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**LEADERSHIP BY DESIGN:**  
Building a Better Future

## EXECUTIVE SUMMARY

The formula for organizational success in today's global market is equally as complex as the factors that shape it. Advancement in technology has ushered in a new era that continues to shape the economy, our communities, and has virtually erased geographic boundaries that once separated people across the world, but are now interconnected in a highly complex global society. Competition in the marketplace is fierce, forcing companies to adopt new business models and management strategies that optimize efficiency, productivity, and the bottom line. These expectations extend to Federal, State and local governments who share similar challenges with leaner budgets, unfunded mandates, and unrelenting political pressure to deliver faster, better, cheaper. The U.S. General Services Administration's (GSA) Public Buildings Service has embraced a new paradigm, leveraging innovation and technology to design, construct, and operate more efficient and sustainable buildings, driving both organizational change and new industry methods as a growing leader in the green economy.



## INTRODUCTION

Historical evidence tells us that Thomas Jefferson possessed an affinity for architecture to the extent that he became a self-taught architect. He argued that the pursuit of architectural achievement was vital to the American experiment; that a building was not merely a walled structure, but the process of constructing it was equal to the task of building a nation (GSA, 2013; American Studies, 1996).

Interestingly, our Founding Fathers included architecture as a symbol of our democratic values and point of national pride. Even with limited resources, they made it a priority to commission designs that would withstand the test of time and represent the principles our country has stood for over these many decades. Today, the Public Buildings Service is the steward of that vision (D. Robyn, personal communication, July 1, 2013). Fidelity to balance budget, schedule, and quality at best value to the American taxpayer is an increasing challenge as the economy continues to languish and Congress reigns in federal spending. This particular issue has been the focus of numerous articles across professional disciplines. Publications such as the *Government Executive*, *Federal Times*, *Public Administration Review*, and even industry magazines such as *Planning*, *Landscape Architecture Magazine*, and *Architectural Record* are weighing in with ideas and solutions for leading projects, programs, and organizations during this markedly unsettled period. While Federal, State, and local agencies face a “new normal” to deliver services with fewer resources, some argue the scarcity of these resources provide an environment ripe for creative solutions. In the case of the Public Buildings Service, this new reality is driving innovation and new management practices.

The Public Buildings Service (PBS) is a branch of the U.S. General Services Administration, an independent agency established in 1949 by the Federal Property and Administrative Services Act. Often referred to as the landlord of the Federal Government, GSA is the largest real estate organization in the country with more than 9,600 assets that account for 374.6 million square feet of office space occupied by 400 federal agencies located in over 2,100 communities in all 50 states, 6 U.S. territories and the District of Columbia. Of GSA’s 9,600 assets, 478 are historic properties that stitch together a timeline of public architecture that includes U.S. courthouses, land ports of entry, federal office buildings, laboratories, and other special use facilities (PBS, 2012). With such a diverse real estate portfolio, the agency faces an enormous challenge to meet aggressive environmental requirements under federal law.

Inevitably, the act of designing, constructing, operating, and maintaining buildings involves large amounts of energy, water, and other resources that impact the environment. Even after buildings are constructed, occupants and building managers face a host of challenges as they try to maintain a healthy, efficient, and productive work environment. A well-known fact published by the EPA asserts that buildings contribute nearly 40 percent of total energy use, 65 percent of electricity consumption, and 30 percent of greenhouse gas emissions in the United States (EPA, 2013). If we consider the cumulative effect on a global scale, the numbers are astronomical; more than 3.3 billion people worldwide live in urban areas, meaning that more than half of the world’s population interfaces with the built environment. These are compelling statistics to remind people sustainability is not just a temporal trend, but a real shift in the socio-cultural, political, and economic landscape. The purpose of this paper is to examine these challenges through the lens of the Public Buildings Service as it repositions itself under a new paradigm focused on sustainability, innovation, and a new model for the federal workplace.



## THE ENVIRONMENTAL CHALLENGE: A Federal Mandate

In 2010, former GSA Administrator Martha Johnson delivered the keynote address at the U.S. Green Building Council's Federal Summit where she declared the Public Buildings Service would achieve a zero environmental footprint, a goal best described as a "moon shot" when comparing the challenge to NASA's goal to land on the moon. The term, zero environmental footprint, generally describes a carbon-neutral building, or in this case, a collection of buildings where equilibrium is reached between the energy buildings consume and the energy they produce on-site such as solar power. Admittedly, Johnson noted that in order to achieve a net-zero footprint meant taking risks, "[a] zero-footprint goal won't be reached without a significant and perhaps spectacular trail of successes and failure... It'll start with a 'fail fast' culture in which we try things, try bite-sized things, win some quickly, lose some quickly, and learn from mistakes" ("Speeches," 2010). This rhetoric conveniently aligned with the 2009 American Recovery and Reinvestment Act (ARRA), which put the agency on a new trajectory to implement a robust construction program to increase the energy efficiency of its federal buildings.

