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LETTER FROM THE EDITOR

“What operational, social, and ethical principles should guide us in the extraordinary task of building the environments of today and tomorrow?”

That question is central to Sarah Williams Goldhagen’s book Welcome to Your World, in which she espouses an approach to design that enriches lives, places human experience squarely at the forefront, and nourishes our well-being. Those values are mirrored in ArchitectureBoston’s 2020 Insight, whose mission is similar. Just as Goldhagen exhorts the design and building professions to go about their work with an awareness of how people use and experience space, this issue aims to offer a lens into that landscape, to provide a framework for the conundrums confronting architects, designers, and urban planners. How does our built environment shape and reshape us? What do we need in our toolboxes to confront the advent of climate change? Where do we begin to make sense of the cascading challenges within our urban realm?

In our complex world, there are no easy answers. But we can begin mindfully, by trying to articulate why design matters. It can, for example, help provide a roadmap for Boston to arrive at its carbon-neutral goal by 2050, when the population in the United States is projected to reach almost 400 million. As Randa P. Ghattas advocates in “Reshaping our carbon footprint” (page 12), the city must collaborate with neighboring communities to leverage knowledge, share resources, and encourage innovation. That we’re not in this fight alone is a sentiment echoed by Dave Hampton in “Heed clients, nature, and allies” (page 92). Climate-adaptation initiatives would do well to meld landscape architects, hydrologists, and engineers from the get-go: “Rather than an argument for the primacy of one discipline over another, this is instead a call for true interdisciplinarity and integration,” he writes.

Even as we come to terms with the devastating effects of human interventions on the natural world and nature’s profound reaction to them—let alone the complex, long-term work that must be undertaken to mitigate those effects—we shouldn’t overlook the simple, restorative power of interacting in real life. In “Come together” (page 50), Alice Brown exalts in Boston’s recent investments in social infrastructure. Spaces that welcome us, that build community, that promote equity—those are the hubs that help us articulate why good placemaking can be transformative.

No matter what we are doing—from tipping our cap to technological advances and digital innovations to pledging to live sustainably and responsibly—design is central to human experience. How we intersect with what architects design and the manner in which we inhabit those constructed spaces are always in flux. What remains constant is the imperative to ensure that our future world reflects our values. It is our collective responsibility, as Kelly Haigh says in “Our work, our selves” (page 44), to leave the design industry better than we found it. Bryan Irwin underscores that thinking in “Rise up and reinvent” (page 94), a clarion call to the design profession. “As makers of our built world, architects and planners should ask these questions: What do we believe in? Can our work suggest a future we all want to be part of?”

For more than 20 years, the BSA/AIA published ArchitectureBoston as a (mostly) quarterly printed ideas magazine connecting design to social issues. This past spring, AB reinvented itself into a digital-first online journal, with stories, reviews, and essays on the core issues central to the architectural profession today.

This year-end compilation issue—AB 2020 Insight—represents the next generation of that publication. What appears in these pages is a blend of components: stories first showcased online during the course of the year that remain as relevant as ever alongside new content that forecasts trends from housing to sustainability, from infrastructure to resiliency. ArchitectureBoston owes a debt of gratitude to its founding editor, Elizabeth S. Padjen FAIA, and to my predecessor, Renée Loth Hon. BSA, whose erudition and creativity combined to produce more than two decades of exacting thought leadership. It’s my hope that their spirit and spark live on in these pages.

Fiona Luis
Editor
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URBAN DESIGN

NEW DIMENSIONS IN BUILDINGS AND ON THE STREETS

by Ben Carlson AIA

My crystal ball reveals powerful, inevitable forces driving the urban-design issues that will demand our attention in 2020. Many important trends delineate urban design—from a search for more equitable public spaces to food halls—but some will require greater immediacy and innovation. The 2020 election, climate-change effects, technological advancements, and investment flows all indicate the following issues will require more effort and creative solutions from those who plan and design urban places.

Ben Carlson AIA is the director of urban design at Goody Clancy.
Climate change has grown as a concern among voters since 2016, with 69 percent of voting-age Americans now worried about climate change, according to a 2019 survey by Yale and George Mason universities. The United Nations' call for urgent action over 10 years to minimize catastrophic climate change, coupled with increasing effects from climate change where people live, is making an abstract concept tangible. American cities most at risk from climate change are also the least prepared and have relatively larger black and Latino populations and poverty levels, as documented by Notre Dame's Global Adaptation Initiative. Meanwhile, solutions are emerging as renewable energy and net zero buildings enter the mainstream; cities devise practical zoning, landscape, and infrastructure strategies to mitigate water and heat impacts; and the Green New Deal builds these strategies into a broader policy framework. Important urban-design challenges include designing buildings and neighborhoods to withstand rising waters, integrating more plantings and renewable-energy production into urban form, and reorganizing streets and land use around clean transportation.

Housing is the oldest, most important shaper of urban form, but now it's also a pressing political issue. According to NPR, pollster Geoff Garin found that 75 percent of all voters this year would be more likely to vote for someone with a plan to make housing more affordable. Because multifamily buildings can offer greater affordability, better address the lifestyles of many households, and reduce inequities of single-family zoning, Minneapolis and Oregon recently passed laws enabling "missing middle" two- and three-family dwellings in formerly single-family zones, and California is considering similar incentives for multifamily buildings. As housing regulation becomes more flexible, it's time designers revisited the uniformity of urban-design conventions so a more diverse mix of building types and sizes feels at home.

Technological innovation and private capital are rapidly changing how we move about. Uber and Lyft usage in New York City increased tenfold from 2015 to 2018, while a similar number of transit trips vanished, according to a University of Kentucky study. "Micromobility" trips on shared bikes and scooters doubled between 2017 and 2018, with scooters overtaking shared bikes in numbers and usage, according to the National Association of City Transportation Officials. Robots now travel sidewalks and stoops with packages. While these changes offer many welcome choices and benefits to people in urban places, they also sow chaos on our slow-to-change streets—sidewalk speeders, bike-lane blockages, crawling buses. Communities need to rethink street design and policies, sorting out who moves and parks where and when—anticipating the advent of autonomous vehicles. A decade of success in tweaking streets to expand space for people, and favor buses and bikes, demonstrates that streets can, indeed, adapt and, if designed right, become better public places.
What will it take for Boston to become carbon neutral by 2050?

by Randa P. Ghattas AIA
It's 2050. My neighborhood bustles with families who have been living in the city for generations. We don't own a car. We walk or bike on networks of protected lanes that crisscross the city. The air is clean and streets are quiet, even with electric rapid transit buses and trains, which are ubiquitous and on time. My 1880s house feels comfortable, even on drafty winter days. Dust is not a problem; soot doesn't collect on my windowsills. I power my home with solar energy. Main streets, filled with people hanging out, are lined with shops, trees, and vegetation. At the height of summer, I no longer worry about air quality when I run. Welcome to my vision of a carbon-free Boston.

But I awake; it's 2019. We have a long way to go before we achieve this sustainable future, a future where the carbon dioxide emitted into the atmosphere is reduced to zero by eliminating the use of carbon and offsetting remaining emissions.

Earlier this year, the Green Ribbon Commission released its “Carbon Free Boston” report containing a general set of recommendations to enable Boston to meet its carbon-neutral goal by 2050. The report outlines three key strategies to meet those goals: 1) electrify everything; 2) maximize efficiency in the building, transportation, and waste sectors; and 3) use clean, carbon-free energy for fuel.

Focused on Boston only, the report recommendations mirror other urban climate plans but do not fully address the methods, policies, and programs that will need to be put in place to make this transition happen. Two other companion reports, one on equity and one on the technical details of the report, will provide more information. Nevertheless, implicit in the report is a wholesale restructuring of our economy with equity as critical to the success of this transformation. So how do we get there?

The report focuses on buildings as one of the most important pieces in the transition to a carbon-free Boston. Buildings account for more than two-thirds of the city’s greenhouse-gas emissions, with pre-2018 buildings accounting for 93 percent of those emissions by 2050 if we continue business as usual. To transform Boston’s 86,000 buildings (80,000 residential, 6,000 commercial), deep energy retrofits coupled with electrification will be needed; the report notes that’s approximately 2,000-3,000 renovations every year. That’s a lot of retrofits in very old buildings.

To accomplish this in design and construction is no easy task. It’s an industry that historically has been slow to change and is largely fragmented, composed of hundreds of thousands of players—small and large contractors, designers, engineers, building operators, vendors, and product manufacturers, among others.

As new policies and programs, both carrots and sticks, are put in place, the commercial and large multifamily sector, supported by an established design and construction market, will follow suit, despite initial resistance, and meet the new challenges. However, successfully transitioning the small multifamily and single-family residential market will require significant intervention. Comprising a lot of small buildings owned by one or more people, this market accounts for half of the floor space and one-third of greenhouse-gas emissions in Boston. Who pays for these retrofits? Who designs and builds them? How do we address the significant knowledge gap in the market? How do we engage effectively with the owners of these units? Most important, how do we avoid leaving those with limited resources behind in a heated housing market, in an economy where the gap between the haves and have-nots is expanding, and where segregation continues to vex the city?

**EDUCATION AND TRAINING**

We need a trained labor force, and it needs to be done quickly and equitably—no easy task. Affordable and accessible training across the industry (among compliance officers, design professionals, builders, and owners) is crucial. This is particularly important for contractors in the residential sector—an important entry point into the labor market for immigrants and individuals without college degrees. In 2012, France adopted higher performance requirements for residential buildings and invested in a national training program to educate the marketplace. In 2018, it announced additional resources for training the industry to speed the transition. The benefit of coupling building-performance requirements with training programs is that the initial outlay of resources may be high, but the return on investment is also high. Much of the training in this space happens in the offices of design and engineering firms, and in the construction field; as the industry gains knowledge and transitions to designing...
and building differently, that expertise will be passed on to future generations.

Training a new generation of workers will also be important. Environmental workforce readiness programs, such as the 10-module, multimedia, activity-based curriculum Roots of Success, should be integrated in schools, job training, and youth programs to target low-income communities. Technical arts programs, which often integrate construction trades, can teach how to build higher performance buildings. Community colleges, universities, and cities can collaborate to develop educational programs around knowledge gaps.

Support programs targeted toward homeowners will be critical. As part of a larger comprehensive set of policies and programs, France developed the Points Renovation Info Service, a network of public and independent advice centers, as a single point of contact for homeowners; it offers free technical, financial, fiscal, and regulatory information, and simplifies access to information, resources, and support.

**COST**

To do any of this successfully and equitably, we will need significant resources. Deep energy retrofits are expensive and affect the whole building, including windows; walls; roofs; and mechanical, electrical, and plumbing systems. In Boston's heated housing market, that poses immense challenges. According to Harvard University's Joint Center for Housing Studies, 28 percent of metropolitan Boston homeowners are cost burdened and 12 percent are severely cost burdened; for renters, the figures are 48.8 percent and 24.8 percent, respectively. Tax breaks, significant subsidies, and, for many, outright grants will be necessary to maintain a stable market. Any policies, such as those tied to rent or sale of a property, will need to address this challenge.

One of the key benefits of transitioning to a carbon-free Boston is that it will save us all money. Although existing programs, policies, and incentives support energy-efficient improvements, they are simply not enough, especially in older homes where structural, health, and safety issues are often critical priorities before energy efficiency can be addressed. Retrofitting these structures will require more resources than what is currently allocated to energy efficiency. These costs will fall on the owners of these homes unless creative solutions are identified.

To source significant additional resources, we will need to leverage the other benefits of carbon neutrality. For example, improved health outcomes can become a basis for innovative partnerships among the financial, utility, insurance, biomedical, and healthcare industries to provide financial resources to owners and address the problem equitably and holistically. A pilot program in Vermont targets low-income households with high hospitalization rates for asthma and chronic obstructive pulmonary disease. Doctors prescribe home assessments and home-improvement funding. Because many of the strategies that support health also support energy efficiency, families end up with lower-energy homes and reduced emergency hospitalizations. In Chicago, a similar program emerged out of a foreclosure prevention program.

Developing programs such as these can enable private investment while integrating energy efficiency, renewable energy, and public health in low- and moderate-income communities. Can they also help support those who are struggling but do not fall within the traditional definition of low- and moderate-income households?

**SCALING UP**

Along with new sources of funding, collaboration among various industries in Greater Boston should be developed with an eye toward identifying innovative relationships and opportunities.

Kalundborg, Denmark, is a model for industrial symbiosis and was recently awarded the Win Win Gothenburg Sustainability Award. Multiple public and private entities in Kalundborg transform their industrial waste, approximately 25 streams and expanding, to become resources for others. A treated byproduct from a pharmaceutical company becomes a fertilizer...
for farmers, waste heat from industrial production is integrated into the local utility and pumped into a district heat system for the residential community, and waste ethanol becomes biogas for the local utility. Michael Hallgren, production director at Novo Nordisk, one of the players in the symbiosis, says, "The partnership is based on common sense and cooperation, as well as comprehensive trust between the partners. The partners trust that they can share challenges with each other and find shared solutions that create value for all parties involved." Here, the success of the whole is more important than the success of the individual.

The city's relationship with the region must be acknowledged holistically so that synergies with neighboring communities can be identified and leveraged. Boston and its neighboring cities may be the economic engines of the area, but their benefits cannot remain concentrated within them. For residents who have moved farther and farther from Boston because they have been priced out of the housing market, a carbon-free city may exacerbate the inequity that already exists for those in less affluent communities. This includes low- and moderate-income as well as middle-class households. Is there a give-and-take that can exist between the city and the larger region?

