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KARTELL'S COMPONIBILI SMILE STORAGE UNITS PAGE 52

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SCHOOL DAYS

Clockwise from top left: VLK Architects celebrates the history of a Houston-area school with a timeline in the hall. The Cascade Spiral Noteboard rounds out a selection of school-friendly furnishings. MD3 Contract's Beetle seating shines in multiple settings. Kornegay Design planters—one of SNAP's outdoor gems.



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Three school buildings featuring active design encourage students to amp up their physical activity.

The School Report



WHAT'S NEXT FOR K-12 SCHOOLS?

Designs that help to encourage physical movement, independent research, and student-led collaborations seem to be driving more innovative floor plans and building materials for primary, middle, and high schools.

Carrie Moore, AIA, a **Skidmore, Owings & Merrill** director who worked on the first net-zero school in the Northeast, caught us up on the design trends and products that she sees gaining traction in education. Surfaces that provide a dual

use such as tackboard walls with an acoustic benefit are among her favorites. Get a glimpse of the future through her eyes on page 16.

Meanwhile, the shrinking role of onsite school libraries has triggered a specific architectural response from **VLK Architects** for a Houston-area public K-5 school. VLK's Richard Hunt led the award-winning design of the 110,000-square-foot A.J. Condit Elementary school in Bellaire, Texas. He explains that school libraries face the possibility of becoming "book museums," unless they're redesigned to dovetail with the technology used in modern classrooms. Read the case study on page 19 to see how his team reimagines a library for the 21st century. Another case study on page 23 shows ways that **Perkins Eastman**'s circular plan for an International Baccalaureate school in Hartford, Connecticut, helped reinforce its curriculum and connect it with nature.

Whatever the brief, you'll find exciting options for building products in the pages of our product section focused on education solutions (pages 33 and 34). Even high-end furniture manufacturer **Kartell** seems to have kids on the brain, with architect **Fabio Novembre**'s emoji-inspired update of its popular Componibili storage units (page 52). It is difficult to resist his Smile.

Keby L. Beamon

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A BID FOR CULTURE The Büro Ole Scheeren-designed Guardian Art Center in Beijing (left) is being billed as a museum despite its commercial anchor tenants. The fabric-and-paint "femmages" of Miriam Schapiro (below) are on view at New York's Museum of Arts and Design.

The Art of Commerce

THE STRIKING NEW Guardian Art Center in Beijing, near the Forbidden City and the National Art Museum of China, appears more civic than commercial. But its clustered basalt stone volumes will contain a luxury hotel, restaurants, transportation hub and the privately held China Guardian Auctions (its owner holds a roughly 14 percent stake in Sotheby's), which paid for the multi-use complex by architects **Büro Ole Scheeren**.

The structure's lower level is made up of nested volumes, which reference Beijing's classic courtyard houses. Panels in its cladding have a pattern of circular glass openings, inspired by a Chinese landscape painting by 14th-century artist Huang Gongwang. A massive rectangle clad in glass panels arranged in a brick pattern, sits atop the stone volumes.

The museum-like gravitas is part marketing strategy: the auction house is openg some preview gallery space to the public, promoting

ing some preview gallery space to the public, promoting that access—amid a complex mix of commercial attractions—as the equivalent of a cultural center. "It is a lot more than just a museum," says Ole Scheeren. "It's not a hermetic institution, but rather an acknowledgment of the hybrid state of contemporary culture."

Appearing culturally sympatico with neighboring traditional architecture, including houses and the ancient imperial palace, was also necessary for getting the building approved by Beijing's planning authority, which rejected 30 previous proposals for the site.

"The building's architecture embeds multiple layers of abstracted cultural and historic notions and captures the complex emotional spectrum of Beijing," Scheeren says. – Justin Chan

Doyenne of Decorative Arts

Late artist and pioneer of decorative patterns Miriam Schapiro is celebrated in an exhibit titled *Surface/Depth: The Decorative After Miriam Schapiro*, at the Museum of Arts and Design in New York City.

Working with mediums as diverse as textiles, painting, and sculpture, Schapiro, who died at the age of 91 in 2015, is perhaps best known for her works of *femmages*, a name she created to describe her collages made from a mélange of paint and sewn or woven fabric which portrayed—and questioned ideas of femininity and women's work. She was often called a pioneer for her role in the 1970s' feminist art movement and notably collaborated with celebrated artist Judy Chicago among others.

The exhibit also includes pieces by nine contemporary artists working in decorative mediums inspired by Schapiro. "It's revealing to see this contemporary work in historical perspective," says curator Elissa Auther. – *Erin Hudson*





<u>inbrief</u>



CHAIR PLAY Inside the Walls at New York's Friedman Benda gallery highlights furniture by legendary architects. Odd Matter's prototype chair (left) makes use of Reebok's fabric. Upholstery on the Allsteel task chair Mimeo is 3D mesh.

Furniture by Architects

Manhattan gallery Friedman Benda is hosting two exhibits of furniture by architects. One, titled *Inside the Walls*, features works by Frank Lloyd Wright, Kenzo Tange, Oscar Niemeyer, Lina Bo Bardi and Philip Johnson among other legends. It highlights historic firsts in materials such as fiberglass, plywood, and tubular steel. A simultaneous show titled *No-Thing*, features work by nine contemporary firms, including Andy and Dave, Norman Kelley, and Pezo von Ellrichshausen. "Architects are often at the forefront of 'newness' in the design world," says curator Mark McDonald. Both exhibits run through February 17. – *E.H.*

The New Upholstery

Sneaker fabric on seating may be gaining momentum. Reebok just invited designers to find new uses for its Flexweave athletic shoe fabric. Rotterdam-based **Odd Matter** responded by using it on a chair that encourages active sitting.

Last year, manufacturer **Allsteel** updated its 3D mesh on the Mimeo chair using a fabric with similar attributes. Of Flexweave, Odd Matter's cofounder Georgi Manassiev says: "It seemed logical... because of its properties. Light and yet soft." Agreed. – *E.H.*

Architecture's First Woman Editor

Mildred Schmertz, FAIA, was ARCHITECTURAL RECORD magazine's first woman editor-inchief (1985 to 1990) and the first woman with that title at any U.S. architectural magazine. She died on January 9, 2018 at New York-Presbyterian/Weill Cornell Medical Center in New York City from pneumonia.

During her 33 years on the staff of RECORD, the publication won two National Magazine Awards from the American Society of Magazine Editors. "Mildred was a tireless advocate for the best architecture of the moment except for what she deemed a passing fad," said RECORD's editor-in-chief Cathleen McGuigan. – Suzanne Stephens

THWINNING DESIGNS

The International Design Competition for the Urban Environment of Developing Countries—Focused on Manila attracted 476 submissions. On the next 42 pages, as chosen by a distinguished international jury, ar



ARCHITECTURAL RECORD'S May 1967 issue (above) announced the results of a competition organized by its first woman editor, the late Mildred Schmertz, pictured first in the second row of photos.



Dynamic Color

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3. BEETLE SERIES

MANUFACTURER: MD3 Contract

PERFORMANCE: Named for its iridescent finish, these molded fiberglass seats are sanded, painted, and polished by hand.

PRICE RANGE: \$\$

APPLICATIONS: The no-maintenance durable pieces come in five sizes ranging from 23" x 16" x 15" to the largest 52" x 33" x 21" and was conceived for use in playgrounds and public parks. MD3CONTRACT.COM (SNAP #202)

1. Original 1227 giant outdoor collection

MANUFACTURER: Anglepoise PERFORMANCE: This 9'-long version of a tasklight amps up the function of an articulated arm in a weather-proof, 112-lb luminaire.

PRICE RANGE: \$\$\$

APPLICATIONS: The powdercoated aluminum fixture has a steel wall-mounting bracket for outdoor use in work and hospitality environments. ANGLEPOISE.COM (SNAP #200)

2. MEETY TABLETOP

MANUFACTURER: Arper

PERFORMANCE: Inspired by the architectural structure of bridges, the aluminum legs provide a sturdy foundation to suspend customizable tabletops.

PRICE RANGE: \$\$\$

APPLICATIONS: The tabletop is specified in round (47"), square (47" x 47"), and rectangular shapes (28" x 55") for use in a residential space or collaborative work environments. **ARPER.COM**

(SNAP #201)





4. LS4 LED LUMINAIRE

MANUFACTURER: Coronet LED

PERFORMANCE: This linear, architectural luminaire with a small profile $(3^{7}/8"$ width) is suitable for suspended, surface, or wall-mount installation where continuous indoor light is required. PRICE RANGE: \$\$

APPLICATIONS: The light is available in custom lengths, colors, and long runs to 1/16" accuracy and ideal for use in offices, lobbies, corridors, and retail stores. CORONETLED.COM

(SNAP #203)

MANUFACTURER: Kartell

KARTELL.COM (SNAP #205)

IN_WALL DOOR

5.

MANUFACTURER: Silvelox

PERFORMANCE: New security entrance door designed to minimize heat loss and offer different values of thermal transmittance to satisfy multiple needs. Available in a wide range of finishes.

