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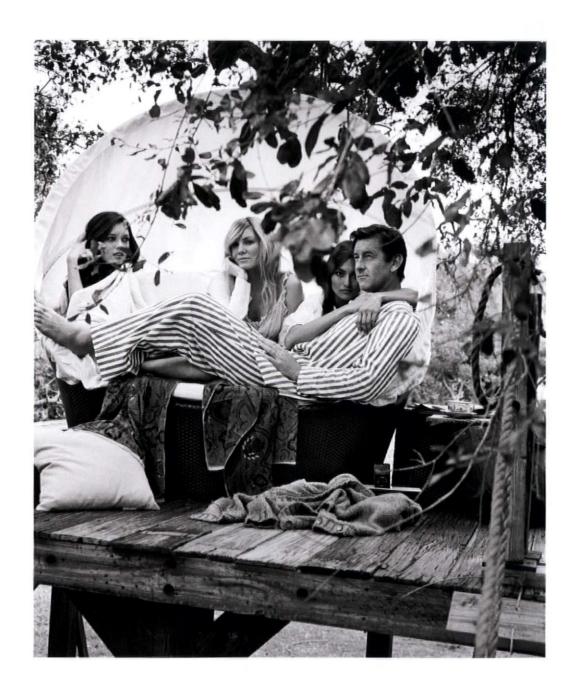
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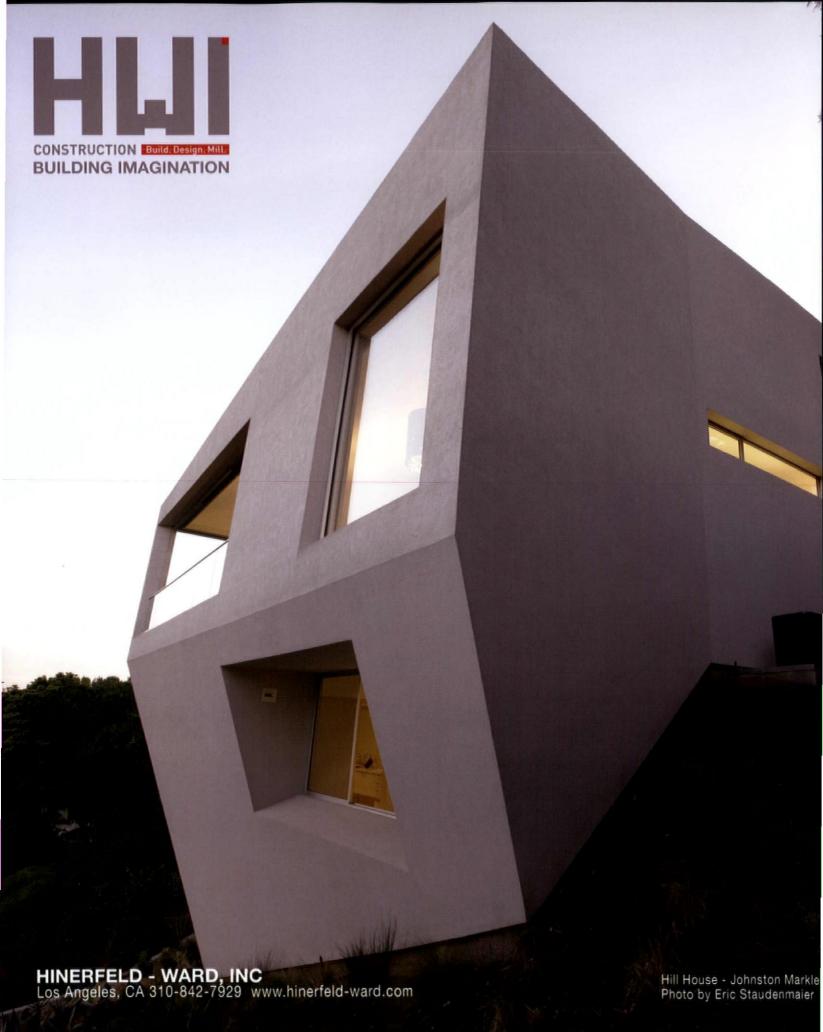




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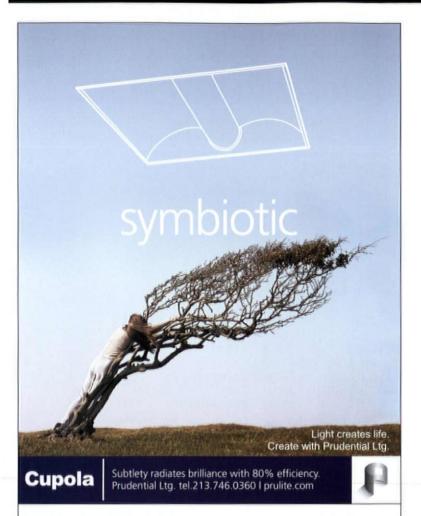
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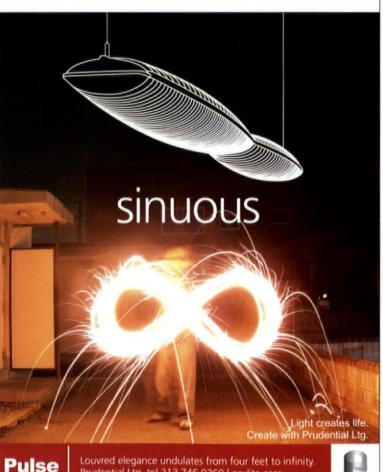
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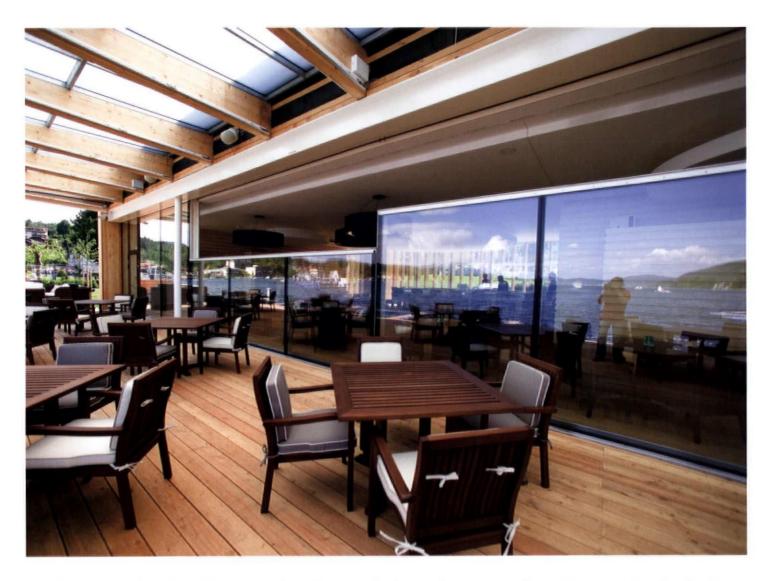


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FORM EVENTS

FORM celebrates AIA/LA Design Award winners

at CalArts' The Wild Beast

FORM MAGAZINE CELEBRATED THE 2009 AIA/LA and AIA/SFV Design Awards winners at the new music pavilion dubbed The Wild Beast at the California Institute of the Arts. Designed by Hodgetts+Fung, Craig Hodgetts was on hand to discuss the space's creative journey along with Tom Hinerfeld of Hinerfeld-Ward Construction. A jazz trio performed in the background as patrons nibbled on hors d'oeuvres and sipped wine poured by Hope Family Wines. Additional sponsors included Hinerfeld-Ward Construction, Green Polishing Solutions, Repurpose Compostables, and Honest Tea.



