

# THE NEW FEDERAL WORKPLACE

A REPORT ON THE PERFORMANCE OF SIX WORKPLACE 20 • 20 PROJECTS

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The Applied Research Program supports GSA's Public Buildings Service by generating research findings and business improvement recommendations that can be directly applied to real world situations. The mission of the Public Buildings Service is to provide superior workplaces for federal customer agencies at the best value to the American taxpayer.

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# INTRODUCTION

WORKPLACE 20•20: A FEDERAL RESPONSE TO CHANGING PATTERNS IN THE WORK ENVIRONMENT

Over the last two decades, there have been dramatic changes in technology, business practices, and the demographic profile of the U.S. workforce. Team work has grown in importance; computer work takes precedence over paperwork; and increased local mobility and the greater geographic distribution of team members is now a common reality rather than the exception. Flat, fluid organizations have proliferated, requiring workspaces that are less hierarchical and less tied to status.

In 2002, the U.S. General Services Administration responded to these changes in a special way when it launched the WorkPlace 20·20 research and development program.<sup>1</sup> The focus of this effort was to help agencies realign their work settings to support teams effectively at a time when organizational structures, work styles, and technology were evolving rapidly.

### EVALUATING THE PERFORMANCE OF SIX WORKPLACE 20.20 PROJECTS

Since 2002, the WorkPlace 20·20 program has worked with more than 11 different federal agencies to deliver 40 different projects. Now the time has come for evaluation. How have those projects performed? What lessons have we learned? To answer these questions, GSA commissioned the WorkPlace 20·20 Projects Evaluation Study. The first step was to analyze the results of a satisfaction survey given to the end-users of all the WorkPlace 20·20 projects. Six representative projects were then selected for a more in-depth post-occupancy review—a comprehensive look at their planning, design, delivery, utilization, and physical performance. This report summarizes the findings and recommendations related to these six federal workplace case studies.

"As teamwork and sophisticated interactive technologies have become the norm in workplaces, GSA is committed to addressing these trends, on behalf of our client agencies, with innovative work environments that are mission-responsive and sustainable."

TONY COSTA Acting Commissioner, PBS U.S. General Services Administration

# THE NEW LANDSCAPE OF WORK

# Common Workplace Trends across Agencies

### ASSIGNED WORKSPACE: AN UNDERUTILIZED ASSET

Over the past decade, both public and private organizations have had to adapt rapidly to changing technology, cultural norms, and workforce demographics.

Two key changes—increased local mobility and the greater geographic distribution of teams—have transformed the workplace.

One significant result is a drastic reduction in space utilization: at any given time, roughly a third of employees are working in an outside location, while another third are in the building, but not at their desks. Only 30 percent to 40 percent of end-users with assigned desks in a given workspace are actually using them.

### ORGANIZATIONAL STRUCTURE: A CHANGING LANDSCAPE

Local mobility and a geographically distributed workforce have also transformed management culture by reducing the opportunities for the face to face communication on which traditional management styles, such as "managing by walking around", depended. The WorkPlace 20•20 Projects Evaluation Study found that participating organizations all showed signs of this transformation taking hold in the federal workplace. Examples include the following:

- Flatter organizations: Cross-unit organizational groupings with fewer layers and more decentralized decision making are replacing more hierarchical structures.
- Blurred boundaries: Collaboration is recognized as a competitive advantage of organizations that support it effectively. Boundaries or "silos" are breaking down as different parts of the organization learn to work more effectively together. The need to collaborate and share knowledge is blurring the boundaries between departments and between job categories.
- Increased flexibility: Organizations are more agile and more receptive towards change, both across the board and within smaller work units.

# NEW WORKPLACE TRENDS: THE COMMON GROUND

GSA recognized these changing work styles and patterns, and launched the WorkPlace 20•20 program in 2002 to help its federal agency clients realign their work settings to support their teams effectively. Since then, there have been more than 40 WorkPlace 20•20 projects for 11 different federal agencies. Because WorkPlace 20•20 focuses on supporting the goals and missions of GSA's client agencies, we have been able to identify two broad trends that are reshaping the federal workplace across agencies.