If we can develop an economy that is both regenerative and restorative, where transportation, energy, food, material, forest, and waste networks can operate synergistically within a larger framework of interconnected systems, change can start to take hold. Once the benefits begin to stack up, we might just create a mutually supportive, equitable, and carbon-free region.
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The number of individuals, businesses, and organizations taking action to mitigate and adapt to climate change has grown significantly in the past several years. Record-setting heat, drought, fires, and storms are going to be the new normal, but societal urgency in response to climate change is reason for optimism. The major trends in sustainability are those with the biggest impacts: embodied carbon, design for health, and net zero energy.

Katherine Bubriski AIA is director of sustainability and building performance at Arrowstreet.
EMBODIED CARBON

For the past few decades, the building industry has focused on operational carbon, the emissions from heating, cooling, and other building operations. Little focus has been on embodied carbon, the emissions from manufacturing building products, transporting them to the building site, and constructing the building. Over the next 30 years, embodied carbon from building materials will equal operational carbon. We must act today to reduce embodied carbon, which is locked in from day one, unlike operational carbon, which can be reduced over time by energy-efficiency upgrades. More and more, architecture firms are modeling the embodied carbon of designs through life-cycle assessments, a measure of environmental effects associated with the stages of a product's life from material extraction through to disposal. I expect that number to grow significantly in 2020. Reuse of existing buildings will be crucial as well. In both existing and new construction, there are three major keys to designing for reduced embodied carbon: using less materials, such as exposed structure and polished concrete floors; optimizing structure by increasing the structural grid and reducing the size of slabs and footings; and choosing materials with lower carbon emissions, such as wood.

OVER THE NEXT 30 YEARS, EMBODIED CARBON FROM BUILDING MATERIALS WILL EQUAL OPERATIONAL CARBON.

DESIGN FOR HEALTH

The AIA Code of Ethics stipulates that architects should design for the health, safety, and welfare of the public. In today's climate, health should be at the forefront. Health professionals have noted that the built environment is drastically affecting the health of the population, and architecture is beginning to address these conditions at the community scale. It is not enough to locate air intakes away from current contaminant sources; we need to curb global emissions by designing zero carbon buildings, reducing embodied carbon, and implementing plans to reduce transportation emissions. At the building scale, we need to create an enhanced indoor environment with appropriate air quality, acoustics, lighting, thermal comfort, active and universal design, and biophilia.

NET ZERO ENERGY

An increasing number of projects, covering all building types, are being designed to net zero, with K–12 schools in Massachusetts seeing the largest uptick. (One dozen schools currently in design or construction have set net zero goals.) The question of whether net zero buildings cost more has also been addressed. The U.S. Green Building Council Massachusetts recently published an independent report, "Zero Energy Buildings in Massachusetts: Saving Money from the Start," showing that zero energy is financially beneficial. The focus of net zero is also increasingly turning toward all-electric buildings that eliminate onsite fossil-fuel combustion, a key step, along with increasing renewables in the power grid, to decarbonization. Cities and towns throughout Massachusetts aware of the benefits of improved safety, health, resilience, and financial stability are now joining the bandwagon and developing net zero action plans for their communities.
Every community has a building that tells its story. The place where things were made, original ideas were sprouted and spread, and individuals discovered their role in the larger whole. These structures dot the American landscape as markers of our collective progress. Their pores are clogged with the community's sense of self-worth, and their health is a reflection of our own health.

Buildings shouldn't be preserved in formaldehyde. But discarding the buildings that reveal our nation's history, with all their patina and rust, isn't the solution, either. The infrastructure that we have is here to stay, even if the enterprise that once occupied its space is obsolete. The architecture of the future must focus on transformation. It must desurface the potential in our existing built environment with a respect for the past and an eye to the future.

MONTGOMERY BLOCK

Montgomery Block was the first building in San Francisco's history designed with fire and earthquakes in mind. It seemed superfluous in 1853 when hundreds of Chinese immigrants dug a crater in the earth for the building's foundation to rest atop a bed of timbers. But in 1906, its wisdom was revealed, as the Block stood intact and the city around it lay ruined by a massive earthquake.

The Block was a stucco-clad megalith. It had repetitive picture frame windows, an exaggerated cornice, and a courtyard punched into its interior core. Its base was a retail center with three floors of residential units stacked on top. In the early days, the rent was high and attracted professionals. As the city grew and its demographics changed, the suits moved out and artists moved in, converting the units into studios. The confines were cozy and that beget a culture of creative cross-pollination.

A scene emerged inside the Block and radiated onto the surrounding neighborhood. At different points in a time frame spanning from the Progressive Era to the New Deal, artists from the likes of Jack London, Ambrose Bierce,
Frida Kahlo, and Dorothea Lange lived at Montgomery Block or in the surrounding art district that it spawned. Montgomery Block was demolished in 1959. The iconic needle in the city’s skyline, the Transamerica Pyramid, pierces through its ghost. As striking and iconic as the Pyramid is, it is surrounded by a cluster of lifeless copycats. It anchors a San Francisco that’s haunted by an inability to maintain affordable housing or a diverse, independent culture that was conjured by its predecessor.

PACKARD AUTOMOTIVE PLANT

Like Montgomery Block before it, Detroit’s Packard Automotive Plant was cut from the same forward-thinking cloth.

The Packard Plant broke the model of factory construction for the time and in the process, created a new mold. In the early 1900s, architect Albert Kahn had already designed nine wood structures for the complex, but for the 20th, he employed a system of reinforced concrete that was invented and patented by his brother, Julius. The “Kahn system” angled steel-reinforcement bars at 45 degrees, enabling enormous spans of concrete and allowing for an open floor plan that was infrequently interrupted by the presence of columns. At the building’s perimeter, these long spanning beams were infilled with enormous glass windows that funneled in natural light and cross ventilation. From the roof, glass monitors allowed overhead light to wash the work space.

Within the walls of the factory, men assembled car frames while women covered and stuffed the frames of the car’s seats. As time passed and America found its way into not one, but two world wars, the factory lessened automotive production in favor of air and naval engines. The men went abroad to fight while the women proved their aptitude at running the factory and overseeing production.

Outside the factory walls, an infrastructure supporting the workers popped up around the complex, with houses, churches, restaurants, watering holes, and every other cornerstone of a healthy community. The workers may not have been able to purchase the luxury cars that they made, but they and those living in the surrounding community—so many of whom were originally from Eastern Europe, the Jim Crow South, or the far reaches of Appalachia—managed to carve out an exemplary living for themselves.

That American Dream seems galaxies away from the Packard Plant of today. Major industry is long gone. And now, like so many other things in the city of Detroit, the plant is completely vacant. Its brick and concrete are crumbling, its windows are busted out, its copper has been scrapped. Its gargantuan structure seemingly floats on a cloud of debris. One side of the complex is bounded by a railroad, another by a six-lane interstate, and the other two by a neighborhood where the few kept-up houses stand in stark contrast to the backdrop of feral greenery. The plant’s withering appearance is taunting; but, unlike Montgomery Block, it still remains: dormant and in desperate need of a push.

ARNOLD PRINT WORKS

The Arnold Print Works backstory runs parallel to that of the Packard Plant.

Arnold Print Works constructed a 25-building mill complex between 1860 and 1900 in the center of North Adams, Massachusetts. The buildings followed the shape of the peninsula where two branches of the Hoosic River converged. They exemplify New England
mill design and engineering. Southern yellow pine, red brick, and local limestone came together, supported by thousands of wood beams and columns. Natural light and space were abundant, as were residents of North Adams, almost one-quarter of whom produced printed textiles at the mill. The buildings were connected by second-floor bridges and ramps. Man-made extensions of the river flowed beneath to assist the dyeing and finishing of textiles.

The Print Works closed in 1942 and was replaced with the operations of Sprague Electric, which made significant structural interventions to support the manufacturing of transistors, resistors, and capacitors—some of which were used in launching systems for moon landings. Sprague employed the sons and daughters of Arnold workers. As electric light pervaded, holes were cut into floors and natural light wells were closed up, and layers of paint were added to already existing layers.

Just like Arnold before it, Sprague fell victim to competition from cheaper labor elsewhere and closed its operations in 1986. Acres of concrete, brick, stone, and wood on the island in the city center were abandoned. Thousands of jobs were lost.

Fast-forward to 2019. The Arnold-Sprague complex has been transformed into the Massachusetts Museum of Contemporary Art (MASS MoCA), one of the largest contemporary art museums in the United States. With space as an asset, a series of impossibly large galleries were sculpted from the bones of the mill-factory. Light wells were rediscovered, entire floors were dramatically removed, bridges and tunnels connect places for large-scale art installations. Huge windows were cut into façades, and surreal, winding stairways connect vertically. Performing arts happen in between and around the
visual art, drawing visitors to the region amid a wave of creative lodging and dining options.

MASS MoCA has reinvented itself through art. The Swift Factory hopes to do the same through food production and entrepreneurship.

At its peak, the Swift Factory employed roughly 300 Hartford, Connecticut, residents, and its signature gold leaf gilded the dome of the Connecticut State Capitol two miles to its south. But as time passed, production waned, and the surrounding neighborhood suffered deeply from redlining and white flight. As crime intensified outside, street-facing windowpanes were replaced with cloudy fiberglass panels to deflect projectiles and focus inward. The factory closed its doors in 2005, and more than a decade later, nearly half of northeast Hartford residents live below the poverty line and one-quarter are unemployed. In the midst of a major renovation, the Swift Factory hopes to mend these statistics. Areas for creative and entrepreneurial opportunities have been designated, but food production is the primary tenant because it offers jobs that are attainable for high school dropouts and ex-drug offenders. The architectural transformation focuses on repairing the neglected factory to its original character. New transparent windows have been installed in all openings, and, for the first time in decades, the Swift Factory is a cordial neighbor to northeast Hartford.

Unlike the aforementioned factories, the built fabric of Miami’s Wynwood district was substandard. Rows of nearly identical, windowless warehouses lined the streets of a dangerous and downtrodden former garment district. But in the early 2000s, developers invested in the abandoned repositories and marketed the cheap rents to artists and other creators. Local and international artists were invited to Wynwood to paint the miles of blank façades, while bars, restaurants, shops, and galleries blossomed within the walls of the murals. Today, outsiders flock to the area to get lost in the maze of accessible art and to support local businesses. The investment in Wynwood has doused lifeless walls with the flash and vibrancy of Miami.

Kansas City also recast a plane of nothingness into a place to engage with the city. On the rooftop of an everyday downtown parking garage, a lone boxcar rests in a sea of prairie grass. The Prairie Logic project is like occupying an Andrew Wyeth painting or a Willa Cather novel amid a jungle of glass high-rises. The prairie is something between a garden and a plaza. The boxcar is intended to be a sculpture memorializing the city’s history as a railroad hub. Its sliding door can be opened and become a performance stage. Prairie Logic exhibits the potential for beauty in ubiquitously banal spaces.

In 2007, the City of McAllen, Texas, found itself burdened with the prototype of ubiquitous banality, an abandoned Walmart. With limited resources, the City couldn’t level the Walmart, so it decided to relocate its undersized library into the store. Using the endless square footage, the essentials of a traditional library were generously arranged. Still, the Walmart offered plenty of surplus. Architects designated areas for children to play, teenagers to congregate, and immigrants in this border
city to attend English as a second language, or ESL, and citizenship classes. Materials and color help differentiate spaces, orient patrons, and soften the utilitarian qualities. The library operates as much as a community center as a place to borrow books. From the skeleton of a big box, it pioneers the possibilities of the 21st-century library.

No place’s rock bottom is as dystopian as Belle Isle in Richmond, Virginia. Once a Civil War prison camp, Union soldiers suffered the horrors of war in the heart of the Confederate capital. Following the war, the island was quarantined from the city by a hydroelectric power plant that used the island’s positioning in the belly of the James River. Today, an undulating pedestrian bridge suspended from the underside of a massive interstate bridge invites citizens from throughout the city to enjoy Belle Isle’s offerings. They come to wade in its waters, sun on its rocks, walk and bike its trails, and explore its decrepit structures. Belle Isle is shrouded by the city. It’s a meeting space of Richmond’s citizens, its natural beauty, and its city infrastructure. It offers itself to all and encourages all to use it as they please. The pain of its past heals with its inclusiveness and the hands of time.

Across America, there are buildings that have the capacity to live beyond the stories of their past. But like all precious things, they need love and to be shown that they matter.
EQUITY AND ENVIRONMENT DRIVE DESIGN

by Matthew LaRue AIA

The twin crises of our time—growing opportunity inequality and man-made environmental impact—are shaping the key trends in housing design and construction today. What we build and how we do it are critical to our future direction. As 2020 looms, these trends stick out as noteworthy.

Matthew LaRue AIA is a senior associate at HMFH Architects.
**UPZONING**

Boston residents pay, on average, one-third of their income toward housing, an enormous drag on economic mobility. Many communities in the region have been contemplating changes to zoning regulations that are intended to address affordability. Though the means vary, there is a common goal: to allow greater housing densities, reversing a decades-long downzoning trend. Smaller unit sizes are being tested under Boston's Compact Living Pilot. Accessory dwelling units, once widely prohibited, are now allowed in Massachusetts communities such as Newton, Ipswich, and Milford. Cambridge is currently debating whether to relax dimensional regulations for projects by developers of 100 percent affordable housing so they can better compete with the market-rate guys.