Guiding these decisions was Executive Order 13514. In short, the goal of EO 13514 was "to establish an integrated strategy towards sustainability in the Federal Government and to make reduction of greenhouse gas emissions (GHG) a priority for federal agencies" (FedCenter, 2012). Toward achieving that goal, federal agencies are required to meet several numerical and non-numerical targets, some more specific to construction and building use, while other targets address specific management strategies to improve sustainability. Examples include:

- Increase renewable energy and renewable energy generation on agency property;
- Manage existing buildings to reduce energy, water, and materials consumption;
- Implement water management strategies including water-efficient and low-flow fixtures;
- Reduce potable water intensity by 26% before FY 2020 (Baseline FY2007);
- Reducing emissions from employee commuting and business travel by 25 percent;
- Ensure at least 15% of existing buildings and leases (>5,000 GSF) meet the Guiding Principles by FY2015;
- Ensure all new Federal buildings that enter the planning process in 2020 and thereafter are designed to achieve zero-net-energy standards by 2030 (FedCenter, 2012).

To fully understand the enormity of this challenge for the Public Buildings Service, it is important to consider that in 2010, the agency owned and leased 414 million gross square feet (GSF) and:

- consumed 64,804 BTU/GSF;
- consumed 14.1 gallons/GSF;
- produced 2,270,645 metric tons of GHG attributed to Scope 1 & 2 emissions;
- produced 156,676 metric tons of GHG attributed to Scope 3 emissions; and
- spent \$440 million on energy to operate its owned facilities ("Strategic Sustainability," n.d.).

These statistics are simply overwhelming, but to tackle this challenge and reduce the agency's environmental footprint requires a multi-pronged management strategy. This includes a fundamental shift to re-imagine the design of the workplace as agencies consolidate personnel to reduce space and rent, while accommodating the needs of a multigenerational workforce. In addition, it requires the agency to develop an action plan that targets specific goals to meet environmental targets and performance measures. This, inevitably, requires a new business process to improve the planning, management, and design of capital improvement projects.



## **THE MANAGEMENT SOLUTION: Sustainability, Innovation, and Workplace 2.0**

Taking a more focused look, the Public Buildings Service took action in the face of these challenges. Building on past success, PBS formed the Workplace Program Management Office (PMO) modeled after the ARRA PMO, which the agency created to successfully manage more than \$5.5 billion spread across hundreds of projects during ARRA. The Workplace PMO is an armature of PBS created to implement a “national initiative that strategically integrates PBS and Federal Acquisition Service (FAS) resources into a new GSA service offering. The offering includes space, people, and technology solutions customized to the differing workplace needs of federal agencies seeking to reduce their real estate costs and increase workplace efficiencies. The WorkPlace PMO provides resources and expertise to increase savings and efficiencies through an integrated approach to workplace design” (“WorkPlace,” n.d.).

There are a confluence of issues and benefits for the Federal Government to become a more mobile workforce. In July 2011, GSA conducted a workplace study and found that on average, the Federal Government spends \$10,000 to \$15,000 annually per person in facility costs. A following study published in March 2012, found that implementing a mobility program saves about 18 percent in the space required for each employee, or about \$1,800 per employee per year. Therefore, eliminating 100 workspaces can save an organization over \$1 million per year (Bent, 2013). In addition, new workplace solutions, more aptly described as workplace 2.0, provide flexible environments that accommodate the needs of a multigenerational workforce. This is critical for recruitment and retention of young talent, particularly today when 30 percent of the federal workforce is eligible to retire and agencies face a “brain drain” of institutional knowledge (Liberto, 2013). While public managers struggle to balance the needs and expectations of four generations, some theorists such as Joel Barker believe these conditions spawn innovation and the search for a new paradigm where the chances for success increase when a diversity of experiences present a diversity of possible solutions (1992, p. 152). The silver lining may be the fact that there has never been a better moment or greater potential than today’s multi-generational workplace, but it is also one of the most significant challenges for public managers to bridge the generational divide.

