIR DRYER COOL? WHEN IT'S THE PRODUCT OF POWERFUL R&D AND LASER-LIKE FOCUS.

● **BRITISH INDUSTRIAL DESIGNER** James Dyson has spent his career marrying disruptive technology with an Apple-esque minimalism to transform drab everyday appliances such as vacuum cleaners, fans, and hair dryers into products with cult followings. Case in point: the Dyson Supersonic hair dryer pictured at right. Developed over four years and through 600 prototypes, it features a digital motor half the weight and eight times the speed of a traditional dryer.

Such rigor is no anomaly. Dyson is the U.K.'s biggest investor in robotics and artificial intelligence research. In September, the company launched the Dyson Institute of Engineering and Technology, a university within its office grounds, to feed its growing headcount of engineers and scientists, which Dyson predicts will double to 6,000 by 2020. Dyson also plans to invest \$2.6 billion into developing battery-operated vehicles in the same time frame. —*Debbie Yong*



# GOOGLE

## IN SEARCH OF CONSUMER ELECTRONICS AND SOFTWARE WITH SOUL



**GOOGLE IS ALL GROWN UP.** As with many tech companies—Apple, Yahoo, even Amazon—Google’s design language has come a long way since its kaleidoscopic early days, when every color, typeface, and punctuation mark was used with abandon. [Seriously—just look at that 1998 homepage.] Over time, most of Google’s peers matured by shedding their quirks and shades in favor of minimalist forms and a restrained palette, best embodied by the sleek, futuristic, Braun-influenced stylings of Apple. Not Google. In the wake of its 19th birthday, the company, now part of the conglomerate known as Alphabet, has retained the personality of its youth by wedding sophisticated industrial and software design (have you seen Google Home and Android 8.1?) with strange shapes, novel fabrics, and pops of bright color, such as the power button on its new Pixel 2 phone. In a world where today’s angular machines are plastic and glass, black and white, and altogether expressionless, Google’s products burst with the exuberance of, well, humans—a signal to its peers that they shouldn’t take themselves too seriously.

—Andrew Nusca

▶ Google Pixel 2

## SAMSUNG HOLISTIC, STRATEGIC CONVICTION

● **IT WASN’T** so long ago that Samsung found itself in a courtroom defending its creativity against Apple. But the company’s decades-long bid to move beyond its reputation as a budget brand has paid off. Today Samsung is tech’s largest spender on R&D. And its TVs, phones, appliances, services, and offices? Covetable. —A.N.

## HUAWEI BUILDING A BASE OF INNOVATION

● **WHEN CHINA’S** tech giants looked to markets beyond their own shores, it was clear that many wouldn’t be able to make the trip thanks to dubious intellectual-property portfolios. Not Huawei. The Shenzhen [but not *shanzhai*] gadget maker is a leader in international patents for software and hardware alike. —A.N.

## AMAZON HUMAN- CENTERED CAPITALISM

● **GOOD DESIGN** isn’t limited to aesthetics; it is equally about function. And what could be more functional than the store that sells everything? From its bulletproof website to its cashierless stores to its family of speech-enabled devices, Amazon’s customer focus cannot be ignored. —A.N.

## MICROSOFT DESIGN FOR THE 99%

● **THERE’S MUCH** to be said about Microsoft’s whiz-bang interfaces, modern Metro design language, and interactive Fluent Design System. But what sets this titan apart is its emphasis on inclusive design that makes products as accessible to people with disabilities as to those without. —A.N.