First, office work practices are changing in response to major shifts in workforce demographics and technology. Second, environmental awareness and energy price volatility have led to federal mandates for environmental quality and performance—as well as a pronounced end-user preference for work settings that are healthy and environmentally responsible.

The convergence of these two trends is transforming how GSA approaches office real estate—from initial planning through design, delivery, and utilization.

# THE SIX WORKPLACE PROJECTS

# The Workplace Projects Studied

The WorkPlace 20•20 Projects
Evaluation Study looked
comprehensively at six different
workplace projects across the U.S.
Collectively, the projects represent
the broader federal workplace. The
projects included are:



U.S. Coast Guard MLCP(v), Oakland, CA: This project used the WorkPlace 20•20 process and a variety of tools, including social network analysis, to support a move into a new, multi-tenant building.



**GSA PBS Regional Headquarters, Chicago, IL:** The first WorkPlace 20•20 project, it used the WorkPlace 20•20 process to support a major reorganization.



U.S. Coast Guard MLCP(s), Oakland, CA: This organization had recently reorganized into cross functional teams and leveraged the WorkPlace 20•20 process to help it realign its internal processes and work culture.



GSA FAS Regional Headquarters, Fort Worth, TX: This project used the WorkPlace 20•20 process to support the physical consolidation and organizational integration of several groups from multiple locations into a single facility.



Veterans Administration Regional Office (VARO), Reno, NV: This project used the WorkPlace 20•20 process to support development of a build-to-suit, single-tenant building. The VA's core values, especially the focus on serving veterans with operational efficiency and compassion, were very important planning and design criteria.



GSA PBS Customer Service Center, San Antonio, TX: This project used the WorkPlace 20•20 process in the redesign of a customer-facing small office. The design aimed to inspire customer confidence and to support PBS' own work needs.

# THE NEW FEDERAL WORKPLACE

# Common Workplace Goals for the Next Decade

The steady transformation of work practice and the broad workplace trends have clear implications for the goals that federal agencies are setting for their workplaces. Four goals in particular are likely to set the agenda for the federal workplace over the next decade:

# IMPROVE COLLABORATION AND COMMUNICATION

In addition to bursts of solitary activity, a typical day for knowledge workers includes many brief stand-up conversations, opportunistic encounters, "on the fly" meetings, and planned meetings of various sizes. The importance of collaboration and knowledge sharing and the need to support mobile workers and teams mean that the workplace is increasingly "where people meet to interact" rather than a setting for individual, heads-down work,3 Both collaboration and individual work still occur, of course, but it is crucial to provide a range of settings to support informal and formal interaction. We need to balance all of this with the need to accommodate focused work, a growing issue as the workplace becomes denser and more open.

Workplace features that support this goal include increased internal visibility, more space for interaction, and a greater variety of meeting rooms.

# 2 IMPROVE ENVIRONMENTAL QUALITY

Under the old rules of space assignment, high level managers occupied private offices along the window wall, while staff sat in cubicles of various sizes and styles. For today's end-user, the quality and performance of a workspace are reflected in everything from indoor air quality to ease of use, access to daylight and views, access to a range of collaboration spaces, and visual and acoustical privacy when needed. A high-quality, high-performance workspace has become an important recruiting and retention tool.

Workplace features that support this goal include high performance lighting fixtures, HVAC systems, and acoustic components.

# 3 IMPROVE SPACE USE EFFICIENCY

Increased collaboration and growing workforce mobility mean that past assumptions about the provision of individual workspace and meeting rooms are out of step with the way federal workers actually use the workplace.

Workplace features can address these inefficiencies in several ways:

- Encourage and support mobility, and recognize its impact by increasing the density of the individual workspace, some of which is non-assigned.
- Increase the variety and number of meeting spaces, to accommodate formal meetings, casual discussions, and impromptu conversations.
- Provide "privacy" rooms for focused work or conference calls that could be disruptive to others.

# 4 IMPROVE ENGAGEMENT AND WELL-BEING

Research shows that healthy and engaged employees are productive employees. A well designed workplace can increase an employee's sense of well-being, instill pride in the organization, and support the organization's mission.

Workplace features that support this goal include increased access to daylight and to window views. Engaging the occupants in the design process also greatly enhances the design benefits.