DESIGN FOR THE PLANET

Thursday, June 3, 6:30-9 PM at LA Trade-Tech's Student Services and Classroom Buildings

hosted by Los Angeles Community College District, Architectural Foundation of Los Angeles and FEFFI Speaker: Larry Eisenberg, LACCD Executive Director of Facilities Planning and Development



Designed by MDA Johnson Favaro, the Student Services and Classroom Buildings are the first new buildings in the last 40 years at LA Trade-Tech. They are part of the \$6 billion LACCD Sustainable Building program. LEED Gold certification is expected for both structures. USGBC-LA will give guided tours.

Los Angeles Trade-Tech College 400 West Washington Blvd. Los Angeles, 90015

Please RSVP to rsvp@formmag.net Include name, title, company, phone and email.

Space is limited.

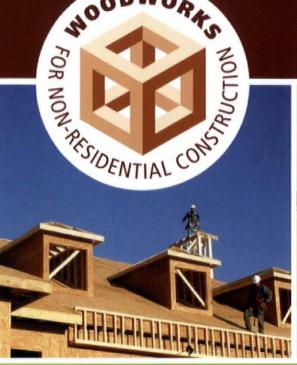














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Photo credit: APA - The Engineered Wood Association (left and center), Tom Weir, Brandow and Johnston, Inc. (right).







EDITOR'S NOTE

Being awarded gold, silver or platinum is indeed an achievement but, at times, it is important to strip away the labels and reevaluate the state of eco-friendly design. We often focus on unearthing solutionsespecially in transportation—that will revolutionize the industry. But while we are searching for that

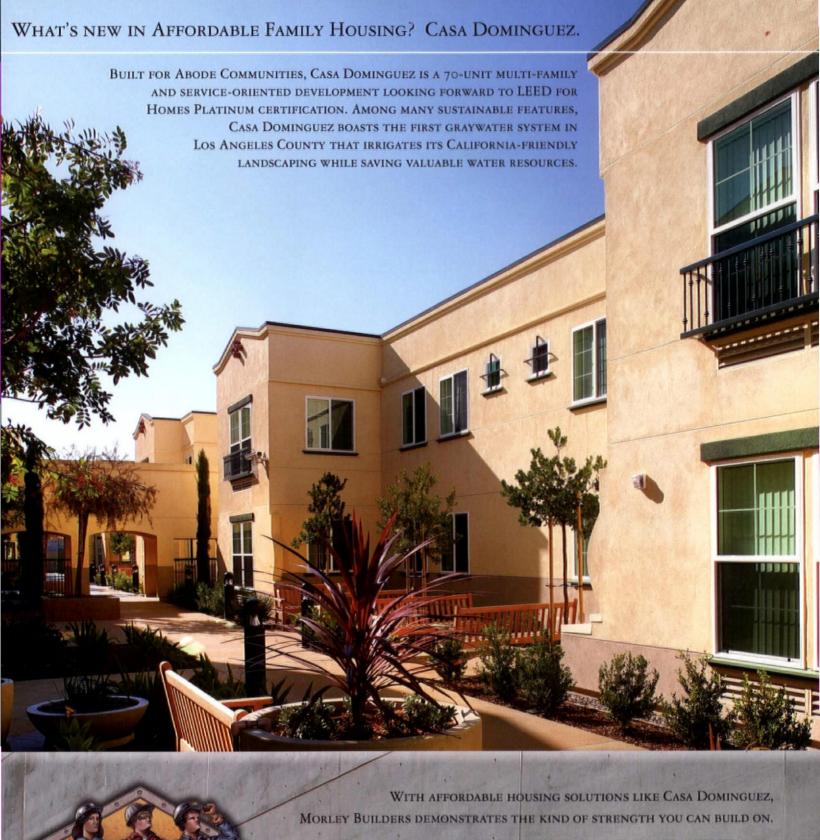
breakthrough technology, we need to simplify our tactics and continue to incorporate multiple green measures into our designs. The sum of these parts can create a sustainable whole.

The spectrum of how we can all be more "green" is broad, and part of a designer's job is to educate their clients on ways they can incorporate sustainable technologies (big or small) into their homes or businesses. In this month's Showroom (p. 12), FORM features several practical and beautiful solutions—from installing a Nedlaw Living Wall to placing a \$4 rain collector in the backyard. Of course, products are the icing on the cake. How we build, incorporating alternative energies and reusing materials, can



make a substantial difference in our collective carbon footprint. Michael Webb's essay on adaptive reuse (p. 38)—the ultimate eco-friendly solution—explores how working within the constraints of an established building can lead to innovative design. Our transportation roundup (p. 30) addresses a key issue to our globe, how can we continue our current lifestyle and reduce our carbon emissions simultaneously. Paris offers one solution—making cities more bicycle-friendly— and as evidenced in our photo essay (p.34) you can cycle and look chic simultaneously.

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SHOWROOM





Nedlaw Living Walls, Indoor Air Biofilters

Nedlaw Living Walls has developed the only LEED recognized system that utilizes plants to filter out contaminants in an indoor environment. Air is actively forced through the wall of plants, as biological components degrade almost 90 percent of chemicals into water and carbon dioxide; the equipment then redistributes clean air. Prices range between \$150-\$400/square foot.

more information: 519.648.9779 or www.naturaire.com



Waterwall Designs, Fatboy

Inspired by ongoing drought and the increased need for rainwater harvesting in metropolitan areas, the Fatboy was designed as a space saving rainwater tank for urban homes. The 650-gallon tank is made of UV stabilized high-density polyethylene and comes in cream, brown, brick red, or deep green. Prices start at \$1150.

more information: 800.549.5514 or www.waterwalltanks.com



Gordon Tait for Viteo Outdoors, Gardenwall

Australian designer Gordon Tait creates a room divider that merges indoor and outdoor areas. The modular system consists of stackable planters made of lightfast plastics that can attach up to three rows in height. Supplied with plants that blossom through the various openings, the Gardenwall combines green functionality with natural aesthetics. The price is \$160 per piece (24"x8"x22").

more information: 312.664.9582 or www.viteo.at



Hero, RC-1

The reinvention of everyday objects into sustainable modern necessities is the mission of Hero; and its stylish rain collector (\$550) can hold 45 gallons of water. A filter prevents debris from entering the collapsible phthalate free bladder. Panels and legs are made of UV resistant polyester powder coated steel, available in white or brown.