PRICE RANGE: \$\$\$

APPLICATIONS: Entry door is installed flush with the interior wall for minimalist context and suitable for any residence. SILVELOX.IT

(SNAP #204)





4

7. **ELIZABETH TECK SOFA**

MANUFACTURER: Ligne Roset

PERFORMANCE: Designed by Nathan Yong, the residential-looking sofa (32" high x 50" wide x 37" deep) comes in a durable contract-grade version. PRICE RANGE: \$\$\$

APPLICATIONS: For use in outdoor spaces

including hospitality, commercial, and residential settings, it can be upholstered in a special siliconecoated fabric attached to a polyester backing. LIGNE-ROSET.COM (SNAP #206)



Q+A: SCHOOL DESIGN

INTERVIEW BY KELLY L. BEAMON

Carrie Moore, AIA

Director, Skidmore, Owings & Merrill

YOU WERE ON THE TEAM THAT DESIGNED THE FIRST NET-ZERO ENERGY SCHOOL IN THE NORTHEAST. WHAT HAVE GREEN SCHOOLS TAUGHT US?

MOORE: As firms get smarter about optimizing the architectural, mechanical, electrical, and plumbing systems in schools, they're also addressing where learning actually takes place.

SO, IN WHICH NEW PLACES DO STUDENTS GATHER TO LEARN?

.....

MOORE: Increasingly, learning happens outside classrooms—in a corner of a hallway transformed into a break-out area, or in gardens, which are becoming learning laboratories.

WHAT DO STUDENTS NEED FROM THESE NEW LEARNING ENVIRONMENTS?

MOORE: Design that enables play and creativity. A big driver of the changes is that students are agents of their own learning; they actively construct, debate, question, and pose solutions. It's a project-based curriculum, to which the physical setting must respond.

WE'VE RECENTLY BECOME EXCITED ABOUT "ACTIVE DESIGN." IS THAT CONCEPT A BIG FACTOR IN YOUR SOLUTIONS?

MOORE: Yes. And when it's done well, active design creates synergies between spaces, encourages movement, and results in higher performing students. Good school design can't exist without active elements.

AND WHAT SCHOOL-FRIENDLY BUILDING TRENDS EXCITE YOU?

MOORE: There's this trend toward turning any surface into a space for learning—like using floor-to-ceiling tackable surfaces that also have acoustic properties, or building in unexpected writable surfaces using glass and painted finishes. In general, it's about using products with dual functionality. That's an exciting challenge.

IF YOU COULD CHOOSE THE BUILDING MATERIALS FOR ALL SCHOOLS, WHAT WOULD BE YOUR CHIEF STIPULATION?

MOORE: An interesting challenge would be for all building materials to come from sustainable and renewable resources.

WHAT'S NEXT ON YOUR PROJECT LIST?

MOORE: Out of our New York office, The Dalton School, Horace Mann School, and The Milstein Center at Barnard College are currently under construction.





Carrie Moore, AIA, is a Director for Skidmore, Owings & Merrill in New York, whose expertise is in complex institutional projects.



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CASE STUDY: SCHOOL DESIGN

BY KELLY BEAMON



Libraries That Learn

PROBLEM: Update a 100-year-old institution for the Internet generation

SOLUTION: Design a truly 21st Century library as the centerpiece, and the rest of the floor plan will follow

THE NEW CAMPUS built by VLK Archi-

tects to house the 100-year-old A.J. Condit Elementary School in the Houston suburb of Bellaire, is a working model of a new era in learning. Outside, a major shift from the previous rundown brick-clad box that was razed to make way for the new project is a replacement—comprised of three elbowshaped volumes that curve toward each other—that holds 24, K-5 classrooms only on outer walls, instead of on either side of narrow straight corridors. And each classroom's new interior wall is made of glass to connect it to the vaulted two-story space; second-story classrooms open onto a curvy landing with balconies overlooking the commons below.

The additional open space to accommodate the growing student population was a must. Beyond that, VLK's program of an attractive centralized "learning commons" with all classrooms connecting to it, gave the school district a tool for addressing what it describes as an advancement in education methodology.

That's because the commons, with its spaces for informal gathering and solo learning, is also Condit's library—still stocked with books but reimagined without walls as a freeflowing media hub with various points of entry where students can use a computer and conduct self-checkouts according to the honor system, just outside the classroom door on every level.

"The learning commons changes the way the library is used. By weaving and threading the classrooms through the commons, learners and educators have access to the resources but in a collaborative and open way," says VLK project designer Richard Hunt.



PAST MEETS FUTURE To link the spirit of the old school to the new building, VLK Architects salvaged its 1928 brick archway, and made that a feature wall next to the entrance.

CASE STUDY: SCHOOL DESIGN







Hunt says the new library concept has been talked about in professional school design circles, but he had not seen the idea built before his team took on the challenge—and especially not among public schools.

The open book shelves canbe arranged in a radius shape, to make use of dry-erase boards and seating built into their curved sides. The shelving and other soft seating options are on casters, so that students can "redefine their spaces," Hunt explains.

To encourage students to move from classrooms to areas of independent learning, an element of fun was also key. "There's a treehouse aspect to the space, because of the overlook down to the first floor. We were also allowed to bring in a different materials' palette," Hunt says of the rugs and playhouse-style seating shapes. At first glance, visitors notice the blue- and green-painted signage and soffits. To add interest to a rectangular, white two-story volume that holds two of the schools' science labs and extends up into the vaulted space like a column, VLK applied a graphic of the school's name in blue. The color scheme continues in the color-block pathways, which break up wall-to-wall carpeting on the ground floor.

While the floor plan is inviting for teachers and students (Hunt says the principal tests new hires by asking them how they'd incorporate the space into their lessons), noise-control was a consideration. Ironically, the layout which raised the noise question also helps to mitigate it, says Chad Davis, VLK senior associate: "The shape is much like an auditorium. The curves of the balconies are actually part of the acoustic management. You have great acoustics when you have a dynamic space." Acoustic tiles shaped like lily pads suspended from the ceiling also help. But Hunt says committing to this building meant faculty placed a higher priorty on active learning. "They understand that this is about open discussion between the kids, not something that's library quiet."

LEARNING OUT OF THE BOX

The hall outside second-floor classrooms and labs (top), on the landing overlooking the central "learning commons," doubles as a breakout space. A first-floor teaching theater (center left) extends the library's new function as a media hub. Curvy shelves can be arranged to form reading nooks (left).

U-CARA U-DESIGN

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CASE STUDY: SCHOOL DESIGN

BY ALEX KLIMOSKI



CHARTER OAK INTERNATIONAL ACADEMY, WEST HARTFORD, CONNECTICUT

Circle Time

BENSON

ROBERT

PHOTOGRAPHY: ©

PROBLEM: Replace a 1930s concrete-framed building that was dark and constraining with an open plan connected to nature. **SOLUTION:** Create a circular facility that offers better daylighting and a variety of learning spaces.

WHY MAKE A school building circular? For the Charter Oak elementary school (named after Connecticut's official state tree), the answer can be explained by its philosophy. As an International Baccalaureate (IB) school, its curriculum is closely aligned with the United Nations' mission of fostering world peace. Established in 1968 in Geneva, the IB program—offered at close to 1,700 primary and secondary schools, both public and private, in the United States alone—teaches students to make connections between conventional coursework and international issues. Face-to-face interactions are an integral part of study; just as diplomats often convene in a ring-shaped formation at the U.N. building, students gather regularly for discussions in the round. So when architects from **Perkins Eastman** presented possible configurations for the new facility to Charter Oak faculty and parents, the symbolism of a circular plan clicked.

Conceived as a "pavilion in the park," the 83,500-square-foot building sits on a 9.5-acre lot surrounded by traditional suburban houses. Playgrounds and outdoor learning spaces wrap around the building's south, east, and north sides, with a parking lot and large grassy field to the west. In the interest of keeping it in scale with the neighborhood, the school rises as high as two stories only where it is

GATHER AROUND

An added benefit of the shape is the central courtyard, which accommodates an amphitheater, rain garden, and areas for gathering.

CASE STUDY: SCHOOL DESIGN



IN THE ROUND

The building's circular plan was decided early on, largely because of its allusion to interconnectedness, one of Charter Oak's core values. In the library (opposite), the same oak tree pattern is created from perforated metal screens, applied over the glazing. Leafshaped acoustic panels hang from the ceiling in the library and auditorium.

farthest from residences. On the south, where it sits closest to a main intersection and houses (not shown in photo), the building is one level (pre–K and kindergarten occupy the ground floor; in the northern, higher part, grades one through five are above). Its curved shape diminishes perception of its size, which is revealed slowly as one walks around it, either inside or out.

The new doughnut-shaped structure replaces a 1930s concreteframed Art Moderne building with a 1970s rectilinear addition, located on what is now the parking lot. As a nod to its predecessor, it is clad in brick of a similar orange, though its structural system is steel. When the project was completed in 2016, the historic building was razed. Although the community found it endearing, the former school was dark and constraining, and wasn't attracting the desired enrollment. (As a public magnet school, it has a lottery system through which town residents can be chosen to attend.) State funds financed the project.

From the planning stage, input from the community was crucial to the design. The architectural team found that children and parents sought similar qualities in the new school: natural light, connections to the outdoors, and variety in the design of spaces. All of the classrooms, along the inner and outer perimeter walls, feature generous glazing; other areas, such as the courtyard, teaching garden, media center, and small rooms for individual instruction, provide alternative teaching environments. "Throughout the duration of the project, the children were involved, and that's powerful," says Kate Jerram, Charter Oak's curriculum specialist. In line with the IB philosophy, the construction of the new school served as an educational opportunity for students, who met with the architects on a regular basis to learn about the building's development.