▶ Amazon Echo Spot

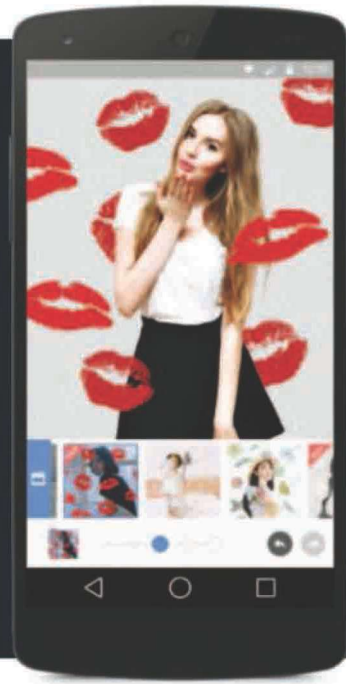




▲ Musical.ly



▲ Snap



▲ Meitu

# MUSICAL.LY

**THE SECRET TO THIS WILDLY POPULAR SOCIAL VIDEO APP? A DESIGN THAT'S ENGINEERED TO GO VIRAL.**

● **MTV IS SOOOO LAST MILLENNIUM.** Today's tweens produce their own music videos by accessing libraries of 15-second song clips—not to mention a plethora of ridiculous face “lenses”—on the

hit app Musical.ly. The founders of the China-based, DIY lip-synching service, originally launched as a platform for educational tutorials, caught on to the fact that kids prefer copying Taylor Swift to watching

calculus how-tos early on. Another lesson? Small but significant design tweaks—like moving the Musical.ly logo so that it wouldn't be cropped out when shared on other apps—helped the company grow

its user base much faster. All of this has helped the booming music video maker generate 60 million monthly active users and get snapped up by the Chinese Internet firm Toutiao for as much as \$1 billion. —*Michal Lev-Ram*

## MEITU THE MOST INTUITIVE MAKEOVERS IMAGINED

● **TOUCHED-UP PHOTOS** never looked so good. Yet another China-based app maker, Meitu (the name means “beautiful picture” in Chinese), is enabling millions of young people to enhance their selfies—brighten eyes, smooth out skin, tweak and enhance features, or whatever their mobile-first heart desires. The company's series of apps (think BeautyCam, SelfieCity, and MakeupPlus) have been downloaded and installed on more than 1 billion phones worldwide, making complex technologies like augmented reality and machine learning accessible to regular people. Meitu's secret sauce? Tapping into the current demand for mobile apps that do one thing and do it well—plus catering to narcissistic tendencies. —*M.L.*

## SNAP NEW ADVENTURES IN UX

● **LET'S BE HONEST:** You probably didn't know how to use Snapchat when you first downloaded it. Do I swipe? Where's the menu? Snap's convention-busting approach to user experience, which extends to its popular filters and unpopular Spectacles, reinvigorated a category known for its heavy reliance on feeds. —*A.N.*

## INSTAGRAM PROTECTING THE EXPERIENCE

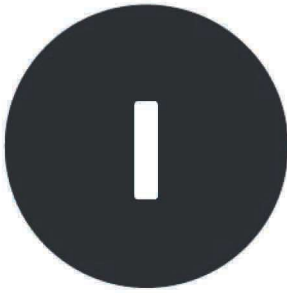
● **SURE, WE JUST** celebrated Snap for breaking the UX rules. But we commend rival Instagram for preserving its soothing social environment even as it adds live video and Stories (copied from Snap, naturally) to its core experience. It's a far cry from the busy buffet of options offered by parent Facebook's namesake app. —*A.N.*

# IBM

**PUTTING A STICKY NOTE ON THE CUSTOMER.** TO WIN IN THE AGE OF COGNITIVE COMPUTING AND CYBERSECURITY, THE VENERABLE TECH GIANT IS BETTING BIG ON DESIGN THINKING. HOW BIG? IT NOW BOASTS THE WORLD'S LARGEST DESIGN TEAM.



▲ Cloud product designers work on an “empathy map” for an app developer at IBM’s design headquarters in Austin.



**IF YOU WANT** to track the fast-moving design transformation happening at IBM, try following the Post-it notes.

“I see it everywhere,” says Diane Paulenich, a managing director at the technology giant who started her career at the company working in a call center 32 years ago. “Sounds silly. But when I go into the different offices I see teams of people getting together and collaborating with sticky notes.”

The stickies are a hallmark of “design thinking” exercises, in which participants often jot down thoughts on the brightly colored pieces of paper and place them on a whiteboard as part of creating, for example, an “empathy map” to understand the perspective of the user or customer by imagining what she or he thinks, feels, says, and does.