State zoning-reform legislation that would change local zoning approvals from two-thirds to a simple majority is in the works. The idea is that multi-family development in walkable areas statewide would have a better chance of being approved. It remains to be seen if Massachusetts has the will to pass it, but as a harbinger of the trend, Oregon just passed its first-in-the-nation legislation banning single-family zoning altogether in urban neighborhoods.

**PASSIVE HOUSE**

Passive House Institute US (PHIUS) certification can be onerous to achieve and may require higher up-front costs. Despite that, the square footage of US projects certified or in development has tripled over the past three years, driven by several factors. Some financing entities now require PHIUS certification to qualify. In affordable developments, operational expenses are factored into the project proforma, and the energy savings possible through PHIUS make it a practical choice. There are marketing benefits, too—certification can distinguish a housing project in a competitive market and satisfy growing occupant demand for sustainable living. Energy reduction isn't the only benefit. Due to tight envelopes, user comfort is typically high. For that same reason, indoor combustion such as with gas stoves is avoided, so air quality and occupant health are improved. This drives PHIUS projects toward an all-electric profile that, when combined with onsite renewables, ties into greenhouse-gas reduction goals that many universities and government entities are developing.

**RESILIENCE MEASURES**

Although many Boston-area municipalities and universities have undertaken climate vulnerability assessments or resiliency planning, action based on those is just now emerging. The focus has been on flooding and sea-level rise mitigation, but extreme heat, wind damage, and wildfires also demand attention. Many flood mitigation projects are under construction. Residential developments, such as at Suffolk Downs, now voluntarily factor in strategic accommodation of coastal surges. Building code changes are being studied to ensure that high and low temperature extremes are more easily tolerated. Residential solar electric combined with onsite battery storage are increasing in popularity, providing protection against prolonged power outages and reducing peak electrical demand.

**WHAT WE BUILD AND HOW WE DO IT ARE CRITICAL TO OUR FUTURE.**
When it comes to housing, the NIMBY-YIMBY clash gets extra heat
by James McCown

Housing advocate Lynn Weissberg doesn't like the term YIMBY.
"It's too divisive," she says, about Yes in My Backyard, a growing pro-development movement. As part of the leadership team of Engine 6, an affordable-housing group based in Newton, Massachusetts, Weissberg was instrumental in assembling a broad coalition to get two Newtonville housing developments approved over the vociferous objections of NIMBY—Not in My Backyard—advocates. Both developments—28 Austin Street, a 68-unit development, and the 140-unit Washington Place complex—have 25 percent affordable housing components, 10 percent higher than required by Newton law.
The new groups don’t have skepticism about developers. YIMBYism appeals to the libertarian streak that a lot of them have. It’s Econ 101.”

Miriam Axel-Lute, editor of Shelterforce magazine

"The people on the other side were NIMBYs and were very loud," she says. "They accuse us of being in the pocket of developers. But we're not. We are in favor of development because Newton needs more diverse and affordable housing units."

Dating back decades, NIMBYism's supporters object to new development in general, especially near their homes. Adherents of YIMBYism see themselves as the opposite of obstructionists who hold that more building—especially housing—is a good thing and that the new supply will not only help middle-class tenants and buyers but also trickle down to the homeless and others at the margins of society.

The clash has become highly contentious in urban housing circles. NIMBYs are branded parochial and selfish; YIMBYs are accused of being naive about urban economics and stooges for the real estate industry. It is all the more controversial in areas with chronic housing shortages, Boston and San Francisco being two prominent examples.

It has also become a subject of academic inquiry. A 2017 study by Boston University, relying on minutes of local government meetings, found that the average NIMBY pretty much fits the stereotype: an older white male, a homeowner, a longtime resident, and a voter in local elections. A fresh-off-the-press 2019 study by Massachusetts Institute of Technology (MIT) suggests that the YIMBY narrative of more supply benefiting everyone is flawed, saying that higher housing density leads to higher prices, not affordability.

Civic officials in Massachusetts find themselves right in the thick of the NIMBY/YIMBY controversy. Andrea Kelley, Newton city councilor at-large, falls decisively in the YIMBY camp and was a vocal proponent of both 28 Austin and Washington Place.

"The more that is built, the more opportunities there are," she says, adding that NIMBY groups such as Newton Villages Alliance are populated by relatively few but very active people.

"Is the loudest voice the one you always listen to?" she asks. As an at-large councilor, she adds, she is free to consider the greater good for the overall city and represent underserved groups. "My job is to stand up for the single mother who doesn't have time to come to City Hall. I believe we have a responsibility to be part of filling the regional need for housing."

Then there's the thorny aspect of class distinctions and racial stereotypes. Robert Friant is managing director of External Affairs for the New York City-based Corporation for Supportive Housing. "YIMBY is about the unlimited possibilities affordable housing brings to a city," and, by contrast, "NIMBY is sometimes based on the uglier side of the table, contending that housing with an affordable component increases crime and decreases home values. We have studies that prove neither is true."

What are the political and demographic forces at work in the ascendance of YIMBY? According to Clayton Nall, assistant professor of political science at Stanford University, the key distinction between NIMBY and YIMBY is that the latter is replete with high-earning young professionals.
"In the Bay Area, it's possible for a young person to earn what nationally would be considered a high salary and still not be able to afford a home, to rent or to buy," he says. "If you talk to the YIMBYs, they're responding to the supply side, saying basically, 'We just need to build more housing.'"

Nall describes the problem on the West Coast as extreme, with property values so high that "people with good jobs (are) joining the ranks of the homeless." It has led to previously unimaginable efforts by California politicians to wrest control of zoning from local jurisdictions. Senate Bill 50, dubbed by supporters as the More HOMES (Housing, Opportunity, Mobility, Equity, and Stability) Act, would have allowed the state to impose zoning changes, clearing the way for substantially more dense housing, especially at existing transit hubs. It was endorsed by an organization called California YIMBY but was recently blocked by California lawmakers.

"NIMBYism is looking old to a lot of Millennials and Generation Xers," says Miriam Axel-Lute, an Albany, New York-based editor of Shelterforce magazine, a housing advocacy publication begun in 1975. "The new groups don't have skepticism about developers. YIMBYism appeals to the libertarian streak that a lot of them have. It's Econ 101."

Axel-Lute herself is skeptical. "No matter how much market-rate housing is built, it's not going to trickle down to the ones who really need it." But the new voices have value because "YIMBYs acknowledge that we need more public support for affordable housing."

As if to affirm her contention, Yonah Freemark, a doctoral candidate at MIT who conducted the 2019 study, found that up-zoning (basically allowing for more and denser development) in Chicago between 2013 and 2018 did not increase supply or make housing more affordable but instead upped property values—not exactly in the YIMBY playbook. "There was a 10 percent to 20 percent increase in property values," Freemark says.

Closer to Boston, Jesse Kanson-Benanav, chair of the leadership committee of A Better Cambridge, a YIMBY group, frames the movement in terms of dense, healthy urban environments versus suburban sprawl. "We believe we are at a turning point," he says. "People, especially young people, are making the decision to live in cities."

The group cites the basic unfairness of Cambridge being so expensive and exclusive—indeed, the city's population is now 110,000, versus 120,000 in 1950. It's within a 30-minute transit commute of more than 250,000 jobs, in essence at the epicenter of Greater Boston's economy. Its excellent transit infrastructure means it offers not just job opportunities but potentially less car dependence.

"Current zoning has limited who, like people of color, can live in communities," Kanson-Benanav says. "White property owners are primarily concerned about new development eroding property values. But we have evidence that that is not the case. But it's still part of the opposition. People buy into this false argument."

In Roslindale, a residential neighborhood of Boston, YIMBY activist Alan Wright sees the movement and urbanity as mutually supportive. "The basics of NIMBY opposition come down to traffic congestion," he says. "But that's old thinking. The younger generation is taking mass transit, Ubering, and don't want the hassle of having two cars."

Joel Bloom, a Newtonville resident, is in favor of both the Austin Street and Washington Place developments. "We have a low amount of economic diversity in Newton," he says. "As a native New Yorker, I don't buy into the negative stereotypes about affordable housing. I could be a candidate myself for selling my house and moving into an apartment."

He adds that a vibrant mix of retailers at Washington Place would improve the neighborhood. "We need a bookstore, a camera store, and a good New York pizza place."
URBAN PANNING

Dirk Ahlgrim's industrial eye

by Fiona Luis
If, when you look at the works of Dirk Ahlgrim, the German photographers Andreas Gursky and Axel Hütte come to mind, there's a reason for that. Ahlgrim was born in New Zealand in 1967, and when he was just an infant, his parents returned home to Germany. Growing up near Düsseldorf, Ahlgrim was influenced by the Art Academy there and absorbed the Düsseldorf School of Photography's philosophy, with its somewhat austere focus and penchant for documenting industrial views. "The idea was not necessarily to look for beauty," he says, "but to start recording the environment as is." Ahlgrim studied industrial design at the Braunschweig University of Art, which further trained his eye to search for alignments of structures and shapes. In 1999, after earning his master's degree at the Royal College of Art in London, Ahlgrim moved to the Boston area to work at the design consultancy IDEO. "A few months later, I bought a professional camera and since then have been photographing the environment around me," particularly street scenes and landscapes with architectural details. Now head of design for the home-security company SimpliSafe, Ahlgrim continues to scan the topography he inhabits, from the evolving Seaport to the city's quiet corners, turning his eye toward the elements that intrigue him.

At an angle, there's a lot of color in Simmons Hall [in Cambridge, Massachusetts]. Straight on, this amazing structure is illustration-like. I captured the top half on an overcast day when this person showed up, walked around, then suddenly stopped. There's something weird about the scale; questions are being raised—and not necessarily answered."
City Shadows

"Something I observed in downtown Boston is that with taller buildings, it feels almost like there are spotlights between them. I'm drawn to scenes of emptiness punctuated by one detail and strong shadows that blend out others. It's like having a stage and waiting for an actor to enter. People often seem like their minds are elsewhere, which you can't tell in the moment but you see in the image."
Painter-photographer

"Turner in Boston (left) reminded me of paintings I'd seen at an exhibition. I wanted to keep the focus on structures, so it's a long exposure: in the horizontal split, you see clarity above and a washed-out section below. Hopper in Boston (top left) was taken out of my studio window; it gives you a sense of waiting for someone to come up the stairs. And that narrow glimpse where buildings come together reminds me of [an Edward] Hopper painting. Dinner (above) is a contrast of bleak-industrial outside, warm-humanity inside. Scenes like this don't repeat every day,"
Seaport

"You could almost subtitle this 'temporary landscape'—the scene was always changing every time I went out to take a photograph, and there seemed to be a lot of activity, yet at the same time, it would feel deserted. I wanted to capture this moment before this particular view was gone. It's a large-format photo, a collage of nine or 10 single images, that invites you to stand up close and look at details."
"I am intrigued by the Old Northern Avenue Bridge (left); everything around this industrial structure seems to step back and create a dramatic centerpiece. Nine images are collaged together to capture this wide angle; there’s a dynamic in something fairly static. With India Wharf (above), the fog was coming in one day, and looking out of my studio, with the reflection in a puddle, there seemed to be an architectural cut in the bottom half and a natural cut in the top half."
Topographies

"Before Novartis started to build across the street in Cambridge, the owner of Poster House (right) wrapped it in a printed canvas showing the structure in better condition. The faux façade is almost not noticeable, which made me wonder, 'What's the value of a building? Could we live in a printed environment?'
The Gillette headquarters (bottom right) is difficult to capture in its totality. On a day with strong sunlight, I isolated a section and in the shadows you see panels, like X-ACTO blades, a connection to how the building is being used. As a designer, I keep my eyes open for material and light, like when I took this shot at the John F. Kennedy Presidential Library and Museum (bottom). I observe and photograph buildings, then go back and see patterns and themes."
WOMEN IN DESIGN
WHAT WE DO

As architects, we quite literally shape the future world. It is therefore our responsibility to ensure that future world reflects our values. Do we want more sustainable spaces built for a diversity of cultures and perspectives? Do we want to bolster our action on social justice issues or see more inclusive representation in our firm’s leadership? These outcomes happen only by design; we must leverage our own personal experiences and ideals to advance our profession.

Through my involvement in the Women in Design (WiD) community, I have met countless women whose accomplishments transcend the design field—they are artists, advocates, athletes, dancers, and social influencers—and I’ve watched as they each find a way to leverage these talents to expand their impact in a way that is unique to them. And although WiD’s programming is largely professional, we give ourselves the latitude to be ourselves in the process. I have found allies and sounding boards on matters ranging from negotiation tactics to parenting, not as competing parts but as an intertwined whole. It is energizing to be recognized as your integrated self.

WHY IT MATTERS

The human element is fundamental; we are people making spaces for people. And the best way for a design to reflect the richness of its society is for those making the decisions to reflect that society. We need to evaluate who we’ve invited into the process, ensuring that the people at the table represent all facets of the community and—most important—that they are given a voice and the space to invest themselves in the outcomes. It matters that we bring others along with us.

If we find meaningful parallels between our work and our lives, we must foster that in others as well. It is our collective responsibility to leave the design industry better than we found it—not just for women, but for people of all genders, cultures, and life experiences. If we embrace it as personal, we no longer have the option of maintaining the status quo, and we will be compelled to be transformational. We must choose to be optimists and give a little bit of our personal selves to the future world; it will certainly be better for it.