more information: 416.902.8309 or www.hero-365.com

-Karin Rose



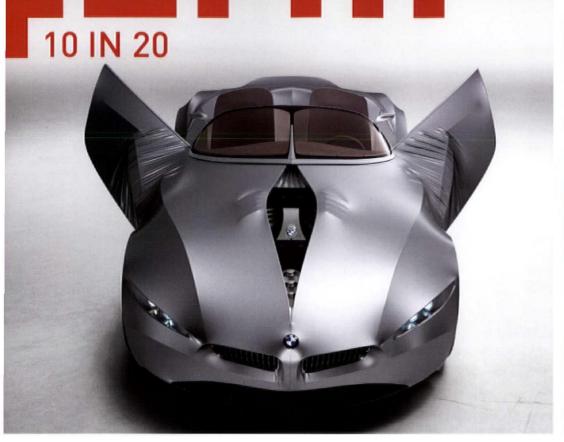


Le Laboratoire, Andrea

Invented by French designer Mathieu Lehanneur with Harvard professor David Edwards, Andrea (\$199) is a 'living air filter' that purifies air by enhancing the metabolic properties of plants. It works 40 times more efficiently than a carbon filter, as a near silent fan draws polluted air into its system then circulates the oxygenated air back into the room.

more information: 011.33.178.09.49.63 or www.andreaair.com







Verena C. Kloos BMW GROUP CONTEXT AND ADVANCED DESIGN DEPARTMENT HEAD

A discussion on future, functionality and designing for different cultures

You started in Colors & Trims. Is interior design a special love?

When I first came to DesignworksUSA I had run an interior design studio in Italy. I wanted to bring that flair enriching, complementing, and adding a style consciousness to the work instead of just producing good products. When you work for Deere and other hard goods manufacturers it's different than working for Landscape Forms, for example. The user experience is different. The good thing about having worked at BMW Designworks is that, occasionally, we can choose our projects and we can steer our work toward environmental [design], hospitality and sustainability. Now we can really furnish an entire house or office we have so many products-lighting, carpet, furniture.

Also, with interior design we really think about context and the environment it is being placed in. We are looking into the whole experience.

How do you approach your design from a global perspective?

We look at how people use things. We go on immersion trips to other places and integrate our research into the design. For our 7-series, we went deeply into China to study. China is a large market for premium cars. In the US, cars are still being driven by their owners. In Asia, the 7 is a chauffer's car. You have to make the back seat appealing and comfortable for the owner. We had some surprising findings studying Asia. They view wellbeing, health rituals, time and space [differently]; and Feng Shui plays a significant role. You cannot get all of your research out of reading. You have to experience the smell, the heat, the climate.

Can you give us another cultural difference?

Cupholders in the '90s were always a topic. In the U.S. you have no autobahn, you have strict speed limits, you spend a long time in the car. In Germany, at 200 kilometers per hour you would not consider taking a sip of your coffee. A designer has to experience how cold it can be to drive in Finland or Canada. You have to wear thick gloves and controls have to be larger, the steering wheel thicker to accommodate them. The culture and climate are very important. If you design out of one spot you don't understand these things.

How do these insights relate to other projects you are working on?

Landsape Forms wanted a line of transit furniture that could be used globally. In Europe, people rely on mass transit. The cities have a different density and there is less vandalism so things can look more beautiful. It is important to understand the full picture. When you have more people on the street you reduce crime.

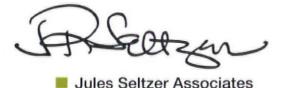
You speak so much of the senses—smell, touch, sound. Other designers are not so articulate about the senses.

Maybe I'm very sensitive! The role of the



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"The role of the designer is to consider the holistic experience human beings have and then apply design to it."

designer is to consider the holistic experience human beings have and then apply design to it. In America, you have so many over-scented retail environments. If I walk into the design studio here and it doesn't seem fresh I will ask the designers if it is fresh enough. Good surroundings are required for wellbeing, energy, and creativity.

What other roles does a designer play?

We also assign ourselves the role of cleaning things, cleaning space. Not in a radical way but in the sense of paring down. I was once speaking at a university and one of the professors made the comment, "The best design is to avoid products." I don't agree 100 percent but there is truth in it.

Is every project a problem solving exercise or are some of them just to make something look cooler?

We always try to bring problem solving to it. We are not stylists. I don't want to disrespect stylists; they are important. That is a very soft side of our business. A good designer does both. Look at the iPod or these [Arad] chairs. They look simple, have a good price point, and are comfortable. It is not so simple to achieve that.

There is a trend in architecture to make smaller living spaces. Do you think those could be improved by looking at car/boat/plane design?

A major purpose of Designworks is to crossfertilize from boat to car to plane to lobby to kitchen. There is always a crossover. We can come up quickly with new ideas because we design for so many purposes. It is not a direct transfer but a new solution in a different situation. The ships galley, an airplane toilet are very constrained spaces. It is a challenge to make it nice, clean and appealing not cramped with only functional design.

What does the future hold for design at BMW

We are looking to get into mass transit. We have a lot to offer. What we have learned sitting in the back seat of a car, for example, is applicable to the experience of sitting on train. There is a lot in common that is easily







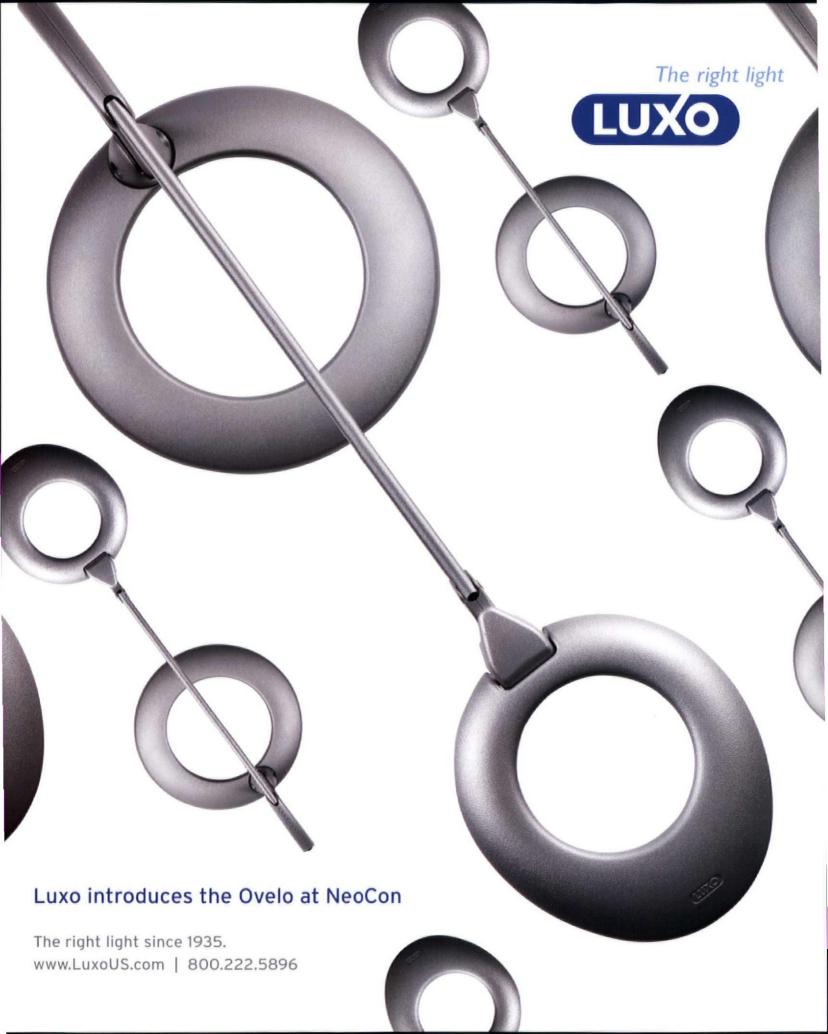
PREVIOUS, LEFT: The GINA Light Visionary Model; RIGHT: The twisted profile of Landscape Form's bench symbolizes energy and motion. THIS PAGE, CLOCKWISE FROM LEFT: Emeco's popular aluminum chair reborn; The Dynamic Metro40 design reinterprets a bus shelter rail; The interior cabin of the new Falcon 7X business jet for Dassault Aviation.