# ERIC RICHERT—A FOUNDER OF SUN MICROSYSTEMS' DISTRIBUTED WORK PROGRAM—IDENTIFIES THE SUCCESS FACTORS THAT ARE MOST CRITICAL TO THE EFFECTIVENESS OF DISTRIBUTED WORK GROUPS.

.....



An environment of trust



An environmen of support



Clarity of expectations



Ready access to material resources



Group identity, cohesion, and commitment



An accepted set of group processes and protocols



Control of outcomes



Efficient use of time



An environment of new and shared ideas and knowledge

### MOBILITY AND DISTRIBUTED WORK

Increasing decentralization, mobility, and specialization of knowledge in the federal workplace raise basic questions about how to divide tasks, share knowledge and resources, manage conflict, adapt to change, and evaluate performance. Parts of the private sector, especially the high-tech industry, have a decade or more of experience with a globally distributed workforce. The approaches they have developed can inform the federal workforce as it adapts to the new workplace trends.

In his white paper on distributed group work practices,\* Eric Richert summarizes three key elements common to these approaches:

1. Identify relevant success factors: As in any performance plan, desired outcomes depend on success factors. It is especially critical to formally and explicitly identify success factors for new and different practices such as distributed group work practices. The table below highlights how a formal operating structure supports informal interactions that are so important to effective group work.

	Formal Structure	Knowing Each Other	Requires	Supports
Physically Collocated Groups	Same place, same time work	Evolves organically through routine, ad hoc interactions	Physical places	Frequent informal interactions
Locally & Globally Distributed Groups	Explicit group agreements, which can be flex place, flex time work	Intentionally organized and nurtured through group process and technology	Robust technology plus occasional physical places	Frequent informal interactions

- 2. Adopt local mobility strategies: Adopting distributed work practices can help the increasingly mobile local groups benefit from physical proximity while avoiding the real estate costs associated with traditionally collocated groups.
- 3. Apply best practices: The importance of best practices increases and the risks of poor implementation of distributed work grow as decentralization and mobility spread. For distributed work to work well, it is most important to set clear expectations for performance, to give a formal structure to interaction, to share experiences and best practices, and to ensure that technology is used effectively.
- \* Richert, E.: *Distributed Group Work Practices,* New Ways of Working Network, 3 February 2008.

# WORKPLACE PROJECTS EVALUATION FINDINGS

GSA's WorkPlace 20•20 Projects **Evaluation Study clearly** demonstrates the value of designing for new workplace practices. The study found greatly enhanced and broadly based end-user satisfaction that is attributable to the workplace design approach developed and implemented as part of the WorkPlace 20•20 process. Both perceived and measured indoor environmental quality are also improved, indicating that new workplace designs also support the federal government's sustainability and high performance building goals. Finally, employee engagement—a key indicator of enhanced productivity—improved in all of the projects.

The six findings summarized here discuss how well the projects did from the standpoint of their end-users. They both affirm the overall success of the design strategies and show their limits.

# FINDING 1: IMPROVED COLLABORATION

More than 50 percent of the respondents rated group productivity and communication both within and between groups as better in their new workspace. Fewer than 10 percent said the new workspace was worse than the old space for any of the communication and collaboration behaviors studied. The others were neutral about the comparison.

These findings are consistent with a significant body of research showing that offices with high interior visibility, integrated circulation, and a variety of informal meeting areas increase the probability of spontaneous encounters that aid information flow.

The design strategies used to support collaboration, communication, and group productivity include the following:

- The use of low partitions or open plan workspace so that people can see each other.
- Ample provision of a variety of meeting and teaming spaces, especially those that can be used informally.
- The use of amenities and circulation elements, such as stair landings, to encourage unplanned encounters that spark conversations.

Although communications and information flow, on average, improved in the new workplaces, the study found that design on its own cannot enable organizational change.

### FINDING 2: THE NEED FOR CHANGE MANAGEMENT

In one project, for example, organizational analysis showed that two groups that were physically separated needed to work more closely together. The new workplace placed them next to each other, with lower partitions to provide high visibility and a central circulation route to increase the likelihood of encounter. However, social network analysis showed little change in the interactions between these two groups before and after the redesign of their workspace.

Subsequent discussions with the agency showed that the work practices and cultures of the two groups, which persisted after they moved into their new workplace, created continued obstacles to collaborative work.

