



dialogue

17.

Talking about...
How to Support
Community Life

New Learning Places
Civic Sustainability
Walkable Urbanism
Reinventing Airports

A Gensler publication

What makes a building high performing is how well it enhances people's productivity.

Kevin Kampschroer, Director, GSA Office of Federal High-Performance Green Buildings

Communities are repositioning, too.

The same impulse leading the private sector to embrace anything that will boost its competitiveness is equally present in the public sector. As this issue notes, the US General Services Administration—GSA—is the benchmark for high-performance buildings and work settings. GSA not only designs them sustainably, but documents their performance. When the private sector looks for proof statements, GSA has them. GSA is effectively setting a national standard.

Take any aspect of community, and you'll find that the agencies and institutions involved are ramping up their game. They are as engaged today in repositioning as the private sector, both out of necessity—being subject to the same financial pressures—and because they recognize a unique opportunity to break with their own past and support the community in new ways that are vastly more effective. That's affecting work settings, schools, airports, and where and how cities are increasing density. That design plays a potent role in this transformation should be no surprise. It's the medium of real change.

cover:
UC Berkeley students watching Al Gore and Richard C. Blum (opposite far right) at the groundbreaking for the Blum Center for Developing Economies.

opposite from left:
New Line Learning Academy, Maidstone, Kent, UK; US Department of Homeland Security, Omaha, NE; JetBlue Terminal 5, JFK, New York, NY.



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LEARNING ACADEMIES

By David Sokol

Most of us spent our formative years in a blackboard environment. We experienced our school days one teacher at a time, seated in soldierly rows of carved, dented, and gum-accreted desks, with all attention focused on a chalk-dusted icon and a call-and-response pedagogy. Group projects were exotically infrequent. Peer-to-peer interaction was banished to hallways.

As parents of today's students know, the design of education's settings is finally catching up with the major changes in pedagogy that have taken place in schools, colleges, and universities. Project-based learning now sits alongside recitation. Working in teams, the kids are absorbing information while negotiating various responsibilities and attitudes. Teachers and professors, also working in a team format, recognize that different students perform differently in social, focused, and lecture settings. One student may need to cycle through all three to excel, while another student may do much better in one than the others.

As contemporary education embraces multiple styles of learning, Gensler's education specialists are designing buildings and settings that accommodate this new approach. Let's look at current work to see how this is playing out in schools and colleges.

right:
New Line Learning Academy
Maidstone, UK

Schools and colleges alike are asking how people actually learn. As they shift their approach, often radically, they're turning to design to reshape the settings where learning takes place.





clockwise from top left:
 St. Philip's Academy
 Newark, NJ
 Notre Dame de Namur University New Hall
 Belmont, CA
 Future Leaders Institute Charter School
 New York, NY

Prototyping the future

In Maidstone, Kent, UK, a run-of-the-mill portable disguises an exciting experiment that weds pedagogy and design. Year eight students at the New Line Learning Academy (NLL) enter this temporary structure, take off their shoes, and then proceed to a former gymnasium refashioned into a space called the plaza. With its highly graphic introductory sequence, the space is the prototype for Gensler's design of three all-new campuses for NLL. This is where the students spend the majority of their day, with team teaching and project-based learning. Taking off their shoes gives them a sense of owning their space, explains Gensler's Philip Gillard.

Students move quickly between lessons, from individualized seating and group-focused, seminar-table formats to a series of risers that suit lectures and other auditorium-style events or lounging. And the plaza accommodates students without their needing to shift places: 360-degree video projection and biometric lighting service smaller vignettes within the larger zone. "Imagine a learning space with six or eight kids around a big table," Gillard says. "Two or three at one end might be working together, they might have an eight-person discussion, or all of them may work on their own." That's not set by a class timetable, he adds. It's impromptu and learner based. By providing wireless access, students can use netbooks or PDAs instead of desktop computers that have to stay at the school (and are vulnerable to theft).

The plaza concept draws on ideas that the Gensler team first developed as part a larger program to rebuild or renovate 150 Kent County schools—now part of the UK government's Building Schools for the Future (BSF) initiative. The team proposed creating learning zones, like the campfire, the watering hole, and the cave. The plaza combines several of them into a larger space, about 4,800 square feet in area, with a mezzanine level to permit even more variety in simultaneous work styles. The Gensler team will use the data collected in the prototype to tailor each plaza for its specific location, Gillard explains. "The concept is adaptable to different age-based sizes and learning preferences, and can be modified to support science, athletics, and other specialized activities."

Gillard has led Gensler's partnership with Kent County Schools since 2005, reshaping the schools from a design standpoint as the educators on the team rethought their pedagogical approach. The academy label means that NLL Academy has a mandate to implement radical change. "The academies can throw out the rule book," Gillard says. "They're licensed to push the envelope, with the expectation that these changes will pay off in student performance." Kent County comprises a broad demographic. The county's schools modernization program began by focusing on the most disadvantaged communities—an emphasis that has attracted partnerships with UK colleges and private schools, and sponsorship by companies like HP and Microsoft. The program consciously embraces the community as a whole, making room not just for parents on school nights, but for adult learners and local events every day of the week.

Experiential learning

The socioeconomic and student-performance profile of inner-city Newark, New Jersey, is not dissimilar from that of Kent County's disadvantaged communities. At St. Philip's Academy, a K-8 independent school, families pay what they can afford. Along with academic subjects,

the curriculum "addresses personal issues and skills, like pride, nutrition, and family development," says Gensler's Ralph Walker, now a trustee of the school.

St. Philip's Academy was founded in a church basement in 1988. It outgrew a converted bank building almost as soon as it moved into it, so in 2007 it relocated to new Gensler-designed quarters—a renovated five-story chocolate factory, originally built in 1904, with a 13,000-square-foot gymnasium addition. With 350 students, St. Philip's clusters its classrooms around 10-by-12-foot, open antechambers in a barbell configuration. These nodes hold up to 10 kids—breakout space for group work or one-on-one sessions with individual students. "They're designed to be used opportunistically," Walker says.

The design actively supports what Walker calls "teachable moments." The cafeteria has an open kitchen because the school wants the students to learn how food is prepared, start to finish. The science program makes full use of a harvestable garden on the gymnasium roof, just one of the school's many sustainable features. There's also on-site composting, to close the food-cycle loop. "The urban farming movement is starting to catch up with St. Philip's," Walker jokes. The students are immersed in all of it as active participants. "Their learning is experiential."

Walker, Maddy Burke-Vigeland, leader of Gensler's education studio in New York, and their colleagues are one of eight finalists (out of 1,000+ entries) in Architecture for Humanity's Open Architecture Challenge: Classroom design competition. Their entry is a real project, the Future Leaders Institute Charter School. As Burke-Vigeland explains, "by unfolding the box and blurring the classroom—transforming the main corridor and other shared settings into learning places—we can support this high-performing school within the envelope of the traditional school building it now occupies." (For details: www.openarchitecturenetwork.org/projects/3973)

Community of peers

With economy in mind, Greenfield Community College in Greenfield, Massachusetts, has set out to rebuild itself. That it is doing so in these straitened times suggests the leverage it sees in embracing and supporting new ways of learning. Gensler's Ken Fisher, who's leading the design team, explains that, unlike their peers at traditional liberal arts colleges, "a lot of the students at Greenfield are the first in their families to attend college. They have jobs that limit their time. They may have children to raise or families to support, which limits their resources." Community colleges are the great bargain of US higher education. They're also at the forefront in redefining what a college is and does.

The focus of Gensler's work at Greenfield is the modernization of the core of the campus. It includes the redevelopment of an existing library to create a new learning commons that will house a variety of student support services, plus distance learning and educational technology. Along with traditional library settings, there are breakout rooms for group study and peer tutoring, and a coffee bar. "Anyone who's spent time at Starbucks realizes that socializing is part of how people learn today," Fisher says.

The changes under way at Greenfield Community College are predicated on time-strapped students' convenience as much as on administrators' and architects' awareness of

multiple learning styles. That Gensler decided to realize a fluid, yet multivalent space for the college library only validates these new approaches to learning and new ways of designing for them. The democratic perspective will help the library endure, Fisher believes. "It's not about finding books in the stacks anymore; it's about how important interaction is to learning."

Embracing technology

Technology is ubiquitous in academia today. When a tropical storm flooded the University of Texas's Health Sciences Center in Houston in 2001, this became the occasion for rethinking how learning happens. Gensler helped the UT Houston Medical School add powerful virtual-surgery stations—and place group learning spaces around them. "That's a good illustration of a new paradigm," says Gensler's David Calkins. "Technology and collaborative learning go hand in hand—in universities, community colleges, and charter schools." His colleague Mark Thaler agrees. In a project his team is designing for New York's St. John's University, "wireless technology blurs the boundaries—the same space can be used for teaching by day and student activities at night. Learning happens throughout."

A learning revolution

Today's technological innovations, particularly those in communication media, are rewiring students for multiple learning environments that deploy intense, episodic social interaction. "The real revolution in education is twofold," Ralph Walker says. In 1983, he notes, Howard Gardner posited that the sheer variety of human nature means that some people take things in linguistically, while others are visual, kinesthetic, musical, and so forth. "Schools are finally acknowledging that they need multiple teaching methods and multiple venues for learning," Walker says.

The other half of the revolution is that learning is pervasive, extending across our whole lives. "The community colleges really get this," David Calkins observes. He notes how a new campus for the Lone Star College System outside Houston constantly shifts its offerings to support the evolving needs of its students. "Five years ago, the senior academy was the fastest-growing program. Now the retraining programs predominate as the college gears up to get people back to work."

"Schools were a rite of passage," Walker says. "Today, they're an accompaniment to life." His colleague Gillard agrees. "Even the middle schools see their students as real people with widely different needs and natures. 'One size fits all' is over." This is not unlike the office workplace, notes Gensler's David Broz—he finds that ideas in good currency there, like supporting different work modes, often apply when he designs learning environments for schools, colleges, and universities. "We're all human," he says. "We bring our learning styles along with us."

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City College

By Vernon Mays

Since 2004, Columbia College Chicago has leveraged design to accentuate the standout qualities of its urban campus—a remarkable transformation that’s been accomplished with a true economy of means.