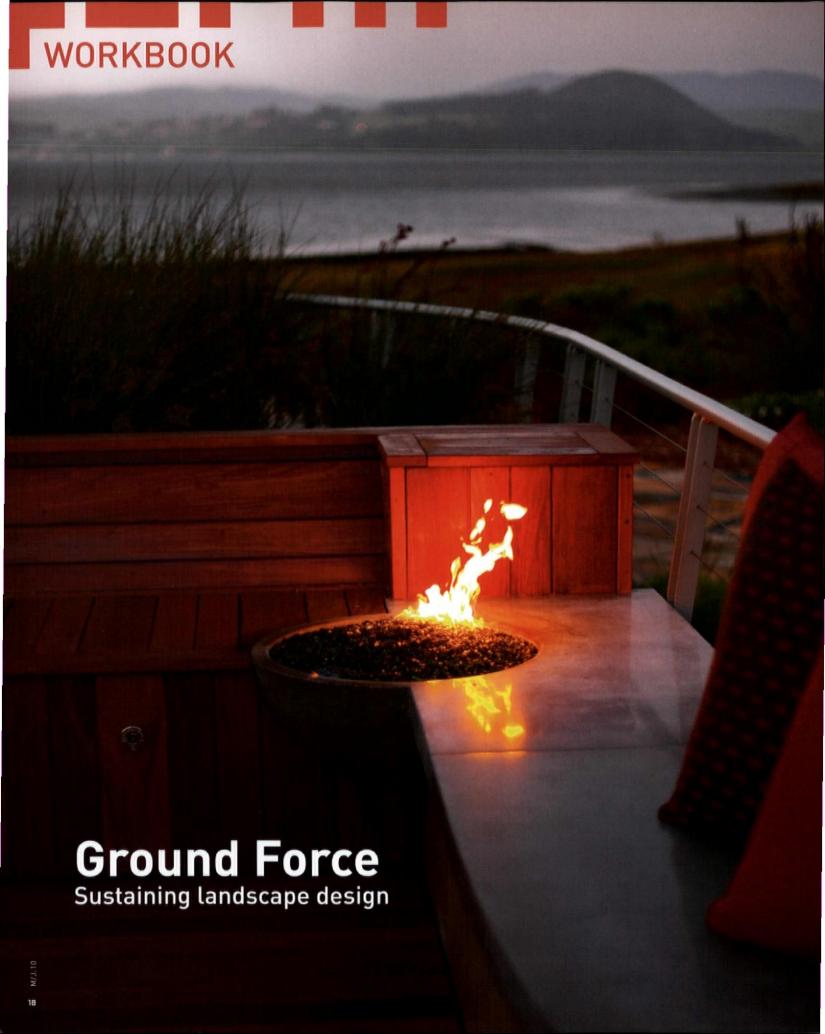
transferred. We can provide a lot of value to this new sector. I think what is missing in mass transit is the sense of personal space. It's very different than being in a public space where you have a choice about where to be and you can get away from people that might annoy you. Design can make a big difference in improving the experience and making it comforting. Studies have shown that clean spaces stay cleaner and there is less vandalism.

And the future of design?

The role of design is to look beyond what you are designing for, to look at the whole experience. I will be very interested to see what the tipping point is at Salone di Mobile. Designers do all of these furniture exercises just for their own pleasure, not considering where it will go. In our strategy research phase we look at the consequences of our design in one year, in five years, and over its life. We look at the possibilities of life-cycle management for the manufacturer. How the piece can be freshened up in the future without having to throw away the structure. We always deeply and steeply look at the consequences. We want to make life easier, to improve it. I hate clutter. We don't design it.

- Ann Gray







Quincy Court

Location: Chicago, Illinois

Designer: Rios Clementi Hale Studios

Website: www.rchstudios.com

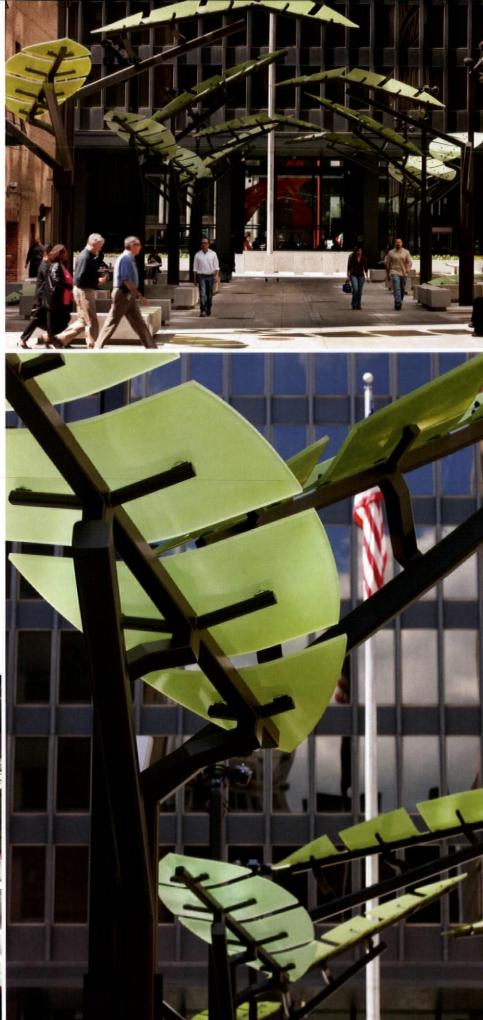
U.S. General Services Administration purchased the service alley adjacent to the Mies van der Rohedesigned Federal Center to create added security and develop an appealing space for public use as a part of the nationwide First Impressions Program. The design team, one of two landscape architecture firms selected by the GSA, sought to incorporate elements of the site's heritage and current urban needs with special attention to color, shape and amenities.

"The site improvements provide a progression from the monumental architecture of the Federal Center to the pedestrian scale of State Street, adding to the security while creating spaces for people to gather, relax, and socialize amid Chicago's animated central business district" says principal Mark Rios, FAIA, FASLA.

