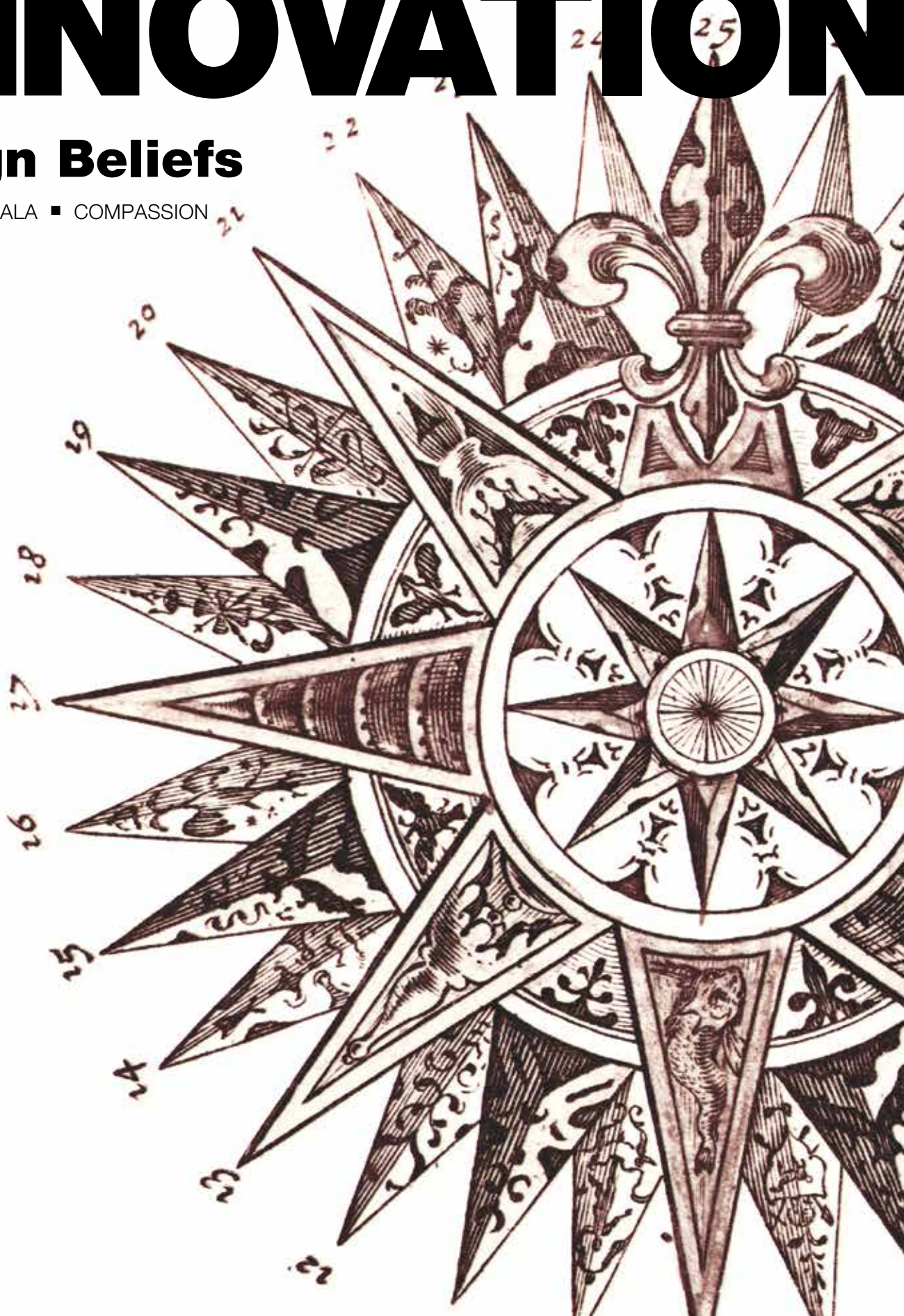


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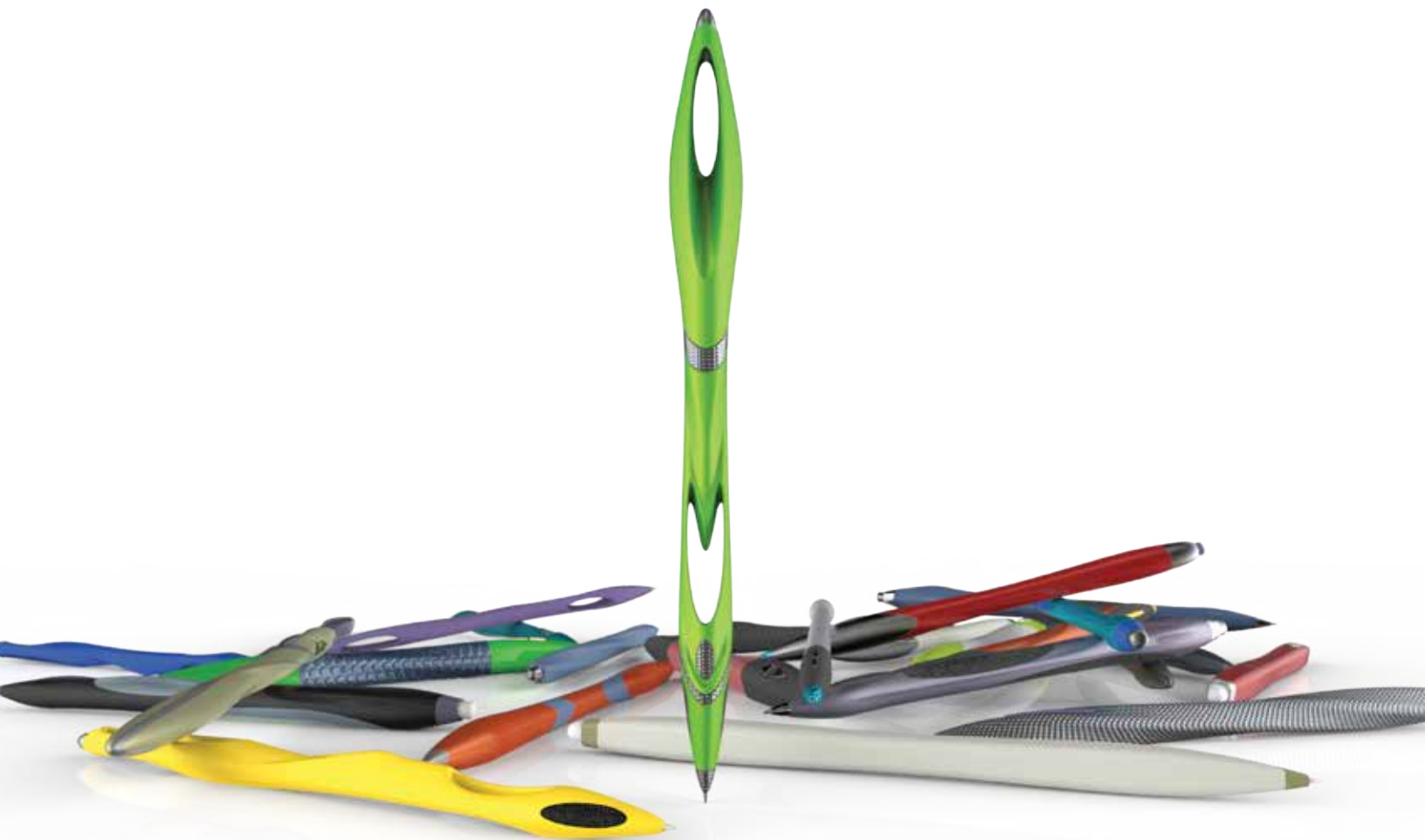
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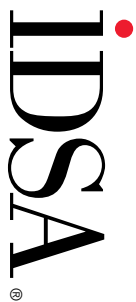
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The quarterly publication of the Industrial Designers Society of America (IDSA), *Innovation* provides in-depth coverage of design issues and long-term trends while communicating the value of design to business and society at large.