The conclusion is that fundamental organizational or cultural issues in the workplace cannot be overcome by workplace design alone. It is critical to employ change management techniques, such as holding sessions to explain the intent of the design features and to guide occupants in fully utilizing the new workspace.

Figure 1: Improved Collaboration

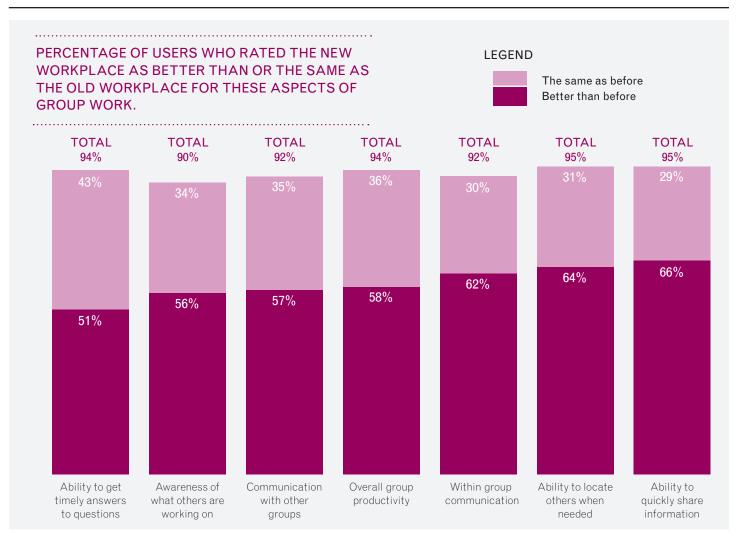


Figure 2: The Need for Change Management

CHANGE MANAGEMENT STRATEGIES ARE NECESSARY TO HELP PEOPLE ADJUST THEIR BEHAVIORS SO THAT THEY CAN UTILIZE FORMAL AND INFORMAL INTERACTION SPACES IN AN OPEN PLAN OFFICE WITHOUT DISTURBING THEIR NEIGHBORS.



# WORKPLACE PROJECTS EVALUATION FINDINGS (continued)

# FINDING 3: IMPROVED ENGAGEMENT

More than 80 percent of end-users said their new workspace increased their pride in the workplace, and more than 60 percent said it increased their pride in the organization, their sense of well-being, and their overall job satisfaction.

Many management scientists consider these measures to be indicative of employee engagement and their overall satisfaction with "organizational life." People who are satisfied with their jobs are less likely to leave and more likely to show higher levels of organizational citizenship, for example, by helping others or by working harder to get tasks done. There is also growing evidence that employee engagement, a characteristic measured by Gallup's Q12 Survey, is a critical factor in an organization's overall effectiveness.<sup>4</sup>

Key design strategies that contribute to this sense of satisfaction reinforce the sense that the organization cares for the health, creativity, and productivity of its employees. Key design features include a range of amenities and settings conducive to new work styles, the quality of furnishings and finishes, and sustainable measures, such as good indoor air quality and access to daylight and views.

# FINDING 4: IMPROVED INDIVIDUAL WORK EFFECTIVENESS

The satisfaction survey showed improvements in several areas related to individual work:

- 59 percent said the new space is better for individual work effectiveness.
- 55 percent said the new space is better for personal productivity.
- 49 percent said the new space is better for concentration.

Between 10 and 30 percent of end-users rated the new workplace worse for each of these outcomes. The remainder found the new workspace the same as the old one for their personal work effectiveness.

Key workplace design features associated with this measure of workplace effectiveness include the following:

- Lower partitions that reduce distraction by increasing personal courtesy. When colleagues are visible and present, people are more aware of the impact of loud conversations and other disruptions, and they lower their own voices.
- A range of settings that are easily accessible for informal conversations.
- Specific places for focused work, phone calls, and other personal or small group activities that need acoustical privacy.

### Figure 3: Improved Engagement

PERCENTAGE OF USERS WHO SAID THE NEW WORKPLACE IS BETTER FOR ENGAGEMENT AND WELL-BEING FACTORS.

