

# The IDEO

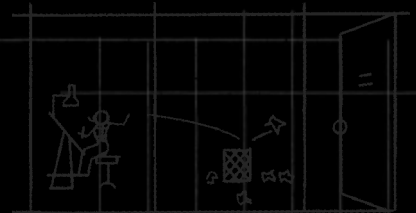
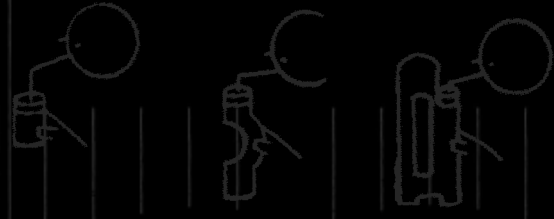
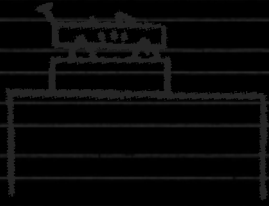
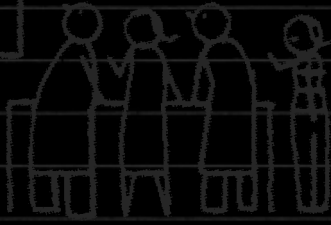


**Brainstorming, prototyping, storytelling:  
Leading design firm IDEO is rewriting the rules of  
business creativity through a culture of continuous  
innovation—and teaching others to do the same.**

**By Catherine Fredman / Illustration by Laurent Cilluffo**

## Difference

YOU MAY NOT KNOW IDEO'S NAME, BUT THE 24-year-old design firm is credited with envisioning and implementing a staggering list of products and services in a wide variety of fields. The Palo Alto, California, company's impact on the world of product innovation is akin to Tiger Woods' success in professional golf and Microsoft's clout in personal computing. ¶ Its creations range from the first commercial mouse (for Apple Computer) to the innovative Grid laptop computer, from the first standup toothpaste tube (for Procter & Gamble's Crest) to the first robotic whale (for the movie *Free Willy*). Add to that list portable defibrillators, self-sealing sports water bottles, the Palm V organizer, and Oral-B's Squish Grip children's toothbrush. ¶ As the company has moved into the creation of services and ►



consumer experiences, IDEO has designed the patient-friendly DePaul Health Center emergency room in St. Louis, Missouri, worked with famed architect Rem Koolhaas of the Office for Metropolitan Architecture (OMA) to create the invisible technology at the innovative Prada “epicenter” facility in New York City, and even helped McDonald’s cut in half the number of steps in its “Made for You” food-service process (while inventing a toaster that browns buns in 15 seconds).

This summer, when *BusinessWeek* published its acclaimed Industrial Design Excellence Awards (IDEAs), the design firm blew away the competition with a total of 14 awards. The publication termed IDEO’s achievement “astonishing.” But what is truly astonishing is that these honors have extended a 10-year winning streak totaling 58 awards—almost double that of the nearest competitor.

Companies like McDonald’s, Pepsi-Cola, and Steelcase International come to IDEO for advice because of the design firm’s unique approach to innovation. “But,” says IDEO President Tim Brown, “until innovation reaches the marketplace, it’s of no value to business. We put things out into the world.” Adds Steelcase CEO Jim Hackett, one

of many admirers: “IDEO can take raw ideas from concept to market faster than any other company I’ve seen.”

Essentially, IDEO is a creativity factory. About 350 people working in a network of offices stretching from San Francisco to London to Tokyo pump out more than 100 new products each year. The firm helped design Polaroid’s I-Zone instant camera, the interiors of Amtrak’s Acela high-speed trains that run between Washington, DC, and Boston, and Steelcase’s Work/Life Center in New York City, an interactive theme park and exhibition hall of office furniture and work settings.

General manager Tom Kelley describes the process that generates, identifies, and implements appropriate ideas in his best-selling book *The Art of Innovation*. But, he’s quick to say, “The magic is not in the steps of the ‘what’; it’s over in the ‘how.’ If ‘what’ is the methodology, then ‘how’ is work practices.”

Take one of the first and most important steps in the process: understanding and observing. One of the favorite sayings at IDEO is “Innovation begins with an eye.” The firm tends to see things differently because it literally sees different things than what focus groups and

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**IDEO Secrets for Successful Brainstorming** / While IDEO has raised brainstorming to an art form, it’s also a skill that can be taught and improved anywhere, as explained in Tom Kelley’s *The Art of Innovation*. **Sharpen the focus** / Good brainstorming sessions get off to a better start if you have a well-articulated description of the problem at the right level of specificity. For example, a topic like “spill-proof coffee cup lids” is too narrow a description and already presumes you know the answer. A better, more open-ended topic would be “helping bike commuters to drink coffee without spilling it or burning their tongues.” The best topic statements focus outward on a specific customer need or service enhancement, such as “How can we accelerate the time-to-first-result for customers searching via dial-up modem?” rather than inward on some organizational goal, such as “How can we build a better search engine than Company Y?” **Have playful rules** / Critiquing or debating ideas can quickly sap the energy of a session. Many IDEO conference rooms have brainstorming rules stenciled in 6-inch-high letters on the walls; for example, “Go for quantity,” “Encourage wild ideas,” “Defer judgment,” or “One conversation at a time.” When the discussion veers off course, the facilitator

other conventional forms of market research typically turn up.