The design evolved around three concept themes: canopy, urban oasis and light. In order to achieve a successful public space, the design team sought to incorporate these ideas into a space where pedestrians could sit, relax and engage civically. "The canopy elements and hardscape details tell the story of the site by alluding to the unique elements that form its character: the honey locust trees that create vibrant seasonal interest; the white terra-cotta detailing of historic Chicago buildings; the Miesian grid of the modernist plaza; and the reflected light patterns of the surrounding facades," says Rios. During winter the bold, graphic trees become sculptural elements, at night they provide ambient lighting and increase safety and during summer they provide shade.

Photographs: Scott Shigley







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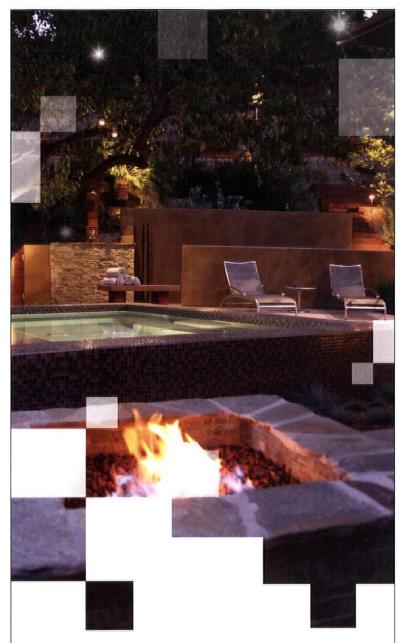
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Fontana Park

Location: Fontana, California

Designer: BMLA Landscape Architecture

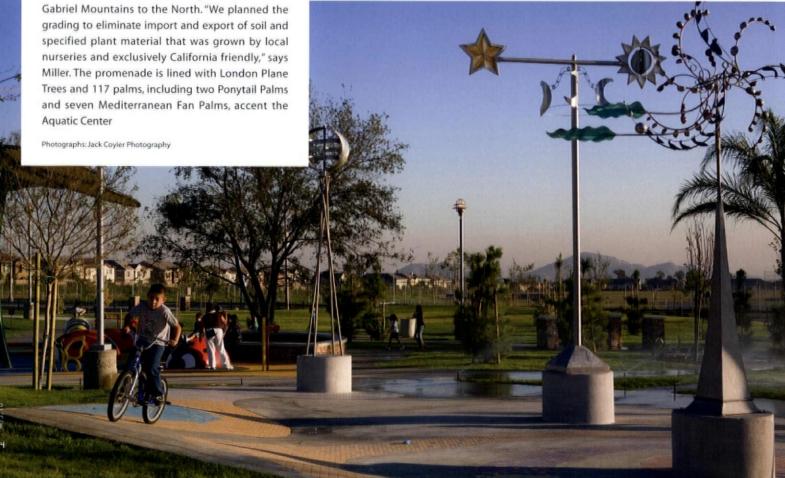
Website: www.bmla.net

The 38-acre park was born from the need to unify the sprawling community of Fontana through a public space. "Early in the process of programming and conceptualizing the park, community leaders and citizens brought to the planning table the idea of bringing to life a culture of community health through activity," says Baxter Miller, president of BMLA. The design team approached the project from a multi-generational standpoint, incorporating a 43,000-square-foot community center, a play area including a 2-acre tot lot with rubberized hills, a formal promenade and open playfields.

The original site of the park featured angled trees shaped by the strong winds from the Cajon Pass, so in response the design team created a whimsical play space with kinetic sculptures and wind-driven art."One of the interesting parts of developing play spaces is the creative input that you get from the artisans who sculpt and fabricate the feature that you design," says Miller. Two themes—Shipwreck and Bug Garden—emerged for the play area and the design team turned to Cemrock to fabricate the sculptures out of foam and glass fiber reinforced concrete.

Paths link the skate park to the community center and pool and offer breathtaking views of the San





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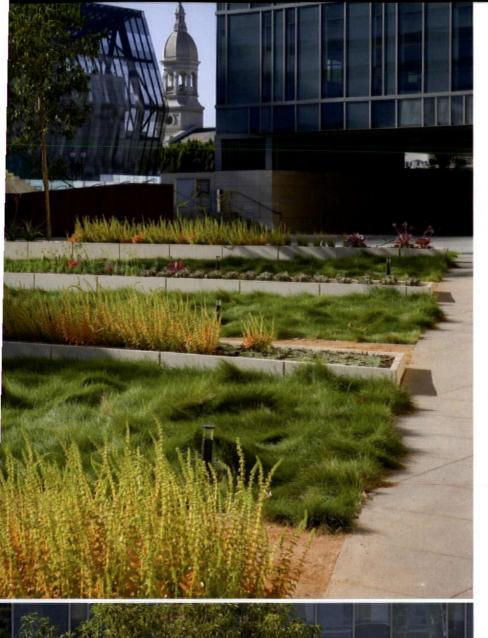
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LAPD Police Administration Building

Location: Los Angeles, CA

Designer: Meléndrez Design Partners

Website: www.melendrez.com

Landscaping in an urban environment often is challenging; many urban projects do not have enough space to create interactive green environments. As a result, landscape architects must be efficient in their design. In this case, the client wanted to express their connection with the community through inviting public spaces where residents can live, play and interact with one another and the police department while also following security criteria associated with institutional facilities. In order to maintain a sense of openness, the designer addressed security concerns in less obtrusive ways to avoid a feeling of forbidden entry.

Instead of creating impenetrable edges around the building, the design team built planters, rising slowly from street level to the entry of the building. Bollards are substituted with an elegant water feature, a double row of sycamore trees and elevation changes create subtle barriers and alluring elements.

The design team viewed the landscaping as a quiet response to the building's elegant and contemporary architecture. The plants selected reflect a lush, vibrant and verdant landscape, incorporating both native and non-native vegetation. Mexican palo verde trees create a veil of green along Spring Street, and Brisbane box trees in the First Street plaza complement the magnolias by City Hall. New Zealand flax, rosemary, red yuccas, agaves and succulents add dimension to the design.

to the design.
Photographs: Jack Coyier Photography

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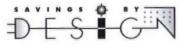
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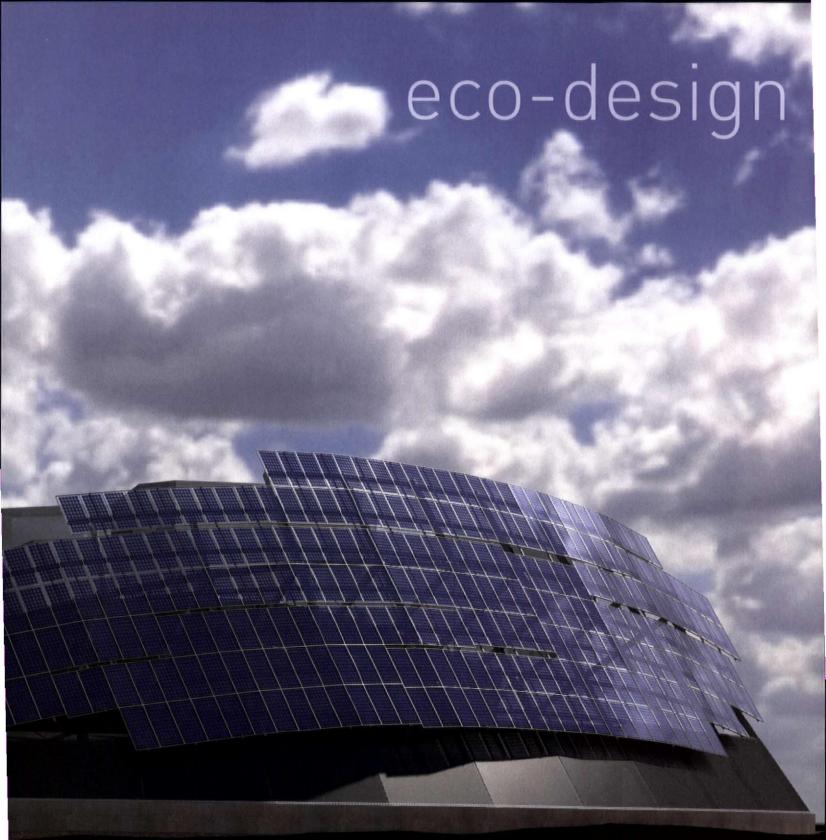
BENTLEY PRINCE STREET