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Left: This is one of Steve Frykholm's favorite photos from the Herman Miller archive. In 1962 Charles and Ray Eames won the competition to design the seating for Chicago's new O'Hare Airport. As well as pictures of the product in use, they also took this spontaneous and whimsical photo. See p. 46.



Cover photo: 17th-Century Drawing of a Compass Rose by Blaeu/Corbis Images

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FROM THE EDITOR

WILLINGLY ACCEPT CONSTRAINTS

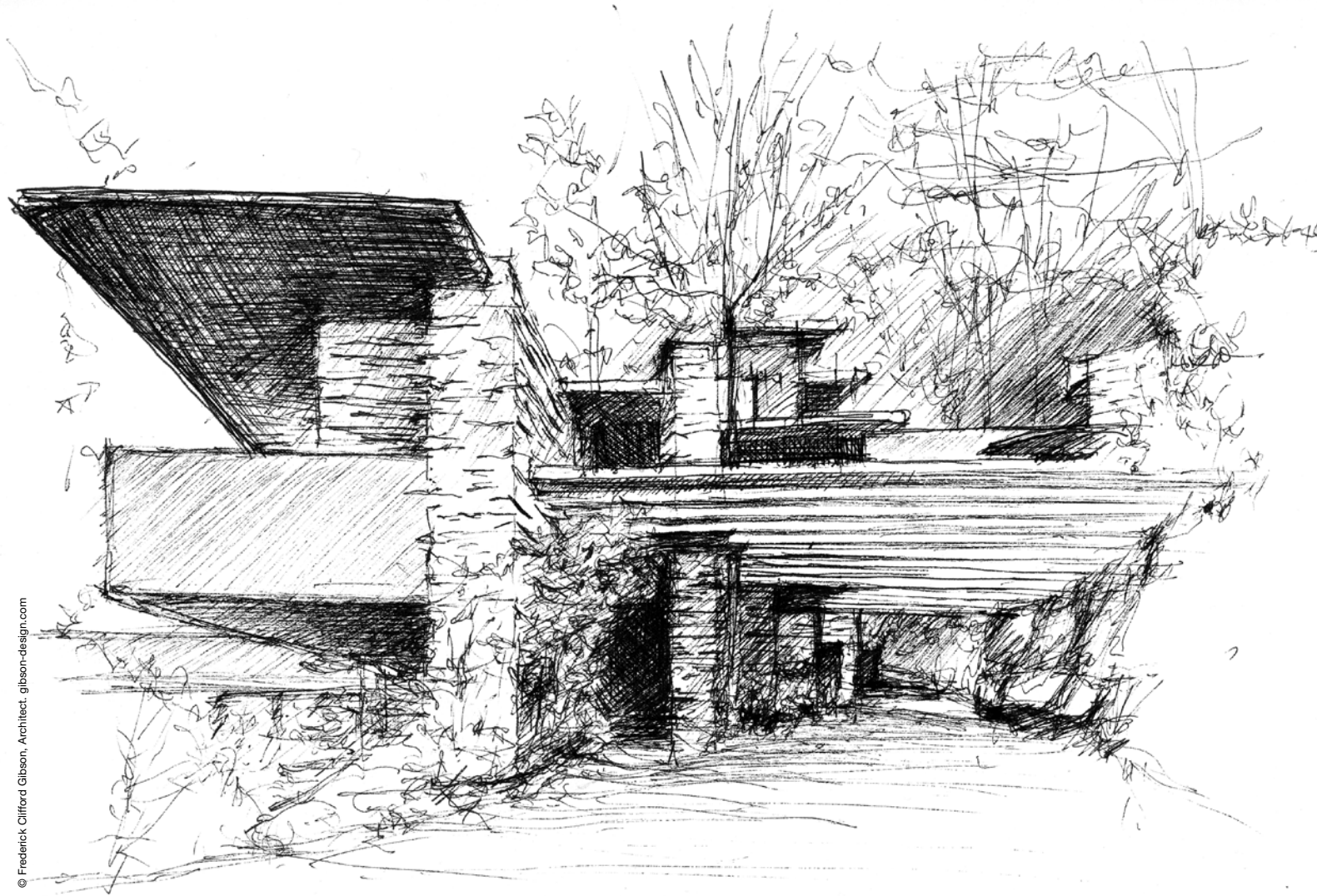
Design is often acknowledged as an independent and free-spirited world where the mind can do amazing things in a space without limits, a place where creatives can develop new and original ideas from nothing. The phrase “creative freedom” is usually thought to be music to a designer’s ear, and empowers the thought process, enabling the designer to consider all possibilities in an open landscape. It can be widely assumed that innovators embrace the unknown and do their best work when the limits are boundless and the potential wide open. People often think the greatest innovations come from a special place where a brilliant mind, or minds, working free from constraints suddenly achieves an aha moment and—poof—out comes a new invention. Certainly we can name many of the great design innovations that have resulted from this process. Or can we?