While “college campus” conjures images of Gothic buildings and lawn-covered quadrangles, the demand for higher education in cities today is changing how students view the college experience. Columbia College Chicago, founded in 1890, is one of a number of urban institutions—NYU, started in 1831, is another—that use the city itself as their campus. Originally a “school of oratory,” Columbia College Chicago took off in the 1990s. Today, its campus consists of 22 downtown buildings—2.5 million square feet—used for classrooms, offices, and dorms.

The “campus” is a work in progress, but the college is making strides. It has an updated master plan that gives top priority to the task of making its disparate buildings suitable settings for academic life. “The challenge has been to create an identity that reflects our innovative, fresh, and colorful college,” says Alicia Berg, vice president, Office of Campus Environment. “We’re a school of arts and media spread out across the South Loop in buildings acquired over time. The challenge was to create a sense of continuity, inside and out.” Led by David Broz, an education practice leader in Chicago and Minneapolis, Gensler has done over 80 projects for the college in the past five years.

That campus feeling

“How do you create a campus environment when the fabric that stitches the buildings together is actually the city streets? You don’t have control over it, as with a conventional campus.” That was Broz’s dilemma. What Columbia College Chicago did control, he notes, were the corridors of the buildings—all 120,000 square feet of them. Before 2004, the college just bought buildings and put them into service. “There was no shared design language and no real integration between floors.”

To give the buildings some common ground, Gensler took the college's Office of Campus Environment through a visualization exercise that provided the basis for an early design intervention. The corridors now have a two-tone color scheme that gives them an art gallery-like atmosphere. To orient people in the zigzag hallways that sometimes plague older buildings, Gensler inserted bold swaths of color in the elevator lobbies, and used supergraphics to mark faculty offices, stairways, and restrooms. "We also hung several hundred reproductions of student artwork on the walls," says Broz. "It feels like you're at an exhibit."

Each building has its own color scheme. The seven-story 33 East Congress Building features a bright orange motif that's selectively expressed in the carpets, walls, and ceilings—right down to the ground-floor security desk. "You turn the corner and you see this burst of orange 100 feet down the corridor," Broz explains. "That tells you where to exit the building." Gensler went on to redesign the college's public lobbies and first-floor spaces—a strategy aimed at embracing the South Loop, an area that's in a major transition socially and economically. It was a crucial step for the college. "Traditional campuses are about monumental buildings and the spaces they enclose," Broz says. "Columbia College Chicago is about how city buildings interact with downtown streets. The ground floors are where life happens."

Less learns to do more

Despite its longevity and recent growth, Columbia College Chicago has to reconcile its ambitions with a modest capital budget. Gensler focused on design moves that, for relatively little money, would have an

outsize impact on the quality of student life. Take the lobbies. Some were in bad shape, and others were badly "modernized" by the previous building owner. Gensler took them back to basics.

Historic columns with plaster capitals were uncovered, and simple light fixtures and clean graphics were added. At the 623 South Wabash Building, dislike yellow chairs lend a fitting informality to the lobby lounge. A wedge-shaped orange ceiling conceals new warm air ducts, creating a temperate space that students are glad to frequent during Chicago's notoriously freezing winters. Upstairs, students were often spread out on different floors, which can be isolating. To counter this, Gensler mixed in a lot of communal spaces to encourage people to congregate—a strategy also applied to other college buildings.

Reworking the ground floors suggested the possibility of treating the building exteriors as a canvas that could cement ties with the community outside. When Gensler renovated the second floor of 33 East Congress for the journalism department, the word *Columbia* was spelled out in bold letters across the windows facing the elevated trains that run by the building day and night. This one low-cost move gives the college a public visibility that's the envy of other universities in the Loop. "It's seen as the gorilla in the neighborhood now because it has such an amazing presence," Broz says.

Another connection to the city takes place at Anchor Graphics, a not-for-profit fine art print shop affiliated with the college. Two large bay windows in the second-floor studio face Wabash Avenue, and Broz wanted to



bring daylight into the space without allowing too much of the sun's heat in as well. The solution was handmade curtains that use sheer fabric as a base. Joining forces with the Office of Campus Environment, the designers created patterns with reflective sequins that resist the sun and flutter as heat rises.

access to them. In one building, computers were set up in five adjoining classrooms, each with someone being paid to monitor their use. However, the students imagined that the computers could only be used in class. To change their perception, Gensler suggested getting rid of dividing walls to create an open-plan environment.

The classroom floor now has three wall-less classrooms, set apart by visual cues—lower ceilings, different carpets, and special acoustical treatment. Computer workstations fill out the space in between. "Despite initial concerns about noise levels, it's actually pretty quiet," Broz says. "Students can see that computers are available, so they gravitate there between classes and start working."

Not all the effort has gone into academic buildings. In the old Lakeside Press Building, now a residence hall, Gensler exposed the barrel arch ceiling at the entry and created a gathering place with pool and foosball tables. On the opposite side of the first floor, a new workout room caters to the fit. There's a small stage nearby for impromptu performances and poetry slams. "The students are artists, actors, and musicians," Broz explains. "They want to show what they can do."

Issues of an urban campus

One challenge at Columbia College Chicago is the need to adapt former department stores and banks, some of them a century old, to entirely new uses. Another challenge is the Loop itself, not the quietest place on the planet. The elevated train line that adjoins the journalism department is pretty noisy. "We knew that we couldn't put anyone along that façade who would find the trains disruptive," Broz notes. "What fits perfectly is the department's newsroom. For reporters, the train is just background noise."

The journalism department's program includes a converged newsroom where students adapt writing and reporting to the latest media platforms. Gensler put this specialized facility in the center, wrapped in corrugated metal. Inside are a video production set and a mixing lab. "Everyone has to walk around it," Broz says. "What could have been a big, amorphous space has a heart—a unifying element."

This raises another issue—how to integrate technology. The college makes heavy use of computers in its programs and wants students to feel they have constant

Finding a wider audience

One problem for an urban campus is to identify a "way in" for prospective students and their parents. To provide one for Columbia College Chicago, Gensler helped it convert a ground-floor space along Harrison Street as an Admissions Tour Center. Naturally, since creative types make up the student body, the college needed to differentiate itself visually from more buttoned-down alternatives. Floor-to-ceiling transparency is what greets students and parents. "It's important to recruiting," Alicia Berg says. "Students judge our credentials as an arts and media school by the image we convey. We also want to make people aware of the Columbia College brand in Chicago. These projects make a civic statement about our place in the community."

This is an urban campus. Its roots are every bit as ancient—actually, slightly more so—as the traditional campuses that appear in most university and college catalogues. Those institutions may have their ivy-covered courts, but Columbia College Chicago has a world-class city at its doorstep. Culture, urbanity, and the pure energy of real life are as much a part of its curriculum as its formidable range of courses.

Vernon Mays is a Richmond, Virginia-based writer and an Editor at Large of *Architect* magazine.

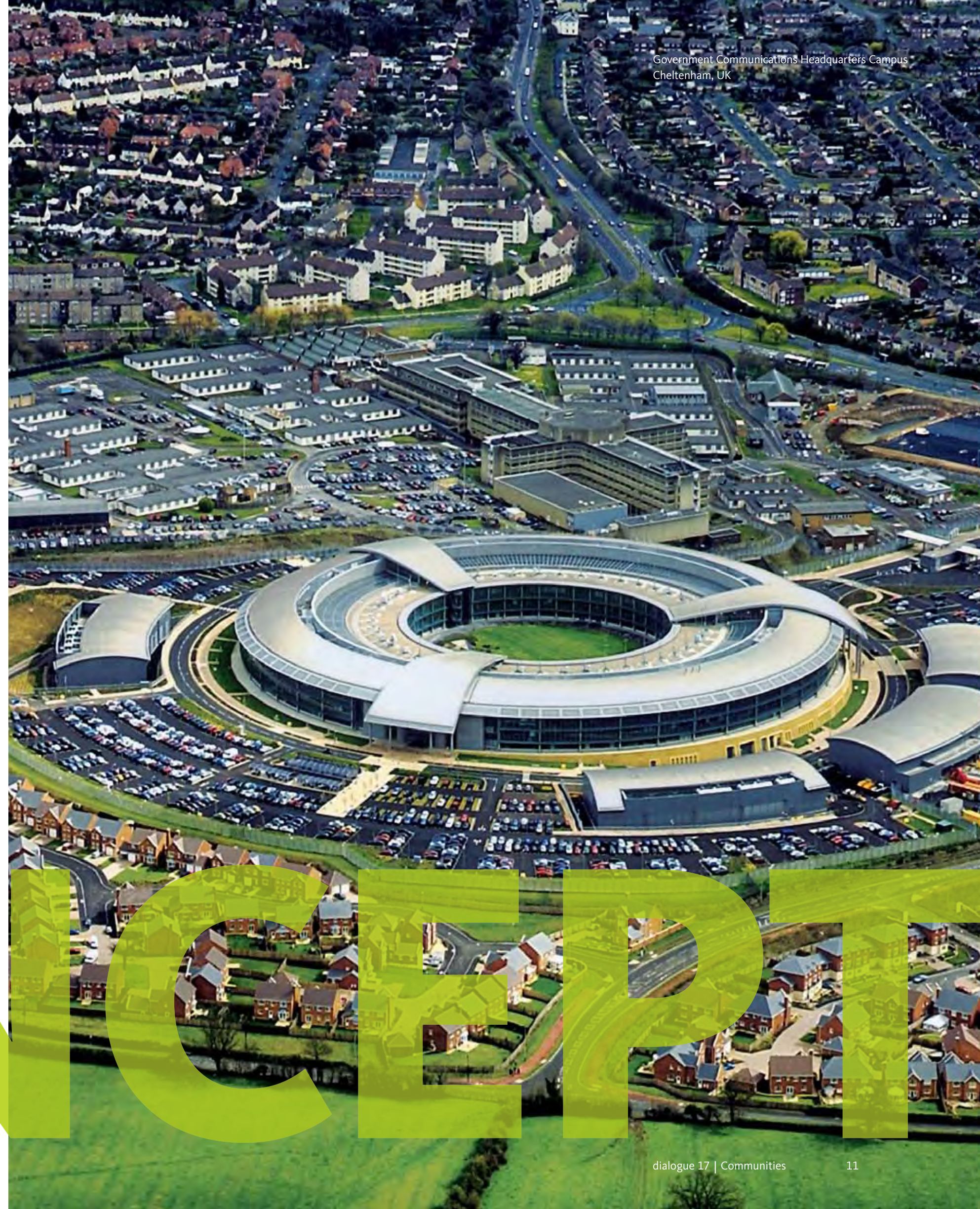


The private sector is seen as the innovator, but governments are taking the lead with the sustainable workplace—developing great examples and then proving their value. Others are taking note.