Another important consideration was connecting the school's occupants to nature. The central courtyard provides a lush setting of regional plants for learning, respite, and passage from one side of the building to the other (tricycles are a popular mode of transportation). An outdoor amphitheater becomes an extension of the (indoor) auditorium when the double-height glazed door at the stage's rear is lifted.

References to nature, particularly oak trees, also abound on interior surfaces: the windows of the auditorium and library, facing one another in the courtyard, feature designs of branches, the first as a frit on the glazing, the second in perforated metal screening; acous-



tic panels in both double-height spaces take the form of leaves; the hallways and classrooms pop with green-painted doorways and walls, and occasional wood paneling. Fitting with the curriculum, which incorporates the values of sustainability, Charter Oak is a LEED Gold-certified building with a geothermal heating system and a solar panel array on the roof.

Now in its second year, Charter Oak is already seeing the benefits of its new facility. The retention rate from pre-K to kindergarten increased to 100 percent, and the school district received over 400 requests for admission for the 2017 school year, up from the usual 100. And, according to teachers, children seem happier. "The building has a very dynamic feel," says principal Juan Melián. "I'm not an architect, but it is serving us very well."



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FLOORING

Halls of Learning

CHARGED WITH TRANSFORMING a

sprawling cafeteria at Ryerson University into a centralized location providing admissions, enrollment, and financial services to students, Toronto-based **Gow Hastings Architects** focused on simplifying, organizing, and branding the space. Housed in a 1970s Brutalist building, the existing room was dark and ponderous—hardly supportive of the school's image as a leading institution in innovation.

For the tile flooring in the 13,000-square-foot space, Gow Hastings specified the Architecture collection by **Casalgrande Padana**. Large-format 12 inch-by-24-inch tiles in two coordinated colors (Cool Grey and Light Grey) were installed in alternating diagonal bands that stretch across the space. The pattern helps clearly define zones for reception and administrative functions, and works to visually expand and divide the space without compromising the open floor plan.

The light, neutral tones of the floor and wall boost the light level in the Student ServiceHub as well as set off accents of vivid color used throughout the interior. Bright supergraphic signage and vibrant furnishings pop against the pale fields, resulting in a modern, animated space that conveys the contemporary identity of the university. —Leslie Clagett

GROUNDING DESIGN

Simple, large-format floor tiles are used at Ryerson University Student ServiceHub, elevating the use of color in the design by Gow Hastings Architects.



FLOORING



JAVA JOINT

MANUFACTURER: Crossville **PERFORMANCE:** GreenSquare-certified and manufactured in the USA. **PRICE RANGE: \$\$**

APPLICATIONS: The unpolished finish of these 12"x24" porcelain tiles enhances their dense and delicate strata pattern. Suitable for commercial and residential use, the collection includes bullnose, cove base, and 2"x2"-sheet mosaic tiles and is offered in five neutral colors.

CROSSVILLEINC.COM (SNAP #213)



PORTOFINO

MANUFACTURER: Vives **PERFORMANCE:** Class 1-slip resistance **PRICE RANGE: \$\$**

APPLICATIONS: This porcelain tile delivers the look of traditional terrazzo flooring without the lengthy installation process. In four neutral colorways, the 24"x24", 31"x31"cm, and 24"x47" tiles come in semi-polished and matte finishes; a rectified design allows a seamless appearance. VIVESCERAMICA.COM

(SNAP #214)



MANIFESTO

MANUFACTURER: Ornamenta **PERFORMANCE:** Slip- and frost-resistant **PRICE RANGE: \$\$**

APPLICATIONS: The hand-painted appearance of these rectified porcelain tiles gives a graphic punch to floors. The 24"x24" format features three patterns, and the 8"x8" size has nine variants. Five colorways are each offered in positive/negative palettes.

ORNAMENTA.COM (SNAP #215)



NEXTONE

MANUFACTURER: Lea Ceramiche **PERFORMANCE:** Full-body color. Features integral antimicrobial treatment. **PRICE RANGE: \$\$ APPLICATIONS:** With four colors, three finishes, and three texture patterns available, this collection of porcelain tile has great visual versatility. In 24"x48", 24"x24", and 12"x24" formats. **CERAMICHELEA.IT**

(SNAP #216)

A Clean Cut

KEY \$=value, **\$\$**=mid-range, **\$\$\$**=high-end

MEDALLIONS, BORDERS, INLAYS—these are the ornamental elements that can turn a plain floor into a singular design element. Computerized waterjet technology enables such intricate work. While regularly utilized by such suppliers as Artistic Tile, Crossville, and New Ravenna Mosaics, waterjet flooring materials are not limited to tile, stone, and glass. Because the machining is a clear and cold process, it does not heat, harden, or distort materials, so metal, rubber, and vinyl flooring, cork, and carpet all lend themselves to custom-cut designs.

The use of waterjet-embellished flooring goes beyond the decorative; it has plenty of practical applications. In large office buildings, aviation terminals, and hospitals—all structures with complex floor plans and navigational challenges—patterns and colors set strategically into the floor can be used as a wayfinding design aid. Similarly, the floor is the focus in an increasing number of public health clubs: No longer blank planes, the floors of gyms and fitness studios often feature workout stations whose functions are delineated by instructional graphics that are jet-cut into the ${\rm resilient\,floor\,covering.}-\!LC$



through a nozzle at three times the speed of sound using a high-intensity pump that generates 55,000 psi.

EXTERIOR LIGHTING



Blue View

AN UNLIKELY SIGHT in the verdant plains of Iowa, the High Trestle Trail Bridge in Des Moines Central River Valley, while a work of contemporary art and engineering, has historical roots. The installation, part of a conversion of an unused portion of Union Pacific Railroad track to an accessible hiking trail, was designed by the Des Moines-based **RDG Dahlquist Art Studio/RDG Planning & Design. Snyder &**

Associates provided engineering and design services. A series of rotated rectangular "portals" that span the 2,640-foot length of the bridge are references to the structural framing that braced the shafts of the coal mines that were once active in the area. Thirty-five feet tall, they are deliberately spaced and positioned to conjure the feeling of moving through time as well as space.

Channels in each of the 18 steel cribs over the water contain a total of 976 linear feet of Plexineon Blue series LED fixtures from **iLight Technologies**. The low-voltage design produces a bright, crisp, even glow that enhances—rather than dominates—the architecture and the experience of traversing the bridge, whether on foot or bicycle.—*Leslie Clagett*

COOL CROSSING

A highlight of a paved, 25-mile rails-to-trails project, linear blue LEDs gently illuminate the deck of the High Trestle Bridge as well as mirror the water below.

EXTERIOR LIGHTING



CORNET B/02

MANUFACTURER: Bover **PERFORMANCE:** Dry- and wet-location rated.

PRICE RANGE: \$\$

APPLICATIONS: Made of high-density polyurethane, this 20 ½"-tall bollard can be anchored to either the ground or a foundation. Uses one 8-watt dimmable LED lamp. Designed by Alex Fernández Camps. BOVER.ES/EN/ (SNAP #217) geo 4560

MANUFACTURER: Egoluce **PERFORMANCE:** The anodized aluminum housing resists corrosion.

PRICE RANGE: \$\$ APPLICATIONS: With simultaneous uplight

and downlight capability, this wall-mount fixture offers a subtle architectural accent. An integrated LED driver simplifies installation.

EGOLUCE.COM (SNAP #218)



DIVERGENCE CHANDELIER

MANUFACTURER: Hubbardton Forge PERFORMANCE: Outdoor damp-rated; UL and CUL listed. Uses frosted globe or Edison tube lamps; 60-watt maximum. Limited lifetime warranty when installed in residential setting.

PRICE RANGE: \$\$

APPLICATIONS: This angular chandelier can change its aesthetic character, depending on the choice of lamps. Includes an adjustable stem and canopy kit. Not compatible with sloped ceilings. HUBBARDTONFORGE.COM (SNAP #219)



OURO POST TOP

MANUFACTURER: KIM Lighting PERFORMANCE: Dark Sky-compliant, this is the first modern round site/area luminaire to offer up to 37,000 delivered lumens at 137 lumens per watt.

PRICE RANGE: \$\$

APPLICATIONS: Three lens options complement specific installations: lensless for maximum performance, and a clear lens and high-diffusion lens for low-glare, high-comfort pedestrian applications. Available with integral wired or wireless controls. Offered in 20"- and 28"-models. HUBBELL.COM (SNAP #220)

KEY \$=value, \$\$=mid-range, \$\$\$=high-end

High-Tech Street Lighting

TODAY, THE ICONIC luminaire that has long lit the streets of America think Frank Sinatra leaning against a lamppost in the wee small hours of the morning—is undergoing a major technological update. Smart LED streetlights (produced by smart manufacturers like **Echelon**, **Empyrean**, **GE**, **Philips**, and **Wi-Fiber**) that are equipped with all manner of intelligent features are replacing their single-function predecessors in both urban and off-grid locations.

With an estimated 280 million streetlights currently in use around the globe (a number that is predicted to rise to 340 million by the year 2025), and annual operating costs estimated between \$70 and \$125 per unit, the opportunity for improvement is vast. While it can require a high initial expenditure, investing in smart street lighting can be cost-efficient over a period of time. (In communities whose small scale outweigh their economic clout, it's also possible to retrofit existing systems with smart features.)