Did Thomas Edison work this way? Maybe Charles and Ray Eames? Actually, they did not. As counterintuitive as it might seem, innovation comes from a world of paradox—a world where it is constraint that sparks the genius of the designer, where the pressure of limits and demands provides a combustible combination of direction and inspiration. Take for example the Eames’ classic *Powers of Ten* movie, which in 15 minutes describes the relative size of all things in the known universe. It demonstrates the infinite inspiration that can be drawn from reviewing our universe with the lens of increasing and decreasing powers of 10. The constraint (or construct) of this telescoping perspective makes this remarkable movie and design achievement possible. Charles

Eames was known to call constraints “liberating.” Yahoo CEO Marissa Mayer agrees; writing for a business journal recently she concluded, “Constraints shape and focus problems, and provide clear challenges to overcome as well as inspiration. Creativity loves constraints, but they must be balanced with a healthy disregard for the impossible.”

Herman Miller has developed and follows a set of 10 tenets for design that it believes increases innovation. The lasting success of Herman Miller suggests that great innovation comes from the tension between a well-developed set of constraints and the limitless creative mind. In fact, designers not under the Herman Miller umbrella also believe that design constraints provided by the company improve results. In 1977, Nicholas Grimshaw, an architect, discussed the recently completed Herman Miller manufacturing facility in Bath, England. According to him, the excellence of the facility could never have been achieved without the poetry and constraints in the design brief provided to him by Herman Miller. The building was recognized by the *Financial Times* as the best industrial building of the year. Frank Lloyd Wright, one of the world’s greatest architects, also observed this phenomenon at work in the world: “Man built most nobly when limitations were at their greatest.”

In the last decade we have seen Samsung push its design and innovation to new heights. Its new design campus in Korea is a major capital investment in the belief in design and its relationship to innovation. The company did not make these improvements in a vacuum. Samsung has



“In art, truth and reality begin when one no longer understands what one is doing or what one knows, and when there remains an energy that is all the stronger for being constrained, controlled and compressed.”

—Henri Matisse

“I think frugality drives innovation, just like other constraints do.
One of the only ways to get out of a tight box is to invent your way out.”

—Jeff Bezos

imposed constraints on itself in the form of design criteria: that design and innovation should be simple and intuitive, efficient and long-lasting, and adaptive and engaging. IBM also innovates within a self-imposed structure of constraints used to drive design. The company considers it “a framework for the freedom to act.” Virgin Atlantic does not have a specific design process, but it has instituted a structure to ensure that the constraints of time and budget are always met.

Crown, the award-winning forklift manufacturer, leads the industry through a commitment to design innovation. It does so through an approach that focuses on the human-to-forklift relationship. Crown’s innovation comes from designing within the constraints presented by the human operator. Through advanced research and a dedicated focus on the capabilities of operators, the company is able to create the most advanced ideas for operator productivity and safety and product lifespan. Crown sets the industry standard for the highest capacities and productivity speeds.