Paulenich herself has become a convert to the design thinking process, even when she’s just brainstorming with her team. Asking people to write down their ideas, she says, suppresses what she calls “meeting bullies,” those who dominate conversation. And Paulenich regularly makes empathy maps to prepare for client meetings, complete with a picture at the center. “I actually do a little stick figure so that they’re real,” she says. “It’s just to remind me, ‘Don’t think about you, Diane. Think about them.’”

Perhaps you perceive IBM as an engineering company, collecting patents and manufacturing mainframe computers. (Yes, it

still makes them.) Or a venerable technology power trying to find its way in the era of Google and Amazon. Or, if you’ve seen the TV ads, the company behind the artificial intelligence platform Watson. But a design leader? Probably not.

Think again. Today IBM has some 1,600 formally trained designers operating out of 44 design studios in over 20 countries—the largest such team in the world. And those are just the official designers. IBM has offered basic training in design thinking to tens of thousands of employees like Paulenich.

What’s even more remarkable is that IBM has built virtually all of this capacity in just the past six years, since Ginni Rometty took over as CEO in 2012 and the next year tasked executive Phil Gilbert with teaching the 380,000-person organization how to look at business through the prism of design—or, actually, to relearn that skill.

In fact, IBM has a storied history in design. After Thomas Watson Jr. became CEO of the company in 1956, he built a first-of-its-kind corporate design program at IBM, which elevated both its products and its reputation. In 1973, Watson Jr. famously declared in a speech, “Good design is good business.” But over the years, the focus had faded.

Today, IBM’s design operations are run from two floors—totaling 50,000 square feet of whiteboards and open office—on an IBM campus in Austin. Why there? Because Austin is where Gilbert, 61, was based when IBM bought his B-to-B software company in 2010. Gilbert isn’t trained as a designer. But he got religion about the potential of design to help scale businesses at his first startup in the 1980s: “Ever since then I’ve been pursuing this notion that the magic in any product or service is how it’s experienced by the end user.”



▲ Members of IBM’s design leadership team photographed at the offices in Austin, from left: Nigel Prentice, Joni Saylor, Jeff Neely, Liz Holz, and Phil Gilbert, the general manager of IBM Design.

Given a mandate by Rometty to move fast, Gilbert began recruiting aggressively in 2013. At the time, IBM had one designer for every 72 coders; today that ratio is 1 to 8. The company began holding design “boot camps” for new hires, then moving them into multidisciplinary product teams—for everything from A.I. to cybersecurity to Internet of things—where they served as evangelists.

In 2017 the company launched the IBM Design Thinking badge program. More than 90,000 IBMers, like Paulenich, have already earned their “practitioner” badges by completing an online course, and another 21,000 have done extra work to earn at least one of three advanced badges.

The ultimate aim of such programs, says Gilbert, is to help IBM to better serve customers—with a goal of winning. “Businesses don’t care about design thinking, per se,” he says. “Businesses care about outcomes.” That’s a Post-it worthy motto. —*Brian O’Keefe*





▲ The recently opened Starbucks Reserve Roastery in Shanghai.

# STARBUCKS

**HOW THE SEATTLE COFFEE GIANT IS CREATING CUSTOM EXPERIENCES WORLDWIDE.**

## IKEA SELLING MORE, BUT USING LESS

● **THERE'S AN** irony in how Ikea—a company whose business is selling stuff, and lots of it—is turning the millions of customers who visit its stores every day into accidental environmentalists. By buying Ikea's products, consumers

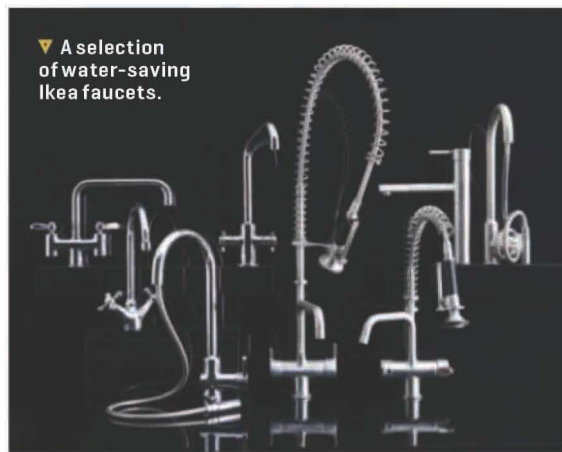
also are inadvertently buying into the Swedish furniture giant's mission to reduce the footprint of everything it sells.