PROOF OF

By Vernon Mays

CONCEPT



Government Communications Headquarters Campus
Cheltenham, UK

While the private sector has embraced sustainability, relatively few companies have gone as far as the US government in developing sustainable design best practices and workplace policies. The General Services Administration (GSA) has emerged as a trendsetter in advocating for sustainability—and then going the extra mile to prove its value through empirical research. Having gained wide respect for elevating the quality of federal buildings through its Design Excellence Program, GSA is now raising expectations for building and workplace performance.

GSA has been working for more than a decade to improve the qualitative and quantitative performance of the federal workplace. In 1998, Gensler helped GSA create and implement its First Impressions Program, which set out to make public access of federal office buildings and courthouses a favorable experience. More than just an aesthetic agenda, First Impressions was about smart business practice. “As America’s biggest landlord, GSA wanted to create a ‘Class A’ experience for its federal tenants,” says Gensler’s Jeff Barber. After surveying dozens of federal buildings, Gensler developed a plan of attack, completed several pilot projects, and trained GSA’s staff to carry the program forward.

With the knowledge gained from First Impressions, GSA asked Gensler to renovate the Richard B. Russell Federal Building and Courthouse in Atlanta, a Design Excellence project. Barber and his team transformed the mundane, 1970s-era office block by humanizing its harsh and uninviting plaza. Along with updating the interior, they added a striking new entry pavilion that solves the need for upgraded security while providing an elegant passage into the building.

Making the federal workplace sustainable

GSA is this decade’s leading US advocate of integrated sustainable design. One of its best proof statements is Gensler’s Department of Homeland Security (DHS) building in Omaha, Nebraska. The LEED Gold project, which houses a staff of 252 and serves a continual flow of visitors, incorporates daylight and rainwater-harvesting systems, a ground-source heat pump, sustainable cleaning protocols, and even measures to encourage people to bike instead of drive. When, at GSA’s request, Pacific

Northwest National Laboratory (PNNL) recently evaluated 12 sustainably designed GSA buildings, DHS tied for first as the best performing.

PNNL considered end-user satisfaction as well as energy performance. It found that GSA’s 12 sustainably designed buildings had a 27 percent higher satisfaction rate than the national average—important new evidence that people benefit from sustainable design. (These findings are summarized in a recent report, *Assessing Green Building Performance*, prepared by GSA’s Public Buildings Service.)

“PNNL’s research shows that when you design for sustainability, human performance benefits,” says Gensler’s Gervais Tompkin. He has been closely involved with GSA’s WorkPlace 20•20—a program, launched in 2002, created to develop and test techniques to help federal agencies treat office space, workplace technologies, and work processes as an integrated system, designed to improve organizational effectiveness. The resulting toolkit provides a cost-effective, time-efficient process for creating workplaces that fit the way people in government actually work.

GSA has completed 40 different WorkPlace 20•20 pilot projects across the US. Recently, GSA’s Public Buildings Service evaluated six of them, including two designed by Gensler. Compared to the facilities they replaced, the new work settings showed improved collaboration, individual productivity, and workplace satisfaction. (These findings are summarized in a report, *The New Federal Workplace*, from the Public Buildings Service.)

Sustainability in the UK public sector

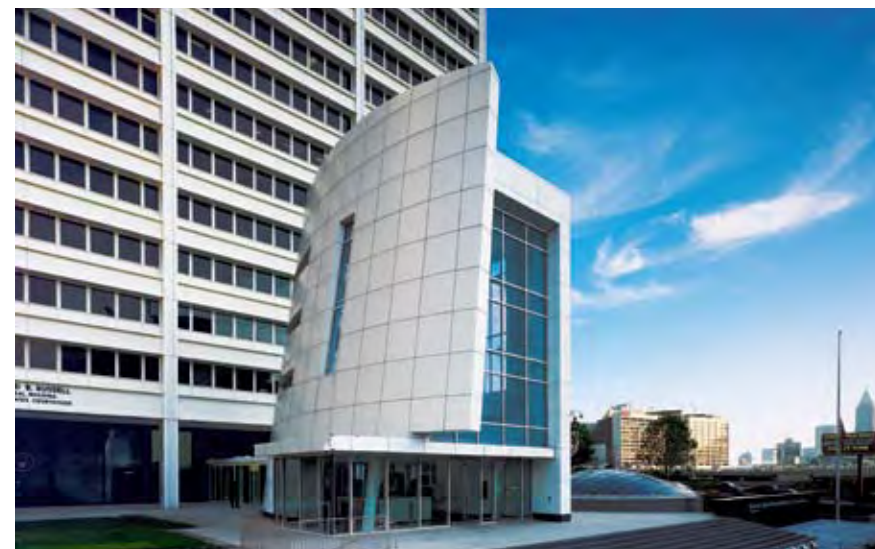
The UK government has also made high performance a priority for its office real estate. Gensler’s involvement with this began early in the decade, when it joined the winning team for one of Europe’s largest public buildings, the Government Communications Headquarters (GCHQ)—the doughnut, as the press loves to call it—in Cheltenham, UK. This “listening post,” similar to the US National Security Agency, needed to replace scores of outmoded buildings, many dating from the earliest days of the Cold War. Consolidating the staff in a modern campus was a major goal.

“GCHQ needed to be a more collaborative culture,” says Chris Johnson, who led Gensler’s team for the project.



below from left:
GSA Public Buildings Service, Denver, CO; Russell Federal Building and Courthouse, Atlanta, GA

right:
US Drug Enforcement Agency, Centennial, CO



The doughnut nickname reflects that the three-building campus forms a secure ring around a fully enclosed central courtyard. Inside, the new workspace feels seamless—an enclosed but very open setting. “Even the outer façade is equipped with glass that prevents anyone from looking in, but preserves the view from inside,” Johnson explains. To address GCHQ’s new emphasis on integration, knowledge sharing, and efficiency, Gensler designed the campus as a high-performance workplace. The campus’s circular shape eliminates dead ends, creating enormous flexibility for work teams to expand horizontally and vertically. There are meeting places across the complex that “support everything from secure conversations to chance encounters,” he says.

The GCHQ campus is one the largest Private Finance Initiative (PFI) projects in Europe. The idea of PFI is that

private entities provide the funds for development in exchange for a long-term lease agreement with the public agency that will occupy the building. The winning team is responsible for everything—in the case of GCHQ, this included design, construction, operation, security, and IT—for an agreed-on fee, payable for 30 years. That long involvement fostered a favorable convergence of sustainable concerns and life-cycle costing. “PFI made everyone involved hyperaware of the implications of their choices for the building’s long-term performance,” Johnson notes. “People really thought like owners. They made good decisions.”

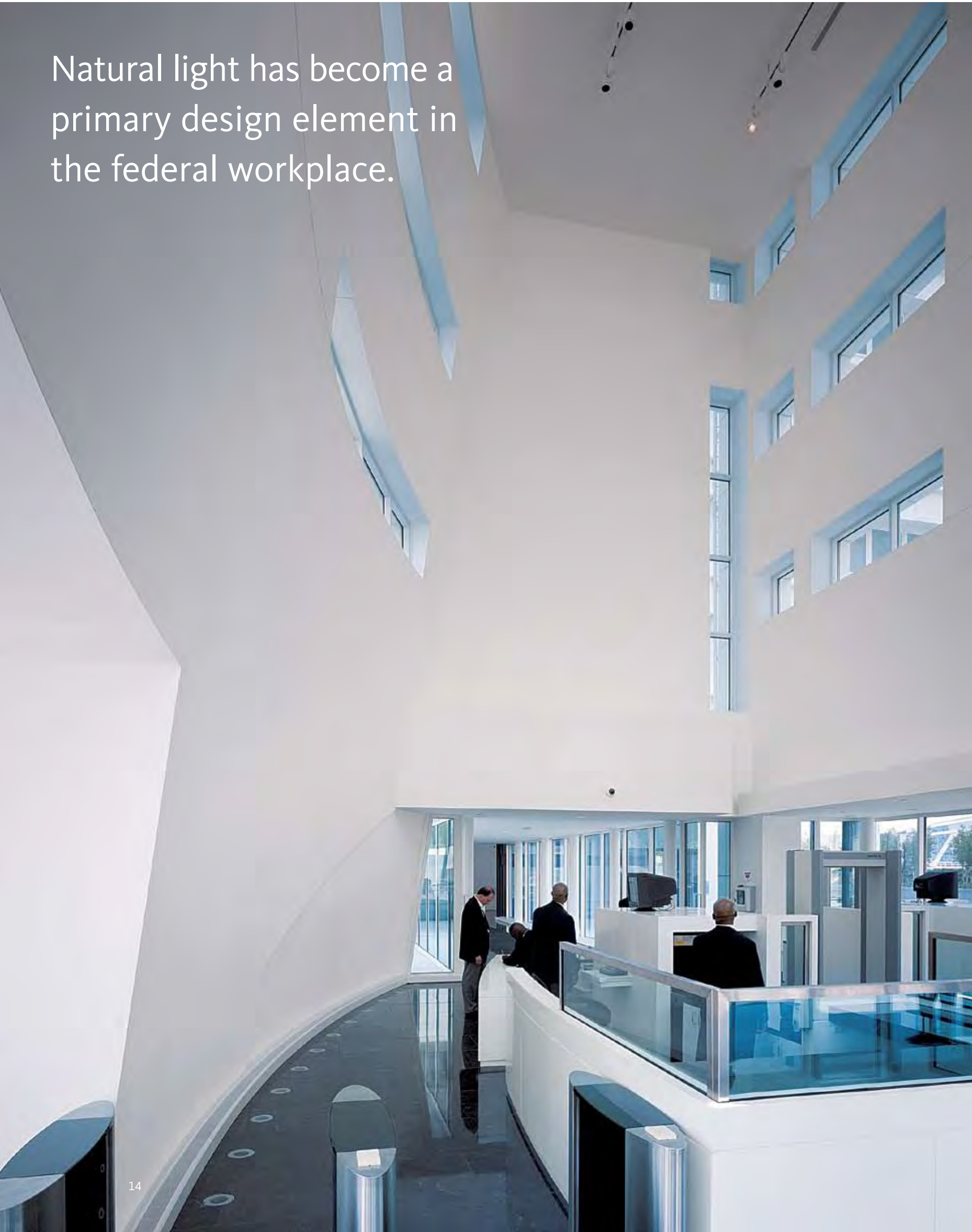
Sustainable design was fully embraced. The transparent façades, clerestory windows, and glass-roofed interior “street”—the main circulation spine—bring daylight into the workspace. A double-skin façade with a two-

layer stack wall acts as a thermal buffer, reducing the heating and cooling load. These energy-saving measures cut GCHQ’s energy use by 40 percent compared to its previous facilities.

