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ICONIC DESIGN

We asked six leading industrial designers to tell us which products inspired them. The breadth of their choices was unexpected.

Introduction by Alan S. Brown

When we first see a product, there is something in its shape that conveys an unspoken promise. The ladder will be sturdy. The sofa will be comfortable. The scissors will be sharp.

Products become icons—the version that essentially defines the category—by perfectly matching form with function. They not only make a promise, they deliver.

Take, for example, the Harley-Davidson. It defines our image of a motorcycle because it is as powerful and as fast as it looks. Similarly, Bang & Olufsen's minimally elegant stereo system is part of the New York Museum of Modern Art's permanent collection, but the music that came out of it was heavenly because engineers built it around psychoacoustic principles. The iPhone may look like a featureless slab, but its apps offer virtually limitless functionality.

On a more mundane level, Henry Dreyfuss' circular design for Honeywell reshaped our ideas of how a thermostat should look and behave. Dreyfuss, a pioneer of industrial design and a founder of the Industrial Design Society of America, influenced generations of American designers by his ability to integrate form and function.

Another example is his 1936 Hoover 150 vacuum cleaner. Dreyfuss covered an exposed motor with a Bakelite hood, creating a streamlined style that consumer products have recreated for decades. Yet he also made the vacuum lighter and easier to maneuver by using lightweight materials and redesigning the dust bag to be less intrusive.

Dreyfuss designed scores of other products, ranging from the modernist 20th Century Limited locomotive to Western Electric's 302 and Princess telephones. Most would call them iconic designs that, in their time, exemplified their category as completely as the iPhone defines smartphones today.

Yet when we asked six top industrial designers to tell us about an iconic work that influenced them, the results were quite unexpected. While some picked classic iconic designs, others chose products that spoke to them more personally.

What their responses show, perhaps, is that industrial designers, like engineers, find sources of inspiration everywhere, from classic exemplars to frisky new products that give them insights into design problems they are grappling with today.

HERMAN MILLER AERON CHAIR

CHARLES AUSTEN ANGELL

CEO, Modern Edge Inc.

Chair, IDSA Board of Directors

An icon is something that people see as a seminal example of that category. It might be the first, like the Xerox copier, or the best, like the iPhone. For me, it's the Herman Miller Aeron Chair. Mention it, and even people who haven't used it know what you're talking about.

Although it has a distinctive aesthetic, the Aeron Chair transcends the sculptural elements that people associate with design. The best designs have great aesthetics, plus human-centered functionality, mechanical excellence, and market impact. They bring them together in ways that define their category.

When you look at the chair, the mesh fabric gives it a feeling of lightness that is balanced by a kind of aggressive black coloring. It looks sleek, modern, and powerful. This aesthetic makes a promise of how it will perform, and its quality and mechanics live up to that promise.

The chair doesn't feel cheap when you sit on it. The mesh is cool on your backside, and doesn't warm up. It has an array of controls for height, tilt, lumbar support, posture, and arm rests that were placed so you can easily adjust its contours to meet your body the way you like it. It is an incredibly comfortable chair to sit in for long periods of time.

The Aeron Chair was truly a great industrial design project. The designers, Bill Stumpf and Don Chadwick, spent two years experimenting and building hundreds of prototypes. That is the type of refinement that rarely comes out of a time-driven corporate program.

The result is a much higher level of human-centric design that keeps whispering in the ears of anyone who will listen. It has influenced me and continues to influence many young designers. If we remember that design is a social act and that we must put people at the center of the design problem, then we are already half-way to a solution.





CINELLI ROAD BICYCLE

DON CHADWICK

Principal, Chadwick Studio
Designer of the Aeron Chair

Before Bill Stumpf and I collaborated on the Aeron Chair, we worked together on the Equa Chair, also for Herman Miller. The Walker Art Center in Minneapolis featured the chair in its *Design Quarterly* magazine and included it in an exhibition. We both attended the exhibit, and there were lots of great designs there.

The one that really stood out was a red Italian road bicycle made by Cinelli. Talk about interactive! For us, it was pure design, in terms of a minimal structure that provides a maximum benefit to the user.

Everything about it was so beautifully made and so perfectly detailed. The frame was fairly lightweight, and stiff so that it could transmit power from the pedals to the wheels efficiently. All the components—the shifts, gears, and brakes—were made by Campagnolo, which had a reputation for beautiful and very precisely

machined components. The fit and finish were perfect, right down to the joints that held the frame together.

We loved how its form followed function. That bike was reduced to a minimum of parts, only what needed to define a structure and provide the user with a perfectly adjustable tool to ride on. It really influenced some of our decisions about the Aeron Chair.

For example, we tried to use the minimum amount of material to achieve the maximum level of adjustment and comfort. Many of the chair's adjustments were actuated through a cable system. I think we were one of the first to use exposed cables in office chair. It was taken right off the bike. We wanted to celebrate the chair's functions, and we did that by leaving the cables exposed.

We were looking for a chair that would satisfy the requirements of people spending long hours in front of a computer, and were surprised how such a highly focused chair migrated into law offices, banks, and corporations.

ARROW HART COMMERCIAL ELECTRICAL RECEPTACLE

MATTHEW MARZYNSKI

Fluke Corp.

Industrial Design Manager

When I was young, I learned an important lesson when I was asked to redesign a commercial electrical receptacle. I thought my job was to make it look good. What I learned is that commercial receptacles are really all about their interaction with the installer.