In another example, after the release of EO 13514, the Public Buildings Service and the Federal Acquisition Service worked together to re-evaluate its internal processes and established a Sustainability Steering Committee (SSC) in order to provide continuous executive attention to GSA-wide environmental performance goals and targets. In Fiscal Year 2011, the SSC was formally chartered and incorporated into GSA’s broader governance structure. The SSC is chaired by the Agency Senior Sustainability Officer and includes senior executives from across GSA programs and geographic regions. In addition, GSA prepared Strategy and Action Plans for each area listed as a goal in its Sustainability Plan. The Strategy and Action Plan requires leaders to identify actions necessary to achieve agency goals and objectives (“Strategic Sustainability,” n.d.). As part of these action plans, GSA committed to design all new federal buildings to exceed energy performance standards by 30 percent for non-residential buildings, achieve the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) Gold certification, and meet Energy Star standards.

A closer examination of the PBS Office of Design and Construction reveals how the agency adapted internal processes to meet these new performance measures and deliver better-integrated projects. Traditional design reviews for capital projects such as U.S. courthouses, border stations, and office buildings typically follow a specialized Design Excellence process where a select group of industry



peers (architects, engineers, construction experts, etc.) are invited to provide commentary on the development of the design as it marches toward construction. This has been the hallmark of GSA since 1994, but the Office of Design and Construction recently introduced a new element to make the review process even more robust and inclusive. The introduction of an Integrated Design Review (IDR) was an attempt to provide greater quality assurance and control by including more subject matter experts from across PBS business lines to participate in technical reviews to flesh out design issues that were not being captured early enough in the process. Author, John Kotter, suggests research demonstrates that participation leads to commitment, not merely compliance (1999, p. 38). Or, in this case, just another design review, but instead a genuine desire to contribute knowledge and expertise to deliver more sustainable designs. Early and often involvement from subject matter experts such as building managers, sustainability experts, accessibility specialists, building forensics, and a litany of engineers, architects, and planners across the agency have produced better integrated solutions because of better internal coordination.

As part of its multi-pronged management strategy, the Public Buildings Service also developed a list of Green Proving Ground (GPG) projects to test, monitor, and evaluate the viability of emerging building technologies to increase the performance of its buildings and determine their potential to save energy, water, and reduce utility costs as part of the agency's sustainability goals. Using the agency's vast real estate portfolio as a test bed, the GPG program has deployed energy savings solutions that address the building envelope, energy management, lighting, water, and on-site power generation ("Green Proving Ground," n.d.). More specifically, these innovative technologies include:

- Commercial Ground Source Heat Pump
- Integrated Daylighting Systems
- Photovoltaics
- Solar Water Heating
- Non-chemical Water Treatment
- Green roofs

Many of the technologies were installed as part of building modernization projects funded by the American Recovery and Reinvestment Act in 2009. Currently, the GPG program is evaluating 22 technologies from a pool of nearly 200 projects across GSA's national real estate portfolio. In a recent white paper entitled, "Green Building Performance: A Post Occupancy Evaluation of 22 GSA Buildings," the program outlined the results of its study, which suggest that compared to the national average commercial building, installing green technologies:

- costs 19 percent less to maintain,
- uses 25 percent less energy and water,
- emits 36 percent fewer carbon dioxide emissions, and
- produces 27 percent greater satisfaction among occupants ("Green Building Performance," 2011).

The results from this evaluation and other on-going studies are used to develop new performance specifications and inform decision making within GSA. Through the Green Proving Ground Program, the Public Buildings Service is finding new ways to save taxpayer dollars by applying the best use of these technologies and driving a market transformation in the green economy.



## **CONCLUSION: Leadership by Design**

The Federal Government makes many decisions each year regarding where to build new facilities, consolidate office space or relocate operations. These decisions have significant environmental implications. Energy, water, waste, and climate change are topics that represent the most pressing environmental challenges for the Public Buildings Service. PBS' ability to adapt to these changes by reshaping, redirecting, and right sizing the agency contributes to its successful management approach. Noted theorist Dr. Edwards Deming points out in his book, "Out of the Crisis," that "there are two kinds of organizations in the world today- those that are getting better and those that are dying. An organization that stands still is dying. It just doesn't know it yet" (Lewis 108). There is a common perception that public service organizations suffer from stagnation and complacency. Layers of bureaucracy make it difficult for institutions to adapt and recalibrate, thereby becoming inefficient, ineffective, and incapable of fulfilling their mission.