Repositioning the federal workplace

One of Gensler’s best-known federal workplace projects is also one of the largest—the 2.5-million-square-foot US Patent and Trademark Office (USPTO) in Alexandria, Virginia. This transit-served campus uses a designed-for-growth strategy to increase its density of use with minimal reconfiguration. There are three office types and two workstation types across the entire campus—a so-called universal plan that simplifies internal moves. Because of the amount of concentrated work required, only 10 percent of end-users are in open-plan work settings. The rest are in offices, but with lots of collaboration space.

Natural light has become a primary design element in the federal workplace.



from left:
Richard B. Russell Federal Building and Courthouse,
Atlanta, GA, and Smithsonian Institution Collections
and Support Center, Landover, MD (a federal workplace
project managed directly by the Smithsonian)



above:
Smithsonian Institution Collections and Support Center,
Landover, MD

Like other knowledge workers, USPTO end-users aren't really tethered to their desks. The work-at-home program is increasingly popular, and is even a selling point for recruiting and retention. It also lets USPTO absorb staff growth without having to add more desks. As more people work from home, there's also less commuting. USPTO is not alone, says Tompkin: mobility is growing in the federal workplace, with positive implications for the environment. "If people worked from home just one day a week, you could reduce the carbon footprint of a federal workplace by 20 percent or more," he says.

In February 2009, GSA Acting Administrator Paul Prouty told Congress that GSA intends to reposition the federal workplace to meet the requirements of the Energy Independence and Security Act of 2007, which mandates a 30 percent reduction in GSA's energy consumption by

2015. Research commissioned by GSA's Public Buildings Service has identified a menu of cost-effective measures—everything from replacing outdated cathode-ray tube computer monitors with flat screens to installing more energy-efficient windows and curtain walls—that can substantially improve the energy performance of the federal workplace. Significantly, the research also found that these measures pay off in human performance. (See *Energy Savings and Performance Gains in GSA Buildings*, from the Public Buildings Service.)

"To be successful, the quest for high performance always needs to address policy as well as product," Tompkin says. "What is really smart about what the US government is doing is that they realize that the only way they can hit the ambitious targets of the federal energy act is to tackle it on both fronts." He believes that GSA will

leverage mobility more and more, both to reduce the federal government's carbon footprint and to meet the growth of the federal workforce in other ways than just adding real estate.

"If you want proof that high performance is achievable, GSA has it," Tompkin adds. "State and local governments as well as the private sector and the developer community are paying attention."

Vernon Mays is a Richmond, Virginia-based writer and an Editor at Large of *Architect* magazine.

GSA'S QUEST FOR HIGH PERFORMANCE

GSA's interest in high performance reflects a longstanding commitment to energy efficiency and sustainability, adopting its first energy plan in 1973. While GSA has emphasized green design over the past decade, the Energy Independence and Security Act signed into law in 2007 set ambitious new energy reduction targets. Soon afterward, GSA established the Office of Federal High-Performance Green Buildings (OFHPGB) to coordinate the effort. With the passage of the American Recovery and Reinvestment Act of 2009, GSA received \$4.5 billion to ramp up the performance of the federal office workplace. In a recent interview, OFHPGB Director Kevin Kampschroer noted that the concept of high performance buildings has been broadened to focus attention on the people inside the building and how building performance enhances their productivity and job satisfaction:

When you talk about a high-performing building, you're talking about its energy use, its materials use, and its effect on the environment. The green buildings definition includes a really important component that hasn't been addressed frequently enough before: Why does the building exist? The green components of the definition add the effect of the building on its occupants and how well they work. What makes a building high performing is how well it enhances their productivity.¹

Understanding how the federal workplace affects people's performance is the primary focus of GSA's Strategic Planning Division, part of the Public Buildings Service (PBS). Research Director Kevin Powell says that the research program was born "when we realized that technology has really changed how people work." The research paralleled WorkPlace 20•20, a GSA program to develop tools and methods to guide the design of fully supportive workspaces. Pilot projects, evaluated before and after completion, proved the concept and led to GSA's current Workspace Delivery Program.

Redefining high performance

GSA drew two main conclusions from its postoccupancy evaluations of WorkPlace 20•20 projects. First, that collaboration and communication are as crucial to federal

agencies as to the private sector. Second, that their office workforce is increasingly mobile, so people are at their desks about one third of the time—a finding consistent with the private sector. GSA's current research is focused on how to achieve high-performance buildings and work settings, Powell says. "The idea is to apply the broadest definition of sustainability to GSA's national real estate portfolio." As part of the recovery act, PBS is rolling out a "smart buildings" initiative. The program will gather data on a host of building systems and building occupancy patterns and "turn it into sensible information that supports efficient operation. Cars do this now, but buildings don't yet," he explains. The goal is to optimize human as well as building performance. Mobility should be part of this, he believes, so federal agencies can adjust their real estate to their actual use, potentially reducing their carbon footprint in the process.

Aiming for a balanced scorecard

Improving how GSA addresses the spatial needs of end-users as well as the environmental quality of their workspace is what occupies Kevin Kelly's attention. The senior architect with GSA's Workspace Delivery Program, he calls what he does "office democracy." This new approach is in stark contrast to the time when the only people consulted on office moves and changeovers were the top managers. Now the rank and file are definitely part of the equation.

No project moves forward without referencing the balanced scorecard (BSC), Kelly says. A planning and analytical framework developed by Robert S. Kaplan and David P. Norton, BSC expands the scope of organizational success beyond strictly financial terms to include business practices, customers, and human capital. GSA uses BSC to link ideas about workplace back to organizational goals. "We work with the client agency to elaborate on these four goals—then we develop a strategy for achieving them. We also establish ways to measure them so we know the agency achieved what it wants," Kelly explains.

Design concepts and proposed solutions are derived from an understanding of the agency's goals, culture, and work

practices (current and desired). GSA uses quantitative methods such as analysis of space use, turnover rates, and absenteeism, supplemented with qualitative measures like web-based workplace satisfaction surveys, observation, visioning sessions, and focus groups. GSA used to rely on self-reporting. "People have a poor sense of how they use space. They'll report that they're on their computers 80 percent of the time when observation shows it's more like 30 percent."

The new federal office workplace is embracing strategies that the private sector will recognize—opening up the workspace; shifting private offices to the interior (while reducing their number); embracing open plan systems that can easily be demounted and reconfigured; adding collaboration space; and consolidating paper storage (while reducing the paper). "We've gone from suburban to urban—more flexibility and higher utilization," Kelly says. "Community and collaboration are supported."

GSA benefits from the sheer size of its real estate portfolio and from its willingness to use it as a laboratory for innovation, Kevin Powell asserts. This is paying off in improved building performance (including water conservation, a growing issue in some US regions) and in workforce productivity and job satisfaction. Uniquely among property owners and managers, GSA invests heavily in research and in measurement.

"There's a strong leadership commitment to do things in an evidence-based way," Powell says. "GSA believes in the value of knowing. It's a real learning organization, one that shares what it knows." As a result, federal office buildings and work settings are becoming national benchmarks, he believes. "With real data derived from consistently cost-effective projects, they prove the value of high performance."

¹ The interview can be seen at <http://law.lexisnexis.com/webcenters/lexisone/Videocast/Green-Buildings/Mark-Bennett-of-Miller-Canfield-Interviews-Kevin-Kampschroer-Director-of-GSAs-Office-of-High-Performance-Federal-Green-Buildings->



Department of Homeland Security Omaha, NE

- Ranked one of the top two best performing in Pacific Northwest National Laboratory's evaluation of 12 recent sustainable GSA buildings
- Achieved a LEED Gold rating
- Energy Star rating (85) is in the top third
- Water costs are 66 percent lower than the BOMA/IFMA baseline
- Domestic water use is 58 percent of baseline

Source:
Assessing Green Building Performance, GSA Public Buildings Service, June 2008, page 10

Walkable City

By Alec Appelbaum

Walking is back. Despite the digital pull, it's human nature to explore and experience the world right around you.