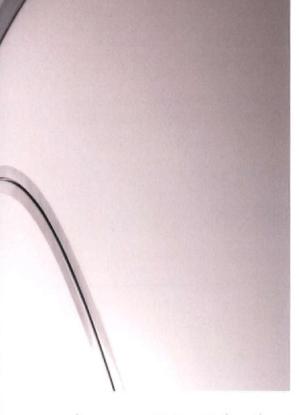


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LEFT: The interior stairwell of the Qantas A380 RIGHT: A simulation rendering of the Solar Impulse

In a quest to make the world more environmentally friendly, green products and sustainable solutions have been incorporated into many of today's transportation designs, as planes, trains and automobiles are becoming more fuel efficient and eco-friendly.

The pioneering spirit that enabled man to conquer space in the 20th century is fueling our desires to find solutions to reduce our dependence on oil in the century ahead, not by reducing mobility and personal comfort but by experimenting with renewable energy and innovative design. The answer does not exist in one magic pill, instead a combination of solutions build upon each other to create a sustainable picture stronger than its individual strokes.

Up in the Air

In 2005, Airbus unveiled plans for its environmentally friendly jumbo jet, the A380, and Qantas quickly jumped on board as its first customer, integrating six in their fleet in 2010. "The A380 sets the standards for the 21st century," said Tom Enders, Airbus President and Chief Executive Officer. "More than 380 patents onboard underline the aircraft's leadership in eco-efficiency and innovation and will allow Qantas to continue to grow whilst reducing its impact on the environment."

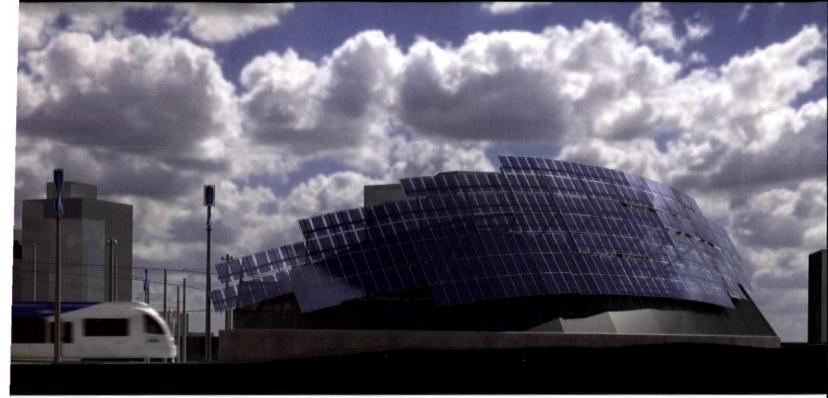
With its greater capacity and unprecedented environmental friendliness, the A380's design allows it to produce half as much noise on take-off as its competitor and consumes less than three liters of fuel per passenger over 100 km of travel, a rate comparable to that of an economical family car.

Onboard the aircraft boasts cutting edge design led by Qantas Creative Director Marc Newson, who created the cabin of the double-decker jumbo plane, working on everything from the seating to the lighting to even the cutlery. The award-winning design includes 14 first-class suites that incorporate a fully flat bed outfitted with a foam mattress, sheepskin overlay and cotton sheeting. The Edelman leather seats face a dining table designed for two; the space also features a personal dresser

unit and electronically-controlled dual layer window shades.

In 2007, Boeing unveiled an eco-friendly plane model called the "787 Dreamliner," which Boeing claims uses 20 percent less fuel, produces 20 percent lower emissions and also decreases maintenance costs by 30 percent from typical aircraft such as the 747. The 787 also promises a more comfortable flying experience for passengers. Its innovations include a new interior environment with improvements in air filtration, higher cabin pressurization resulting in reduced physical fatigue, larger windows, more stowage space, improved lighting and other passenger-preferred conveniences.

Runways of the future may accommodate the Solar Impulse HB-SIA, the first airplane designed to fly without fuel, which left the ground at Switzerland's Dübendorf Airfield for the first time in December 2009, and proceeded to fly 350 meters at an altitude of one meter. "For over ten years now, I have dreamt of a solar aircraft capable of flying and promoting renewable energy," says Bertrand Piccard, who along with André Borschberg, designed Solar Impulse with the wingspan of a Boeing 747-400 and the weight of an average family car. Over 12,000 solar cells mounted onto the wing supply renewable energy to the four electric motors with a maximum power of 10 HP each. Lithium-polymer batteries permit the HB-SIA to fly through the night.



On Track

Many of today's green-inspired trains are powered by magnet technology, which enables increased propulsion chain efficiency via a permanent magnet motor. This type of motor results in lesser operating costs as well as far reduced environmental impact.

In 2009, \$10.5 billion was set aside for high-speed rail lines in the U.S. in hopes of spurring high-speed rail transportation. "We've always known that electric high-speed trains represent a tremendous opportunity to meet greenhouse gas reduction goals by removing cars from the road and by slowing demand for additional air travel," says Judge Quentin L. Kopp, Chairman of the High-Speed Rail Authority. "We welcome the news that this train is even greener, in that it can be powered with none of the emissions that cause global warming."

Portland is making great strides in marrying high-speed rail with sustainable and exciting design. The TriMet Portland Mall Light Rail South Terminus designed by Hennebery Eddy Architects will serve as a gateway to downtown, incorporating photovoltaics and wind turbines as sources of renewable energy. "Infrastructure projects are born out of necessity usually with little regard to the associated impacts or opportunities," says project associate David Byrne. "For the South Terminus the design team sought to engage and elevate the form follows function mantra by enhancing the program elements on the site."



TOP AND BOTTOM: Renderings of solar inspired TriMet Portland Mall Light Rail South Terminus.

The initial concept of the design aims to capture and express the kinetic energy of trains moving through the site. A large sculptural framework skinned with the photovoltaic panels and coil drapery will revolve around a large ovoid public space.

Reclaimed aggregate and granite blocks salvaged from the former Transit Mall will serve as building materials and terraced edges will prevent storm water from running off into the city's sewer system.

anderings courtesy of Hennebery Eddy Archite

Behind the Wheel

In the age of the Prius and the Volt, car manufacturers are increasingly focused on designing smart cars but where will we house all of these eco-friendly vehicles?