“The popular notions of the last decade were for companies to become customer-centered,” says Steelcase’s Hackett. “Theories abounded that if you paid attention to what your customer wanted, you couldn’t go wrong. But the truth is that customers often ask you to do wrong things, not because they’re difficult to deal with but because they just don’t know better. The distinction is moving from customer-focused to user-centered, and the ability to understand the users of their products is a cultural shift that corporations have to make.”

Being user-centered is a skill IDEO hones by employing teams of experts in human factors—anthropology, ethnography, psychology—to observe how people actually use a product or approach a problem, whether it’s a diabetic taking a daily dose of insulin, a work team huddled around a flip chart, or a person buying a can of Pepsi.

Recently, Pepsi called IDEO in to take a fresh look at vending. “We came at it from an operational standpoint: What can we manufacture?” recalls Megan Pryor, vice president of innovation at Pepsi-Cola. “They came at it

from: What do consumers want from a vending machine? They spent hours watching people interact with vending machines. Consumers would never have verbalized ‘I want bigger buttons,’ ‘I want to see my product,’ or ‘I don’t want to reach into that dark hole in the bottom and not know what’s down there.’ IDEO’s method is good for figuring out what consumers want when they don’t know what they want.

“IDEO does a remarkable job of taking observations and turning them into opportunities and, eventually, innovations,” Pryor concludes. “It takes traditional packages that have existed for decades and gives them new life through improved functionality.”

Observations get turned into ideas that can lead to innovations at brainstorming sessions. Brainstorming is practically a religion at IDEO; Kelley calls it “the idea engine” of the company’s culture. These sessions are where IDEO’s creativity is most evident, but they’re also a manifestation of what can be achieved with the right methodology. The firm puts into practice Nobel Prize–winner Linus Pauling’s oft-quoted belief that “The best way to get a good idea is to get a lot of ideas.” ▶



simply points to the rules. **Number your ideas** / Numbering the ideas that bubble up in a brainstorming session helps in two ways. First, it’s a tool to motivate the participants before and during the session or to gauge the fluency of a completed brainstorm. Second, it’s a great way to jump back and forth from idea to idea without losing track of where you are.

**Build and jump** / High-energy brainstormers tend to follow a series of steep power curves, in which momentum builds slowly, then intensely, then starts to plateau. In the coffee-drinking-while-bicycling example, a good “building” suggestion to keep up the momentum might be: “Shock absorbers are a great idea; now, what are some other ways to reduce spillage when the bicycle hits a bump?” By contrast, when discussion tapers off, a good “jump” transition statement might be:

“Let’s switch gears and consider totally ‘hands-free’ solutions that allow the cyclist to keep both hands on the handlebars at all times.” **The space remembers** / Spatial memory is a powerful tool. Have the facilitator write the flow of ideas down in a medium visible to the whole group. IDEO has had great success with extremely low-tech tools like Sharpie markers, giant Post-its for the walls, and rolls of old-fashioned butcher-shop paper on the tables and walls. You ▶

It's not uncommon for a 60-minute brainstormer to yield more than 100 ideas. The assumption is that brainstorming is a skill that gets better with practice. The company has figured out how to teach people to be better brainstormers and what to avoid that would kill a brainstorm.

If brainstorming gets people dreaming, then rapid prototyping gets them doing. "Prototyping is the shorthand of innovation," Kelley comments, noting that a countless number of good ideas got their start from doodles, drawings, and cobbled-together models. The idea is that if a picture is worth a thousand words, then a good prototype is worth a thousand pictures. The firm's philosophy is "build to learn," a process that includes acting before you've got the answers, taking chances, stumbling a little, and, along the way, figuring out solutions to the many small problems so that eventually you have the solution to the largest one. Says Brown, "The discovery that Thomas Edison made is that you innovate by iterating quickly, by having lots of prototypes. Prototyping allows you to learn from risks almost immediately." Adds Steelcase's Hackett, "You get a sense of the performance range of a product that teaches you more about the idea

than a thousand hours spent intellectualizing it." Or, as an IDEO slogan puts it, "Fail often to succeed sooner."