The payback isn't limited to energy savings. Fixture heads can be equipped with cameras; and noise, motion, and environmental sensors can collect data that has a range of practical applications, from security and safety to quality-of-life concerns such as traffic control and pollution monitoring.

Poles, too, can be fitted with a full complement of convenient options, including charging outlets for electric cars. Communication features like WiFi hotspots, two-way emergency call capability, locator services, alarm systems, and electronic advertising/signage display panels can also be incorporated into the design. *—LC*







EYES IN THE SKY

Clockwise from top left: Equipped with cameras, sensors, and microphones, high-tech street lights can collect and transmit data for use in city planning.

LANDSCAPE FURNISHINGS



Play Time

ONE CONSIDERATION in specifying outdoor furniture for projects is whether it should blend in or stand out. The bright colorways coming from some manufacturers recently suggests the latter has some appeal for adding interest in hospitality, education and culural projects.

Loop Series seating by **MD3Contract** adds color and function in public and educational outdoor settings. Made out of molded polyethylene, it is UV-resistant, and maintenance-free. And most of the Loop line of products comes in varying shapes and sizes that can be combined to twist around trees or square structural columns and posts.

Meanwhile, **UAP Supply**'s Stump Stool,

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offered in earthy bronze-and-granite (see facing page), has also been rolled out in powder-coated primary colors.

Even the classic Adirondack chair from New Holland, Pennsylvania, manufacturer **Yardcraft** is lightening up with crayon hues. Its Poly Adirondack Chair is made from the plastic of recycled milk jugs. Available in 10 different colors including Aruba blue and Lime green, the free-standing chair measures 40" high by 31" wide by 32" deep, and is resistant to weather damage and warping.

Adding colorful furnishings to a commercial environment or a residence is at least one way to make a bold statement. *—Tanisha A. Sykes*



COLOR FUSION

MD3Contract's Loop Series of soft seating (top) makes a playful statement. A classic form gets an update in Yardcraft's Poly Adirondack Chairs in colorful recycled plastic (above).

LANDSCAPE FURNISHINGS



FENCEPOST SERIES

MANUFACTURER: Kornegay Design PERFORMANCE: These planters are made from hand-crafted molds to give them the appearance of being built from weathered fence rails, although they are high-strength

6,000+PSI concrete. PRICE RANGE: \$\$

APPLICATIONS: The resulting wood-look containers are available in the following sizes: 24", 30", and 42", and are ideal for use at corporate campuses, healthcare facilities, and educational settings.

LANDSCAPEFORMS.COM (SNAP #221)

KEY \$=value, \$\$=mid-range, \$\$\$=high-end



TENPLO

MANUFACTURER: Marshalls

PERFORMANCE: Designed by Maynard, the cast-concrete seating system integrates lighting and Bluetooth beacons—hardware that enables retailers to wirelessly message passersby when a company's app is detected on their smartphone or tablet.

PRICE RANGE: \$\$

APPLICATIONS: This outdoor seating is well-suited to urban landscapes. MARSHALLS.CO.UK/TENPLO (SNAP #222)



STUMP STOOL

MANUFACTURER: UAP Supply **PERFORMANCE:** Made from granite and bronze, this line of sculptural 19" high stools is the latest addition to UAP Supply's Standard collection of outdoor furniture. **PRICE RANGE: \$\$\$**

APPLICATIONS: The modern seating weathers well in public areas and high-end commercial settings.

UAPCOMPANY.COM (SNAP #223)



THE SCOOP

MANUFACTURER: WAC Lighting PERFORMANCE: The 30" tall LED-lit bollard is sealed against water penetration, engineered to work with 12-, 120-, and 277-volt systems, and provides 60,000 hours of safety lighting. PRICE RANGE: \$\$ APPLICATIONS: Ideal for use in commercial walkways, courtyards, pools, and parking

lots.
WACLANDSCAPELIGHTING.COM
(SNAP #224)

Smooth Operators

IN THE WORLD OF OUTDOOR DESIGN, furnishings that were once an afterthought are now making a comeback. Concrete, traditionally an industrial material, is becoming a cool and modern outdoor trend. The Concrete Side Table by local fabricator **Designs by Rudy** in Vernon Hills, Illinois, is one such recent design. Made from GFRC (glass fiber reinforced concrete), the solid concrete pedestal has a 12" x 12" footprint x 24" tall with a 21" square top. It weighs 250 lbs and is extremely durable, capable of withstanding harsh weather conditions. To protect against scratches and acid stains without changing the surface appearance or leaving a sheen, the table is sealed with several layers of penetrating sealer.

Meanwhile, in Prague in the Czech Republic, design studio **Mmcité**, known for producing "street furniture," introduced BETTER, a concrete high-volume litter bin that won a 2017 GOOD DESIGN from The Chicago Athenaeum International Museum of Architecture and Design. The body of the glass fiber-reinforced HPC reinforced basket has a lightweight top and a reinforced bottom for increased stability. Even though it's heavy, weighing 154 lbs, and massive, at 19" wide x 29" long x 33" high, its cultivated shape fits in almost any context.

Mmcité also designed the Construqta bench, a design concept based on the truss beam. A simple cuboid made of UHPC concrete, its symmetrical play of definite inclines and right-angled sides add to its distinguished look. More than 2 meters long, the bench can be placed separately; by two or three pieces; or arranged in long lines. Seemingly simple, these designs made of high-performance cement materials offer a smooth, modern finish with a splash of sophistication.—TS

IN FROM THE COLD

Clockwise from top: Once associated with large outdoor fixtures such as traffic barriers, concrete is now used for custom furnishings like a high-volume trash can, a concrete side table, and an asymmetrical free-standing bench.







EDUCATION SOLUTIONS



Schooled in Sustainability

WASHINGTON STATE UNIVERSITY'S Everett outpost has come a long way since it began offering classes on the campus of Everett Community College in 2012: Last year it opened its very own University Center, a 95,000-square-foot state-of-the-art building that greatly expands STEM education opportunities in the North Puget Sound region—and boasts an ultra-green design by **SRG Partnership**.

The center's sustainable attributes are both hidden and in plain sight. On approach to the building, for instance, visitors can spot a large photovoltaic array that projects 10 feet from the façade. "We chose to celebrate WSU's energy efficiency measures and integrate them into the architecture as a modern interpretation of a traditional cornice," explains Tim Richey, a senior associate at SRG Partnership.

A grand atrium, dubbed the Innovation Forum, is a 20-foot-wide by 140-foot-long by four-story-high volume that serves as the central vertical-circulation zone as well as a gathering space bridging classrooms and labs to the east and faculty offices to the west. SRG specified a **Kawneer** curtainwall system here with **Solarban** glazing by **Vitro Architectural**

Hd

Glass that transmits ample light and affords impressive views of the Cascade mountains while controlling solar heat gain. Other building-envelope strategies that ensure a comfortable and efficient environment include fixed external sunshades on the south-facing windows and additional shading by the deep overhang of the PV array. Thermal breaks, mineral-wool insulation, a vapor-permeable membrane, and mechanical ventilation louvers can be operated when outside conditions are optimal. When all was said and done, the building envelope managed to perform 10 percent better than the Washington State Energy Code, which is already one of the most stringent in the country.

But perhaps the most striking green element—and an homage to Pacific Northwest industries—is the atrium's cantilevered wood stair made by local craftspeople of regional materials including FSCcertified Douglas fir and bent and glued lamella. Says Richey, "WSU is a leading institution on wood materials and engineering research. The central stair reinforces that commitment and serves as a point of inspiration for what's possible with wood."—*Sheila Kim*



CENTER OF ATTENTION

The centerpiece of WSU's new Everett University Center is a Douglas fir staircase with custom-bent and glued lamella stringers that span up to 44 feet (top). SRG limited glazing to 40 percent of the façade area and distributed it based on building orientation to reduce solar heat gain (above).

EDUCATION SOLUTIONS



RUCKUS

MANUFACTURER: KI

PERFORMANCE: Taking cues from current workplace-furniture trends, this chair accommodates different postures to encourage productivity. Available in a 15"- or 18"-high version, Ruckus is offered on four legs, glides, or casters.

PRICE RANGE: \$\$

APPLICATIONS: Available in a choice of 24 poly colors with a black or warm-gray base, the chair is ideal in learning spaces, offices, healthcare facilities, and more.

KI.COM (SNAP #225)

KEY \$=value, \$\$=mid-range, \$\$\$=high-end



SUBTRACTIVE LAYERS

MANUFACTURER: Patcraft

PERFORMANCE: This easy-to-clean and -maintain dry-back luxury vinyl tile sports a 20-mil wear layer for added durability. PRICE RANGE: \$\$

APPLICATIONS: Well suited to high-traffic

areas of any commercial project, the collection comes in a 12"-x-24" format and in 20 colors inspired by acrylic paintings. PATCRAFT.COM

(SNAP #226)



TRANSPARENCY

MANUFACTURER: Nordeon

PERFORMANCE: The luminaire's temperedglass lens refracts light from concealed edge-lit LEDs to deliver even direct and indirect up- and down-light distribution. It can be specified in 3,000K or 4,000K color-temperature LEDs. PRICE RANGE: \$\$

APPLICATIONS: This super-minimalist panel-style pendant provides direct and indirect uniform, glare-free illumination that is suitable for libraries, universities, schools, retail stores, offices, and medical facilities. It is available in white or silver finish and suspended on stainless steel aircraft cables. NORDEON-USA.COM

(SNAP #227)



CASCADE SPIRAL NOTEBOARD

MANUFACTURER: Smith System PERFORMANCE: To maximize classroom space, Smith System combined a writable board with storage into a single cart. Configurable options include lockable doors, storage totes, or open shelves and on casters or glides.