In addition to company success, singular examples of great design in response to constraint can be found everywhere. The Leveraged Freedom Chair is an excellent example. Amos Winter, assistant professor in mechanical engineering at MIT, wanted to tackle the problem of wheelchair design for the developing world, especially in rural areas. After speaking with organizations working to provide wheelchairs, he became aware of the following constraints: the final product must be sold for under \$200, it must travel up to 5 kilometers a day on varied terrain, it must be usable indoors, and it must be locally repairable. The big innovation in the Freedom Chair is the lever system. Rather than propelling themselves by rotating the wheels, users move forward, up and over difficult terrain with the two hand levers. Torque and angular velocity are controlled by grabbing the levers at different heights. He also created very simple chair

assembly from single-speed bicycle parts that you can get anywhere. The Leveraged Freedom Chair met seemingly impossible constraints, revolutionized the wheelchair and has greatly improved the lives of all who use it.

By imposing constraints on wheelchair design, Winter was forced to rethink wheelchair technology that had basically gone unchallenged for over 100 years. Herman Miller, like Winter, realizes that a rational structure for design actually propels innovation forward. Constraints do not have to be obstacles, but can in fact provide a launching pad for creative thought and direction. It is as much about one’s attitude toward the things that seem restrictive as the restrictions themselves. If seen as obstacles or innovation killers, then the designer’s mind will most likely feel restricted, blocking the flow of creative ideas. If embraced as guidelines and unique challenges to provide focused inspiration, the designer’s mind will remain open. Eames knew this: “I don’t remember being forced to accept compromises, but I’ve willingly accepted constraints.”

This issue of *Innovation* is organized around interpretations of Herman Miller’s 10 tenets, expertly assembled by Herman Miller’s director of insight and exploration, Gretchen Gscheidle, IDSA. Gretchen has gathered a remarkable collection of content, given the need to work within the varied and tight schedules of the many authors and the additional constraint of *Innovation*’s Winter deadline. *Innovation* is very grateful to Gretchen and to Herman Miller for this effort, and for publicly sharing these tenets, really for the first time, to a wide audience. In addition to the viewpoints the writers experienced in acting on these constraints, *Innovation* asked young designers to evaluate each ideal from their point of view. We hope you enjoy this juxtaposition. Who knows, perhaps in this mix of young designers lives the next Charles Eames—willingly accepting of and inspired by constraints.

—Mark Dziarski, FIDSA, *Innovation* executive editor
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By Gretchen Gscheidle, IDSA

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Artist, scientist, student, teacher, optimist, realist—Gretchen Gscheidle, IDSA wears all these hats and many more in her role on Herman Miller's R&D leadership team as the director of insight and exploration. She has one of the best jobs—and coolest titles—in the company.

WHAT ARE YOUR DESIGN BELIEFS?

TENETS OF DESIGN

- 1 HUMAN CENTERED**
WE DESIGN FOR PEOPLE
- 2 PURPOSEFUL**
DESIGN SOLVES A PROBLEM
- 3 INTEGRITY**
EVERYTHING RELATES TO THE PROBLEM
- 4 ORIGINAL**
WE DON'T COPY
- 5 APPARENT QUALITY**
THE QUALITY OF OUR WORK IS EVIDENT
- 6 SUSTAINABLE**
ALWAYS PROTECT THE ENVIRONMENT
- 7 BEAUTIFUL & USEFUL**
DO PEOPLE WANT WHAT WE MAKE?
- 8 SPIRITED**
DOES IT SAY "HERMAN MILLER?"
- 9 BEYOND EXPECTATIONS**
PRODUCE SURPRISE & DELIGHT
- 10 INEVITABLE**
THIS IS THE WAY IT HAS TO BE

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We all have an inner compass, developed over time, that helps us decide what is right (or wrong) for us as individuals. Our compasses may be influenced by other people, but they are uniquely our own. Organizations have them too; sometimes they're called tenets. A tenet, according to Merriam-Webster, is "a principle, belief, or doctrine generally held to be true; *especially* one held in common by members of an organization, movement, or profession." At Herman Miller, we apply our design tenets to almost everything we do: products, communications, buildings and interiors, hospitality and experiences.