Ikea views its environmental impact as a problem that can be solved with design. Take wood, which shows up in about two-thirds of the company's home furnishings. In its fiscal 2016, Ikea used 2% less of the material than it did the previous year, despite selling more wood products. One way was by using dual-density particleboard in its iconic

Billy bookcases, which cut down on materials by 20%. Ikea's design work is also helping customers use fewer resources at home. All of its kitchen faucets now have an aerator. The feature mixes in air with the pressure flow to achieve the same feeling of wetness while using 40% less water.

The green design mindset has paid off too. Sales of sustainable products were around \$2 billion in fiscal 2016, and Ikea is targeting about \$3 billion by the middle of 2020. —Beth Kowitz

▼ A selection of water-saving Ikea faucets.





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**THE WORLD'S BIGGEST** coffee chain doesn't just sell java—it wants to serve up an experience. Starbucks has crafted each of its 27,000 outlets worldwide to feel like locally owned and designed cafés, says Starbucks' senior vice president of creative and global design, Liz Muller. Artists, and the occasional

"starchitect"—such as Japan's Kengo Kuma—are tapped to customize details by country and community.

Muller's latest feat: a sprawling 30,000-square-foot Starbucks Reserve Roastery in Shanghai that opened in December. It's the second of Starbucks' ultra-luxurious innovation

lab spinoffs and its largest store to date. A copper kettle roaster hand-carved by Chinese craftsmen takes pride of place in the outlet, which also features an on-site bakery and Teavana bar—both firsts for Starbucks—and virtual reality tours powered by Chinese e-commerce giant Alibaba. —D.Y.

## PEPSICO INFUSING PRODUCTS WITH FIZZ

● **GOOD DESIGN** is about more than picking out the right shade of blue for a soda can. That's why PepsiCo CEO Indra Nooyi recruited chief design officer Mauro Porcini from 3M in 2013 and made design thinking a strategic priority for the food and beverage giant. The creation of a Design and Innovation Center in New York swiftly followed in 2014. And PepsiCo's new emphasis on design has led to a pipeline of creative products. Earlier this year, for instance, PepsiCo launched Lifewtr, a premium-priced bottled water featuring labels that are designed by artists and change several times per year. —D.Y.



## CAPITAL ONE THINKING OUTSIDE THE BRANCH

● **BANKING AND** cutting-edge design don't automatically go together. But Capital One has adopted design thinking as a mantra to reinvent itself as a software company and innovation incubator, rather than a traditional bank. After acquiring design firms Adaptive Path and Monsoon, Capital One has recently rolled

out fresh digital features, from an emoji-enabled SMS chatbot to GPS-tracked transaction histories. In early 2018 it will unveil its 1717 Innovation Center in Richmond, a 42,000-square-foot facility housing an experience design research lab and, through a partnership with an incubator program, some 50 startups. —D.Y.

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# AIRBNB

**IN A Q&A, COFOUNDER JOE GEBBIA EXPLAINS HOW THE SHARING-ECONOMY POWERHOUSE ‘DOG-FOODS’ TO BETTER UNDERSTAND ITS CUSTOMERS AND WHY GREAT DESIGN CULTURES NEVER REALLY FAIL.**