58%

are getting to know other people in the office better (36% neutral)

66%

feel more satisfied with their job overall (28% neutral) 69%

feel better about their personal well-being (25% neutral) 70%

feel more proud of the organization (25% neutral) 82%

feel more proud to show the office to visitors (16% neutral)

Figure 4: Improved Individual Work Effectiveness



49%

of those surveyed said the new space is better for concentration (26% neutral)

55%

of those surveyed said the new space is better for individual productivity (32% neutral)



# WORKPLACE PROJECTS EVALUATION FINDINGS (continued)

# FINDING 5: IMPROVED WORKPLACE SATISFACTION

High levels of workplace satisfaction and comfort are important not just as indicators of overall satisfaction, but also because workplace dissatisfaction and discomfort are often associated with performance problems. For instance, ambient workplace temperatures that are too warm can increase drowsiness and decrease focus. Lighting discomfort from glare can reduce the ability to work effectively on visual tasks and increase the likelihood of headaches or eyestrain.5 On the positive side, users with seated views of a window are more productive and more satisfied with the workplace than those without such a view.6

In terms of satisfaction, the majority of end-users surveyed—72 percent across all 6 projects—found their new workplaces to be better than expected. Workplace satisfaction improved by almost 20 percent and building satisfaction by almost 30 percent.\* Interestingly, building satisfaction was higher even in projects which did not involve moving to a new building.

In terms of comfort, a comparison of pre- and post-occupancy ratings for environmental conditions showed consistent improvement in satisfaction levels.\* Satisfaction levels for the building overall, air quality, and daylight within the workplace showed the biggest increases of 24 percent or more each.



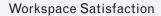
As these findings suggest, all of the design strategies noted previously—from features that support personal and team creativity and productivity to sustainable measures that support health and well-being—contribute to a heightened sense of end-user satisfaction. The benefits of improved design—especially better access to daylight and views, improved overall ambient conditions, and more pleasing aesthetic conditions—had a positive overall effect on ratings of workplace satisfaction.

\*The project in San Antonio, TX did not use a pre-move survey and is not included in this comparison.

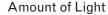
PERCENTAGE OF USERS WHO ARE SATISFIED WITH ENVIRONMENTAL CONDITIONS IN NEW AND OLD WORKSPACES.\*

Building Satisfaction











### Daylight



### Window View



### Air Quality



### Temperature



### Visual Comfort



<sup>\*</sup>The project in San Antonio, TX did not use a pre-move survey and is not included in this comparison.

### WORKPLACE PROJECTS EVALUATION FINDINGS (continued)

# FINDING 6: ACOUSTICALTRADE-OFFS

Facilitating communication, information flow, and group work is a given for the contemporary federal workplace; indeed, the only goal that all six WorkPlace 20•20 projects shared was to increase collaboration and interaction. They successfully delivered on this goal, but at some expense of individual, focused work. This may be inevitable because collaborative activities generate noise distractions and spontaneous encounters tend to occur in and around the individual workspaces.<sup>7</sup>

The study identified the need to support both collaboration and focused individual work as a core dilemma of the modern workplace. Every modern organization does both, but each employs a different mix and emphasis. It is important to find the right balance for each organization and design the workspace to support that balance, as WorkPlace 20•20 aimed to do.

Pre-occupancy survey data for the projects showed high levels of dissatisfaction with acoustics in existing work settings.\* Many end-users expressed concern that a more open work environment, although conducive to collaboration, would make acoustic conditions worse. In some cases, this proved to be true. Across the projects, acoustical satisfaction actually improved

on some measures, but the improvements were modest—less than five percent.\*
Despite mitigations through design to improve acoustical privacy, dissatisfaction remained high. Dissatisfaction with acoustical privacy in the new space was linked to a combination of factors, particularly physical construction issues and change management efforts that were not fully effective.

Minimizing distractions caused by interaction ultimately depends on employees changing their behavior. Since most of these distractions are a direct result of the behaviors that are intrinsic to knowledge work, part of the solution is to understand that the trade-offs are worthwhile. Change management can be particularly effective in reducing the disruptive impact of some features of an open office environment. Since end-users work individually and hold a variety of meetings, it is important to communicate how different settings in the new workplace can best help them accomplish these tasks. It should sensitize people to the need to hold meetings outside of the main workspace or to adjust their behavior when utilizing interaction spaces in an open plan office in order to avoid distracting colleagues.

