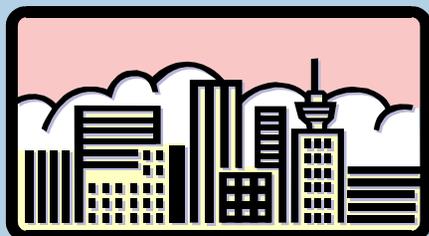


*CREATING THE*  
*SUSTAINABLE*  
*WORKPLACE*

**Rob Obenreder, AIA**  
**Jonathan Herz, AIA**

General Services Administration  
Office of Governmentwide Policy

# *U.S. General Services Administration*



**Public Buildings Service**

**Federal Technology Service**



**Federal Supply Service**

**Office of Governmentwide Policy**



# *Learning Objectives*

- Apply sustainable development principles to the workplace
- Show the value of workplaces that integrate facilities, technology and human resources

# *Workplace Design Drivers*

- Market Pressures
- Organizational Change
- Changing Demographics
- Employee Expectations
- New Technology
- Nature of Work

# *Organizational Stakeholders*

- Management
- Employees/Customers

*And*

- Project Managers
- Designers
- Facility Managers

*Over a 20-year period, what is the single largest facility cost?*

- 5% total costs for construction
- 5% total cost for operations
- **90% total costs for employees**

# *Creating Long-Term Value*

Use the workplace to  
*improve*  
organizational performance.

# *Creating Long-Term Value*

**Facilities have a strategic role in meeting  
Organizational, Environmental, and  
Socioeconomic Goals**

- Respond to tenant needs
- Increase health and productivity
- Reduce liability
- Represent best “true” lifecycle performance

# *Our Environmental Impact*



**Mathis Wackernagel and William Rees**

<http://www.myfootprint.org/>

# *Buildings and the Environment*

## **Building Construction, Renovation and Operation:**

### Consume:

- 17% of water
- 33% of energy
- 40% of the raw materials extracted
- 50% of CFC's
- 66% of electricity

### Produce (directly or indirectly):

- 49% percent of SO<sub>2</sub>
- 40% of landfill waste
- 33 percent of CO<sub>2</sub>
- 10% of particulate emissions

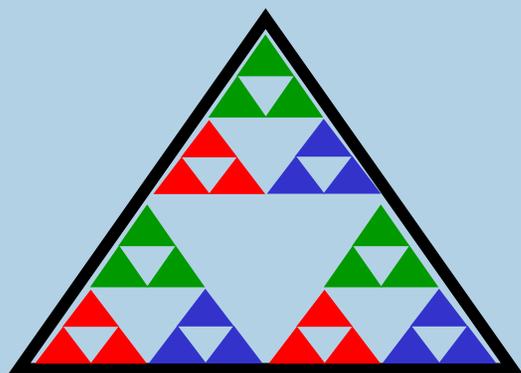
## *Buildings and People*

**People spend 90% of their time indoors**

- 20% - 30% U.S. office workers affected by Sick Building Syndrome
- Indoor pollution one of top five EPA environmental health risks
- Indoor pollutant levels may be 2-5 times higher than outdoors

# *Sustainable Development*

**Ecology**



**Equity**

**Economy**

*“Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”*

McDonough Braungart  
Design Protocol™

*–The Brundtland Commission*

# *Sustainable Planning, Design, and Construction*

- Eliminates mitigation
- Eliminates toxics
- Minimizes or eliminates waste
- Reduces contingent liability
- Increases safety and proficiency
- Creates long-term value

## *Sustainable Repair and Alteration*

- Abates hazardous materials
- Takes advantage of recurring opportunities
- Reduces churn costs
- Provides healthier environments

# *Sustainable Operation and Maintenance*

- Increases occupant health and safety
- Prolongs the life of building finishes and systems
- Uses healthier, eco-friendly products and procedures

# *QUALITIES OF A SUSTAINABLE FACILITY*

- Integrated design process
- Healthy environment
- Properly used and maintained
- Flexible systems
- Occupant control
- Alternative work strategies
- Amenities

# *The Workplace*

**Workplace DOES Make a Difference**

**The work environment affects:**

- Satisfaction and health
- Hiring and retention
- Productivity
- The bottom line

*A world-class organization needs to use  
Workplace as a strategic tool*

# *THE FUTURE?*



***“You don’t get an office. You get cargo pants.”***

*The Office of Governmentwide Policy*  
*Office of Real Property*  
*Innovative Workplaces Division*

We identify, develop, and promote innovative workplace practices.