Kelley tells a story that illustrates the companywide willingness to "fail forward." An employee came back from his first-ever ski trip and boasted to his team at its Monday morning meeting that he had skied for three days and never fallen down. "He expected them to pat him on the back. Instead, people heckled him, saying, 'If you didn't fall down, you never pushed the envelope. You established a comfort zone and stayed in it.'" The lesson: You can get very good at the old status quo, but the state of the art moves on and eventually you will lapse into obscurity.

What fuels the creativity engine is the ingrained belief that ideas are not meant to be hoarded. IDEO spends a lot of time figuring out how to share knowledge across the company, among the managing partners, and out to the companies with whom it works. "Some organizations rely on big databases to disseminate information," says Brown. "We disseminate our knowledge through stories." Storytelling isn't limited to routine Monday morning meetings; Brown estimates that at the quarterly roundtables among IDEO's 20-odd studio heads worldwide, half the time ▶

PHOTOGRAPHY / FAR LEFT: HIDEOTOYO SASAKI / FOURTH FROM LEFT: COURTESY STEELCASE



may find there's a certain synergy in physically moving around the room writing down and sketching the ideas. When you return to the spot on the wall where an idea was captured, spatial memory will help you recapture the mindset you had when the idea first emerged. **Stretch your mental muscles** / Doing mental warm-up exercises will make your brainstormers more productive, especially if the group doesn't brainstorm frequently or when the group seems distracted by outside issues. One type of warm-up is a fast-paced word game used to clear the mind and get the team into a more outgoing mode. Another is to do content-related homework. Yet another is to bring show-and-tell items to help you visualize the wide variety of options and materials that could be applied to the session's topic. **Get physical** / Good brainstorms are extremely visual. They include sketching, mind mapping, diagrams, and stick figures. But they also extend to bringing in competitive products and elegant solutions from other fields, having materials on hand to build crude models of a concept, and even "bodystorming," in which people act out current behavior and usage patterns to see how they might be altered.



is dedicated to sharing stories about projects or the best business practices. “People hold stories in their heads better than other forms of information,” he says.

There are also Friday afternoon show-and-tell sessions to which everyone is invited, characterized by the sharing of a team’s work at different phases in its projects. These meetings are marked by the emptying of the Tech Box, a huge filing cabinet filled with high-tech toys that aid in the communication of new concepts. “It’s a way of physically manifesting the latest ideas, the things we could use in day-to-day work,” explains Kelley. Many of IDEO’s regular clients now have either physical or virtual Tech Boxes of their own.

Tech Boxes, storytelling, visualization, and brainstorming were at the heart of the company’s development of a more inviting and efficient emergency room at the DePaul Health Center. “We were missing radical creativity,” says health center President Bob Porter. “IDEO’s methodology helped us create a dramatically different approach to how we treat our patients.”

What keeps the design firm’s tools honed is the philosophy that everything can be improved. “The theory

IDEO espouses is that regardless of the category you compete in or the products you’ve had for long cycles, there are always ways to innovate those products so users have a better experience and greater enjoyment of them,” says Steelcase’s Hackett, who saw IDEO take whiteboards and flip charts, a category that “didn’t seem to have a real future of change,” and come up with a portable and erasable writing surface called a Huddleboard Marker Board—“a conference room on-the-go, helping knowledge workers huddle together in impromptu meetings anywhere.”

IDEO is teaching companies how to adapt their processes to achieve their own innovation goals. “The notion of being a strategic partner in innovation services is genuinely new,” says Tom Peters, author of *In Search of Excellence*. “I don’t know of anyone else as focused on transferring their own design knowledge and processes to other organizations. And I don’t know of any organization that couldn’t benefit from IDEO-ing itself.” /END/

**Catherine Fredman** collaborated with Maria Bartiromo on the book *Use the News* and with Intel’s Andy Grove on his memoir *Swimming Across*.



**Six Ways to Kill a Brainstormer / The boss gets to speak first** / If the boss gets first crack, then he or she’s going to set the agenda and the boundaries, and your brainstormer is immediately limited. **Everybody gets a turn** / Going clockwise around the room may be democratic, but it’s not a brainstormer. **Experts only, please** / Don’t be an “expert” snob. Bring in someone from manufacturing who knows how to build things. Invite a customer service rep with lots of field experience. They may not have the “right” degrees, but they just might have the insight you need. **Do it off-site** / While off-site brainstorming sessions are fine, you want to foster the buzz of creativity so that it blows through your offices as regularly as a breeze at the beach. **No silly stuff** / It’s hard to overestimate what flights of fancy do for a team. They remind everybody that brainstormers aren’t like regular work, that anything goes, and that you can have a lot of fun while you solve the problems. **Write down everything** / Taking notes shifts your focus to the wrong side of your brain. It’s like trying to dance and type on your laptop at the same time. Sketch all you want, doodle to your heart’s delight, but leave the note taking to the designated note taker.