**FEW COMPANIES** have emphasized the importance of design thinking as much as Airbnb. Two of the San Francisco startup’s three cofounders, chief product officer Joe Gebbia and CEO Brian Chesky, are graduates of the Rhode Island School of Design [RISD]—a biographical detail that turned off some investors at first but turned out to be a big advantage for the sharing-economy giant, now valued at \$31 billion by investors. We spoke with Gebbia, who also serves as head of Samara, the company’s in-house design and innovation studio, about his approach to design.  
—Leigh Gallagher

**FORTUNE:** What does “design thinking” mean to you?

**Gebbia:** To me, design thinking is another way of saying empathize with the customer. It’s consideration for the person you’re designing for. That’s all it is. What it means is you’re going to spend the time and the effort to understand the needs of the person you’re designing for such that you can

create something that’s valuable to them. This is an old lesson from RISD when I was on a team working on a medical device. Through our research, we went out and talked to doctors and nurses and patients, but the big aha moment was when we actually had the existing solution applied to us, and we lay down on the hospital bed and got to experience what it was like to be the patient. It was this design principle, “Be the patient.” Go as far as you possibly can to see the world through the eyes of the person you’re designing for.

There’s also a Part 2, which is applying your own point of view to the world. Design thinking does not mean design by committee. It does not mean that you write down every feature request or every complaint that a customer has and just transmit that into a one-to-one match. So Part 2 is, you come back to your studio or your place of creation and combine what you learned with your own point of view and your own creativity and your own imagination as a designer. The term I use for this is “enlightened empathy.” And talking to somebody does not mean sending them a link to a survey. Digital communication is completely different from in-person, face-to-face conversations. One will give you surface insights and the other really gives you depth.

**You also talk about “dog-fooding.” What’s that?**

Dog-fooding is using your own products so that you understand from inside out what it is you’re providing the customers. It’s another way to gain insights and to gain intelligence. You use it yourself; you eat your own dog food. Every time we do that, we discover something that we can improve. It’s one reason why we highly encourage our team members to be hosts, and why we give out travel stipends to every employee inside the company. Everybody comes back with, “Oh yeah, I tried to search, and I found this bug.” Or “I really want to see this information as I’m driving to my Airbnb.”

**What goes into building a creative environment?**

One thing in particular to Samara is that the word “failure” is not allowed. And the reason is that failure is not actually a thing. It’s such a misconception. There is an action that takes place, and you get a result that you want or that you don’t want. And then you label that with whatever you want. And if you get a result that you didn’t want, some people label that as a failure. You can do that if you want to; or you can choose to label it as an incredible learning moment. The fact that you just figured out one



▲ Airbnb cofounder Joe Gebbia [right] poses for a selfie at a gathering of Airbnb hosts in Australia.

less path to go down in order for us to achieve the goal that we're after, well, thank you for that. Thank you for eliminating more paths. Cross it off the list, and we can now get to where we want to go quicker.

**So many companies are now seeking to apply design thinking. What advice would you give to a big company seeking to do that if it doesn't naturally have design DNA?**

I think they need to hire more designers. I think they need to hire design executives. And I think that the leadership or the founders or the CEO or whoever's running the company needs to go through some kind of crash course in the value of design. Because if the leader of the company doesn't get it, then nothing else you can do really matters. There needs to be an executive sponsorship of design philosophy. If design is unfamil-

iar to them, I would recommend a weeklong workshop at either the d. school at Stanford on the West Coast or RISD on the East Coast. They both have executive programs to help leaders grasp the nature of design, the value of design, so that they can be more informed and more conscious about design.

**Can you name a company you admire designwise?**

I think Pixar's done an amazing job integrating art and science. They really get this idea that art and engineering work side by side.

**Has the thinking about design changed in the corporate world?**

The good news is that there has

been an incredible shift in investors' mindset on the value of design. And so even the people that leaders are sometimes beholden to, they are now getting it in a way that 10 years ago, trust me, they didn't. Because we met with them and they rejected us, because they didn't understand the value of design. But I feel like we, along with many of our contemporaries, have proven that design is a differentiator, that design can help you expand your business, that design is a critical component.

**One last question: How would you design, say, an IPO differently?**

We'll leave that one on the whiteboard. It's up to somebody else to rethink that whole process. ■