Program Areas:

- Sustainable Development
- Telework
- Performance Measurement
- Integrated Workplace

## *The Integrated Workplace*

- Strategy for effective workplaces
- Integrates people, place, and tools

### Principles

- Unites real property and business strategy
- Collaborative and multidisciplinary
- Derived from work practices and strategies
- Identifies needed space and tools
- Accommodates economical change

## *"Hallmarks of the Productive Workplace"*

1. Spatial Equity
2. Healthfulness
3. Flexibility
4. Comfort
5. Technological Connectivity
6. Reliability
7. Sense of Place

*...and don't forget  
a little "fun."*

## *The Integrated Workplace - The Planning Phase*

1. Procure appropriate expertise.
2. Consider your business plan and mission and analyze needs.
3. Collect information, investigate technology tools, explore appropriate work strategies.
4. Use an integrated design approach.
5. Look at life-cycle costs and incorporate space flexibility for future changes.

# *The Integrated Workplace - the Implementation Phase*

1. Establish criteria and establish benchmarks.
2. Identify change management and training needs.
3. Design linked to goals, criteria
4. Construction informed by process

## *The Integrated Workplace - the Management Phase*

1. Provide orientation and user training.
2. Conduct post occupancy evaluation.
3. Measure workplace performance.
4. Identify and implement necessary changes.

*Sustainable Development*

+

*The Integrated Workplace* =

*The Sustainable Workplace*

## *The Sustainable Workplace*

**Combines sustainable development and Integrated Workplace concepts to:**

- Improve health and performance
- Respect the environment
- Maximize human capital
- Support an efficient organization
- Best use of resources

## *The Sustainable Workplace*

*A guiding principle of sustainable design is to create places that are not only healthy and productive, but which also lift the human spirit.*

*The premise is a simple one: **Healthy, happy people will be more productive and more engaged with their work and their organization.***

*Dr. Judith Heerwagen*

*J.H. Heerwagen & Associates, Seattle, WA*

# *Organizational Benefits of a Sustainable Workplace*

- 1. Leveraging Human Capital**
- 2. Supporting Business Objectives**
- 3. Enhancing Portfolio Value**

# *Organizational Benefits of a Sustainable Workplace*

## **Leveraging Human Capital**

- Increased Comfort & Satisfaction
- Healthier
- Increased Performance
- Better Staff Interaction
- Improved Recruitment & Retention
- Reduced Absenteeism
- Better Work / Life Balance

# *Organizational Benefits of a Sustainable Workplace*

## **Supporting Business Objectives**

- Business Performance
- Customer Service
- *The Bottom Line*

# *Organizational Benefits of a Sustainable Workplace*

## **Enhancing Portfolio Value**

- Facility Flexibility
- Effective Space Utilization
- Efficient Operations and Maintenance
- More Tenant Options

## *Benefits for Building Professionals*

- Better respond to customer needs
- Make you more competitive
- Provide additional customer services
- Improve design
- Reduces facility management costs
- Opportunities for longer-term service

# *GSA Office of Real Property Workplace Pilot*



## Needs Defined by Staff

- Address Privacy and Noise
- More User Adaptability
- Improve environmental conditions
- Provide opportunities for more collaboration
- Managers near staff



**The Other Reason !!**

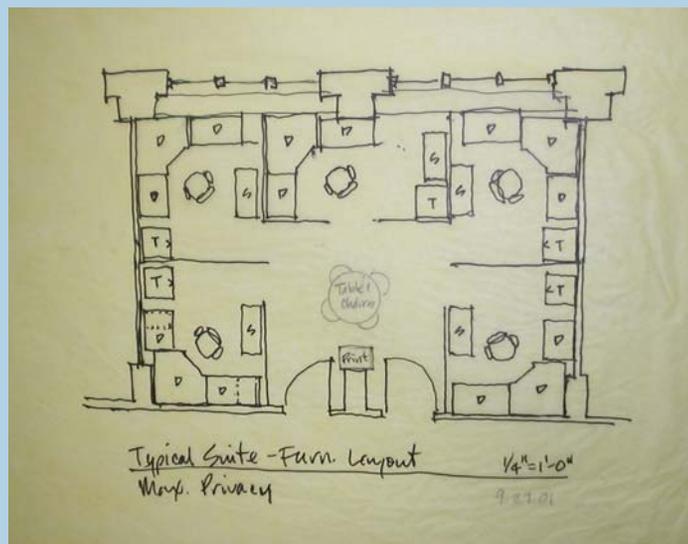
## *Alternative Workplace Strategies*



- Telework program
- Telework centers
- Desk-sharing
- Touchdown space
- Remote information access