Kelly Haigh AIA is a partner at designLAB architects.

THE BACKGROUND

Several years ago, I attended the ribbon-cutting ceremony for the Hitchcock Center for the Environment in Amherst, Massachusetts. In her remarks, the executive director, Julie Johnson, noted that the project began before I’d gotten engaged and that my toddler was in the audience that day, celebrating with us. To her, this was a testament to the importance of long-term vision as we shape our built environment. As she spoke, I was struck by how these projects define my own personal milestones: Emery Community Arts Center in Maine made me an architect; the Claire T. Carney Library at University of Massachusetts Dartmouth made me a leader; Hitchcock ushered me into motherhood. And as my work on the Delbridge Family Center for the Arts at Natick’s Walnut Hill School for the Arts advanced me to partnership, I found myself reflecting on what we do and why it matters. To me, the answer to both is rooted in the personal nature of our work.

by Kelly Haigh AIA
How to steer design firms toward a smart, bold practice transformation

by Frank Stasiowski FAIA

Social pressure is mounting for architecture firms today to attain a balanced workforce or perish. The most successful design firms strive for sustainability and embrace such concepts as embodied energy, reclaimed materials, and reuse waste systems. Innovative industry leaders adhere to the redefinition of design excellence. Now firms face similar pressures to apply the standards they set for sustainability to staff and staffing decisions.

The cities we live and work in are diverse. Clients embrace equity, diversity, and inclusion. Pressure from external forces to morph from the traditional white, male-dominated work environment to one that provides equal opportunities across race, gender, sexual orientation, age, religion, and physical ability is strong and getting stronger. But we should not diversity-wash for the optics. And waiting for equality to just "happen"—as we have for decades—is no longer an option.

So how do we get from where we are—the toughest hiring market in 20 years—to where architecture firms should be going: 75 percent women-, 50 percent minority-owned by 2030? Diversity for diversity's sake will not cut it. The same is true of measuring only what your firm will lose without strong diverse leadership. Companies get there by action—making immediate changes to leadership models, pipeline efforts, and the ability to take risks.

The first step is to change leadership's mindset. Firms need more women and minorities in ownership ranks so that retention and satisfaction rates increase. Make the argument for gender parity, and link it to design excellence and firm sustainability. Set goals and demand accountability now, in order to get there by 2030.

Most architecture firms work within a strict ownership model—the baby boomer hierarchical approach. Decisions, and recruitment is among them, come from on high, as do direction and goal setting. Such top-down command may not fully tap into the resources of an entire firm. Instead of this model, consider turning to shared entrepreneurship.
This new structure encourages transparency, boosts collaboration, and allows key staff to make important decisions. If a firm already has a staff that is equitable and inclusive, such an approach will naturally sustain a balanced workforce as a priority. This model is also key when it comes to advancing women and minorities into leadership roles. For years I’ve recommended putting a 25-year-old on design firm boards. Now I recommend a 25-year-old woman or minority.

In 2019, more women are enrolled in architectural programs, and there are more women graduates than ever before. The pipeline is strong and getting stronger, a shift from the 1990s and 2000s. Over the next decade, the numbers for minority architects will show similar progress, for both nonwhite domestic citizens as well as immigrants. White-student enrollment continues to decline—2017 was its lowest point ever, reports the National Architectural Accrediting Board—while the fastest-growing category was for nonresident aliens. Expect these trends to continue.

Firms must embrace a sense of urgency. Bolster the pipeline with focused scholarships and co-op placements. Other development tools might be community outreach and association involvement that are consistent and sincere. Lead, don’t follow.

Even if your staff is diverse and you encourage different perspectives and ways of thinking, look toward leadership. A firm made up of 50 percent women and 50 percent men does not mean the female staffers will enjoy the same influence or the men around them will consider them equal.

The goal is to impart skills that harness the productivity, creativity, and innovation of nonhomogeneous groups. Fast-track the following:

- Focus on commonalities: The entire team needs to meet client needs, for example.
- Reward preferred behavior: Professionals able to negotiate within the culture are of value.
- Encourage self-monitoring: Teams know when they are not working and talking. The lesson needs to be how to get through those challenges together.
- Remember accountability for all.

In the years ahead, architecture firms must be flexible. Old solutions will not apply. People will be uncomfortable. Change comes fast, and embracing new and better ways is the key to move ahead.

Offering women and minorities a base from which to excel will work in the firm’s favor. Use your goal setting to recruit more candidates, and offer more than your competition. Move the needle forward toward a sustainable future.

Some ideas to consider: Expect technically accomplished employees, but be sure to emphasize nontraditional yet important qualities such as collaboration and interpersonal skills; offer additional bonuses for the recruitment of women and minorities, and incentives for those who can become future leaders; and recruit globally.

Since it was introduced in 1990, the H-1B visa program has been a way for foreign-born workers to get their green cards to live and work permanently in the U.S. The number of H-1B visas dropped from 2007-2009 because of the recession but bounced back by 2015. Applications dipped again in 2018, reports the Pew Foundation, due in part to Trump administration policies. This will likely be a short-term lull, as architectural firms will see more opportunities for global recruitment efforts.

The design industry is shifting, and how firms respond to the changing tides will determine their future agility. To achieve smart practice transformation, leadership has to act boldly, revamp company culture, and offer more to recruits, charting a diverse, equitable, and sustainable course in the process.
EPIC's Toris is an innovative architectural approach to roof and floor deck ceiling systems. Toris creates modern, visually unobstructed spans up to 30 feet while providing superior acoustics and hanging features. The panels enhance the appearance of the glulam beams.
COME TOGETHER
Boston makes fresh investments in social infrastructure
by Alice Brown

When author and New York University professor Eric Klinenberg talks about his time as the research director for New York’s Rebuild by Design program, he tells a joke. After training design teams to think about building social resilience into their climate-preparedness plans, one team came back with a plan for “resilience centers”—community spaces that served as meeting points for the surrounding area, with friendly staff, free Wi-Fi, regular events programming, and maybe even books. Klinenberg lauded the great idea, then sent the team to the nearest public library—to see their idea already being implemented. It’s a joke that’s at once hilarious and sobering.

In his book, Palaces for the People: How Social Infrastructure Can Help Fight Inequality, Polarization, and the Decline of Civic Life, Klinenberg argues for the creation, rehabilitation, and renewed appreciation of the physical spaces in cities that bring people together and build both a sense of community and authentic interpersonal bonds. It’s a compelling case for those places where humans can connect and interact, especially since it’s easy to be distracted and disheartened by the social fragmentation happening around us. The rise of digital communication and the ease with which we can self-select a bubble of people who agree with us and reinforce our beliefs haven't helped.

In an era of increasing segmentation, we can all too easily fall prey to a belief that our social spaces are eroding, our community divides are growing, and we’re more polarized and isolated than ever. But what if we look up from our phones (not yet, though, keep reading) and take stock of the new physical infrastructure that is bucking this trend—the buildings in Boston where people are coming together in real-world spaces the way they did 100 or maybe even 200 years ago—in buildings that are fresh and new, and that often leverage digital tools to pull it off.

Boston is a city that invested in multibenefit social infrastructure long before even the invention of the telephone, with places and institutions that are famed destinations now: Boston Common, Faneuil Hall (with both a food market and a meeting hall), the Public Garden, the Boston Public Library (BPL), and the Emerald Necklace. What’s striking today is that exciting new social infrastructure is being built while some of the older institutions are undergoing major renovations to provide the same benefits. Organizations are developing online platforms, leveraging social media, and simultaneously investing in the built environment to share ideas and bring people together. You’ll find these investments in libraries (Klinenberg’s favorite example), for play and recreation, around food, for meetings and lectures, and across the town/gown divide. The funding and management of these spaces comes from the public, private for-profit, and nonprofit sectors with varying degrees of intentionality around building community, though all of them provide tangible proof in the built environment that real-life social connections are valued.

THE LIBRARY

Having America’s first large free municipal library is a badge of honor for Bostonians, and the exquisite McKim building in Copley Square is unquestionably a “palace for the people.” Yet it’s the $78 million renovation of the Johnson building next door that BPL president David Leonard credits with increasing foot traffic by 20 to 40 percent and building civic infrastructure. Completed by William Rawn Associates, Architects in 2016, the building, with its glass façade; bold, bright colors; and new gathering spaces conveys that the library is truly inviting the city to gather and use its resources. The books—coupled with computers, classes, and a WGBH radio studio—attract young and old library users, new immigrants, city leaders, and everyone in between.

Jamaica Plain branch of the BPL.
Photo by Aram Boghosian
People of all ages and backgrounds are coming and using the library for whatever their need is at the moment [whether that's] reading, literacy, improving yourself, or gathering with others to watch radio live and in person."

David Leonard, BPL president

Unlike some other cities that have updated only the main branch of their libraries, between 2013 and 2021, Boston will spend a combined $75 million building and improving branch libraries—from a new building in East Boston to renovations of Modernist buildings such as Dudley Square, investments are flowing out into the neighborhoods. In 2018, a temporary branch opened in Chinatown—the neighborhood's first in 62 years. And the construction of a new branch library for Uphams Corner is coupled with plans for a cultural district and affordable housing.

THE PARK

Boston Common may be America's oldest city park, but a new park straddling the Cambridge-Boston line has set a new standard for usage and community building. In November 2015, the Charles River Conservancy (CRC) cut the ribbon on the $5 million Lynch Family Skatepark designed by Stantec and constructed by ValleyCrest Landscape Development. The concrete ramps and bowls have since become, per square foot, the most used state park in Massachusetts. After being kicked out of so many spaces, a generally marginalized population now has a
place to hang out and hone their skills. Laura Jasinski, the executive director of the CRC, appreciates that they’re given a chance to be constructive, productive, and physically active.

For its next social infrastructure concept, CRC is developing a swim park that’s just a four-minute walk away on the other side of North Point Park. People will be able to swim in the Charles River in a contained environment that may be open for a longer season than most municipal pools, warmer than the ocean, and with fewer environmental issues than the area’s ponds. In the meantime, the City of Boston is developing plans to renovate Boston Common and has just unveiled designs for a major overhaul of Moakley Park that would build climate adaptation and protection along with social infrastructure.

THE FOOD MARKET

The original Faneuil Hall served as a market building with an open ground floor, and Quincy Market’s 1976 reopening as a festival marketplace was heralded for its inclusion of local food stalls and pushcarts. But if you’re searching for an authentic European-style food market today, where locals spend time and build connections, you’ll more likely find it at Bow Market in Somerville’s Union Square.

Matthew Boyes-Watson and his business partner, Zach Baum, intentionally set out to create a vibrant public space and a series of affordable storefront opportunities. They’re using metrics defined by the Danish architect and urban designer Jan Gehl to study how people use and spend time in the plaza that is ringed by redeveloped garage bays that have been transformed into the market. Boyes-Watson says that they’re “really excited by early indications that [people] feel fully at home in the space… We love seeing the diversity of humans who come.” They know that they’ve achieved what they set out to do when they see seniors come into the space who feel comfortable reading a book instead of engaging in retail.

Other food markets have been popping up in recent years, from the Boston Public Market—operated by the Trustees of Reservations with a focus on locally produced food—to the more corporate Eataly inside the Prudential Center. Time Out Market Boston, modeled after a successful food hall concept in Lisbon, Portugal, opened at 401 Park Drive in the Fenway this past June.

THE FORUM

There was a time when Boston was famed for its orators, but as speeches and conversations moved onto the radio, Boston’s most nationally well-known voices may have been Click and Clack, the Tappet Brothers of Car Talk on WBUR-FM. Last year, the 69-year-old radio station decided to invest in a physical space for building community. CitySpace, built by Cambridge Seven Associates, opened in February 2019 and in its first month hosted everything from an opera singer and a celebration for 25 millennial artists of color to conversations with famous chefs and a panel on ending chronic homelessness. The programming intentionally pulls different kinds of people into the space.

The premise of the new venue is that even as people are moving away from radio ownership and doing more listening online, they are simultaneously gravitating to spaces where they can be around other people. And with outdoor speakers and expansive windows, passersby have a chance to interact with the space as well.

The more diverse the content is, the more diverse the audience is…”

Amy Macdonald, director of Community Engagement for WBUR

CitySpace exterior rendering by Cambridge Seven Associates. Photo courtesy of Cambridge Seven Associates and WBUR.
We call it a campus center, and not a student center, for a reason,” writes Julie Crites, director of Common Spaces at Harvard University. “The space is open to everyone—faculty, staff, students, and the community.”

Julie Crites, director of Common Spaces at Harvard University

THE UNIVERSITY

Though renowned for their caliber, Greater Boston’s institutes of higher learning have rarely been famous for their welcoming vibe. Harvard’s Common Spaces program has spent nearly a decade actively trying to make the university more inviting while also developing places where students and faculty from across its schools can interact. From installing brightly colored chairs in Harvard Yard to redesigning and heavily programming the Science Center Plaza, the university has physically demonstrated that it wants people to linger on campus. With the reopening of the Smith Campus Center last fall, there’s been a clear investment in a welcoming indoor space that feels, well, like a palace for the people. Full of seating (and plants), the building offers an atmosphere of inclusion, collaboration, and curiosity that the Common Spaces program strives to create.