Parking designers are embracing practices such as using recycled materials, solar panels and energy-saving lighting to turn concrete rooftops into green surfaces to reduce storm-water runoff.

Rich & Associates, a parking consultant based in Southfield, Mich., designed the Blue Cross Blue Shield garage in downtown Detroit, one of the first parking garages to meet Leadership in Energy and Environmental Design standards set by the U.S. Green Building Council.

"Within the past five years, it's been a growing segment of the industry. Any parking garage that we're involved in from a design standpoint balances constraints of a budget with the desire and philosophy of a green building," says Dave Rich, director of business development for the company. "In the past, there wasn't much consideration for the context of the architecture, it was only for a functional purpose. Now, we are very cognizant of how the facades integrate in the urban fabric of where they are being placed."

On a more recreational note, Tilke Engineers & Architects is finishing up designs for Atlanta Motorsports Park, on its expected opening at

the end of 2010, will be the world's only sustainable racetrack in the world.

"Our world class facility is being created with the 'green' objective of reducing our carbon footprint," says Jeremy Porter, CEO of Atlanta Motorsports Park. "Just because I like to drive cars fast, does not mean I like to pollute." The plans include a sustainable building design, waterless urinals, tank-less water heaters, reclaimed water for the irrigation system, recycling of garbage and oil, the maximum efficiency HVAC available today, thermal resistant windows, supplementary insulation, and the use of high-efficient lighting and florescent bulbs.

BELOW: The roof of the parking garage at the Blue Cross Blue Shield of Michigan headquarters utilizes greenery and a track made of recycled tires.



esy of Rich and Associates





TOUR EDENIS

affair with "Women & Bicycles"

I WAS IN PARIS NEAR THE PLACE DE LA CONCORDE. IT WAS AROUND 8:30 AM and people were on their way to work. I saw many women of all ages and sizes riding in bicycle lanes. What stood out was the number of women riding bicycles and, especially, the beauty of their dress and the confident manner with which they rode. While I believed the images and story would be compelling, I quickly realized that there could be a much larger purpose to this project. What if we could get urban areas in the United States to replicate what Paris had been able to accomplish by promoting safe streets and, thereby, reduce traffic congestion and improve air quality and the health of their citizens? The photo book would be used as a calling card to meet with local government officials and to give speeches and presentations to groups and organizations that could help make their cities become less car dependent and friendlier to bicyclists. With reduced traffic congestion and improved air quality and health, it would be a win-win situation. -Gil Garcetti

Paris: Women & Bicycles (\$45; Balcony Press 2010) debuts this month.





get stuck in traffic, and I'm never on that holy quest to find parking."

-A Parisian cyclist



BY MICHAEL WEBB

Adaptive re-use takes an environmentally conscious approach to building but how can landmarks be transformed innovatively?

DOCTRINAIRE MODERNISTS, FROM LE CORBUSIER on, were as determined to sweep away the past and construct a brave new world as were Lenin and Mao in the political sphere. They encountered fierce resistance, for most people cling to what they know and reject the unfamiliar. In architecture, as in politics, every revolution inspires a reaction, and the allure of progressive ideas lost its luster in the 1960s. Wholesale urban clearance and the proliferation of banal modernist buildings spurred a preservation movement that strives to protect every fragment of the past.

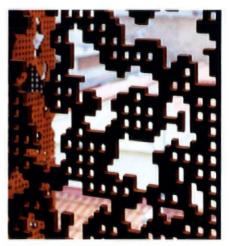
Architects are increasingly active in the middle ground between these two extreme positions, creating a dialogue of old and new. Across America and, still more in Europe, disused factories, banks, churches, water towers, castles, warehouses, power stations, and even a submarine base and an air raid shelter have been meticulously restored and inventively transformed to play new roles. Those purposes include museums and creative workplaces, hotels and cultural centers, residential and recreational spaces.

Adaptive re-use can be as creative as ground-up building. Airy structures of wood, steel, and glass are juxtaposed to startling effect with massive shells of stone, brick, and concrete. Roofs are opened up to infuse interiors with natural light. Ruins are framed and the patina of old walls enriches the experience of users and visitors. Preserving these elements reinforces the continuity of history and the spirit of place. Landmarks fare best when their vitality and economic potential is renewed, and fresh patterns of use enrich the neighboring community. It's also a green strategy, minimizing the disruption and expense of new construction and combining the best of traditional and innovative technologies.

The Caixa Forum in Madrid is a model of how to infuse an inert landmark with utility and delight. Herzog & de Meuron transformed a disused power plant into a showcase for a contemporary arts foundation, much as they turned London's Bankside Power Station into the Tate Modern. Here, they were working on a more intimate scale, across a busy highway from the Prado Museum, and the challenge was to open up the historic quarter in back to the street and make the area more pedestrian friendly. To do this, they removed the stone base and propped the brick cube on three massive supports, adding faceted planes of stainless steel to the underside and creating a shady plaza. Patrick Blanc added one of his vertical gardens to a blank wall and the brick cube was extended upwards by a carapace of Cor-ten steel. The interior was gutted and a sculptural staircase links the basement auditorium to the top-floor restaurant. There the Cor-ten wrapper is pierced to throw a dappled pattern of light and shade across the room, evoking the Moorish tradition in Spanish architecture.

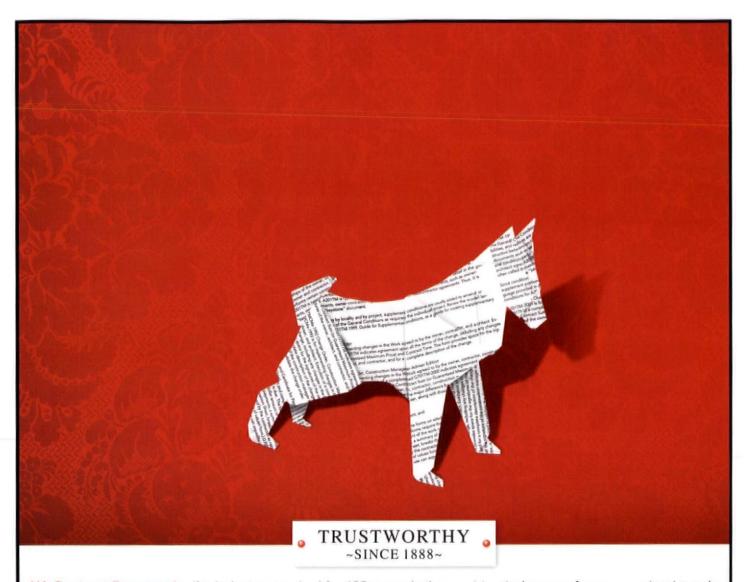
Radical yet respectful of the surroundings and fabric of the old building, Herzog & de Meuron achieved an equilibrium of past and present. Norman Foster has demonstrated a similar mix of sensitivity and boldness, starting with London's Royal Academy, where he inserted a steel and glass structure that links two historic buildings, revealing a classic façade that was previously concealed. The glass canopy over the courtyard of the British Museum and the dome over the Reichstag do similar things on a heroic scale, but his most provocative intervention to date is the Hearst tower in mid-Manhattan. Joseph Urban designed a fanciful podium in 1929, but the tower he intended was never realized. Foster's tower is an independent structure that employs the old shell as a lofty, lightfilled atrium, and its faceted facades play off Urban's art deco geometries.