PRICE RANGE: \$\$

APPLICATIONS: Ideal for elementary school classrooms, libraries, and other centers catering to young people. It measures 29 "wide by 19 " deep by 71" high; the end panels come in a choice of 19 powder-coat colors. SMITHSYSTEM.COM (SNAP #228)

27)

The Glaring Issue of Daylighting in Education Settings

IN THE 1960S AND '70S, some may have believed that windows in schools only served to distract occupants, but today there's a consensus among many architects that the natural light windows afford is beneficial to students, helping improve learning and attentiveness, instilling positive moods, and even supplying added Vitamin D. Of course, daylighting doesn't mean haphazardly adding a curtainwall or window.

Often, "the biggest oversight is glare," says Jeffrey Murphy, a founding partner of **MBB**. "We recommend careful sun simulation studies that can inform the design and orientation early on." When planning elementary school PS330Q, for instance, his firm conceived upper hopper panels with white-fritted **Pilkington** glass in the south-facing classrooms to combat glare. Matte finishes for millwork surfaces, floors, and furnishings and a *brise soleil* by **Architectural Louvers** further mitigate the harsh reflections and light.

Marsha Maytum, principal of **Leddy Maytum Stacy Architects** concurs: "Getting enough light in a room is often less of a challenge. We're interested in optimizing visual comfort." In addition to carefully choosing surface finishes and orienting the openings, she points to solutions such as designing thin floor plates, daylighting from multiple sides to produce even light levels, and strategically using solar-control products. Demonstrating these tactics, Jacobs Institute at UC Berkeley features a glazed south elevation paired with a custom system of 42-inch-deep horizontal shading louvers. And the building's east-west-oriented public spaces provide views but still minimize glare and solar heat gain via 6-inch-deep **Aerolite** vertical blades.

Ultimately, both firms emphasize that designers should consider the specific uses and activities of each school space in addition to orientation toward the sun to determine how best to harness and direct daylight. "The responsibility of the design team is to provide an appropriate solution for the space's intended use," says Maytum. "It's counterproductive to provide a well-designed, day-lit space if those using it are going to close the shades and turn on artificial lights for the duration of the class." —*SK*





LIGHTING THE WAY

Daylight floods a hallway at PS330Q, spilling over into a sunken gym and basement via full-height interior glazing (top). External light shelves help control and filter sunlight in the south-facing main studio of the Jacobs Institute for Design Innovation (bottom).

TILE + STONE SURFACING



Fine Finishes

ARCHITECTS AND DESIGNERS are always looking for innovative, new options to enhance the look and feel of a residential or commercial space. While many products provide a suitable range of color and texture options, trends such as surfaces that imitate other materials are creating opportunities for architects to design inventive new spaces.

A recent example of playing with texture is **Walker** Zanger's Studio Bera & Beren collection, porcelain tile that mimics fine-grain Portuguese and Spanish limestone. These floor tiles are smooth and sleek while wallcoverings highlight texture and dimension. The stone comes in 12" x 24" natural and structured finishes in both standard and larger sizes.

Natural stone surfaces are also growing in

popularity, especially when used on accent walls and other focal spaces. Companies like Eldorado Stone have introduced Whitebark Cliffstone, a contemporary, versatile ledgestone palette that combines grey and earthen tones with lighter hues. With dimensions measuring 1.25"-6" high x 4"-22" long x 1"-2" deep, the collection is warm and inviting.

Another favored technique by architects is mixing and matching high-performance materials throughout the space, from utility rooms to foyers. Launching this spring, the Dinant series by Wilsonart Quartz, available in 63" x 120", is a complex black and gray background with white veining throughout the slab. The high-quality quartz is resistant to scratching and staining and is virtually maintenance-free. —Tanisha A. Sykes





SMOOTH OPERATORS Clockwise from the top: New tile and stone finishes from Walker Zanger (top), Eldorado Stone (center) and Wilsonart Quartz (bottom) offer patterns with rich backgrounds.

TILE + STONE SURFACING



TONAL PAPER TERRAZZO

MANUFACTURER: Formica Group PERFORMANCE: This Terrazzo look-alike is actually a laminate from Formica's SurfaceSet 2018 collection. The product is highly durable with superior scratch, wear, and impact resistance, and it's easy to clean and maintain.

PRICE RANGE: \$

APPLICATIONS: With four finishes, two colors, and two thicknesses, the 4'x 8' and 5'x 12' tiles are suitable for horizontal and vertical commercial application.

FORMICA.COM (SNAP #229)

KEY \$=value, **\$\$**=mid-range, **\$\$\$**=high-end



NATURA

MANUFACTURER: Dekton by Consentino PERFORMANCE: Manufactured from a blend of the same raw materials used to make glass, quartz, and porcelain, the composite is a budget-friendly alternative to marble.

PRICE RANGE: \$\$

APPLICATIONS: A new color way in the Dekton XGloss Natural Collection, it replicates marble with soft grey veining against a classic white surface, and comes in 56" x 126" panels in three thicknesses. DEKTON.COM

(SNAP #230)



CORTECCIA

MANUFACTURER: Antolini

PERFORMANCE: Slabs of this soft quartzite, a natural stone that is considered less porous than marble and more durable, resist staining and etching.

PRICE RANGE: \$-\$\$\$

APPLICATIONS: With its linear veining, Corteccia is recommended for worktops, floors, walls, and kitchen surfaces, but is also suitable for exterior use. ANTOLINI.COM

(SNAP #231)



STUDIO MODERNE STONE

MANUFACTURER: Walker Zanger PERFORMANCE: The bold patterning and clean lines of these stone mosaics, which are available as large as 18" x 18", feature design motifs that reference Classic Modernism and Art Deco.

PRICE RANGE: \$\$\$

APPLICATIONS: Ideal for use as a distinctive focal point in kitchens and bathrooms. WALKERZANGER.COM (SNAP #232)

Stony Retreat

JUST OFF THE MAIN DRAG in Hudson, New York, in an early 1900s two-story Craftsmanstyle house sits an apartment reimagined into a creative studio for photographers on weekdays and a respite for city dwellers on weekends. The owner and designer, Anthony D'Argenzio of the New York-based creative agency **Zio and Sons**, wanted to reflect the 1,300-square-foot home's period with a vintage look.

The kitchen backsplash for example features a durable, hand-glazed tile called Zellige by **Clé**. Made from natural glazes, pigments, and terra-cotta clay, each tile varies in color, shade, and surface texture. Handcrafted in Morocco, the tile measures 4" x 4" and reflects a glossy finish described as a "sequin-like" surface. "Color kind of scares me, but I still wanted some texture and subtle qualities behind it, so these tiles worked out perfectly," D'Argenzio says.



WHAT'S OLD IS NEW AGAIN A New York-based mixed-use space gets a vintage-inspired update featuring Clé tile accents.

He also likes the juxtaposition between old and new, so he updated the flooring using Loz Feliz 8" x 8" cement tile by Clé. "Don't be afraid to include heavy texture in a simplistic environment," he says. "It adds character, depth, and a sense of soul." The budget-friendly tile is a charming and sophisticated addition that comes in any number of white color combinations. —*TS*



An Upturn for the Northwest

In Idaho, Oregon and Washington, the Recession has run its course BY J. MICHAEL WELTON

MANUFACTURING'S BOOMING in the Northwest, as demand grows worldwide for the region's products. "What we've seen is a massive investment in manufacturing—whether in food products, semiconductors, lumber, or tissue paper," says Alex LaBeau, president of the Idaho Association of Commerce and Industry. That's true at **Sun Valley Bronze**, an expanding maker of high-end, handmade hardware. "We've added 10,000 new square feet to our location in Bellevue, Idaho," says Aimee Commons, creative director.

It signals a big change from five years ago. "From 2011 to 2012 we had a downturn, but in 2012 we started an upturn," says Del Stevens, president and CEO of **Dura Industries** in Portland. "That's when we started doing samples for the Smithsonian." As in painted aluminum samples for the National Museum of African American History and Culture in Washington, D.C., now clad in 3,600 Dura Industries panels. "We got national attention and a lot of architects called us," he says. "So we now have several new finishes—one's on a 42-story tower in Portland, and another's on a 10-story in Portland."

In Springfield, Oregon, **9Wood** took advantage of 2012's slowdown to add sales representatives—and it's paying off. "The ceiling is a surface that architects are discovering—it's the third surface," says Michael Roeman, marketing manager at the ceiling and wall paneling company. "It's become another canvas to do decorative things, and for acoustics."

Acoustics is a hot topic at **Modular Arts** in Seattle, too. "We've been working on various ways to control sound in spaces, with our patented, magnetic T-Grid ceiling tiles that create seamless sculptural overhead landscapes," says Don Kaump, president. "We're pursuing both sound absorption and sound diffusion—and in some cases, light." It all adds up to a regional economy that's finally put the Great Recession in the rear-view mirror.



MADE IN THE USA: IDAHO, OREGON + WASHINGTON



founded: 1992

EMPLOYEES: 60

сом

PRICE RANGE: \$-\$\$\$

SUNVALLEYBRONZE.