Northeastern University built its Interdisciplinary Science and Engineering Complex, designed by Payette, in a way that attracts the public onto the plaza and into the building on Columbus Avenue. The university invested in making Carter Playground a well-used park and constructed a new bridge from the Fenway campus to the Roxbury neighborhood across the Orange Line tracks.

Whether built to welcome community, intentionally programmed with the curated content, or designed to bridge divides, these investments in new civic spaces aspire to take social infrastructure to the next level. It remains to be seen if they are part of a growing trend that continues to expand across the region and how the social bonds formed by these spaces make communities more resilient.
We partner with leading design professionals, including architects, landscape architects, interior designers, and builders, to help bring their visions to life.

We would be interested in talking to you about your projects.
THE POWER OF CONNECTION, AUTHENTICITY, AND BEAUTY

by Christina Lanzl

Christina Lanzl heads the Urban Culture Institute and teaches in the Department of Architecture at Wentworth Institute of Technology.
Design professionals—from architects to planners, landscape architects to arts and culture makers—continuously feel the pulse of the communities we work in. As practitioners and theorists, we produce research, findings, and workable models. Here's a current compendium of Top 10 placemaking concerns.

FEELING THE PULSE OF THE COMMUNITIES WE WORK IN IS ESSENTIAL.

01 Awareness
Climate change, shrinking resources, global warfare, world migration, threatened species, and persistent hazardous chemicals contamination—how can placemaking help us think holistically, consider the interrelatedness of all things large and small, and grow a conscience that leads to responsible action?

02 The great connector
Placemaking has the power to connect people to one another and to place through social interaction and multidisciplinary contributions. Its values and practice can help establish cross-cultural connections that offer a seat at the table for everyone.

03 Aesthetics
The creative potential of transformative placemaking projects and the psychological effects of our built environment on the individual and society have been acknowledged. Experiencing beauty helps us thrive. The care we take in shaping our personal spaces can extend to sidewalks and beyond so that we embrace all public places as our commonly shared living rooms.

04 Equity
As a driver of economic development, placemaking can mean new opportunities, particularly for communities suffering from past disinvestments. How can we ensure dignity and respect for people and places while weighing long-term benefits and sustainable solutions?

05 Authenticity
Conceptually, placemaking benignly embraces what already exists and enhances sense of place through aesthetics, storytelling, and usability. A goal should be to empower local residents to achieve and maintain these common principles.

06 Storytelling
In telling the story of a place, care must be taken: Whose story is being told, and how? Inclusivity must be paired with a careful consideration of intent to avoid excessive memorialization of individuals, no matter how great their contributions.

07 Placekeeping
Places that are already popular tend to attract the attention of new initiatives and market forces. What are the limits to growth? A high concentration of features should not necessarily increase the cost of real estate.

08 Creative problem solving
Whether labeled under tactical, radical, guerrilla urbanism, maker movement, or pop-up culture, successful projects and models have emerged worldwide in both urban and rural communities, particularly where resources are limited. Placemaking should help stimulate the idea that small is beautiful and promote adaptive reuse.

09 Critical thinking
A vital tool for the creative transformation of place, critical thinking can help us grapple with the exploding cost of real estate and housing, the disconnect between urban and rural, and the inequities of a free market economy.

10 Education
Placemaking’s biggest threat is ignorance in all its forms. How can placemakers improve equitable access to successful public places and the quality of education?
CAN BOSTON BE A PUBLIC ART CITY?

Yes—if we take risks, flex new muscles, and forge creative alliances

by Kate Gilbert
Despite its moniker, Boston is not the hub of the universe. Yet the city is ripe with potential to defy its own history and create a new model for connective experiences in our public spaces, one that transforms our landscapes and the ways in which we relate to one another as citizens in these divided times. Boston should fully embrace temporary public art as a catalyst for the cultural change we seek.

We have a ways to go. For starters, Boston must address its splintered cultural identity, funding structures, and fragile arts ecosystem that make it prohibitive for artists to thrive. These factors also point to why there are so few publicly accessible and contemporary permanent representations of Boston's shared culture in our public spaces.

This can change. At Now + There, we're using both the lack of a strong, unified cultural identity expressed in our public spaces and our natural human desire to connect with one another as a clarion call. As a nonprofit public art curator of temporary artworks, we're using the power of art to shift how people see their city, to motivate people, to affirm the multiplicity of our cultures and cultural assets, to challenge biases and question the status quo. Ultimately, we're using public art to elevate the economic and social health of our communities. The artwork itself may be temporary, but we believe it has an enduring impact.

Installations are temporary by design, lasting anywhere from six weeks to 18 months. If you don't like it, it goes away—but it also has a sneaky, powerful way of suggesting what is possible.

Liz Glynn's Open House, installed July through October 2018 at the end of Commonwealth Avenue Mall in Boston's Kenmore Square, significantly changed how that end of the Arthur Gilman–designed mall, long cut off from its more beautiful and statued side and Olmstead's Charlesgate Park by the Bowker Overpass, was used. For three months, students, tourists, residents, and even the area's transient population coexisted within the tableau of a Louis XIV ballroom Glynn constructed with 26 pieces of cast concrete based on a ballroom designed by Stanford White.

The work created a backdrop for performances, grounding for a weekly meditation group, visual punch for a housing protest, and a safe space for gathering—deterring drug trafficking for its duration. But perhaps its two most lasting impacts were suggesting to future designers how the mall could be reimagined and
bolstering the mission of the young nonprofit Charlesgate Alliance, which is to knit Charlesgate back together.

A multiton concrete living room doesn't just appear in a city park overnight. It takes radical collaboration. In the case of Open House, partners included the Boston City Park Department, the Massachusetts Bay Transportation Authority, Friends of the Public Garden, local businesses (from a hotel to a family-run pub), and Boston University. Unlike top-down planning exercises, producing temporary public art can feel like practicing democracy: of the people, by the people, and for the people.

Temporary public art like the examples just described motivates us to flex new muscles. It asks us to embrace things that might seem risky or push past our personal comfort zones.

Nick Cave and his multilocation project Augment does this very thing. More than 1,000 inflatable lawn ornaments—those boisterous holiday decorations often found on suburban lawns—come together in a "visually euphoric cloud of shared culture," as Cave calls it. A viewer may see a bunny being hugged by Captain America while an eagle's talons come out of the side of Star Wars' R2D2, who seems ready to pounce on a turkey. Sourcing directly from pop culture, Augment—initially on exhibit in Boston's historic Cyclorama in the South End from August 27 through September 13—is immediately recognizable to an intergenerational, multiethnic audience. It creates poignant
Like so many other citizens who care about connecting in public spaces, Now + There is using temporary public art to celebrate the possible.

moments of exhilaration and inspiration while also calling into question what brings lasting joy.

On September 14, the sculpture was carried via a jubilant community parade to Upham’s Corner, in Dorchester, a neighborhood of Boston that has long suffered from transit disinvestment, rampant vacant commercial space, traffic congestion, and transportation inefficiencies; it has recently been designated an Arts and Innovation District by the City of Boston. Once in Upham’s, the sculpture was reassembled as an installation that pushes out of the windows and doors of a vacant building. Surrounding it is a building wrap designed with local artists and community collage makers that reflects the vibrancy of Upham’s and hearkens its bright future.

Like so many other citizens across the nation who care about connecting and healing in public spaces, Now + There is using temporary public art to disrupt our public spaces and celebrate the possible. Call us what you will—artists, landscape architects, urban planners, placemakers, cultural foot soldiers, community activists, social researchers. We come from a long Boston lineage including, most recently, the Reclamation Artists and Fort Point artists who forged a new style of land and protest art in the 1990s and 2000s; and we are not alone today as we partner with Design Studio for Social Intervention, the City of Boston, and others. But we must also look outward for inspiration.

Today, biennials and triennials are multiplying the impact that art can have via concentrated, temporary installations. Take, for instance, Counterpublic, a new triennial in St. Louis run by The Luminary, formed partially in response to police brutality and as a means of building a new future. Counterpublic took over a 12-block radius of St. Louis last spring and summer, offering free, cutting-edge contemporary art to imagine a new future for a particular neighborhood. According to its founders, Counterpublic “aims to advance towards counter-futures, seeing in the complexities and collectivities of this already-existing place a future public possible.”

Art that illuminates and art that provokes alternative designs: Can we do this in Boston? Absolutely.

In 20 years, there is one Boston characteristic I hope is ingrained in our production of public art—that of the hardened Yankee who doesn’t give up. It’s my hope that we’ve poured enough concrete, inflated enough sculptures, paraded frequently (without a sports team), and sparked enough joy that Boston stands tall as a public art city; a destination for tourists seeking innovative experiences and citizens sharing an exuberantly inclusive culture. ■

Joseph del Pesco and Jon Rubin. Monuments, Ruins, and Forgetting. Counterpublic 2019
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We live in the golden age of memorials.
I once would have written that line intending that it be read with a celebratory inflection. Now I mean it with a dose of irony, even a little sadness.

We have memorials that touch on an expanding range of topics, memorials of ever-greater creativity. Memorials put up, and memorials ripped down.

Shouldn't we be nervous by our burgeoning memorial culture? Is it mere coincidence that memorials are proli
erating in an era of intense inequality, growing violence, and heightened nationalism worldwide? We are mining our darkest history and celebrating our greatest individuals and achievements. But are we being inspired to change a fractured world? I hesitate to even suggest this: Do we avoid taking action in the world on behalf of our values, or against destructive elements, because we have increasing numbers of memorials in which to deposit these concerns? The words of Austrian writer Robert Musil should hang over our heads: "There is nothing in this world as invisible as a monument."

My thinking about our fervent public debate about memorials concerning African-American history was unstuck by a recent visit to Boston's Museum of Fine Arts (MFA). Chance encounters with unexpected works of art can promote a dialogue in one's mind. Look up, over the internal walls you have created between your thoughts, and you find that wisdom lies just over there.

Boston artist Hyman Bloom's spectacular, explosive paintings of opened bodies—bodies subject to autopsy, bodies with the insides hanging out, bodies lying in a morgue—draw you in, even as you think you should be repelled and look away. They are not beautiful in any traditional sense, and they are not repulsive in a way you might imagine.

The Greek philosopher Heraclitus said that "we both step and do not step in the same river." On a different day, the meaning I would glean from these paintings might take me in any number of directions, but on that day at the MFA, Bloom's paintings immediately brought to mind the writings of Ta-Nehisi Coates. In Letter to My Son, Coates insists that we recognize the violence done to black people over the course of American history; indeed, that this violence is a central story of American history and the heritage of the country: "But all our phrasing—race relations, racial chasm, racial justice, racial profiling, white privilege, even white supremacy—serves to obscure that racism is a visceral experience, that it dislodges brains, blocks airways, rips muscle, extracts organs, cracks bones, breaks teeth. You must never look away from this. You must always remember that the sociology, the history, the economics, the graphs, the charts, the regressions all land, with great violence, upon the body."
Can we have a memorial that recognizes the violence? Do we have memorials that gesture in this direction? We seem pulled in different directions. At the University of Virginia, Höweler + Yoon have crafted a place of repose to mark the school’s history of slavery. It is inviting, comforting, and necessary. But its aim, at least according to one reviewer and in a way inherent to the design, is to help us “heal.” Let’s ask ourselves: “Do we deserve to heal yet?”

From healing to celebration—that’s the feeling of the winning entry for the Martin Luther King, Jr. and Coretta Scott King memorial on the Boston Common. At The Embrace, a cavelike structure created out of interwoven hands, we are encouraged to hug (at least according to the images the designers submitted for the competition) and find “what we share, not what sets us apart.” This is a memorial designed for the selfie, our own version of Anish Kapoor’s Cloud Gate in Chicago. But will those hugs and selfies help us bend “the arc of the moral universe” toward justice, as King declared (echoing Boston abolitionist Theodore Parker, whose 1853 sermon was the source of MLK’s more eloquent phrasing)? Should these hugs perhaps wait until we have achieved a measure of what King called for, not just political justice but economic justice?

The sentiment is very different at the monument to lynching, officially known as the National Memorial to Peace and Justice, in Montgomery, Alabama. The names and dates of every known lynching victim are inscribed in stone. Other markers lie, awaiting retrieval from towns across the country that are finally ready to confront their own histories of violence. Incomplete until all the stones have gone to their appropriate resting places, this monument challenges. It does not “heal” except through action.

Similarly, a soft embrace is not what artist Steve Locke hoped to achieve at Faneuil Hall, where he was asked to design a memorial to the slave trade, whose profits helped fund this historical landmark. Is it just chance that an artwork composed of a life-sized bronze slave auctioneer’s block, picturing a map of the slave trade and the infamous image of kidnapped and enslaved Africans arranged like sardines in a ship destined for the Americas, would fail to come to fruition in the sacred site of commerce and patriotic mythmaking? That much of the critique of the design came from the local chapter of the National Association for the Advancement of Colored People only complicates the matter further.

Locke left for a job in New York and withdrew his work from consideration. But the questions posed by his work and the King memorial remain: What are we trying to achieve? The warm embrace, the place of solace, a place where we regain contact with our values, to be inspired for the work ahead? Or a place of provocation, unsettling disturbance, of discomfort designed to make us wake up?

Back in the museum, I wander through a series of some of the most well-known photographs of the mid-20th century, the Howard Greenberg collection recently acquired by the MFA. Of the several hundred photographs, many jump off the wall from decades ago to speak to today’s quandaries.