For example, most commercial receptacles have colored side connection screws, gold for black wires, the chrome for white. Electricians can unloosen the screws with either standard or Phillips screwdrivers. The screws do not come out all the way, so you can't drop them on the floor.

That's not the only way to attach wires. You can also stick them into holes on the back, where a one-way spring grabs them so they won't pull out. On the back of the receptacle, a plastic channel shows the exact length to strip the wire so you leave no exposed metal when you insert it into the hole. There is also a square hole to unlock the spring in case you made a mistake.

The receptacle has attachment stubs with a screw holes on both ends. Each stub has a pair of rabbit ears on either side to fit oversized electrical boxes. If the ears take up too much space, there is a gap between them and the stub so they bend off easily. These spaces are sized so the installer can use them it to strip insulation off the two most common wire gauges, 12 and 14.



Think of how much they cram into this thing. Once done, it gets shoved into an electrical box and you may never see it again. That's what makes it an unsung hero of industrial design.

The thing I learned is that every object has to function within its universe. By looking deeper than the surface, by understanding how it served contractors who want to get in and out of a job fast, it became a lesson in empathy, engineering, design, and value.

XOOTR

MARK DZIERSK

Managing Director, LUNAR Chicago

Past President, IDSA

I've been an industrial designer for 30 years, and I have a lot of favorites. One of them is the Xootr, designed by LUNAR well before I joined the firm. The Xootr is a high-end scooter. Six months after it came out, Razr came out with a low-end scooter that was a smash, but Xootr remained the gold standard in adult scooters.

The Xootr is a beautiful machine. It has a machined aluminum or magnesium body, with a large platform that fits an adult. Its large-diameter 180 millimeter polyurethane tires and nearly frictionless ball bearings let you scoot a whole city block with just a few pushes. It also has a hand

brake to slow you down, because you could reach 15 miles per hour if you push off a gentle hill.

The Xootr answers my problem of how to commute to my office in Chicago. I take a train from the suburbs, but my office is more than a mile away from the station and taxis are expensive. The Xootr is actually a transportation device that fills the white space between walking and taking a cab. It folds up so I can take it on the train, and I can unpack it and scoot to the office without working up a sweat. You could never do that on a Razr, you'd look like an idiot.

Xootr brought scooters back to life after a hiatus of 30 years. It made me realize that everything old could be new again. All you had to do is find the white space. Scooters were a kid's toy, and Razr picked up on that. But Xootr was actually a transportation device, and that was new and different.





ZÜCA BAG

MARIANNE GRISDALE
Creative Manager
TEAMS Design USA Inc.

Not so long ago, none of our luggage had wheels. Wheels were rejected because people said they were not cost effective. When someone finally introduced wheeled luggage, our first thought was, “Duh!” It was so simple, and it was amazing that it took so long.

Then designers added wheels on all four corners— spinners—so you could walk with upright bags instead of bearing all the weight in one hand. The latest innovation is the Züca, which is like a mini-locker on wheels. It has a sturdy, lightweight aluminum frame that can seat an adult. It also has two sets of two large wheels on the back. They make the bag easy to roll, and you can pull it up a staircase with no problem, though they also make it too big to fit in an airplane overhead bin.

I used to figure skate when I was younger. A majority of figure skaters are kids, and they’re always tossing their skate bags in and out of trunks and lockers. Those skates cost \$1,200 to \$1,500. So when I started to skate again, I wanted a bag to store and protect my skates, and Züca’s welded metal frame offers a lot of protection.

You can customize Züca with compartments to hold the type of things you might carry to rink. It works like a rollable mini-locker. That’s why they are used by everyone, from students with lots of books to makeup artists that need to carry all their supplies with them. The first time I used it, I wondered why someone didn’t design something like this for me when I was a kid.

Züca inspired a cart I have been working on. It led me to consider combining something durable that suggests quality, like welded steel, with fabric elements that reduce weight, eliminate pointy edges, and give it a softer, friendlier appearance.

NEST LEARNING THERMOSTAT

TAD TOULIS

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After Apple, designers are pushing harder to blend the geometry of an object with user interaction. The Nest thermostat is a great example of this post-Apple integration of mechanical design with digital technology. That makes sense, because it was developed by Tony Fadell, who led Apple's iPod and iPhone teams, and Frank Bould, whose designs incorporate an engineering aesthetic.

The Nest design picks up on what we think a thermostat should look like. Like Honeywell's iconic thermostats, it has a round dial that we set by rotating the ring where we want it. Nest adds more complex functionality by tethering this mechanical function with digital navigation. By pressing and turning the dial, you can navigate all sorts of menus, blending the mechanical and the digital.

The result is very elegant and practical. You dial the temperature you want, and over a week, the Nest calculates your preferences automatically to set household temperatures. It senses when you are not home and turns down the heating or cooling. It also uses wireless technology to communicate with remote temperature sensors in other rooms and with your smartphone.



Connecting an intuitive analog device to digital content is a really powerful idea. I drive a Toyota Prius hybrid, and the first time I pressed the start button was a pivotal moment for me. Some purists might prefer a key, but being able to start my car with a button, like a sophisticated piece of consumer electronics, said to me, "This is a different kind of car."

In my own work, I'm dealing with how to take mechanical precedents and digitize them in rational ways so that they are more than the sum of their parts. We only want to add digital behavior to augment what we're trying to do, so we can do things that couldn't be done otherwise. **ME**