Some years ago, I shared with *Innovation* a glimpse inside the Herman Miller culture on a somber note; after Bill Stumpf, IDSA died in 2006, I wrote a tribute for these pages. Stumpf was a mentor and friend whose passing led me windingly down a path to meeting people who in time became new mentors and friends, including Mark Dziersk, FIDSA (who invited me to be guest editor for this issue) and Joe Schwartz (executive emeritus at Herman Miller and one of my invited authors). All three helped prepare me in different ways for my current role leading the insight and exploration team in Herman Miller's R&D organization.

That is not my only role in the company; I'm also a Watercarrier, an honor reserved for those who have reached 20 years of employment. Tribal water carriers are responsible for one of the body's and spirit's most basic elements. Our corporate Watercarriers are charged with mentoring newcomers and sharing our tribal stories and heritage. I'm proud to be a Herman Miller Watercarrier and an active contributor to our rich design heritage. The Watercarrier spirit of storytelling motivates me to present our design tenets to you and the resulting view of our corporate culture at Herman Miller.

Recognizing a need to be clear about our view of design, six colleagues combed the archives a year or so ago and curated a master list of 10 qualities of good design that has come to be known internally as the Herman Miller Design Tenets. They are the sum thinking of our collective design brain trust, including Gilbert Rohde, George Nelson, FIDSA, Charles and Ray Eames, Alexander Girard, Robert Propst, Stumpf, Herman Miller's founder, D.J. De Pree, and corporate leaders Hugh and Max De Pree. We're grateful for all they entrusted to us, including D.J.'s admonition that "Good design isn't just good business, it's a moral obligation." Think about that. I know Stumpf did, many of us do.



Watercarrier sculpture
by Allan Houser at
Herman Miller MainSite,
Zeeland, MI.

Photos: Herman Miller Inc.

To be sure, Herman Miller has no proprietary rights to any of these tenets. Many people look at design as we do. Together these tenets provide us a clear, consistent view of design that helps us express who we are and gives us a way to measure our work, challenging us to live up to our own standards.

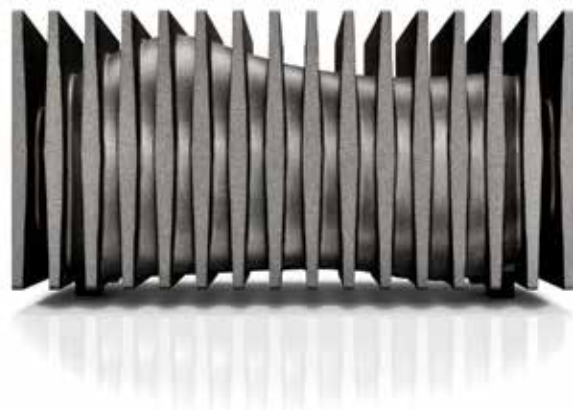
Before this issue of *Innovation*, the tenets have rarely been shared beyond the company walls, generally just with visiting designers. And they resonate! Sharing them with Mark Dziersk, FIDSA was the genesis of this issue; I hope that sharing them with all of you now will be as much about your organization as it is about Herman Miller. Hugh De Pree once questioned how without understanding design we could "communicate the advantages of design to our employees and customers." I ask, what are *your* design beliefs, your tenets? What is your construct for measuring *your* design work?

Using the 10 tenets as a backbone, I invited associates with a place in our company's design story, past or present, to write about one. The guest authors had nothing more to start with than a prompt of what we, corporately, believe best exemplifies that tenet in our organization and a solicitous email from me. Some of the exemplars will be familiar to you; others give a glimpse into a particular part of Herman Miller, such as Marigold Lodge. I trust you'll enjoy and share my appreciation as to where these guest authors, and the accompanying responses from design students and young professionals, take the tenets. And I hope you'll enjoy contemplating these tenets from your own perspective, perhaps formulating ones of your own.