There’s Margaret Bourke-White’s photograph of
African-American men, in shackles, sleeping on the ground, victims of the modern Jim Crow. And there is Dorothea Lange’s photograph of a plantation owner with his field “hands” behind him—black men sitting on a porch waiting for their next order. And then another Bourke-White masterpiece—an image of African-Americans lining up to seek relief after the Ohio River flood of 1937. Above them, on a billboard, are the smiling faces of a white family out for a drive, proving the “truth” that “there’s no way like the American Way.” The billboard is a myth; the photograph of the billboard with impoverished black families in front of it is a large measure of American history.

Nearby, however, is one of the most powerful images from the Civil Rights era—a photograph by James Karales of the march from Selma, Alabama, to Montgomery in 1965. It is taken from a low angle, looking up at the line of marchers striding over the top of the hill, determined to finally make it over the Edmund Pettus Bridge to the steps of the Alabama State Capitol.

As closing time approached, I wandered hallways trying to return to the Huntington Avenue entrance. In one hallway I pass a Giacometti sculpture of a woman. As so often with Giacometti, the figure stands alone, molded and buffeted by the world’s forces. I think of his other statues, standing on impossibly long and spindly legs. But I also think of Walking Man, a similarly frail figure striding forward. I think of the earliest Greek statues, stolid and unmoving, and then the ones that, as art historian Vincent Scully would say, take a step forward and change the world. Isn’t everywhere we live, as Michael Walzer has written, in some sense a place of “pharaonic oppression”? And isn’t there always a “better place, a world more attractive, a promised land”? And isn’t it true that there is “no way to get from here to there except by joining together and marching”?

Let’s build memorials that remind us of our history and create spaces for dialogue.

But to do that requires making the world more in the likeness of the world we want to live in. The world requires repair.

This past summer, several African-American leaders marched (and drove and flew) to the Capitol in Washington, DC, to testify at a hearing on a form of “repair” that is not about the psychological healing so many of our memorials aim for. This was a hearing on reparations—compensation for the state-mandated and enforced acts of violence and displacement, segregation and discrimination, and the necessary amends that a society should make. Reparations have been, until recently, a third rail in our discussions because the size of the crime, translated into dollars, was, by a white establishment, too hard to bear. Perhaps the time has come.

Let’s take down those Confederate monuments in the public spaces of our cities that no longer deserve to celebrate a treasonous regime dedicated to white supremacy. And let’s build memorials that remind us of our history and create spaces for dialogue.

But all of them will prove meaningless if they do not direct us toward the memorial that matters most of all—a more just society. ■

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Let's build memorials that remind us of our history and create spaces for dialogue.

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National Memorial to Peace and Justice, in Montgomery, Alabama. Photo by John E. Ramspott
DIGITAL FABRICATION WILL BOOST DESIGN'S FUTURE

by Bradford J. Prestbo FAIA

Bradford J. Prestbo FAIA is the director of technical services at Sasaki.
Ubiquitous and underappreciated, infrastructure provides the foundation for stability and growth of our cities and towns. The critical services needed to support growing populations are maintained by the often invisible complexity of water, power, waste, communication, and transportation systems. The most intractable of these often get the most attention, with congestion on roadways and ailing transit systems frequently making headlines. The following Top 10 list presents a more comprehensive view of what is front and center for infrastructure in Massachusetts.

01 Blurred lines
The adoption of the design-for-manufacturing process will continue blurring the boundaries between current architecture, engineering, construction (A/E/C) disciplines.

02 Productive efficiency
Increased awareness of digital fabrication processes will improve the efficient use of materials.

03 Software compatibility
The continued dissolving of boundaries between software platforms will allow for greater efficiencies in the design process.

04 Streamlined process
Increased use of technologies for the on-demand fabrication of elements, such as metal studs, will reduce manufacturing, shipping, and inventory processes.

05 New service models
Owners will begin to expect the integration of fabrication-oriented design as part of architectural basic services during contract negotiations.

06 Customized ease
The fourth industrial revolution in manufacturing will start replacing the “design by catalog” process through the production of cost-efficient custom-design elements. Mass customization can be used to create connection fittings today and structural members tomorrow.

07 Opportunities abound
The democratization of manufacturing technology will provide new business opportunities for design professionals. Architects empowered with this technology will be able to produce much more than building documentation.

08 Design central
The growing awareness of fabrication processes will return the designer to the position of the master builder.

09 Building trust
Uncertainty in bidding cost models will lessen as designers, owners, and contractors become more aware of the efficiencies of digital manufacturing, which, in turn, will increase trust and confidence in the design.

10 A new way forward
Abandoning antiquated means of conveying design intent for the direct translation of digital files will reduce coordination and fabrication time. Incorporating fabrication-aided design into your practice will be transformative, creating more financially and environmentally aware designers—and designs.
PUT THE PHONE DOWN.

Vending machines and art dispensers are changing the public space narrative
by Scott Burnham

PRINT OUT A POEM.
Space—public, private, personal, social—defines our relationship to one another in the city. Our mental space, however, is rarely nurtured as we move about the metropolis.

Cell phones have fundamentally altered this landscape. They draw us inside our own shells and cut us off from shared urban experiences as we disappear into our screens and ignore our surroundings. People have always escaped into their own mental space—reading a paper on the subway, relaxing with a book on a park bench, or staring off into the distance outside a café—but we were all still of the space, connected by ambient noise, atmosphere, and serendipitous glances.

Today’s reflex to pull out a phone to fill every spare moment has changed this. A growing cadre of projects has stepped into the breach, aiming to reconnect us to our shared space by offering cultural alternatives to the public isolation of the screen. Using culture and narrative, these initiatives return the thread of shared human experience to the city.

**SHORT EDITION**

Have a few minutes to kill in a lobby or waiting room? Look around. There might be a short story waiting to be discovered.

Since 2015, Short Edition has installed story dispensers in more than 200 locations, distributing upwards of 4 million short stories in public spaces.

The tall, slim kiosks are popping up in airports, shopping centers, and building lobbies to provide reading material to people as they go about their day. With a mission of “reviving the timelessness of storytelling,” Short Edition’s core feature is time. People can select a short story, poem, comic strip, or children’s story specific to the amount of time they have available and print out one-, three-, or five-minute reads.

In 2017, a Short Edition story dispenser was installed in the Prudential Center in Boston’s Back Bay, featuring local and international authors. Earlier this year, 15-year-old South End resident Yasmin Mohamed experienced what it was like to have her story, “Magic of Monsoon Season” made available to the public. “The feeling of me and two strangers crowding around the machine [waiting] for my story had me giddy,” Mohamed told WriteBoston. “I felt like a mini celebrity in that moment. They even wanted me to sign the paper!”

The Prudential Center’s story dispenser—in a location where 70,000 people work and visit daily—has delivered thousands of stories, becoming one of the most popular Short Edition machines in the country. “[It] has made the experience more enchanting,” said Bryan J. Koop, executive vice president for the Boston region of Boston Properties. “It is a fantastic cultural amenity... We regularly get feedback from passersby who love the stories and share them.”

Earlier this year three machines were installed on the London Underground subway system. In addition to offering short stories from classic British authors including Virginia Woolf, Lewis Carroll, and Charles Dickens, the machines featured a specially commissioned one-minute tale from best-selling novelist Anthony Horowitz.

“I travel on the tube every single day, and I see everybody buried in apps and games or looking at old tweets,” Horowitz told The Guardian. “So, the idea of using that little chunk of your day for something that entertains you, something which is, with a very small ‘i,’ literature, is appealing.”

The dispensers have also recently appeared in Philadelphia. Andrew Nurkin, the deputy director of enrichment and civic engagement at the Free Library of Philadelphia, said the machines have helped the library expand its reach. “We are interested in finding sites to engage audiences who aren’t necessarily coming to the library,” he told The New York Times.

The public appeal of the project, he said, is due to both easy access to quick reads and the mystery of what will come out of the machines. “You don’t know what you are going to get,” says Nurkin. “Who knows? Maybe you press a button and get a story written by your neighbor.”
Vending machines have long been fixtures on European train and subway platforms. German publishing house SuKuLTuR saw an opportunity to use them to sell small publications.

“If you are waiting for one of the elevated trains in Berlin, you ought to scout the vending machines,” writes Dorothea von Moltke in the Wild River Review. “Not because German potato chips are better than any others or because the Twix has an aftertaste of cinnamon in the Berlin air, but because displayed between the two snacks, you are liable to find a bright yellow pamphlet: food for thought during the time it takes to travel between most points A and B in this wide, flat city.”

Almost 20 years ago, SuKuLTuR approached a vending machine company with a proposition to add small books to the inventory of products sold in their machines. Since then, Berlin commuters have been able to purchase classic works of German literature alongside gum, candy, and chips.

After selling more than 100,000 copies of the yellow editions—designed specifically to fit vending-machine slots—the company expanded throughout Germany’s train system with its own line of machines.

**ART-O-MAT**

During the heyday of records being banned in the United States, musicians used to joke that the quickest way to ensure a hit was to have someone ban your song. Cigarette vending machines seem to prove this theory in their own way—after states banned them, the equipment found even greater popularity repurposed as cultural stockists.

One of the first projects to find new use for the machines was Art-o-mat, started in 1997 by Clark Whittington in Winston-Salem, North Carolina, when he exhibited a collection of his artwork in a banned cigarette machine. As more states banned them, Whittington and
his Artists in Cellophane group adopted them for creative use as art dispensers. There are now 100 refurbished cigarette vending machines across the US stocked with work from more than 400 artists—each piece available for “five dollars a tug,” says Whittington.

The project has become a cult sensation for legions of fans and artists. Etsy crafter Shannon Green says in a YouTube video that when she learned that an Art-o-mat was installed in the Las Vegas hotel she had booked, top on her vacation to-do list “was to buy art out of a vending machine.” Green now distributes her own creations through these machines.

**DISTROBOTOTO**

Distroboto is a point of pride for Montreal artists. What began with one repurposed cigarette machine inspired by Art-o-mat has grown to a network of more than two dozen devices installed in stores, cafés, and public spaces throughout the city. Today, Distroboto makes the work of more than 1,200 artists from Montreal and around the world available to the public.

“This city is so full of artists and writers,” Louis Rastelli, an author and cultural historian who heads Distroboto, told CNET. “It’s one of the many ways the public can... discover the scene. And it’s a way of getting art into the community and connecting artists with the people around them.”

Since Quebec outlawed smoking in bars in 2006, Rastelli has been rescuing discarded cigarette machines from the junkyard and repurposing them to sell mix tapes, literature, paper dolls, mini photo albums, zines, and all manner of cultural works. Rastelli notes that Distroboto machines are able to sell larger artworks than Art-o-mat because the machines were made for Canadian cigarette packs, which are larger than US packs.

To ensure a broad audience and a low barrier for people to discover new creative work, each object is sold for $2 (Canadian). “Pretty much every visual art item we sell...will have a Tumblr address on the back,” says Rastelli. “It’s all very complimentary with online stuff.”

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**VOX POPULI**

The bus stop on a sparsely populated road in Bariloche, Argentina, can be a lonely place. A voice with a story to share can be a welcome companion. Argentinian design firm Designo Patagonia partnered with local artist Ariel Uzal to create Vox Populi, a “talking crankcase” that shares stories and poems with commuters while they wait for the bus.

“We designed it as a ‘brutalist object,’” says Designo Patagonia’s Manu Rapoport. “We didn’t want it to stand out—it should be simple, intuitively usable (it just has one button), with no additional info, and of course robust against vandalism.”

Instructions for the device are written next to the machine in a manner that resembles graffiti, creating something of a game for visitors to discover the cloaked offering of the stark device. The audio content was selected to be “optimistic, fantastic, trying to ease that long time waiting for the bus,” says Rapoport. “When you push the button, one story is played with no information given about the author or the story, giving some mystery and encouraging listeners to find out who they are by their own means.”

The device currently contains 28 audio tracks of classic and contemporary Argentinian authors, with plans to add more over time.
**TELEPOEM BOOTH**

Phone booths were containers of a ritual to connect to another person’s voice—stepping in, closing the door, picking up the handset, inserting coins, dialing a number—all to hear someone on the other end. Such a ritual seems archaic now, but some booths are reviving it to make new connections.

Created by New Mexico writer and artist Elizabeth Hellstern, Telepoem Booth is a project that repurposes decommissioned telephone booths for people to connect with a voice that reads a poem of your choice.

Inside each booth is a classic rotary phone and a “Telepoem book,” a remake of the phone book directory that now lists more than 700 poems by author name and themes such as love, hope, and friendship. Select a poem and dial the corresponding number in the book, and a voice at the other end will read the poem to you.

Poet Edie Tsong said in an interview with the *Santa Fe New Mexican* that pausing during the daily grind to listen to a poem “slows things down so you can access different parts of yourself that get kind of tucked in there when you’re just trying to go to work and pay the bills.”

**LISTENING BENCHES**

Every public bench holds at least one story. Most, however, are anonymous seating for people lost in their phones, closed off from the story of the person next to them or the one contained by the bench they are sitting on.

Eighteen benches spread across Essex county in England make it difficult to ignore stories each bench holds—literally. The “Listening Benches” created by Essex Sounds are fitted with audio-enabled plaques that give visitors a chance to dip into the embedded stories of the area. From tales of local floods to the oyster-fishing history of the community, or simply local stories elderly residents wish to pass on, the benches are designed to be interactive for parkgoers.