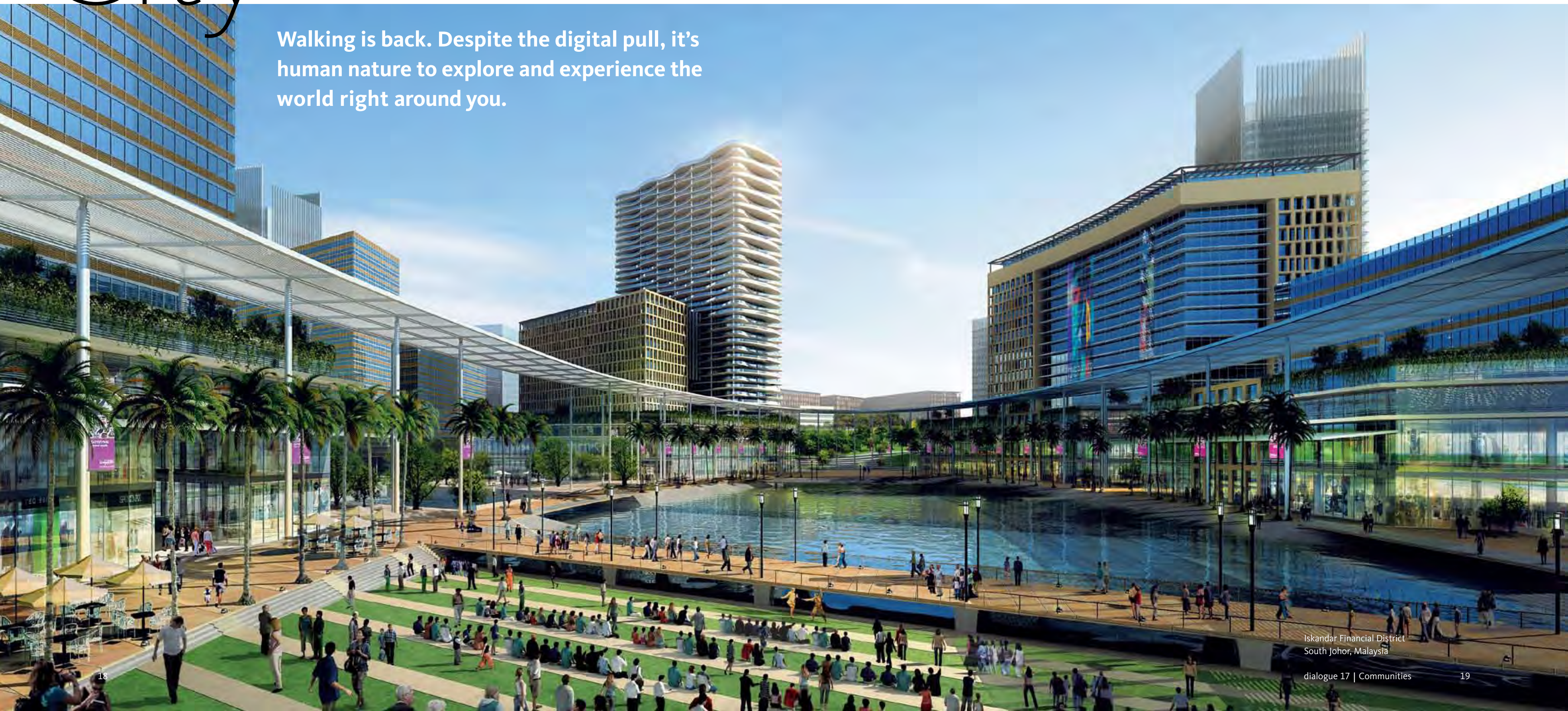
Transit may be central to walkable urbanism in its latest incarnation, but "a short walk" has been the measure of urban distance for millennia. So you'd think it would be easy to put that human characteristic back in place in a modern context, but a lot of cities have lost the knack. Gensler's global team of urbanists is helping them get it back. Here's the team's take on making cities walkable and accessible.

Mesh transit with a sidewalk culture

"Transit on its own can't create walkable urbanism. You have to imagine how people think about a place once they get there—ask yourself if it will engage them or drive them away," says Robert Balder. He's leading a Gensler/Buro Happold team that is helping San José—Costa Rica's capital city—develop walkable districts

around new light rail stations. "From the moment people arrive, you want them to feel they're in the center of the action," he says. In Costa Rica, a country famous for its sustainability, light rail is viewed favorably as an investment in clean air. If that's going to stoke the urban experience in San José, every light rail station needs to mesh with a vivid sidewalk culture. "Not every district has that," he adds. "Luckily, San José is a walking city."

A regular grid of short blocks, with sequentially-numbered streets and avenues, lends itself to transit oriented development (or TOD, as planners call it). TOD encourages walking by adding mixed-use density in areas of the city that are transit served. Along with density, there are amenities like parks, cultural facilities, and quality schools. "Thriving means what it says," Balder explains. "You need to attract



Iskandar Financial District
South Johor, Malaysia



above from left:
Gensler–Tongji University plan for Puxi; Shanghai streetscape; Atlántico Station area redevelopment, San José, Costa Rica; Chicago’s Magnificent Mile.

younger, upwardly mobile households. Within a 15-minute walk, people should find places to work, shop, relax, and experience culture, and find entertainment and good food. The goal is to encourage people to fan out from every light rail station and explore the district within a 400-meter radius—about a quarter mile.

Consider San José’s new Atlántico light rail station. A major park and the national library and assembly building are on one side of the station. On the other side, there’s a railroad museum and a historic church that draw fewer visitors. Gensler’s plan adds a canopy-covered plaza next to the station that extends the park, redefining the area as a cultural district and encouraging people to explore on both sides. The plaza, which will hold daily and seasonal events, gets a new identity from its canopy. “It will give this new cultural district a landmark,” Balder says.

Spark the exchanges that fuel urbanity

“Great urban settings offer a kind of social and cultural exchange,” says Michel St. Pierre. “The mobility of the urban workforce means that people are out and about. You have to orchestrate their encounters, treat the city

as a not-so-random generator of inspiration.” This shouldn’t be read as whimsy or sentiment. Cities have always blended pleasure with economic purpose, providing places where people can find each other. That value resonates more poignantly for the Facebook generation, and not just for dating. “People value settings where they’re likely to run into friends and acquaintances, whether it’s to renew ties or set a deal in motion.” In his work in China, St. Pierre builds on the elements—already present in cities like Tianjin, Bengbu, and Shanghai—that bring people together: farmers’ markets, for example, or a waterfront that is “incredibly well used in a city full of back-alley houses with no other expansive open space.”

Combine a human scale with an urban density

“San José was allowed to sprawl,” Balder notes. As a result, the average density in the heart of the city is low—about 1.5 FAR. (FAR is the ratio of building area to ground area.) Clustering redevelopment around the city’s new light rail stations will raise the density to 3 to 5 FAR, sufficient to make transit viable and create a lively street life. At a different scale, Shanghai is doing something similar, St. Pierre observes. “Part of the charm of the city’s

original urban core is its tree-lined streets, which are scaled for pedestrians and bicyclists. In recent years, cars have taken over.” Sponsored by a developer, Shanghai CRED, St. Pierre and his team are working on a plan that would add density around Puxi’s metro stations to encourage office workers and shoppers to take the subway and leave their cars at home. Carried out with Tongji University, the plan also preserves the older alley housing that adjoins the main commercial areas. “The goal is to make Puxi a real place that people will want to experience on foot or on bikes,” he says.

St. Pierre’s colleague Grant Uhler believes that buildings play a big role in supporting this kind of interaction. He points to 108 North State Street, the retail anchor of a long-vacant block in Chicago’s Loop. The site is right in the center of things: State Street shopping, the theater district, and the federal plaza with its Picasso sculpture. “We studied the urban context to understand how pedestrians use the district, and then we designed the building to pull them in.” Whatever beckons gets your attention, Uhler notes, so the building reveals itself with a conscious transparency. There’s an arcade along the street that

shelters people and creates a human scale. There’s a green roof that looks out over the Loop. “Even at a distance, you feel part of a real place,” Uhler says. “You want to see more.”

These cues for curiosity also inform Shanghai Tower, a 126-story building in the city’s financial center, Lujiazui. “It’s reflected in the design from top to bottom,” Uhler says. Directly accessible from Shanghai’s metro, the mixed-use tower rises from a plaza designed to be the outdoor room for the 16,000 people who will call it their workplace or temporary home. Extending the district’s new community park, the plaza has two sunken gardens, a water feature, and other landmarks.

To whet the appetite, the entry podium exposes six levels of shopping and dining to passersby. Up above, the tower rises in increments, each served by an atrium sky garden. Not just lobbies, they’re places to congregate for the building’s different communities—mixing zones where people can hang out or meet friends, clients, colleagues, or fellow hotel guests. Filled with trees and other plants, they make use of the interstitial volumes between the

tower’s inner and outer façades. “They function as ‘lungs’ for the building that save energy and improve indoor air quality,” Uhler says.

Remember to connect the architectural dots

“You can’t just focus on individual buildings—you need to connect them together in ways that lead to memorable moments of shared activity,” says Carlos Cubillos. He’s leading a Gensler team that’s planning the dense new Iskandar Financial District along Malaysia’s Straits of Johor, where walkable urbanism is a priority. “We want people to arrive by high-speed transit,” he says. To encourage them to walk to their destinations, even in the monsoon season, Gensler is activating the setbacks between the buildings and the streets, creating a network of continuous arcades—“a shelter from swelter,” Cubillos calls it—that invites people to step into the shade or out of the rain. This web of canopies helps make the public realm a year-round place for pedestrians.

“You have to create a vocabulary at the pedestrian scale with a warm inviting feel to it,” Uhler says. People in cities are often short on time and thinking about their

next destination. If an area feels friendly and makes visual sense without being diagrammatic, people will stay longer and find it more congenial. “What might have been just a stopover now warrants a return visit.”

“Walkable urbanism requires that you create spaces that people can use and link them with major components, including transit access points,” St. Pierre believes. “You have to give these new settings real urbanity.” What makes great urban space, in his view, is a stimulating mix of uses and an amenable way to help people navigate them. That said, “Digital tools help a lot.”

Robert Balder agrees. “Applications that send maps, transit schedules, and detailed information about what you’ll find there will encourage you to plunge in and start exploring neighborhoods you might forsake otherwise.” Nirvana is when these digital cues are reinforced by the place itself, he adds. “Once you start walking, a well-balanced plan gives you perseverance.”

Alec Appelbaum writes for the *New York Times*, *Metropolis*, and other publications.

CITIES & COMMUNITIES

JOHN RAHAIM

John Rahaim is the director of the San Francisco Planning Department.

John Rahaim was recruited as San Francisco's planning director from Seattle, another waterfront city with a reputation for livability. Compared to Seattle, San Francisco is more compact (and only New York is denser). Founded as a Spanish garrison town in 1776, the city no longer anchors its region. Yet it remains high on the list of desirable places, a mecca for the creative class and a perennial draw for tourists. Growth has followed, but San Francisco is not an easy place to build. Can the city support community in a broader sense while reconciling the different interests of its diverse, vocal, and politically engaged constituents? For John Rahaim, the starting point is the idea of community itself—what it is and how it is encouraged.

What does community mean in San Francisco?

John Rahaim: There's always the geographic community, typically the most important when it comes to project-based planning. But there's also the environmental community, the preservation community, the development community—people who share certain values around certain issues. That defines a community now, especially given the Internet and all the stakeholders and special interests out there. These groups can be very vocal, and they work well beyond the boundaries of single neighborhoods.

How does San Francisco create new communities?

JR: That's the crux of our work as planners. Place making is what we call it—building the possibility of a physical community, or at least the infrastructure to support one. You can't force community, but you can create the environment for it. You can also build in a way that prevents it from happening. That occurred in many of the urban renewal projects of the 1960s and 1970s, but it's a risk in any project. Our work is complex and happens on a number of different scales. It's about encouraging certain uses.