The audacity of that juxtaposition is rarer in the US than in Europe, Le Corbusier toured



OPPOSITE: The sculptural addition to the Caixa Forum in Madrid reflects the surrounding roofscape. INSET: A detail of the pierced Cor-ten wrapper.

America in the 1930s and titled his account of that trip, "Voyage to the Land of the Timid." It was an unkind thrust, given the deep conservatism of European countries in that era, but he anticipated the shift that occurred fifty years on. Once a hub of innovation in architecture and design, the U.S. now lags behind, and its best talents enjoy greater opportunities abroad than they do at home. European cities cherish their legacy but welcome originality, beside and within historic buildings. When Berlin was reunified, a reactionary planner demanded that every centrally located structure conform to traditional models, and a great opportunity to reinvigorate the city was squandered. But Gehry and others have accomplished wonders behind the staid facades. Elsewhere in Germany, and even in Paris and Amsterdam, there are constant jolts of invention to remind us that we are enjoying a dynamic work of art. It's time for America to abandon its nostalgia for a romanticized past, reject the deceit of contextualism, and embrace the best of the new.



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Professor Andrew Hargadon lights the path for emerging designers

As a Professor of Technology Management and a founding director of the nation's first Energy Efficiency Center (EEC) and the Center for Entrepreneurship at the University of California at Davis, Andrew Hargadon is committed to helping researchers and students move their ideas out of the lab and into the market.

"Most people think of innovation as something new but innovation is not about invention. The operating mechanism behind a powerful idea is ideas that aren't new but are already in existence and already at work somewhere else," says Hargadon. The profound impact that Thomas Edison had on light or that Henry Ford had on the automobile happened not because they invented new technology, but because they created new combinations of old ideas. Edison did not invent the light bulb nor did he invent the generator or the wiring but he was able to link these seemingly disparate elements to bring electric power to the general population. In today's market, Apple did not invent the MP3 Player or the cell phone. Instead, the company combined hi-tech, contemporary design with progressive marketing to make these technologies more valuable to the public.

By understanding the needs and wants of the public innovators can transform the landscape of technology. The Energy Efficiency Center is committed to analyzing and advising different policy options that will advance energy efficiency. Green technology is one of the most regulated industries, and although these constraints worked for the energy

infrastructure 50 years ago today's regulatory environment needs to be revised so companies can emerge to solve real-world problems. The barriers of the bureaucracy lie in the standard answer to invest more into basic research. In order for us to advance,"we must fundamentally change the way in which the old industry, the old regulatory regime, the public utility commissions and the general regulatory agencies interact and respond to emerging opportunities because right now we're living under a system that hasn't effectively changed for over 100 years," says Hargadon. He believes that the funds should be shifted to areas where innovations are most likely to originate, in the mix of people and ideas that already exist across industries.

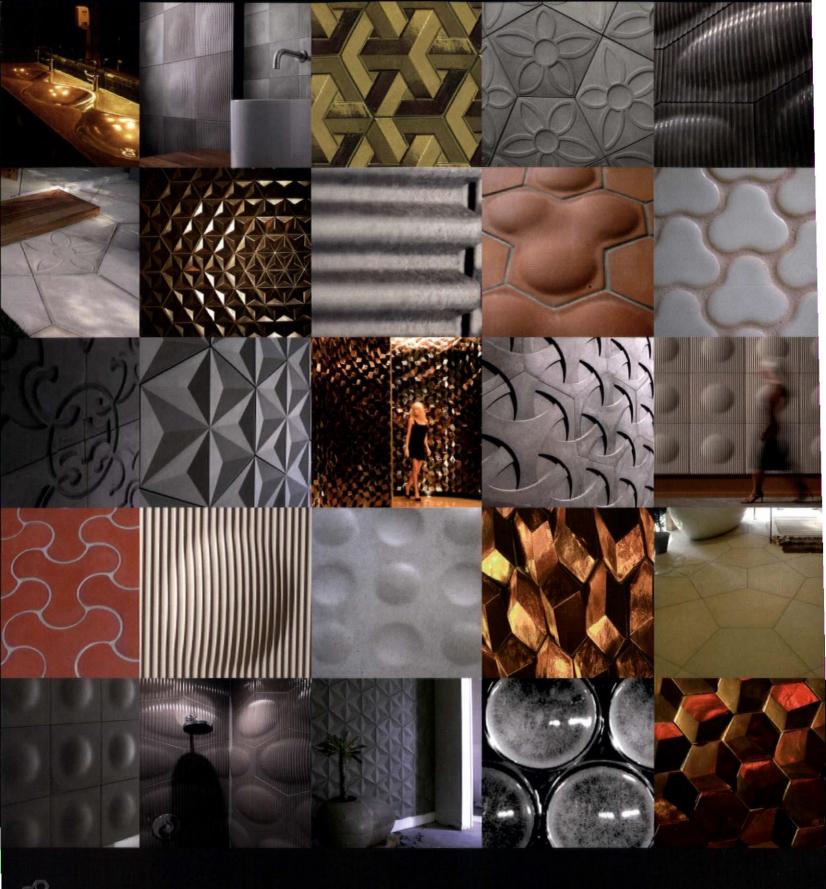
UC Davis recently started construction on West Village, a "living laboratory" mixed-use development that will stretch 220 acres to the west of the main campus. Over the next 10 years, 500 single family homes, 1200 student rentals, and 30,000 square feet of commercial space will be built. West Village will allow researchers to test energy efficient technologies, low energy transportation, and sustainable building design. The EEC is in collaboration with the development team to amalgamate the latest energy efficient innovations and reach a net-zero greenhouse gas foot print goal. A biogas digester will consume community green and agricultural wastes to produce a biogas, not sufficient enough for pipeline quality but capable of running a fuel cell for baseload power. "Homes will not have natural gas but instead

LEFT: Student Jake Lorber constructs radiant flooring for a community center at UC Davis Domes; RIGHT: Dr. Kurt Kornbluth of the EEC demonstrates solar panels to neighborhood children in Ghana.

be all electric," says Hargadon.

Whether it is the government or a business model, energy efficiency must be applied to an effective infrastructure before it can expand and be adopted. The California Parking Garage Lighting Project, launched by EEC and its affiliates, used "smart lighting" to achieve over 50 percent energy savings in standard parking garage lighting applications. With EEC's efforts, multiple vendors now manufacture "smart lighting" products. The innovation will soon be put into California code for all outdoor lighting. Another project called "Lighting the Way" aims to distribute an ultra-low cost, modular LED lighting system to reduce fuelbased lighting in Zambia, Africa. Out of the 10 million in population, only 20 percent of Zambia households have grid connection. "Lighting the Way" distributes a renewable source lighting alternative so these households can have better light for less money with lower environmental consequences.

- Karin Rose



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