

Proof of Concept

BY VERNON MAYS

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.

This article appeared originally in *Dialogue* 17. ©2009. Please see the current issue at dialogue.gensler.com.

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.



Photo: © Crown

Government Communications Headquarters Campus Cheltenham, UK

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.)

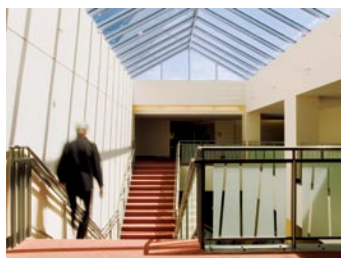


Photo: Blake Mourer/Gensler

GSA Public Buildings Service,
Denver, CO

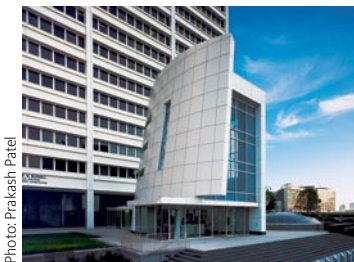


Photo: Prakash Patel

Federal Building and Courthouse,
Atlanta, GA

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. 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.

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 a Gensler Senior Editor, also serves as an editor-at-large at *Architect* magazine. Contact him at vernon_mays@gensler.com or +1 202.721.5344.



Photo: Prakash Patel



Photo: Paul Warchol



Photo: Paul Warchol

Natural light has become a primary design element in the federal workplace. *Left:* Richard B. Russell Federal Building and Courthouse, Atlanta, GA *Center and right:* Smithsonian Institution Collections and Support Center, Landover, MD (a federal workplace project managed directly by the Smithsonian)