The heart of any neighborhood is a public place—a plaza, park, or main street. Encouraging the creation of these major gathering places is one of our most important roles. For example, we just completed plans for the formerly industrial Eastern Neighborhoods. The plan calls for each of the four neighborhoods to have at least one new park. Now the critical issue for the success of a park is the activities at its perimeter. Surround it with blank walls, and it won't work. We can't control those activities, but we can encourage them. In the Mission district, we hope to make a park on land owned by the city's Public Utilities Commission, but we're working with the Housing Department to develop half the site as affordable housing. Designed together, they can create activity—liveliness.

To me, a city is defined by the relationship between its public and private realms. We spend a lot of time with streets, plazas, and open spaces, but their interface with private development gets just as much attention. What private uses will enliven the street? How does a building relate to pedestrians?

You have lived in both. Has Seattle influenced San Francisco?

JR: Seattle was the first US city to require city-owned buildings to be green rated. That created an incentive for the private sector. Seattle's experience probably induced San Francisco to go further. The city recently enacted outright green construction requirements for all buildings above a size threshold. It starts with LEED Silver and ramps up over time to LEED Gold.

When I was Seattle's planning director, my staff included a sustainable infrastructure planner—the person who looked for cross-departmental opportunities to do things more sustainably. In capital budgeting terms, it's called asset management. You look at the triple bottom line for infrastructure. We could use a staff position like that here.

Are you planning San Francisco as a sustainable community?

JR: San Francisco's 1985 Downtown Plan mandated that all high-density development be within a 10-minute walk of a transit stop. It's one of the great success stories in this regard. We don't allow new freestanding parking facilities downtown, and we actively discourage parking in new buildings—we're down to half a space per unit in some places. The city is considering congestion pricing to limit traffic. We're proposing the Better Streets Plan, which designs streets for walking and biking, not just for cars. We're almost finished with a bicycle plan, recognizing that bicycle riding is part of commuting now. We're also looking

at sustainability at a district scale—things like energy facilities and water-retention facilities. There are developing neighborhoods in Seattle that are doing this already. It may offer the biggest bang for the buck in terms of the sustainability of new development in San Francisco.

The whole issue of global warming has created allies for us. Sustainability, as it pertains to my work, is really just good planning. You want to make sure you can accommodate growth with a wide range of uses, and develop it densely around transit. Those fundamentals haven't changed. So it's a great time to be doing this work. There's a growing awareness of the role cities play in creating a sustainable future.

Andrew Blum, a contributing editor at *Wired*, blogs on urbanism at *Urban Omnibus*.

What does community mean in Shanghai?

Yongjie Sha: Most people here would say there are two kinds of community: monuments or large-scale public space and everything connected to everyday life. Cities need both, but community really takes place in the everyday. In Shanghai, everyone used to work and live in a *danwei* or work unit. Professors lived around the universities, and shipbuilders lived near the shipyards. Everyday life took place there. This changed in 1990. Suddenly, you could buy your house from the *danwei*, and then sell it to anyone. Soon, people were moving to new neighborhoods, buying cars, and driving to work.

At the same time, a huge influx of new people arrived in Shanghai. The city had to plan for rapid growth. When Shanghai's planners looked around for planning models for the new areas of the city, they were influenced by modernist urban planning concepts, expressed through zoning regulations, and also by American suburban densification strategies that relied on cars instead of transit. These are quite different models, but they both assume that cities consist of four distinct elements—living, working, commuting, and leisure.

When you divide life up this way, it leads to very big blocks and very big neighborhoods. It's hard to walk around. You need to drive a car to go to the supermarket or take your kids to kindergarten. Even strolling around the neighborhood becomes difficult. A true community has mixed functions. When single-use zoning and traffic come first, it's hard to achieve any mixture. The midcentury US model made it easier for Shanghai to build highrises anywhere in the city, but community suffered.

Is Shanghai now considering other models?

YS: Start with the unique characteristics of the neighborhood, and work from there—that's emerging as the new model. Cities like Shanghai were laid out between the mid-1800s and the founding of the People's Republic in 1949. They have districts where people came together because of their nationality or lifestyle—a Japanese quarter or French Concession. These areas have a distinctive character, with smaller blocks, made for walking, that provide a sense of community. They could be a model for new development at a residential scale.

The city government now views the renewal of Shanghai's central districts as an evolution, not an overnight change. The goal is to preserve community, allowing urban life to continue as it always has. That means preserving older buildings—there's more focus now on historic preservation. Some district governments are trying to redo historic areas in a new way. These buildings may look nice on the outside, but many families share them, and the living conditions are not ideal. Paying some people to move to

new housing near their old homes allows the older buildings to be renovated. Those who stay and those who go both have a better quality of life, and no one has to leave the neighborhood and move to the suburbs.

How did this change in thinking come about?

YS: City planners initially didn't believe in the older urban fabric. They thought it meant that a city was poor and underdeveloped, and the only way to deal with it was to destroy it and build anew. Shui On's Xintiandi project in Shanghai showed how that fabric could be incorporated into an urban-scale redevelopment. It also showed that preservation could be profitable. I brought several mayors from other Chinese cities to visit Xintiandi recently, and they all asked how they could do something like this back home. That project has changed a lot of minds.

In 2003, Shanghai's planners started identifying parts of the city center that could be designated as historic and cultural preservation zones. They spent three years looking into this and then codified them as conservation zones. Within each zone, we've listed restrictions for every building on every block—what should be conserved, what can be renovated, and what can be demolished and replaced. Where you're allowed to rebuild, there are restrictions on height, bulk, and floor area. In parts of downtown Shanghai that were redeveloped early on, you sometimes find highrises next door to historic lane houses. But thanks to these new regulations, that won't happen again. We're better now than Tokyo or Seoul at preserving older buildings.

We're moving toward comprehensive urban planning. Shanghai's central districts, within the outer ring road, were inspired by European precedents. They're compact and walkable, a high-quality lifestyle that relies on public transit. The challenge is to apply that model to the rest of the city. But we have many challenges that Europe doesn't face. Shanghai has 19 million people, and city officials spend most of their time dealing with the consequences.

How is the city dealing with this constant growth?

YS: The solution they've come up with is to create a network of compact, high-density cities on the periphery. Each of these satellite cities accommodates around half a million people. While they're connected to downtown Shanghai by train, they're self-contained, with jobs, housing, universities, and cultural life. They even have their own suburbs. More than half of China's population lives in cities of similar size, so it's a familiar scale. Pudong taught us a lot about what doesn't work. These new cities are well planned and much more livable.

China is embracing the car. What can be done about it?

YS: There's no prejudice against cars here—average people in Shanghai like driving and buying big houses. And to some extent our planning encourages them to drive. It will take time to change that mentality. Not long ago, people were living in very poor conditions, so the first reaction to that past is to buy things that symbolize they've made it into the middle class. But you don't really need a car. Shanghai has one of the best public transportation systems in China, with new metro lines under construction and high-speed trains to nearby cities like Hangzhou. Still, many people have moved out of the city center, seeking what they regard as a better lifestyle. In time, they may move back.

Most of our pollution comes from cars. Industry has moved out of the city and is also much more sustainable now, thanks to measures that force them to account for their energy consumption—and give them financial incentives to pollute less. Development that requires people to drive is unsustainable. So even if people here like their cars, we need to find ways to encourage them to walk, bike, and use public transit. When you set aside a big piece of land for housing, just leaving the neighborhood is hard without a car. So we need to design smaller blocks and narrower streets where people can walk around and interact.

Will the 2010 World Expo reinforce the city's sense of community?

YS: The city is renovating Shanghai's main streets and painting the buildings that line them, to show that this is a new and beautiful city. People like that, because it shows that living conditions have really improved. When the city looks better, there's more pride in it. Even the taxi drivers are learning some English and some manners. It means that Shanghai is becoming more international. That's exciting—and it's a very good thing for the city.

Based in Shanghai, **Mara Hvistendahl** writes for the *Financial Times* and *ID* magazine.

Yongjie Sha began teaching urban design at a unique moment in China's development. His dual focus on urban-scale modernization and revitalization reflects the country's need to do both concurrently, reworking its existing city centers as it also develops new districts to accommodate surging growth. The rapid pace of change also explains his other role as an adviser to city planners across China. He splits his time between Shanghai, where he teaches and also serves on a panel that advises the city on historic preservation, and the many smaller cities that benefit from his counsel. We caught up with him in Shanghai, at his office at Tongji University.

YONGJIE SHA

Yongjie Sha is a professor of architecture and urban design at Shanghai's Tongji University.

NEW FLIGHT PLAN

By Vernon Mays

Fundamental shifts in airline services have pressured airports to adopt new strategies in order to survive and thrive. The latest passenger terminals give them unprecedented flexibility to contend with change.

For decades airline operations were a model of stability. But the industry turned topsy-turvy in 1971 when Southwest Airlines burst onto the scene as the first of a new breed of low-cost carriers (LCCs). This innovative way of doing business, coupled with the advent of smaller-capacity regional jets, gave smaller cities improved access to air travel. Airports reacted quickly to meet demands generated by the increased capacity and rapid turnaround of LCCs. Even bigger changes followed 9/11, when airports were forced to adopt dramatic new security regulations and screening protocols.

As the spotlight shifted from security improvements, new drivers of change emerged. After riding out the bankruptcies and restructurings of 2005–2007, airlines were beginning to show some profitability. Then fuel prices skyrocketed and demand for air travel plummeted. “All this uncertainty has led airports to take a new look at how they work with the airlines,” says Gensler’s Ron Steinert.

Low-cost carriers, by the nature of their operations, demand changes to aprons and taxi lanes to accommodate their fleets. (They usually fly only one type of plane—the Boeing 737, for example.) Their emphasis on Internet check-in means that ticket counters need to provide

more places for bag drops and e-ticket kiosks. At the same time, the legacy carriers are cutting back their regional jet service and shifting aircraft and personnel to more profitable long-haul domestic and international routes. That’s leading airports to look for ways to turn unused domestic gates into “international swing” gates—and to develop or expand customs and border facilities.

Funding these capital improvements is a critical problem for airports, says Steinert. To tap potential sources of revenue, they are moving away from residual funding, in which airlines sign long-term leases for exclusive rights to specific terminal gates. More typical now is compensatory funding. “It could be a five-year lease, a 30-day lease, or no lease at all,” Steinert explains. “It’s a pay-as-you-go philosophy—airlines pay for what they use when they use it and for as long as they use it.” While compensatory funding is financially riskier for airports, it gives them much more control of their facilities.