### Figure 5b\*

### Speech Privacy



### Noise Levels



\* The project in San Antonio, TX did not use a pre-move survey and is not included in this comparison.

### SOCIAL NETWORK ANALYSIS

# THE IMPORTANCE OF SOCIAL NETWORKS

An analysis of the social networks within an organization provides valuable insights into how it actually operates. Social network analysis (SNA) is important because work-related social networks—those representing informal patterns of communication and interaction—are often different from the lines of authority depicted in formal organizational charts. SNA can also provide compelling preand post-occupancy measures on how communication and interaction have changed following workplace redesign. SNA facilitates:

- Information Diagnosis—identifying and affecting the dissemination of information, transfer of knowledge, decision making, and collaboration.
- Change Management-identifying potential key individuals before and after organizational changes; identifying where corrective actions may need to be focused following an organizational change.
- Communities of Practice—identifying and improving staff connectivity to others in similar domains of expertise.
- Staff Development-identifying staff with development potential and areas for improvement.
- Bottlenecks-identifying staff overloaded with information, requests, and work.

# APPLYING SOCIAL NETWORK ANALYSIS TO GSA CLIENTS

GSA started using SNA in 2002 as a research and organizational diagnosis and analysis tool for workplace improvement. SNA provided GSA staff and clients the opportunity to:

 visualize communication and interaction patterns and information flow among their staff and work units, and

 identify potential road blocks or potential change agents.

The SNA findings are incorporated into workplace design to ensure the workplace supports effective work patterns and change.

The analysis involves formalized data collection using surveys and interviews, often supplemented with observations. It is adapted to fit the distinctive characteristics and context of each client. Core survey sections focus on:

- · who people interact with,
- how they interact (face-to-face, email, etc),
- the substance and frequency of the interactions, and
- use of and satisfaction with various work spaces to support or deter such interactions.

Each analysis identifies key network positions that have the most potential to move critical information through the network or influence the network. These positions include the following:

**Best Known**—the members who are most visible on the network or most familiar with the network.

**Information Resource**—the members who are most knowledgeable about the network.

Most Connected to Highly Connected Others—the members with the strongest social capital and potential influence over others.

**Broker**–the members most likely to help make connections to other network members.

Rapid Access to Information—the members who acquire or transmit information quickly by virtue of their network connections.

# POSSIBLE NETWORK ROLES SUGGESTED BY SNA



Best Known



Information Resource



Most Connected to Highly Connected Others



Broker



Rapid Access to Information

# RECOMMENDATIONS FORTHE FEDERAL WORKPLACE

An Integrated Approach to Workplace Design

The findings from the WorkPlace 20.20 Projects Evaluation Study. lead to the recommendation of taking an integrated approach to designing federal workplaces. This means moving beyond the basic square foot per person calculation and integrating spatial, behavioral, and technical factors in workspace design and space allocation. Such an approach can go a long way in resolving the collaboration/ concentration dilemma. Design strategies that are part of an integrated approach include the following:

# DESIGN SPACE FOR A MIX OF ACTIVITIES

An effective workspace supports both collaboration and individual work with the right balance of different types of space for the occupying organization. Space allocation should reflect the impact of mobility and the need for interactions of every type, from informal socializing to formal, scheduled meetings.

# 2 ENGAGE OCCUPANTS IN DESIGN

The culture of an organization and its subgroups can facilitate or impede adaptation of a workplace. The study found that the broad engagement of employees in developing criteria for a new workplace design through town halls, focus groups, and surveys conducted as part of the WorkPlace 20•20 process greatly enhanced employees' willingness to suspend resistance to change, promoted enhanced flexibility, and supported a willingness to adopt new work practices and behaviors.

# 3 DESIGN TO SUPPORT TECHNOLOGY

Increased internal mobility means end-users need to be able to move quickly to new spaces for privacy or concentration. The study found that wireless connectivity and good acoustical performance are essential to resolving the collaboration/concentration dilemma successfully. In less successful designs, these solutions were either ignored or considered late in the design process. As a result, employees stayed tethered to their desks, despite having laptop computers and private meeting or focus rooms available.