MANUFACTURER: 9Wood LOCATION: Springfield, OR PRODUCTS: Architectural and acoustical suspended wood ceilings FOUNDED: 2004 EMPLOYEES: 140 PRICE RANGE: \$-\$\$\$ 9WOOD.COM

BESTBATH.COM

CONTINUING EDUCATION: ACTIVE DESIGN

FROM ARCHITECTURAL RECORD



Move It!

School buildings can encourage children to be more physically active, helping develop their bodies and their brains.

BY KATHARINE LOGAN

BRAIN POWER IS PHYSICAL. Just as exercise builds a child's muscles, bones, heart, and lungs, so it builds the brain, fueling cells with oxygen, nourishing connections between neurons, and supporting new neuron growth. Yet only one in three American children is physically active daily; fewer than one in seven walks or bikes to school; and, according to a new study from Harvard University's T.H. Chan School of Public Health, over half are on a track that will lead to obesity by the time they are 35. Schools, where kids spend up to half their waking lives, represent a major opportunity to develop children's brains, and their health overall, by getting them moving.

Movement doesn't necessarily mean sports or athletics. Research shows that activities of low to moderate intensity can affect overall energy levels and help prevent weight gain; just reducing the amount of time spent sitting, and breaking up that sitting time with movement, makes a difference. Even so, a 2011 study of activity levels among 8- to 11-year-olds over the course of a school day found they were sedentary for 70 percent of class time, including gym class, and most were also inactive during recess and lunchtime. Aiming to do better, three recent K-8 schools—Discovery Elementary in Arlington, Virginia; Northland Innovation Center for Students in Academically Gifted Education (SAGE) in Gladstone, Missouri; and St. Hilda's & St. Hugh's School in New York—use design to foster less sedentary behaviors.

BOOK NOOKS

At Discovery Elementary in Arlington, Virginia, a "hedge" (above) includes child-size cubbyholes that can be occupied in numerous ways. Students can travel between floors on a slide (following page bottom). **CONTINUING EDUCATION: ACTIVE DESIGN**

FROM ARCHITECTURAL RECORD





Discovery Elementary, a 98,000square-foot net zero energy school, implements lessons from the experience of its architect, Charlottesville-based VMDO, on an earlier, health-driven project, Buckingham County Primary+Elementary Schools, in central Virginia. That project gave rise to Healthy Eating Design Guidelines for School Architecture, adopted by the Centers for Disease Control and Prevention and, more recently, the complementary Physical Activity Design Guidelines for School Architecture.

The Physical Activity Design Guidelines provide a set of evidence-based objectives and strategies organized according to 10 domains, including siting, massing, various progam areas, wayfinding, and furniture. "Developing the guidelines helped us to recognize all the different spatial domains that could be rethought in terms of active design," says coauthor of the guidelines Dina Sorensen, former project designer at



VMDO and now K-12 education design leader at DLR Group. "It helped us understand how promoting activity across every space could transform a school into a new type of health-delivery system."

At Discovery, in order to preserve playing fields and open space, which are a valued community asset, on the 25-acre site (it also shares them with an existing middle school), designers set the two-story building into the side of a hill. This parti results in a compact, vertical scheme with multiple changes of level, which the design exploits to foster "active navigation," one of the domains of the Physical Activity Design Guidelines, including strategies like prominently located, visually appealing stairs. "There are a lot of reasons teachers might choose not to move very often—usually to protect curriculum time," says Sorensen, "so this idea of moving as a default behavior, encouraged by some amazing kid-centric features throughout the space, is very powerful."

Immediately inside the main entry, the floor level steps down 30 inches; a guardrail-height millwork partition known as the "hedge" separates the two levels, enclosing the kindergarten zone's "backyard." The hedge, which is up to 4-feet-deep in some places, is populated with child-size cubbyholes that kids can discover, claim, and use in various ways. The architects expected these opportunities to climb up, crawl under, slide down, or adopt an unusual posture while working to be "just a little-kid thing," says Wyck Knox, a principal at VMDO, but even fifth graders have started dropping by the hedge when the kindergarten class is outside.

Throughout the building, features such as seating steps for story time, entire walls that serve as Scrabble and Lego playing surfaces, varied and adaptable furniture, and flexible spatial configurations provide opportunities to incorporate movement into the day. Choosing between a grand stair and a yellow slide between one floor and another is not a privilege or reward, "it's simply a choice," says Erin Russo, the school's principal. A priority for Russo is encouraging the school's teachers to use the building as intended: to take story time upstairs in Cloud Commons (a bright, open, multilevel space that can serve as an informal amphitheater or as a group workspace), to make a presentation in a collaborative workspace known as the Blue Sky Studio, or to let kindergarteners find their own reading spot in the hedge.

Knox considers Discovery's re-envisioning of the classroom concept to be one of the school's biggest successes. A variety of specialized, customizable, and flexible areas, linked by programmable open spaces and clear lines of sight, increase the options for "active classrooms," another of the guideline domains. Transparency, achieved with glass partitions instead of solid walls, enables teachers to keep an eye on children working on their own in adjacent spaces, effectively lowering the student-to-teacher ratio at times. The strategy has also allowed the school to dispense with hall passes and let the kids move around the building independently. "The concept of the classroom is no longer bound up by four walls," says Knox.

Transparency and spatial flexibility are significant features of the Northland Innovation Center for Students in Academically Gifted Education (SAGE),

COLOR CODED

Instead of relying on solid walls and partitions, designers differentiated spaces at the SAGE school (above) in Missouri, with bright hues and changes in floor finishes.

CONTINUING EDUCATION: ACTIVE DESIGN

FROM ARCHITECTURAL RECORD



which won a 2017 Excellence Award from the Center for Active Design, a health-focused leadership and advocacy nonprofit. Inserted into a newly constructed office building in Gladstone, the 33,800-square-foot SAGE Center supports active, student-led, participatory learning: students spend only 5 percent of their school day in structured lecture-style classes, with the rest used for researching, creating, performing, and socializing.

"The notion of kids' following their passion, or path, marries nicely with the principles of active design," says Steven Turckes, PreK–12 global practice leader at the Chicago office of Perkins+Will, designers for the project in association with Leawood, Kansas-based Hoefer Wysocki Architects. "Sitting inactive in a chair listening to a teacher lecture all day is one way of learning, but we would argue it's not the best way. SAGE gives kids the space and the freedom to move, to explore, to experience, and to collaborate."

The two-story facility, serving 250 K–5 students daily, consists primarily of open studio spaces in which focus areas are defined by rich colors and separated by glass

partitions, or walkways marked with a change of floor material. Visual connections between neighboring learning environments encourage interdisciplinary thinking as students move throughout the space and engage a variety of settings over the course of a day.

As at Discovery, the furniture at SAGE was selected to foster a more dynamic environment: movable tables and chairs allow children and teachers to configure spaces as needed, chairs with a V-shaped back are equally functional facing forward or backward, stools designed to rock promote active sitting, padded seating-blocks double as work surfaces. Enabling these types of micro-movements turns sitting into an activity, and aligns with research findings that students learn more effectively when they're able to move.

Turckes credits North Kansas School District's thensuperintendent Todd White (now with nearby Blue Valley School District) with making this paradigm shift possible. White provided the leadership to accomplish change: facilitating the necessary conversations, leading tours of precedent-setting facilities, and organizing workshops, such as one with an educational-furniture specialist, so teachers could experience the options and discuss their use in a range of settings.

Transforming schools to promote mobility among students necessarily promotes it among teachers too. Shifting from self-contained classrooms to a more fluid environment has helped to increase camaraderie and support a level of collaboration that, SAGE's teachers say, didn't previously exist. The ability to monitor and facilitate the children's learning across a variety of workstations in the open space also enables teachers to observe one another's classes more easily, and to share ideas. Facilities for staff include a planning room with a large table and kitchenette, and a meeting room with acoustical privacy. But without self-contained classrooms or even designated desks of their own, "the environment has challenged the school's teachers to reconsider how they teach," says Turckes. "It's created a freedom that they just didn't have before."

Maximizing opportunities for students (and staff) to be more active in their indoor learning spaces improves the environments where they spend most of their time, but outdoor learning and play opportunities are also



ROOFTOP RECESS

At St. Hilda's & St. Hugh's in New York, the architects designed avarietyofoutdoor environments to suit vigorous and quiet play (top). Inside, they created a small gym with a climbing wall in space reclaimed from , mechanical services (bottom). Stairs (following page) are made inviting with the inclusion of daylight and a quote from the Declaration of Independence.



CONTINUING EDUCATION: ACTIVE DESIGN

FROM ARCHITECTURAL RECORD



essential for children's physical well-being, and their intellectual and social development. "There's more and more focus on making these larger spaces positive from a mental health perspective," says Sara Grant, a partner at New York-based Murphy Burnham and Buttrick Architects (MBB), "and on the need to support healthy interactions by designing them as warm, welcoming, and nurturing."

In a 20-year series of projects at St. Hilda's & St. Hugh's School, MBB has been transforming a utilitarian structure in Manhattan's Morningside Heights neighborhood into a building more sympathetic to the pre-K through eighth-grade school's holistic, child-centered philosophy. One of these projects, a collaboration with landscape architecture firm RKLA Studio, is a rooftop play deck for the lower school (pre-K to grade three). Not just an area for outdoor activity (which in itself is something of an achievement on this tight urban site), the design uses materials and spatial composition to offer variety and choice, appeal to multiple senses, and generate a feeling of security and comfort.