When Sarah Weald had a few minutes to spare in her home city of Chelmsford, her decision to engage with a Listening Bench resulted in a particularly poignant moment. While waiting for her daughter one day, she told the BBC, Weald pressed a button and heard her grandmother—who had died years earlier—sharing stories of her childhood in the area. “The first thing that came out was her voice,” recalled Weald. “It was so lovely to hear.”
From initial sketch to installation, Poligon is your single provider for open air structures. Our in-house engineers foster your ideas and bring them to reality. Visit poligon.com for more inspiring shade structures.
STROKES OF GENIUS

In today's digitized landscape, drawing by hand is akin to an act of resistance

by Nalina Moses
A young architect I work with recently came to my desk with a design question. After talking, and getting nowhere, I offered him a pen. He held it gingerly, not entirely sure how to open it, cradle it, and drag it across the page. It was equal parts comedy and tragedy, watching a gifted architect fumble with a pen.

I started working in 1994, as the first generation of drafting software was adopted, and learned to draft both by hand and with a computer. Some days I worked with vinyl pencils on Mylar sheets, and other days with MiniCAD on a Mac II. I handled leadholders, adjustable triangles, and a sliding straightedge, and I handled a mouse, a digitizing tablet, and floppy disks.

It was a time when many traditional physical media (photography, newspapers, letters) were abandoned for electronic ones; but for our profession, the change was devastating. Architecture lost a fundamental physicality, and architects lost a fundamental authority. Those practitioners today who continue to work by hand offer eloquent resistance.

A hand drawing is an architect’s physical, bodily expression. Its strokes, palette, and style reflect her sense and self. Every architect has his own hand: a way of stopping a line, rendering poche, and curving an S. Katie Shima depicts a world in which mechanical processes replace exhausted natural ones. Her exquisitely fine pencil linework, which spreads weblike across plain white paper, lends uncanny grace to these dystopias.

A hand drawing gives the architect singular imaginative power. It is an immediate, unfiltered transmission from the mind and, sometimes, the unconscious. No other person could have seen or rendered it in just this way. Nataliya Eliseeva crafts lovingly detailed domestic interiors in pen and pastel on colored paper. The scenes’ golden tones gives them a nostalgic glow, as if they’ve been reconstructed from personal history or half-remembered dreams.

A hand drawing is limitless in possibility. The empty sheet makes no assumptions and imposes no rules. It allows for architectures seemingly impossible in aesthetics, structure, and scale. In sensual watercolors, Beniamino Servino pictures long sliverlike sheds, called pennata, lifted high on piles straddling crevices in the Alps. He invents a new building type that’s both utilitarian and romantic.

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A hand drawing is limitless in possibility. The empty sheet makes no assumptions and imposes no rules.

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Architects will continue to draw by hand professionally and personally. Sometimes it’s simply the best way to solve a problem or complete a presentation. But most American architecture students are no longer trained to construct perspectives, analytiques, or renderings by hand. And increasingly in offices, computer renderings and models are the primary design tools.

At first glance, the watercolors of Alexander Fernández, which have the stateliness of Beaux Arts renderings, seem like anomalies. Composed from different, sometimes unorthodox views of a single neoclassical structure, they both celebrate and quietly complicate its formal authority.

Architectural drawings are always illusory. They hold at their core a figment, a structure that is remembered, imagined, or hoped for. A hand drawing might be always tinged with loss, offering us a glimpse into a world that remains most fully realized in the mind of its author, that burned most brightly in the moment of its creation.

Katie Shima's drawings imagine a world where mechanical and biological processes have become confusingly intertwined. A vast viral network of pumps, motors, tubes, vials, and gears dominates the landscape, producing oxygen, water, and essential nutrients for the planet after its natural systems have failed. Except for some small green plants cultivated in sealed, glass-topped vessels, there is no flora or fauna.

In these drawings, mechanical components are deployed illogically, redundantly, and excessively, with minimal output: It takes an enormous mass of machinery to sustain a single sapling. Yet the scenes are ultimately hopeful. Shima renders the machine components and connections with angelic fineness and precision. Their composition is lucid and tissue-like, as if the machines themselves have life and move and grow as individual organisms. One senses in their persistent, gentle hum the promise of a new, more balanced ecology.
NATALIYA ELISEEVA

Moscow

When asked to describe her drawings, Nataliya Eliseeva begins, “I draw from my childhood.” Though she works professionally to complete new designs for buildings and interiors, her drawings are charged with feeling, as if the scenes have been summoned from personal memory. While drawn with great technical precision, the people and objects inside them seem enlarged, charged with symbolic meaning, as in a Freudian dreamscape.

Most contemporary architects render details of interiors uneasily, as if they are inessential, outside the architect’s scope. In Eliseeva’s drawings, however, furniture and decorative objects structure the space itself, physically and imaginatively. In a bedroom, an owner’s possessions (artwork, urns, chairs, barbells) seem to encrust its outer walls so that they set the limits of the room. In a bathroom, it’s the large tub at its center, rather than the floors, balcony, and open doors, that seems to define the place. The furniture and personal possessions within these rooms, rendered with great care, make the case for an architecture that is intimate and that can be known only from the inside.
There's a strong autobiographical character to Beniamino Servino's drawings. Over decades, this architect has drawn prolifically, first in notebooks and now "on all types of paper and cardboard, preferably not clean." He typically stamps each page with a date and serial number, and then files it digitally and physically.

In a series of drawings proposing fingerlike buildings (pennata) straddling peaks in the Alps, Servino imagines long sheds lifted on slender legs, with chutes connecting them to the ground below. These perspective views are rendered in dazzling nonnaturalistic color with markers, watercolors, and coffee. No empty space is left on the page; margins are filled with notes and washes of paint. The drawings for the pennata included here, echoing the same ideal form, were created over several years. They capture a structure that appears to Servino again and again, in different guises, like a recurring dream.

ALEXANDER FERNÁNDEZ

An architect's travel notebook is typically filled with casually composed sheets, with drawings that vary dramatically in their level of completion and quality. The travel sketches of Alexander Fernández, a design director at Gensler, have an altogether different character. His watercolor drawings of historic European monuments, completed when he was teaching and doing research abroad, are expressive and elegant.

In small notebooks, starting with a sharp pencil, Fernández blocks out the fundamental geometries of a building, recording multiple views of it simultaneously. One two-page spread might contain a ground-floor plan, a bird's-eye axonometric, notable ornamental details, and an interior perspective of the same building. Finally, he fills these line drawings in translucent watercolor. Little empty space remains on the pages. Nonetheless, each one is composed with the same sense of balance and restraint as the stately Gothic and neoclassical buildings he's observing.
Building façades can serve as powerful canvases that communicate the story of a place

by Jim Stanislaski AIA

The term "facial recognition" has a new modern connotation around privacy and technology—issues we would never have imagined in our long-lost analog world. At our core, however, humans are visual animals, and our faces are more of a social communication tool than an emotional-status indicator.

Alan J. Fridlund, an associate professor in the Department of Psychological and Brain Sciences at the University of California, Santa Barbara, conducts innovative research on the meaning of facial expressions. He says that faces "act as social tools in behavioral negotiation and faces are not about us, but about where we want a social interaction to go." The face we show the world is an indicator of intent that may change a thousand times a day. We are drawn to faces in a primal way, as reflections of ourselves and the ultimate nonverbal communication tool.
As our building façades present architectural faces to the world, some structures are also canvases for portrait artists. Portuguese street artist Alexandre Farto (aka Vhils) chips and carves exterior walls like a wood-cutter or bas-relief artist. While many visual art forms are additive, with paints or other media being applied to surfaces, Farto’s works are acts of subtractive beauty, rendered with raw mechanical power. In a form of urban archeology, he reveals texture and color beneath blank surfaces, showing our buildings have real depth and are not merely the backdrop for today’s thin digital wallpaper. Farto’s favorite subject is the human face, which he explains in an interview during his 2015 Scratching the Surface exhibition in Hong Kong: “When you work with the portraits, you can make a connection with the history of the place and the people who lived around this place. It’s like a confrontation between two realities, and it leads to a reflection about the way we create our identities.”

With the unprecedented shift of world populations to urban centers, development is causing many neighborhoods to gentrify and suit middle-class tastes. When existing structures are erased and then replaced, artists, architects, and urban planners have to confront the challenge of connecting a new building to its history of place. The Bowery in southern Manhattan is one such neighborhood in New York City undergoing a transformation for better or worse, depending on your point of view. The history of the Bowery is a story of ups and downs, from one of the city’s principal streets and home to wealthy and famous in the 1820s, to a decline after the Civil War that created a dark corner of the city with brothels, flophouses, and one of America’s earliest street gangs. In the 1970s, city officials made an effort to disperse the vagrant population, and the entire lower East Side has been transforming since the 1990s.

The faces of the Bowery neighborhood were recently featured as a temporary art installation on 62 windows on the new citizenM hotel in the Bowery, designed by the Amsterdam firm Concrete Architectural Associates, with Stephen B. Jacobs Group serving as executive architect. The Citizens of Bowery series was photographed by Filipino-American portraitist Christelle de Castro, whose studio is on Rivington Street near the hotel. De Castro went door-to-door capturing residents, visitors, local business owners, and street artists. The faces are serious, playful, pensive, and, in one case, feline. They are facsimiles of real life and real people, impossibly fit within the boundaries of a square window box, highlighting the inescapable edges of the medium. Video interviews of the subjects live on in digital recordings, but today the ephemeral faces are gone, revealing the quiet normalness of a gridded hotel façade.
In 2015, Bostonians experienced the work of another street artist, French artist and filmmaker JR, in the form of a giant mural on the 200 Clarendon Street façade (remembered by most as the Hancock tower). JR claims to own the largest art gallery on earth (the streets of the world), and the human face is one of his favorite subjects. In one example, he placed 4,159 portraits on and within the Pantheon in Paris and transformed a sacred space into something else entirely. All his work is striking, but the most meaningful for me personally is his Women Are Heroes (2008–2009) project in Rio de Janeiro. JR rarely explains his work, but in this case, he conveys his intention to show the power of the female face. In a logistically and politically challenging project, he pasted huge photos of faces and eyes of local women on the hillside favelas of the Morro da Providência neighborhood, an area plagued by violence where women are often the victims. The collective female stare from the hillside sends messages the viewer is left to interpret. A university professor might call this gaze a “social tool for behavioral negotiation,” but to a resident, it might simply be a plea for greater human- ity within a struggling community. In any case, it is the faces that speak.

The faces of architecture are both symbolic and literal, scratched into stucco, back-lit in glass or pasted-up paper. We all have moments of pareidolia, the tendency to see faces in inanimate objects such as buildings, clouds, and even the moon. This attraction to the human face is hardwired in us from birth, and our interpretation of these countenances become more finely tuned as we grow older. There is a long history of anthropomorphizing buildings—as they present a façade to the community, buildings become a social communication tool in the same way our human faces are. Let us communicate that social intent clearly because people can’t help but look.
UPGRADING SYSTEMS IS MISSION CRITICAL

by Josh Fiala AIA

Josh Fiala AIA is a principal planner in the Land Use department at the Metropolitan Area Planning Council.
Ubiquitous and underappreciated, infrastructure provides the foundation for stability and growth of our cities and towns. The critical services needed to support growing populations are maintained by the often invisible complexity of water, power, waste, communication, and transportation systems. The most intractable of these often get the most attention, with congestion on roadways and ailing transit systems frequently making headlines. The following Top 10 list presents a more comprehensive view of what is front and center for infrastructure in Massachusetts.

**01 Rejuvenate aging systems**
The American Society of Civil Engineers gives the nation’s overall infrastructure a D+ and highlights Massachusetts’ deteriorating infrastructure as a major impediment to sustained economic success. Innovations such as modular pavement systems and utility access channels could offer an infusion of youth and ease repairs.

**02 Clean it up**
The Commonwealth’s Clean Energy Standard sets a minimum percentage of electricity that must be procured from clean energy sources; it began at 16 percent in 2018 and increases 2 percent annually to 80 percent by 2050. Advanced power grids that allow for the local capture and storage of solar energy and district-based geothermal systems will be part of the solutions to reach that goal.

**03 Enhance transportation systems technology**
The impact of autonomous vehicles remains unclear, but such enhancements as adaptive traffic signals, dynamic curb use, district-based parking management systems, and advanced use of real-time data would enhance roadway capacity.

**04 Create innovative commuter mobility solutions**
By some measures, Massachusetts’ peak commuting congestion is the worst in the country. Solutions will be found in improved mobility infrastructure with a focus on moving people with transit, commuter rapid rail, micromobility devices, and ride sharing—not in building bigger roads for single-occupant vehicles.

**05 Accelerate climate resilience**
A comprehensive and sweeping reform of policies, procedures, and investment in infrastructure systems is underway. Implementation must address sea-level rise, extreme weather, and rising temperatures.

**06 Support energy autonomy**
Infrastructure independence—regionally, locally, and at individual sites—will become more achievable and valuable in the future; the interconnected nature of our national systems are at risk from cascading failures.

**07 Rebalance systems for equity**
As resources become increasingly scarce and privatized, a renewed focus on equity in infrastructure systems will be needed to ensure racial and social justice, fair access, and transparent distribution of environmental costs.