I extend a sincere thanks to Clark Malcolm, a friend and mentor in his own right, and all of my guest authors, including special and poignant recognition for Studio 7.5's Claudia Plikat. Described as 7.5's "moral compass," Claudia died during preparations for this issue. We all miss her. ■

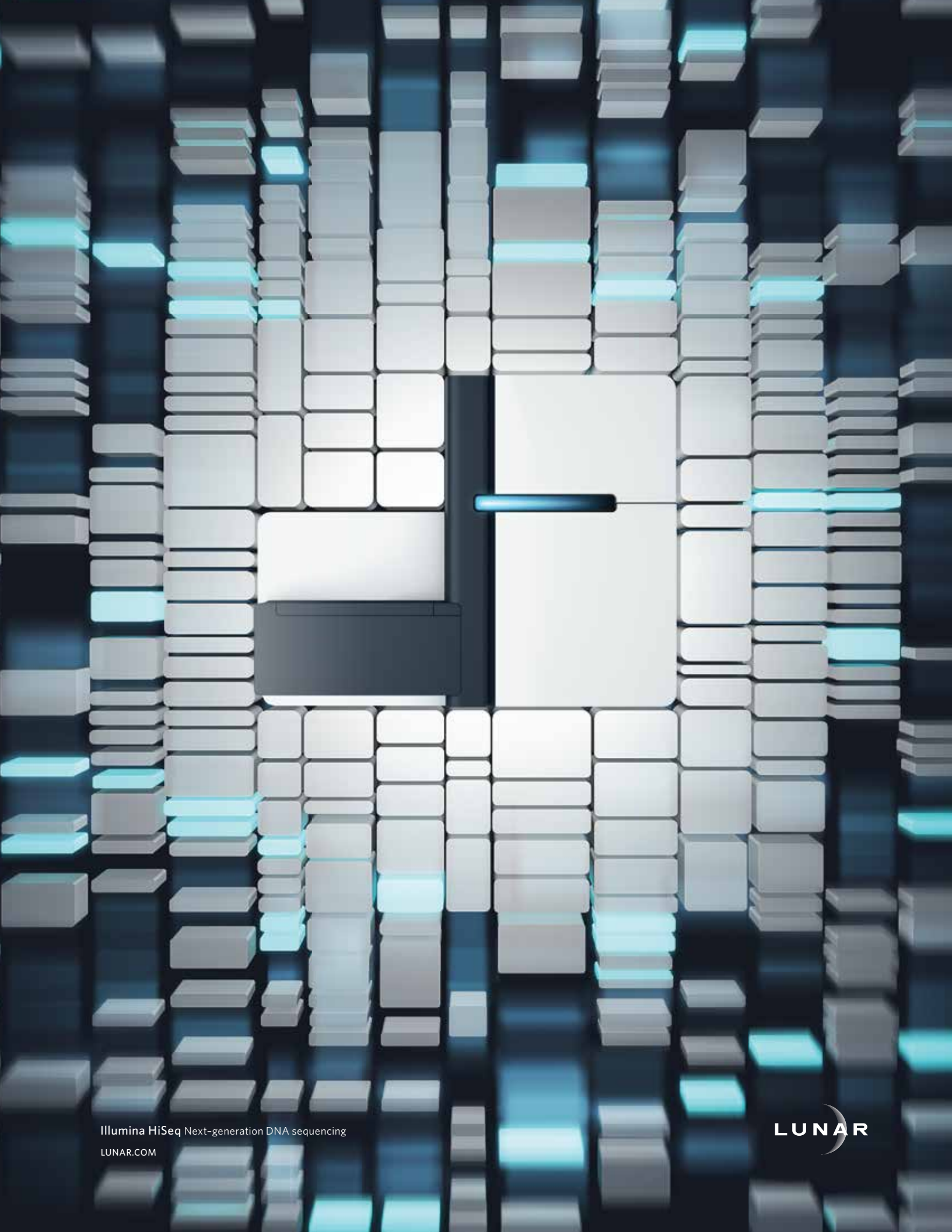


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