The deck comprises three separate zones, each with a distinct character. A ball-play area allows children to make the big, exciting moves they can't make indoors. A climbing zone includes fixed and changing elements that encourage adventurous and imaginative activity. A garden incorporates a planted wall and seating, and opens to views of the Hudson River; sheltered by a slatted screen from the more vigorous uses in the other two spaces, this "room" serves as a protected area for outdoor classes and quiet play.

One of the challenges that constructed urban play

areas face is how to reintroduce nature and renewal so the space doesn't get stale. All three zones of St. Hilda's & St. Hugh's play deck incorporate plantings; their colors, scents, and textures change with the seasons. The active ball zone incorporates banners—printed with clouds, for example, or an abstraction of trees—that can be changed to transform the character of the enclosure. Exhibits in the climbing zone are also switched out periodically: an airplane fuselage, a teardrop trailer, and a tiny tugboat are examples of realworld objects that have been stripped down and made safe for children.

The success of the play deck and other active-design interventions at St. Hilda's & St. Hugh's—such as a daylit stair limned with a quote from the Declaration of Independence, a climbing gym and dance studio in found space reclaimed from building services, and a range of immersive, hands-on learning environments that pre-date but nonetheless exemplify the active-classroom guidelines—is evidenced by data showing that students at the school take an average of over 8,300 steps during school hours alone, with the lower school children averaging over 10,700 steps.

Notwithstanding this success, Grant cautions designers against focusing too narrowly on physical activity, and encourages instead a more holistic approach to student health and well-being. That's an idea that resonates at Discovery Elementary too: activity was a secondary motivation for many of Discovery's design features, says VMDO's Knox. "The primary motivation was the kids' joy and happiness." And it's the same for the activity-promoting features at SAGE:

"What we're seeing," says Julie Alsobrook, retired director of the program, "is that kids are happier."

KATHARINE LOGAN IS A DESIGNER AND WRITER FOCUSING ON ARCHITECTURE, SUSTAINABILITY, AND WELL-BEING

Continuing Education



To earn one AIA learning unit (LU), including one hour of health, safety, and welfare (HSW) credit, read "Move It!," review the supplemental material found at architecturalrecord.com, and complete the

quiz at continuingeducation.bnpmedia.com or by using the Architectural Record CE Center app available in the iTunes Store. Upon passing the test, you will receive a certificate of completion, and your credit will be automatically reported to the AIA. Additional information regarding creditreporting and continuing-education requirements can be found at continuingeducation.bnpmedia.com.

Learning Objectives

- 1 Discuss the importance of physical activity for developing bodies and brains.
- 2 Describe the strategies outlined in the Physical Activity Design Guidelines.
- 3 Explain how the designs of the three featured buildings encourage students to move during the course of the school day.
- 4 Describe design strategies for encouraging outdoor activity for schools on tight urban sites.

AIA/CES Course #K1801A

TRADE SHOW NEWS



Catching Up At KBIS

HUNDREDS OF MANUFACTURERS

debuted products at this year's Kitchen & Bath Industry Show in January. The annual tradeshow, held at the Orlando Convention Center in conjunction with the International Builder's Show during Design & Construction Week, attracted crowds of roughly 80,000 attendees and covered 400,000 square feet of space. The number of professional attendees grew for a fifth consecutive year.

 $Expectations for the \$147\,billion\,industry$

were upbeat in light of the turnout: "The kitchen and bath industry is strong and growing. From our most recent research study, the NKBA expects growth to continue throughout 2018," said Suzie Williford, vice president of industry relations and chief strategy officer, **National Kitchen & Bath Association**. In its more than 50-year history, KBIS has become more high-concept. That transition was apparent this year in the construction of a full outdoor Professional

WHAT'S COOKING? The show floor at this year's Kitchen and Bath Industry Show in Orlando. (above). Perlick's inspirational booth signage (right).

BECAUSE KITCHENS SHOULD BE DELICIOUS, TOO.

TRADE SHOW NEWS







KBIS HIGHLIGHTS

Dacor introduced a 23-cubic-foot French door fridge (top left) equipped with zones that convert from freezer to refrigerator, among other features. Rev-A-Shelf rolled out kits for installing soft-close mixer lifts in existing cabinetry (above). Franke debuted its Chef Center sink system (left) that places accessories in the basin.

TRADE SHOW NEWS

Builder Show Village, a cluster of temporary showhouses furnished in appliances, finishes and fixtures by KBIS exhibitors on the main KBIS show floor.

In both KBIS and IBS areas, innovative storage—always a plus in residential projects—was a trend. **Perlick**, for example, introduced a French door refrigerator with a two-tier deli drawer and built-in marinating pan, among other extras, concentrating on kitchen tasks. Meanwhile, Dacor unveiled a panel-ready fridge with cabinet-height French doors on the freezer. For greater efficiency, compartments inside can be changed from freezer to fridge storage on demand.

FLEXIBLE DESIGNS

Other companies emphasized flexibility in design and function. Elkay showed off interchangeable panels in different colors on its apron-front sinks, while sinks manufacturer **Franke** introduced a system that concentrates accessories for food prep and storage right inside the basin, including a compartment that can function as either a composting bin or an ice bucket. Hardware Resources introduced a new pullout 18" x 20" organizer for bathroom vanities that adds roughly 450 square inches of storage for toiletries to any standard base cabinet.

PERFORMANCE

For other companies, innovation lay in their manufacturing processes. Wilsonart, for one, now offers a line of watertight wood laminate that can be used in wet zones such as shower stalls to save designers time and labor costs typically associated with tile installations. For similar cost-saving during construction, doors- and windows-maker **Jeld-Wen** announced that it has found a way to manufacture an affordable barn-door system that will work with any size builder-grade door panel a project calls for—an instant upgrade for interiors of multifamily housing projects.

Meanwhile, several appliance makers including GE Monogram displayed connected cooktops, which users can turn off remotely via smartphones. And **Kallista**'s use of 3d-printing to make its new Grid faucet and valve set earned the company a Best of Show award.



Α		D		0		Schweiss Doors	49
Acoustical Surfaces	CV4,50	Dri-Design	9,50	Overly Manufacturing Co	2,51	Smith System	1
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Arriscraft Canada	26	Infinity Drain	50	Raydoor	7,49	U	
Aurora Storage Products, Inc.	50	J		Richards-Wilcox	50		
Azon USA	18,50	Just Manufacturing	50	S		Unilock	21
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NEW AND UPCOMING EXHIBITIONS

Social Housing— New European Projects

NEW YORK CITY February 15–May 19, 2018

Featuring 20 architects' work on nonprofit housing, the exhibition—curated by Karakusevic Carson Architects—consists of 25 case studies showing how architects meet high standards of design while constructing affordable housing across various European cities. At the Center for Architecture. For further details, go to centerforarchitecture.org.

Women House

WASHINGTON, D.C.

March 9–May 28, 2018

Conceived as a sequel to the famous 1972 exhibit Woman House by Judy Chicago and Miriam Schapiro, this exhibition examines the relationship between women and the home across myriad contexts through displays of photography, video, sculpture, painting, and installation created by women artists from the 1960s to the present. Organized by Monnaie de Paris, the exhibit originally debuted in Paris. At the National Museum of Women in the Arts. More information at *nmwa.org*.

ONGOING EXHIBITIONS

Ai Weiwei: Good Fences Make Good Neighbors

Through February 11, 2018 The citywide exhibit by artist and activist Ai Weiwei creates a series of installations using the security fence to examine themes of displacement and migration. Sites include the Washington Square Arch in Greenwich Village, the Unisphere at Flushing Meadows-Corona Park in Queens, and Doris C. Freedman Plaza in Central Park. The exhibit also features images on lampposts and other spaces usually reserved for advertisement. Visit *publicartfund.org.*

Inside the Walls: Architects Design

Through February 17, 2018

Friedman Benda's new gallery exhibition by furniture expert and collector Mark McDonald is a survey of pioneering 20th-century furniture design from around the world, presented by a display of archival photos and custom-built exemplars of featured pieces. Works by Gerrit Thomas Rietveld, Rudolph Schindler, and Frank Lloyd Wright are the focus, but designs by Philip Johnson, Kenzo Tange, Oscar Niemeyer, and Lina Bo Bardi are also included. For more information, visit *friedmanbenda.com*.

No-Thing: An Exploration Into Aporetic Architectural Furniture

Through February 17, 2018 Presented by Friedman Benda in tandem with Inside the Walls, this exhibition, curated by Juan García Mosqueda, features wondrous yet perplexing furniture by nine contemporary designers and architects, including Ania Jaworska, Norman Kelley, MOS, MILLIØNS, and Pezo von Ellrichshausen. More information at friedmanbenda.com.

David Zwirner: 25 Years

Through February 17, 2018

For the gallery's quarter-century anniversary, a special exhibition of its artists' work will be shown throughout Zwirner's Chelsea spaces. Selections for the exhibition were based on the artists' role in shaping the gallery itself, with some work specially commissioned for the celebration. Gallery artists include Yayoi Kusama, Gordon Matta-Clark, Alice Neel, and Donald Judd. For more information, go to davidzwirner.com.

Never Built New York

Through February 18, 2018

Cocurated by architecture critics Sam Lubell and Greg Goldin, the exhibition features original prints, drawings, models, and installations of unbuilt projects developed by architects including Robert Venturi and Denise Scott Brown, Rem Koolhaas, and Zaha Hadid. The Queens Museum exhibit was designed by Studio Christian Wassmann. For more information, visit queensmuseum.org.