# 4 DESIGN TO SUPPORT PEOPLE

The workplace design should support how people work today. In addition to designing to directly support individual and group productivity, increased environmental awareness demands that we design to indirectly support work. This means creating a healthy and sustainable work environment to improve employee engagement and well-being.

### THE ROLE OF THE NEW WORKPLACE IN DECREASING STRESS

Do improvements to the workplace decrease stress? Recent research suggests that stress at work is a major public health risk associated with cardiovascular health problems. Stress at work is also associated with decreased worker productivity, lower worker job satisfaction, and increased absenteeism and worker turnover. Physical workspace characteristics such as noise, lighting, and ventilation have also been linked to job satisfaction in office workers and are therefore implicated in the effects of work-related stress on health.

A research team that included GSA and the National Institute of Mental Health\* explored this question using the GSA PBS Regional Headquarters in Denver, CO as the test site. By monitoring end-users, the team found that the new Denver workspace caused less work-related stress than the old workspace it replaced. This is an important finding, as no previous research had established a link between the physical work environment and work-related stress based on real-time measurements of physiological stress indicators. Although both workspaces were within acceptable limits of safety and comfort, these findings suggest that differences in workspace quality can have a significant effect on health outcomes for end-users. These findings were independent of the subjects' own reports of perceived stress, which suggests that a poor quality workspace may cause some of the underlying physiological factors associated with increased work stress without the subjects being consciously aware of it.

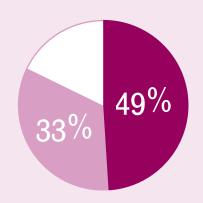
The salient improvements in the new Denver workspace include lighting, ventilation, air quality, and access to daylight and views.

\* Thayer, J., et al: Effects of the Physical Work Environment on Physiological Measures of Stress: Circadian Variations in Heart Rate Variability and the Morning Rise in Cortisol, 22 September 2008.



**GSA PBS Regional Headquarters, Denver, CO:** This project used the WorkPlace 20•20 process in renovating a historic factory building with a very large floor-plate. The new workplace design brings daylight to the interior, encourages interaction, and reduces stress.

Figure 6: Effect of Office Space on Stress Level



### **LEGEND**



The same as before Better than before

Most survey respondents in the WorkPlace 20•20 Projects Evaluation Study said their new workplace is better than or the same as their old workplace for their stress levels.

# FOR MORE INFORMATION

WorkPlace 20•20 was created in 2002 to develop tools and methodology to guide the design of space that supports contemporary work. Pilot projects, such as those whose post occupancy results are presented here, have served as the catalyst for a follow-on activity—GSA's Workspace Delivery Program, which aims to transfer WorkPlace 20.20 tools and methods to GSA associates nationally, while continuing to offer selected consultant driven workspace engagements to our customers. The goal is to firmly establish this more inclusive and accurate approach to project initiation and requirements development, and to ensure that it becomes the GSA way to develop clients' workplace requirements. For more information on GSA's Workspace Delivery Program, please contact http://www.gsa.gov/ workplacesolutions.

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# **PROJECT CREDITS**

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Mank Diagram Canada Can

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WorkPlace Consultant: DEGW, Andrew Laing and Jennifer Schumann, Project Leads.

# GSA FSS REGIONAL HEADQUARTERS, FORT WORTH, TX

**Client:** Gary King, FSS Chief of Staff, Greater Southwest Region.

### GSA Regional WorkPlace Advocate:

Nina Hyre.

WorkPlace Consultant: HOK Advance Strategies, Susan Mitchell-Ketzes, Project Lead.

### GSA PBS SAN ANTONIO CUSTOMER SERVICE CENTER, SAN ANTONIO, TX

**Client:** John Carson, Director, San Antonio Service Center.

### GSA Regional WorkPlace Advocate:

Becky Parham.

WorkPlace Consultant: DEGW, Jennifer Schumann, Project Lead.

# GSA PBS REGIONAL HEADQUARTERS, DENVER, CO

**Client:** Paul Prouty, PBS Assistant Regional Administrator; Mark Krone, Client Representative Team Leader.

### GSA Regional WorkPlace Advocate:

Mary Greaves Burton.

WorkPlace Consultant: Gensler, Washington, DC, Ernest Munoz, Project Lead.



### **U.S. General Services Administration**

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