Admittedly, it is inherently more difficult to lead change in public organizations than it is in business. Private-sector organizations are far more flexible and structured to respond to demands of the global economy. Nevertheless, public service organizations can surmount these challenges by developing corporate culture that supports measured risk and shares a common vision. At the core of change-management exists the kernel idea that successful organizations possess strong, shared values. "These values must be 'owned' by not only the vast majority of the organization, but in some cases by all its members" (Phillips, 1992, p. 53).

In the particular case of the Public Buildings Service, it took a paradigm shift to change the culture of practice where the workforce became the engine to drive innovation and sustainability that positioned the agency on the leading edge of the building industry and green economy. The collective belief that the Public Buildings Service needs to deliver federal construction projects faster, better, cheaper and more sustainable at best value to the American taxpayer is a renewed spirit within the agency. Additionally, the Public Buildings Service implemented new policies and processes that accelerated the consolidation of duplicative functions and targeted the deconstruction of organizational silos to encourage cross-pollination of information, resources, and talent. These transformational changes, among many more percolated into staff offices that derived smarter, more sensible policies. The cumulative effect has produced tremendous results, saving taxpayers millions of dollars.

Yet, the greater challenge is to meet these demands against the scrutiny of a Federal ledger while upholding the principles and ideals of public architecture as an expression of our nation's enduring values. The spirit of this challenge, and the legacy we leave behind is best summarized in a documentary entitled, "Of Our Time," in which world-renowned architect, Robert A.M. Stern, reminds us that, "[a]rchitecture is part of a cultural conversation across time. All throughout history, public architecture is the most important architecture there is" (Lednum, 2010).



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**P E R S O N A L  
S T A T E M E N T**



**2014 FOUNDERS' FORUM FELLOWSHIP PROGRAM  
AMERICAN SOCIETY OF PUBLIC ADMINISTRATION**

I possess an ambitious career plan driven by the intense desire to improve the human condition of the built environment. I am interested in recasting the mold of traditional practice by driving new ideas where sustainability is not just a priority, but a standard of practice; where architects are not merely builders, but civic leaders who possess vision and creative thought; who shape policy and solve key business challenges that optimize the triple bottom line.

By design, my education is a compilation of interdisciplinary studies. I earned a Bachelor of Science in Environmental Design, followed by three master's degrees in architecture, landscape architecture, and urban planning. I pursued complementary coursework in management, engineering, and service-learning, and was convinced my academic experience would produce a collision of ideas to make me a more informed practitioner and future community leader- a "citizen architect." Following this vision, I sought opportunities to learn how I could use this knowledge to shape public policy and engage in public debate, which led me to Washington, DC as a White House Intern. A short time later, I learned the inner workings of a congressional campaign through the lens of a political staff assistant. In retrospect, my responsibilities as president of the graduate student body at Texas Tech prepared me for both positions. These collective experiences solidified my desire to become an agent of change and seek opportunities for public service.

What interests me most about the Founders' Forum Fellowship Program is the opportunity to combine these goals into a single experience for professional development, educational enrichment, and career mentoring. I relish the opportunity to join a distinguished group of individuals that share a mutual interest in exchanging ideas, addressing challenges, and participating in meaningful dialogue about effective governance, sustainability, and the next generation of government leaders. I bring a unique perspective to this conversation not only as an educator at Texas Tech University where I bridge theory and practice to prepare students for the workforce, but also as an emerging professional with the U.S. General Services Administration and as a doctoral student. The focus of my research emphasizes cross-collaboration and best practices for public sector interdisciplinary offices that deliver architecture, engineering, and construction services. My future research plans will build on the idea that architects are equipped with a unique skill set to play a larger role in managing and leading public service organizations, particularly during reconstruction efforts immediately following natural disasters. What better expertise than the "citizen architect" to devise and implement a strategic plan for new infrastructure that requires temporary shelters for displaced victims and unclaimed pets, waste management to ensure public health, humanitarian relief, new transportation networks, and so much more. Humanitarian design is evolving as a new field of study that encompasses the full reach of design, environment, and behavior where architecture brings solutions to global challenges.

If selected as a Founders' Forum Fellow, the program will enable me to build a lasting network of practitioners, administrators, and dedicated public servants who possess a wealth of knowledge and experience that I can learn from, particularly the expertise of a veteran ASPA mentor. Furthermore, the chance to participate in the 2014 annual conference raises my level of enthusiasm to engage the organization as a new ASPA member. The combination of my education, experience, and research make me uniquely qualified to present my findings and contribute to the richness of the conference focused on leading public service organizations in the 21st Century. Thank you for your consideration and I look forward to your decision.

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