Obdurate Space: Architecture of Donald Judd

Through March 5, 2018

The exhibit looks at completed and unbuilt architectural works by artist Donald Judd between 1984 and 1994. Featuring drawings, models, and photos, the display was curated by Claude Armstrong and Donna Cohen, who were both assistants to Judd. At the Center for Architecture. Visit centerforarchitecture.org.

The University Is Now on Air: Broadcasting Modern Architecture MONTREAL

Through April 1, 2018

This exhibition at the Canadian Center for Architecture examines the phenomenon of mass distance learning through focusing on an architecture class that was broadcast over the radio and television in the U.K. between 1975 and 1982 by The Open University. Curated by Joaquim Moreno with exhibition design by APPARATA, the exhibit also exists online with the publication every week of one of the 24 episodes of the class which aired on BBC 2. To watch or find out more, visit cca. *qc.ca/A305*.

Found in Translation: Design in California and Mexico, 1915–1985 LOS ANGELES

Through April 1, 2018

Displaying over 250 objects including drawings, photos, models, and film, the exhibition examines Modern and anti-Modern design movements in California and Mexico, along with their connections to each other. Richard Neutra, Luis Barragán, and Clara Porset are some of the architects and designers whose work is on display at the Los Angeles County Museum of Art exhibit. Visit *lacma.org*.

Ordinary and Extraordinary—An Architecture of Heightened Awareness SARASOTA, FLORIDA

Through April 14, 2018

This retrospective of Brooks + Scarpa presents 150 models, 3-D visualizations, original sketches, and drawings produced by the firm's founding architects, Angela Brooks and Lawrence Scarpa, over more than 30 years. Curated by Jill Slaughter, the exhibition will travel through the U.S. after its opening run at the Center for Architecture Sarasota. More at *cfasrq.org*.

Making Room: Housing for a Changing America WASHINGTON, D.C.

Through September 16, 2018 This exhibition explores how design solutions can address current housing issues through collaborations between architects, product designers, and suppliers. Installations feature various typologies, such as micro units, with a configurable 1,000-square-foot model home with movable walls and multifunctional furniture. At the National Building Museum. See *nbm.org*.

LECTURES, CONFERENCES, AND SYMPOSIA

Frank Lloyd Wright and Newport, Rhode Island NEW YORK CITY

February 14, 2018

The Victorian Society in America presents a lecture about the prolific American architect, delivered by the organization's director and architectural historian, Richard Guy Wilson. At the Jefferson Market Library. Visit victoriansociety; org.

ADFF: D.C.

WASHINGTON, D.C. February 22–25, 2018

The first edition of the Architecture & Design Film Festival in the capitol will screen 25 films, including a documentary on Bjarke Ingels, *BIG Time*; a film about Australia's sole Pritzker Prize winner to date, Glenn Murcutt; and the intimate portrait of Rem Koolhaas, *Rem*. At the National Building Museum. Visit adfilmfest.com for more.

Museums Advocacy Day WASHINGTON, D.C.

February 26–27, 2018

Organized by the American Alliance of Museums, the annual event gathers almost 400 directors, trustees, educators, and other professionals or volunteers who work in museums to receive training in political advocacy and attend meetings with lawmakers to discuss policy that affects museums' missions at the federal level. More information at *aam-us.org*.

NHA Annual Meeting and Humanities Advocacy Day WASHINGTON, D.C.

March 11–13, 2018

The yearly meeting of the National Humanities Alliance includes the presentation of the Yates Award to Congress members and culminates with a day of meetings between lawmakers and NHA members to discuss increasing funding for humanities research, preservation, teaching, and community programs. Details at *nhalliance.org*.

COMPETITIONS

Sydney Affordable Housing Challenge

Registration deadline: February 9, 2018 The open competition seeks pilot-phase design concepts for affordable housing that can be scaled up and adapted to several sites across the Australian city, with minimal land use and materials. Three winning proposals, along with secondary awards, will be presented March 15 at the Sydney Build Expo. Details at sydneyhousing. beebreeders.com.

2018 BDA Prize: Charlottesville, Identity & Design

Deadline: February 22, 2018

The annual ideas competition run by Charlottesville-based architecture firm BDA, asks architects, artists, designers, and the public for design proposals of site-specific public art that, in stark contrast to the city's Confederate monuments, represent diversity and community. Jurors include Planning Director for the City of Detroit, Maurice Cox, and Dr. Andrea Douglas, the executive director of the Jefferson School African American Heritage Center. More information at bdaprize.bdarchitects.com.

Logo Against Alzheimer's Deadline: February 25, 2018

This competition, run by CODE, asks designers to create a logo for Italian organization Affetti da, which supports families of people with Alzheimer's. Judged by a panel including Milo Manara, Milton Glaser, and Federico Babina, the winner will receive a cash prize, and the winning logo design will be adopted. Details at competitionsfordesigners.com.

RIBA Awards 2018

Deadline for UK projects: February 27, 2018 The 180-year-old awards series, which includes regional and national prizes along with prestigious titles such as the Stirling Prize and RIBA House of the Year, is accepting applications for projects based in the UK. For more information, visit architecture.com.

Antepavilion 2018

Deadline: February 28, 2018

The second edition of this annual pavilion asks designers to submit proposals for an installation atop a 62-foot barge, built in 1934, floating in the Regent's Canal at Hoxton Docks. Commissioned by the Architecture Foundation and Shiva Ltd, the project aims to engage designers in construction processes. The winning team will work with AKT II engineers. More information at *antepavilion.org*.

Architecture in Perspective 33

Deadline: March 16, 2018 This annual competition, run by the American Society of Architectural Illustrators, honors the best architectural illustrations and accepts submissions in any medium, including drawings, paintings, renderings, and digital imagery. The winner will receive the Hugh Ferriss Memorial Prize, the top honor for architectural illustration. Visit

Community Center in Nepal *Registration deadline: May 6, 2018*

archinperspective.com.

NGO Rook'n Wood is seeking design proposals for a community center on a site near Kathmandu in Nepal. The program should include workshop spaces, a kitchen, and washroom facilities. The winner, selected by jurors including Yasuhiro Yamashita, Line Ramstad, and Luigi Rosselli, will work with the NGO to construct the center. More information at *arch-sharing.com*.

MANUFACTURERS' SPOTLIGHT SECTION

In these pages are products brought to you directly from manufacturers. You'll find price, application, performance data, and contact information-the facts needed to make the right decisions. Use the reader service card in the issue or go online at architecturalrecord.com to request further details.



Stone surfacing manufacturer Antolini offers Corteccia, a durable soft quartzite from Brazil with linear veins that can enhance interior and exterior surfaces. (SNAP #233)

LIFT-STRAP BIFOLD DOORS AND ONE-**PIECE HYDRAULIC DESIGNER DOORS**

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Schweiss Doors manufactures unique custom designer doors, one-piece hydraulic doors and patented lift-strap opening/closing bifold doors.

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Dri-Design's Shadow Series brings dimension to buildings on the inside and outside because each on the design and material choice of the project. **Product Application**

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- and Dade County



SNAP 237

MATERIALS

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Performance Data

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ARCHITECTURAL APPEAL FOR GAMING EXPERIENCES

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Performance Data

- www.dri-design.com





SNAP 241

SLXN-1815-A-GR-5



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Performance Data

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SNAP 244

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SNAP 245

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Performance Data

SNAP 247

SNAP 248

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PARTNERS IN DESIGN



FABIO NOVEMBRE The architect designed Kartell's new Smile storage, a cheeky offshoot of its iconic Componibili from the '6os. novembre.it





About Face

HAVING RECENTLY CELEBRATED the gold 50th anniversary of its Componibili storage system by late founder and art director Anna Castelli Ferrieri, Italian furniture maker **Kartell** extended the party by inviting 15 designers to put their stamp on the famous ABS plastic form. Among these partnerships, one with architect Fabio Novembre is noteworthy because he is known more for shockingly irreverent hospitality projects than for marketable, consumer-friendly product design. Yet Componibili Smile, his playful, emoji-inspired interpretation of Ferrieri's original design, has achieved the right balance of cheek and best practices, according to the manufacturer. "This collaboration perfectly combines his creativty, vision, and irony with Kartell's ability to create high-quality, technologically innovative products," says Kartell president Claudio Luti.

Instead of altering the archetype, Novembre avoided adding details and instead subtracted material to create three fun facial expressions, instantly recognizable in modern communication. "I've always been under the impression that the round finger hole was meant to be a wink for those who were able to grasp Anna's sense of irony," says Novembre, explaining that having known Ferrieri personally helped to fuel his idea. The minimal tweaks to the units' door pulls deliver a surprisingly strong visual impact without adding a lot of steps to the existing production process. Measuring 12.6 inches in diameter and standing 15.7 inches high, the units are constructed via a tongue-and-groove system. As they have been since 1967, the units can be ordered with casters, topped with removable trays, and intermingled to create side tables and tall cabinets.

Kartell is producing three other Novembre designs too: the EUR stool, the Lantern luminaire, and the Villa dollhouse. Designs of all the Novembre pieces suggest that the forward-thinking architect also has an affinity for romancing the past. "I am very aware that the past, present, and future are links in the same chain," he says.—*Tanisha A. Sykes* (SNAP #270)

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