Mineta San Jose International Airport
Terminal B Concourse, San Jose, CA

Airports will look differently and operate differently as they are reconfigured from airline fortresses to passenger-focused service centers. The aim is easier access and speedier passenger flow.

Adopting the common-use strategy

When an airport is unsure which airlines will serve its city, what's known in the industry as the common-use strategy removes some of the uncertainty. The airport owns its gates, loading bridges, ticketing hall, and baggage claim facilities and assigns usage to a carrier when it needs them. A fully common-use terminal allows for a much smaller ticketing hall and fewer gates and baggage claim facilities, Steinert says. This means a smaller terminal, with lower construction costs. By paying less money for a terminal with much more flexibility, airport executives can use their fixed assets more efficiently. In the process, they gain new opportunities to improve passenger satisfaction and comfort.

Also, with the common-use business model, the funding of capital improvements will become less dependent on airline commitments and exclusive-use agreements. Already airports receive income from the Airports Improvement Program, a federal program supported by taxes on passenger tickets. In addition, airports will begin to rely more heavily on Passenger Facility Charges (PFC), especially if Congress enacts a pending authorization bill to increase the PFC from \$4.50 to \$7.00 per passenger.

This means that passengers figure more heavily now than the airlines do in financing airport capital improvements. As airlines continue to eliminate services, airports are stepping into the breach. "They're offering their passengers a much broader range of amenities—even health and wellness facilities," says Bill Hartman, leader of Gensler's

below from left:

International Terminal, Chennai, India; JetBlue Terminal 5, JFK, New York, NY

team for Detroit's new North Terminal. "Airports with extensive airside concessions can be highly profitable," adds Steinert. "They know they have to keep the flying public happy, because passengers have become such an important revenue stream."

The growing impact of technology

Technology is speeding the transition to common-use airports. It will also drive the look and feel of the next generation of terminals. Many airports have already seen the disappearance of airline branding permanently affixed to ticket counters and gates—replaced by electronic identification signs with airline logos that change whenever a different airline is assigned to the counter. Steinert predicts that with the wide acceptance of e-ticketing, the ticketing hall as we know it today may disappear altogether.

Passengers can already print out their own boarding passes. "Baggage tags are next," Steinert says. "The goal is to move that whole check-in process out of the airport. All you need is a Blackberry or mobile phone. Europe is doing this right now. It's digital, so from the passenger's standpoint, there's no paper." While technology speeds things up, "the aim is to let travelers move through airports at their own pace," says Gensler's Bill Hooper. Having an abundance of e-ticket kiosks and a single queue in front of the security checkpoint is important, he explains, because it lets business travelers quickly assess how fast things are moving. "If they need to step up the pace, they can do so."

What the new airports will look like

Airports will look differently and operate differently as they are reconfigured from airline fortresses to passenger-focused service centers. The goal is easier access and speedier passenger flow through ticketing and security. They will also provide seamless baggage handling, more and better choices of food and beverages, and amenity-filled waiting areas that let today's tech-savvy travelers be fully productive while they're waiting.

What's changing? Here's a landside-to-airside preview:

Transit access: More and more people will arrive by train, not by cab, shuttle, or car. Connecting airports into the transit network is of growing interest to most cities, says Gensler's Will Jenkinson. "That's a prerequisite today for any city that claims to be world-class." JetBlue Terminal 5 at JFK, SFO Terminal 2, and Mineta San Jose—all current Gensler projects—count transit access as a given.

Ticketing/baggage claim: Particularly in new airports without existing infrastructure, ticket halls will move to the lower level of the terminal. As that aspect of departure diminishes in importance, arrival will take its place as the celebrated event of travel. In turn, the baggage claim area will be moved to the upper level, with better exterior views, greater ceiling heights, and more comfortable spaces.

Security/airside: Streamlined passenger screening along with appropriately sized queuing space will provide centrally located facilities that minimize passenger

inconvenience. These improvements already exist at the JetBlue Terminal at JFK, where 15 security lanes keep the traffic flowing (and five more can be added). Once screened, passengers will be greeted by spacious concessions and directed through clearly defined, easily negotiated concourses to their assigned gates. Passenger hold rooms will be contiguous, without physical separation, so seating for boarding passengers can easily expand or contract. Baggage handling will be faster and more secure. Gensler is currently retrofitting all eight terminals at Los Angeles International (LAX) with new baggage handling systems equipped with inline EDS (explosives detection system).

Aprons/aircraft gates: Each aircraft position will accept the complete range of anticipated aircraft, conceivably from a small regional jet to a jumbo aircraft. Adding multiple passenger-loading bridges will permit new aircraft parking positions without having to modify the terminal.

Sustainability: In addition to providing light-filled, healthy settings for their passengers, airports will seek to reduce their carbon footprint to pare operating costs. That's leading many of them to renovate and retrofit existing facilities, not just to replace them. "Most existing terminals are great candidates for renovation," Steinert says, noting current and recent Gensler projects in cities like Singapore and San Francisco. "Anytime you can reuse a building instead of replacing it, that's a sustainable act."

As these trends unfold, "terminals will be the engine of change," Hooper says. "As a building type, they have to accommodate an array of unknowns." The uncertainties of air travel mean that some cities are looking to the private sector to fund and operate their facilities. Lisbon's new airport is an example. "Our airport clients say that constant change is the rule. They don't want to be penalized for it."

Vernon Mays is a Richmond, Virginia-based writer and an Editor at Large of *Architect* magazine.

THE AIRPORT AND AIRLINE POV

As the recent spike in fuel costs and the tightening economy have squeezed leisure and business travel, both airlines and airports have worked hard to cut costs, streamline passenger flow, and improve customer service. Some are seizing the moment to expand their future capabilities, positioning themselves for the eventual upturn.

At John Wayne Airport in Orange County, California, Airport Director Alan Murphy sees the current situation as a mixed blessing. "Obviously we'd like to see higher passenger levels and revenues, but we were operating in terminals that were beyond capacity. The downturn has relieved some problems in the short run while we build a new terminal to take care of them."

Building in flexibility

John Wayne Airport is in the midst of a \$650-million program to add a new terminal and parking structure, and upgrade two existing terminals. The Gensler-designed Terminal C will provide desperately needed new gates. "We have the highest gate throughput of any US airport," Murphy says. Designed to handle 8.4 million passengers per year, the existing terminals actually served 10 million passengers in 2008.

Terminal C will let John Wayne serve up to 10.8 million passengers—the maximum allowed under existing federal regulations. With the retrofit of Terminals A and B, the airport is implementing a common-use passenger processing system. An obstacle to common use in the past was that each airline's computer system, sometimes including the cabling, was incompatible with the systems of other carriers. Now the airport will provide the computer system, Murphy says. "It can interface with any airline's system. And passengers can go to any kiosk for self-service check-in. That provides a lot of flexibility."

Listening to passengers

These advances signal a new era for passengers, who now typically negotiate the ticketing process on their own. "I remember when gas station attendants pumped gas in the family car," says Rob Walker, senior director at Continental Airlines in Houston. "People would rather do it themselves now than pay for it, and that attitude has also caught on in air travel." Continental's costs are lowered when passengers download their own boarding passes and carry their bags instead of checking them. In Houston, the airline surveyed its arriving passengers and found that they'd rather walk from a parked plane than have to wait for a bus. "We scrapped the bus and built an air-conditioned walkway," he says.

Airports are paying close attention to passenger needs. One big improvement comes from the recent introduction of self-select security lanes in the US, separating

frequent travelers from others less experienced. Airports are also adding more lanes to speed the process. Mineta San Jose in California, where Gensler's Terminal B just opened, has taken steps at every level to make life easier for passengers: rerouting roads, adding wider restroom doors, consolidating car rentals into one facility, and adding 10 gates and an expansive waiting area. *Monocle* magazine cited it as a "gateway to the future" in its 2009 aviation survey. "A modern well-designed airport can improve your travel experience," *Monocle* wrote, praising Terminal B's embrace of the 21st century.

"Passengers are arriving earlier and spending more time postsecurity."

Hitting the sweet spot

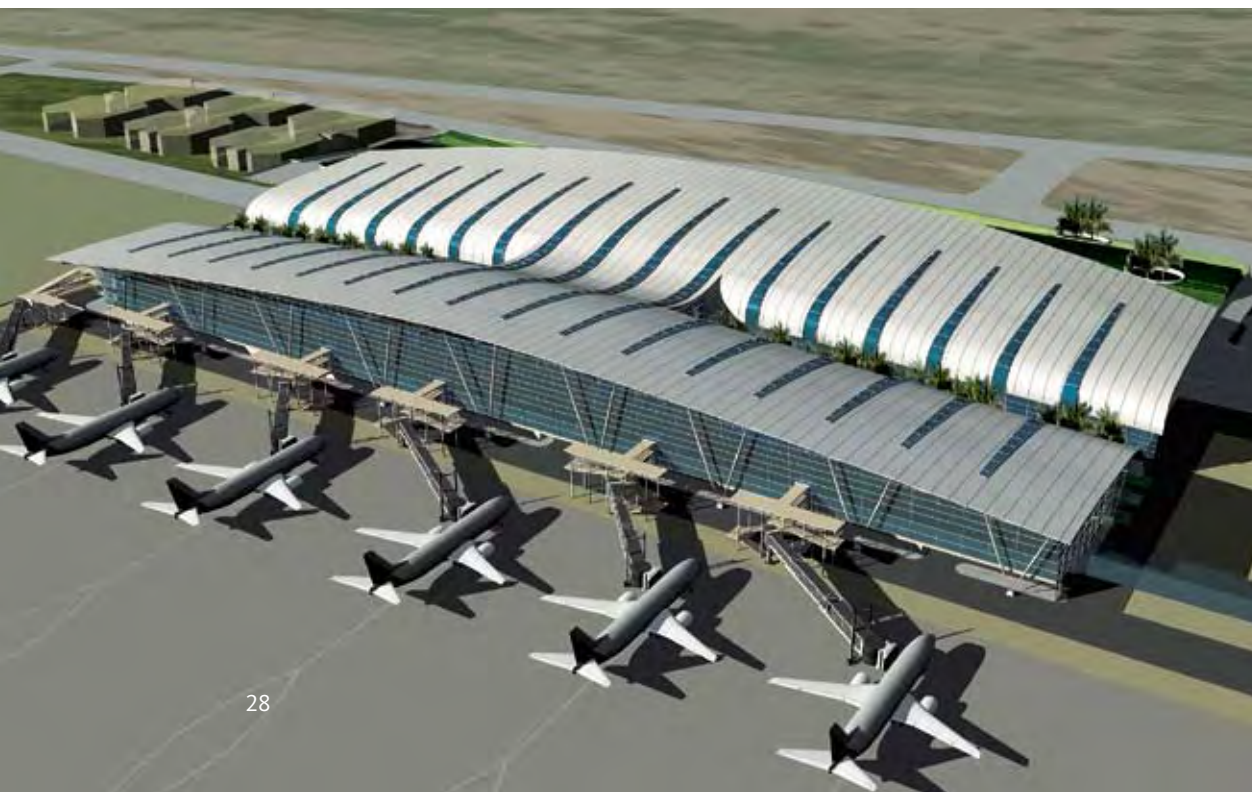
Airline passengers are still looking for quality service, says Richard Smyth, JetBlue vice president of redevelopment at JFK in New York. "They want affordability, but they also want a comfortable flight, friendly service, and a choice of amenities." JetBlue built its reputation on providing passengers with ample legroom and ample in-flight entertainment, including XM Satellite Radio and live TV.