**MASSACHUSETTS’ DETERIORATING INFRASTRUCTURE IS SEEN AS AN IMPEDIMENT TO SUSTAINED ECONOMIC SUCCESS.**

**08 Waste little**
Infrastructure systems will need to be leveraged and optimized to increase sustainable and car-independent development through systems that support more dense and compact building, such as expanded sewer and wastewater treatment systems in more suburban and rural locations.

**09 Avoid distribution disruptions**
To support populations, we will need to invest in improving the climate resilience of critical locations and transportation networks to reduce risks to food and goods freight systems.

**10 Invest in legacy infrastructure systems**
New digital innovations built on old infrastructure may increase the novelty of certain services, but major investments to maintain and upgrade legacy infrastructure systems must remain.
Test.

Learn.

Adjust.
The pop-up approach allows for continuous adaptation

by Mare Weiss and Rachel Zsembery AIA

In the realm of retail, the term “pop-up” brings to mind short-term stores. Developed to serve many different needs—from bringing buzz back to an underused downtown, allowing a start-up to test the market, or launching a new brand impression—pop-up shops have helped redefine retail-store design. What makes them vital today is how they are influencing design thinking overall. For almost 20 years, they have altered our expectations of the consumer experience, just as Uber has altered the transportation experience and Amazon, the home-delivery experience.

Twenty-first-century lives are filled with rapid-fire multitasking. Consumers expect that merchandise, brands, services, and spaces should address multiple needs rather than providing single-need solutions. Car-service driver: Please make sure you have a charger for my phone, a bottle of spring water, and some mints. Local bank: Please have a designated area where I can make a conference call or meet with a client, and yes, a latte would be nice. Employer: I need varying change of scenery for inspiration—please have spaces that are light and dark, big and small, high and low; spaces that fuel productivity and spaces that offer respite.

As a result, pop-up-driven customer-experience elements—engaging, flexible, and multifunctional—are weaving their way into all market sectors and public institutions. Companies are also using the ethos of the test-and-learn model to create a framework to continually adapt their spaces to allow for rapid response to user needs and feedback.

OFFICE DESIGN

In the past few years, compelling shifts in office space design have been occurring. Forward-thinking companies are recognizing that, like a pop-up, an office space has the potential to provide a setting for customers to interact with their brands. So how should that be spatially allocated and curated? Recognizing the opportunity for office space to evolve, an apparel client recently asked if we could provide ongoing design assistance. The brand relies on customers buying into its technology, and the client recognized the value of engaging customers in its research and creative process. But how do we bring that to fruition? Fortunately, the company’s office space includes street frontage in Boston, which lends itself to becoming a space where the client could invite the community in to engage with the client as much as possible.

Our approach: Think of this office as a box cut into three zones. The front zone, or zone one, is an always-evolving pop-up space, allowing the company to engage with the community at street level to test new products and marketing campaigns. The middle zone (zone two) is the semiprivate office space, letting the sound of daily work filter into zone one, and the excitement and allure of the creative process to infuse the public arena. This creates transparency and a semblance of connectivity, while also allowing for a bit of intrigue. The third zone is the private space, which is necessary in every office environment for confidential conversations or related business.
By providing customers with a glimpse into the creative process and asking them to engage with new products and provide feedback—all within a highly curated, branded, and ever-changing environment—the company is able to build long-lasting customer relationships and provide an experience that those customers are eager to share broadly as brand advocates. The evolving nature of the pop-up environment provides a reason to return again and again, and the company has effectively created a test-and-learn focus group within its own office environment.

CITY STREETS, PEDESTRIAN TRAFFIC

How many times have you read about or participated in one of the city’s pop-up transportation alterations? Boston and its surrounding cities have been using the method to test planning ideas from bus lanes to parklets.

In 2016, the City of Boston launched a pop-up park on Franklin Street as the first step in a community-engagement process to identify opportunities for activating underused spaces in the city and to experiment with placemaking through small shifts in the urban environment. Fast-forward to the summer of 2018, when Tontine Crescent Plaza was unveiled in front of The Merchant Kitchen & Drinks restaurant as a semipermanent installation, jump-started by the original experiment. With a few tweaks here and there based on use patterns and user feedback, this former pass-through space has become a constantly evolving destination enjoyed by many different user groups. Throughout the city, tactical temporary or semipermanent urban interventions such as street murals and parklets have the opportunity to become permanent. As an interesting complement, a pop-up travel-themed bar called the Foreign Correspondents Club opened in the Merchant’s basement in early August and stayed through September 21.

SMALL SPACES, BIG IMPACT

Urban streetscapes have regularly been dotted with pop-up experiences, whether in the activation of empty storefronts, through the proliferation of food trucks, or with regularly scheduled temporary markets and beer gardens. Each is established as a way to put unexpected and distinctive products in front of a consumer without the investment required by the build-out of a permanent long-term real estate lease. Spaces in the city are being established to foster these types of temporal activations through the creation of small-scale environments specifically geared to experimental brands.

The Current, a pop-up village created and curated by WS Development in the Seaport District, is billed as “the next wave” of retail. A series of independent structures that provide homes to a rotating series of curated brands, The Current is designed so customers can create new relationships with emerging entrepreneurs. The small scale of the spaces reinforces intimacy, and the frequency of turnover encourages repeat visits to allow for new discoveries. For many small brands that inhabit these spaces, exposure to the crowds of residents, business employees, and tourists who frequent the Seaport is invaluable.

This village-style approach is popping up in several formats, including a brand-focused department store concept called Neighborhood Goods that opened its first location in Plano, Texas. By taking the approach of collecting and curating pop-up activations together, developers and entrepreneurs are banking on the buzz and excitement that surround temporary retail experiences.

The allure of pop-ups—urgent, surprising, delightful, engaging—has permeated well beyond the retail world into everything from workplace and urban design to transportation planning. Their flexible nature fosters experimentation, creates an opportunity to conduct market research, and activates underused spaces in the built environment. The lower capital investment required allows emerging companies to attract new customers through a physical presence—a must for innately digital companies, as the cost of both advertising and acquiring customers online soars—and permits established companies to test new marketing initiatives, product lines, or geographic locations. The ephemeral approach can sometimes pave the way for smart, long-lasting solutions.
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HEED CLIENTS, NATURE, AND ALLIES

by Dave Hampton

The future—as we all know by now from any newscast, weather report, or presentation that involves planning any significant building or piece of infrastructure—is getting weirder and wilder. Yesterday’s record-breaking storm is tomorrow’s norm. So, here are three tenets for design professionals as we seize this opportune moment.

Dave Hampton is principal at re:ground, a resilient strategies and climate adaptation consultancy.
WE MUST DISCUSS, PLAN, AND ACT AT THE SCALES AT WHICH NATURE FUNCTIONS.

MAKE IT PERSONAL

As design professionals, our highest responsibility is to the health, safety, and welfare of the public.

While nearly every climate-related discussion centers on a handful of key themes—risk, uncertainty, technological solutions, cost, and scheduling—the personal is the most critical. Listening to our clients' narratives—stories they tell of past floods, their fears for the future, their hopes that we can design something better—is essential. For example, the nonprofit Consensus Building Institute's work in supporting communities—through stakeholder engagement projects—as they consider adaptation strategies, including relocation, does just this.

Achieving goals for a resilient future requires us to go above and beyond the status quo—advising with the most current information, designing to better than code, challenging ordinances—with all clients. Understanding their personal relationships to a changing future will help us craft proactive and effective long-term strategies, informed and sharpened by evolving climate science.

WORK AT NATURAL SCALES

Forget the city. Forget the state. Forget the nation. These are largely artificial jurisdictions we've imposed on the land in order to subdivide it for use and attempt to govern it, and they've ceased to be useful as we consider a rapidly changing climate. The effects of extreme heat stretch across metropolitan regions. Inland flooding starts upstream and affects downstream communities. Storm surge ignores state lines. We must discuss, plan, and act at the scales at which nature functions.

Hydrology—how and where water flows, where it gathers, and how it returns to the sea, sky, and ground—geology, and topography will be the true governors of who and where it stays cool, hot, high, or dry. The Resilient Mystic Collaborative is helping communities envision what living along a climate-resilient urban river might be like; this municipal partnership is a great example of operating at one of these critical scales: the watershed.

INCORPORATE TRUE INTERDISCIPLINARITY

The manipulation of built form into leasable square footage, and the planning and deployment of pipes and wires to service it have been our predominant concerns. However, to understand things in their increasingly complex contexts, systemically and at multiple scales, calls for a landscape approach. The Sponge Handbook for the transformation of the South Buckingham Canal in Chennai, India, explains this in user-friendly terms and graphics. Major climate adaptation initiatives, such as Room for the River, Rebuild by Design, and 100 Resilient Cities, prominently feature landscape architects, hydrologists, and civil and environmental engineers early on and throughout the projects. Rather than an argument for the primacy of one discipline over another, this is instead a call for true interdisciplinarity and integration.

Jonathan Franzen wrote recently of the futility of relying on mitigation in the face of a "climate apocalypse." His piece underscores the urgency of adapting and transforming, modes which should come as second nature to us as design professionals; we are at our most incisive and inspiring when we synthesize disparate elements into cohesive wholes. Let us leverage the certainty of an uncertain future, and act quickly and (take it) personally at the right scale and in concert with our colleagues from allied disciplines.
Being brought to the brink can recalibrate us as architects
by Bryan Irwin AIA

The onset of the plague in the winter of 1575 was a recurring nightmare for Venetians, having witnessed numerous outbreaks in previous decades. However, that epidemic was extraordinarily virulent, and by the time it left as mysteriously as it arrived, one in three citizens had died an agonizing death. Whole neighborhoods were littered with corpses. Yet this event, traumatic as it was, would be the impetus for one of Venice's great architectural treasures: Palladio's Church of the Santissimo Redentore.

It is a curious thing: So often, inspiring buildings emerge out of or are created because of the tragic need for reinvention. Perhaps their creation reflects our innate desire to survive or our fierce ability to believe in a core
set of humanistic values, much as the Venetians were motivated by their belief in the Christian notion of a merciful god. The votive church II Redentore is at once a statement of man's humility as well as our ability to persevere, its interior an eloquent essay of light and shadow—that which can be explained, and that which cannot.

While hardly the plague, there is currently a whiff of dystopia in the air: with the recognition that climate change is real and its impact profound; America in the grips of an emotionally stunted president; and ugly sociopolitical legacies resurfacing in Europe, threatening fragile alliances. As makers of our built world, architects and planners should ask these questions: What do we believe in? Can our work suggest a future we all want to be part of?

There is something about being brought to the brink that recalibrates us as architects. Lately, a revisiting of established tropes about the origins of Modernism has led some architectural historians to the realization that the motivations were much simpler—and much more profound. Many of the Modernist masters experienced firsthand the front lines of battle and the destruction of Europe in World War I, a war that killed an astonishing 7 million citizens and 10 million military personnel. Having seen their world crumble around them, architects as different as Mies van der Rohe, Walter Gropius, Erich Mendelsohn, and Hans Scharoun came together in an informal group that became known as Der Ring, seeking a way forward.

As a group, they were far less the strident iconoclasts architecture historian Sigfried Giedion would have us believe—they were a group of architects and designers with diverse agendas brought together by a desire to articulate a way forward in a time of inconceivable tragedy. Twenty years later, and emerging from the tatters of World War II, Japanese architects such as Kunio Maekawa and his disciple, Kenzō Tange, defined a new architecture that fused Shinto Buddhism with elements of Western architecture, creating a delicate, uplifting form of Modernism best exemplified by Tange's masterpiece, the Tokyo Olympic Arena, a building at once boldly monumental yet intimately human. In Japan as in Europe, the tragic need for reinvention brought about new form-making that exquisitely expressed what it is to be alive at a particular moment in time.

Which brings us to our moment in time. The indicators are not good. The United Nations recently released an exhaustive—and extraordinary—report that paints a stark picture. We have so dramatically altered the earth's ecosystems that food security and clean water are threatened across the globe. One of the most important findings of the report: "Ad hoc" piecemeal solutions will not slow the accelerating rate of degradation, only "transformative changes" with solutions not yet thought of will potentially slow the process.

**While hardly the plague, there is currently a whiff of dystopia in the air...**

Yet, we have been slow to respond. William Butler Yeats' description of postwar Europe seems oddly appropriate today: "The best lack all conviction, while the worst/Are full of passionate intensity." The recently completed Hudson Yards, the largest privately developed project in US history, brings together some of the most influential architects practicing today. Ironically pitched in public relations material as "Manhattan, Reinvented," the result is a frightening solipsistic take on urban life, an island within the island of Manhattan.

All the while, many of the leading architecture magazines no longer publish plans and explanatory diagrams when they publish new buildings, succumbing to the idea of architecture as a Pinterest post, a stylized photo shoot. Which is not to say there are not many architects and planners striving to meet the challenges we are facing and reinventing how we think about community—Studio Mumbai and RMA Architects in India or Wang Shu in China come to mind—but in the end, are they merely the ad hoc solutions the United Nations warns us about?

The response to the April 15 fire at Notre-Dame de Paris circumscribes the point I want to make. It has been fascinating to read the many poignant remembrances of what that building meant to Christians and agnostics alike—the sheer exhilaration of what it felt like to stand within the great nave. Plundered and reinvented numerous times, each time more noble than the previous, Notre-Dame conveys to a broad spectrum of people a single, profound message: Look at what we are capable of accomplishing.
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