For its new Terminal 5 at JFK, JetBlue asked Gensler to optimize the design for the new realities of air travel. "Because of security requirements, passengers arrive at the airport earlier now. JetBlue built T5 around that," Smyth says. "We invested in postsecurity, because our customers spend a lot more time there." The focal point of T5 is its Marketplace, with a wealth of food, beverage, and shopping options. People can even order food to-go on touch screens and then pick it up at the gate.

Looking to the future

The future of airline operations in the next three to five years may look a lot like Terminal 5. JetBlue's in-line baggage screening system, for instance, X-rays passengers' bags while they're being conveyed to airside for loading. "Only a few terminals have this now," says Smyth, noting that the system greatly reduces manpower and speeds the screening process by as much as four times.

Dave Maas, deputy director for development at San Jose, believes that planning for new technology is crucial. For example, the airport's new gate podiums are designed to house the scanners that it will need in the future to read virtual boarding passes from mobile phones and PDAs. "That day is coming, faster than we think," Maas says.



News + Views

INNOVATION BEATS POVERTY THE BLUM CENTER FOR DEVELOPING ECONOMIES, UNIVERSITY OF CALIFORNIA AT BERKELEY

On April 23, 2009, Nobel laureate Al Gore joined financier, philanthropist, and University of California regent Richard C. Blum for the groundbreaking of the future home of the Blum Center for Developing Economies. In his remarks, the former US vice president predicted that the building "will quickly become a center of global importance." The hugely popular interdisciplinary program connects UC Berkeley's design, engineering, and scientific talent to counterparts in 38 developing countries, the *San Francisco Chronicle* reported. The goal is to develop affordable technology that helps impoverished people deal with endemic problems—and thrive.

To give the Blum Center suitable quarters, Gensler is renovating the 1914 Naval Architecture Building, designed in shingle style by John Galen Howard, UC Berkeley's first campus architect. (Howard is best known for Beaux Arts monuments like Doe Library.) A new bridge links to a modern addition that fits harmoniously with its older neighbor and defines the plaza that the Blum Center will share with the College of Engineering's new Sutardja Dai Hall. Planned for a LEED Silver rating, the addition will give the Blum Center a light-filled new home that will double the space of the 95-year-old Naval Architecture Building, and bring it up to current seismic and life safety standards.



URBAN SYMBIOSIS



BRYANT PARK NEW YORK, NY

Bryant Park entered the consciousness of Manhattan in 1686, when it was deemed public land. It became a park in 1884, but 90 years later, it was in bad shape. In 1992, it reopened as the community jewel it is today, the New York Public Library's backyard, a hugely popular gathering place, and a cultural venue. Everyone knows that story, but there's another: the park's revival has spurred the renewal of everything around it. Gensler has been part of this, beginning in 2000 with the design of the School of the International Center of Photography, just north of the park. Over the decade, Gensler has worked on Bank of America's new headquarters at One

Bryant Park, HBO's headquarters and the HBO Shop, MetLife's new home at 1095 Avenue of the Americas, 1065 Avenue of the Americas, and the library itself. The recently opened Children's Reading Room is part of an ambitious plan Gensler made in 2006 for the library's transformation. The heart of this Midtown renaissance is Bryant Park, a magnet that attracts thousands of people, visitors and regulars alike, and brings out their best. Businesses took note and are now active partners. Seeing what the park has done for their neighborhood, they've opened their hearts—and wallets.

Legend

1. Bank of America/One Bryant Park
2. School of the International Center of Photography
3. HBO headquarters and HBO Shop
4. MetLife/1095 Avenue of the Americas
5. Bryant Park
6. Children's Reading Room, New York Public Library (Mural: Susy Pilgrim Waters)
7. 1065 Avenue of the Americas



1



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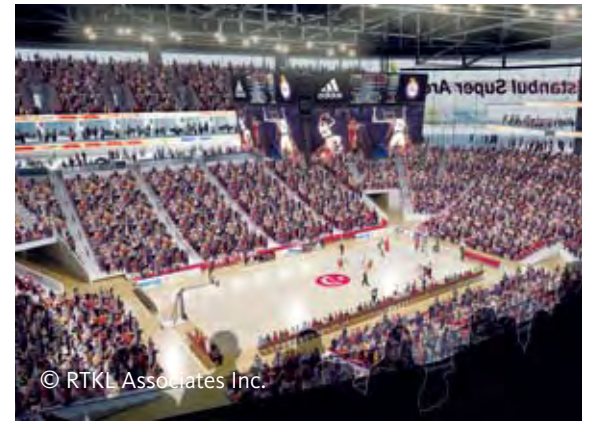
CITY SPORTS ISTANBUL SUPER ARENA AND L.A. LIVE

Cities and their planners often view downtown sports facilities as a surefire way to spark urban revitalization. In the 1990s, retro-styled baseball stadiums set the development paradigm. With their brick arches and architectural flourishes straight out of vintage photographs, these ballparks are a huge draw for fans. But you can't just plunk down a stadium and expect the community to rally. "Build it and they'll come" works only in the movies!

Today, stadium and arena development is a more sophisticated game. Urban sports venues are part of successful mixed-use destinations, and they're designed for 24/7 use. "That's a tall order," says Ron Turner, FAIA, global head of the Gensler Sports practice. "Done well, such a venue is a great anchor for other uses. Done badly, it can sink them." As a pioneer of the sports-entertainment district, Turner knows firsthand that you need the right mix and the right flow. "Fans, diners, bar hoppers, concertgoers—their comings and goings have to be carefully orchestrated."

Turner is leading a Gensler team planning a new sports-entertainment center in Istanbul. Overlooking the famous Bosphorus River, the center is anchored by a 15,000-seat Super Arena and adjoined by a mixed-use district that includes theaters, a hotel, restaurants, cafés, and bars. Fitting into the natural slope of an existing city park, the arena adds a new urban park to the district on its green roof. "You can walk to it and be in it without ever realizing that there's an arena beneath your feet," Turner says.

Before joining Gensler, Turner led the design team for Staples Center in Los Angeles. In this role, he proposed to create a downtown entertainment district around it. This paved the way for the city approving the arena's development—and for L.A. Live, as the district is now known. It has revitalized downtown LA, adding a range of uses that have attracted new residents and throngs of visitors. Gensler designed the Ritz-Carlton and J.W. Marriott hotel-residential complex, the Regal Theater, and Club Nokia at L.A. Live. "The starting point of a dynamic urban destination is smart initial planning," Turner says. "You have to balance place making and logistics." When Staples Center lets out after a Lakers or a Kings game, there are huge crowds to contend with. "L.A. Live has the capacity to handle that surge of people, but it was also designed to induce them to stick around and enjoy the nightlife the district offers."



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"World-class cities like Istanbul and Los Angeles expect urbanity," Turner says. "That means that a stadium or an arena needs to be part of a real place that's alive with people and activity day and night, whether there's a game on or not."

above and below:
Istanbul Super Arena. Work completed by Ron Turner, FAIA while employed with RTKL Associates Inc.



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RIVER CAMPUS BEACON INSTITUTE FOR RIVERS AND ESTUARIES BEACON, NY

In December 2008, Beacon Institute opened the Center for Environmental Innovation and Education (CEIE), the first phase of its 20-acre campus on the Hudson River at Denning's Point State Park. The complex restores and expands a 19th-century brick barn, creating a field office for CEIE with space for research, teaching, and exhibits. Gensler has partnered with Beacon Institute from the outset, planning the campus as a model of sustainable practices, including geothermal energy for heating and cooling, and natural ventilation. Beacon Institute's interdisciplinary focus includes protecting endangered rivers and estuaries worldwide, drawing on real-time data, and educating the public through outreach programs and events.





CLUB NOKIA
L.A. LIVE
LOS ANGELES, CA

With musical acts playing almost every night, Club Nokia provides the rhythmic beat for Los Angeles' revitalized downtown. Part of L.A. Live, the city's newest sports and entertainment destination, Club Nokia occupies the top three floors of a five-story, mixed-use building. Offering mezzanine seating for 600 people, a dance floor for 1,400, and a luxurious VIP lounge for 200, it's a perfect place to showcase new talent and host events that have outgrown hotels but are too small for Nokia Theater or Staples Center, the anchor venues for live performance at L.A. Live.

Gensler designed Club Nokia to heighten the experience of live music performance. Steeply raked arena seating puts the least expensive seats within 200 feet of the stage. That's close enough to see the band's facial expressions as they rock out. Structure and services are hidden in the roof, so sight lines are perfect. Thick concrete walls and an acoustical floating slab isolate Club Nokia acoustically from its neighbors. Richly hued fabric panels modulate the sound and make a space for 2,200 people feel like a room. The impact of the performers is singular and memorable.



dialogue

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Hospitality
Mission Critical

Mixed Use & Entertainment
Planning & Urban Design
Product Design
Professional Services Firms
Retail
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Sports
Workplace

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