# Design Solutions



## Privacy/Noise

- Two-bay suite
- Desk locations
- Moveable partitions
- Office Protocols

## Collaboration

- Co-located staff
- Meeting area in each suite and elsewhere
- Community Space – the “Café”
- Marker board partitions/boards
- Public vs. private circulation



## *Design Solutions*



### **Ergonomics**

- Task chairs
- Keyboard trays with integral mouse pad
- Flexible monitor location
- Fewer overhead lights/non-glare lenses
- Task lighting

### **Environmental Issues**

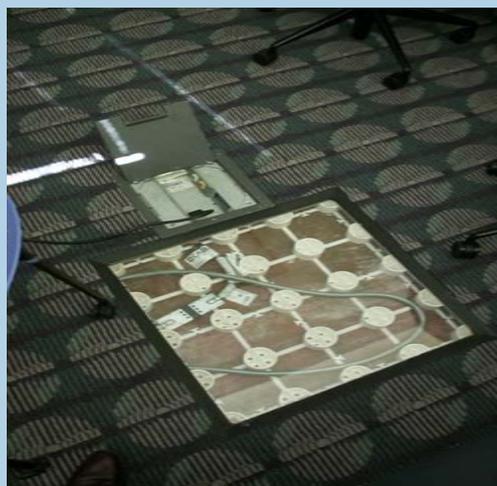
- More daylight
- Task lighting
- Ceiling fans



## *Design Solutions*

### **Adaptability/Mobility**

- User- reconfigurable furniture
- Task lighting
- Cell phones, laptops phones with call forwarding



- Power, data on all walls
- Modular conference room tables
- Telework options
- Access floor, modular carpet
- Modular wall

## *Sustainable Features*

- Recycled paper during office move
- Fabric and carpet with recycled content
- Kitchen floor 100% recycled plastic
- 30% less overhead lighting
- Energy Star ceiling fans
- Separate switching
- Increased daylight
- Compact fluorescent desk lamps
- Motion detector power strips



## *The Bottom Line*



- Workplace improvements through the Integrated Workplace process
- Applied principles of sustainability
- With a limited budget.



# *Potential Federal Government Workplace Savings*

Estimated Federal Cost Benefits from Innovative  
Workplaces - **\$ 4 Billion<sup>+</sup> Annually**

## **Employees**

- Health
- Retention
- Productivity

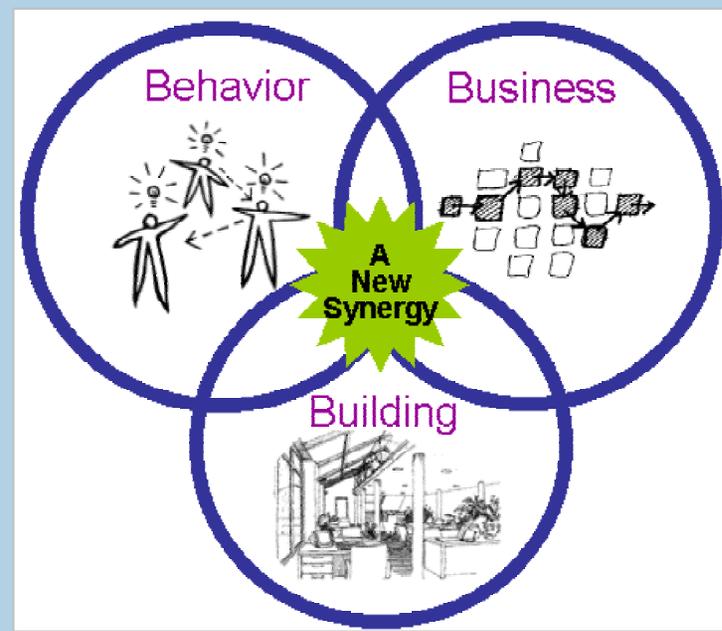
## **Facilities**

- Churn
- Energy
- Materials

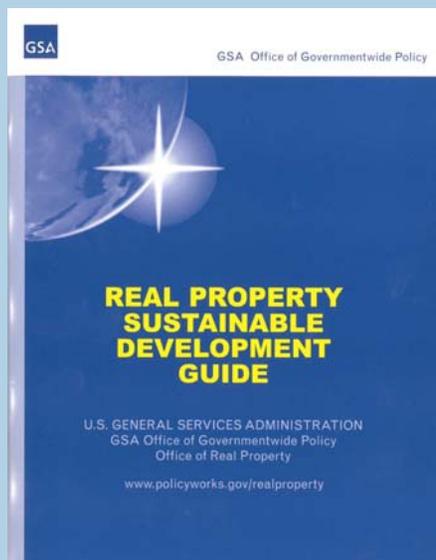
# *WorkPlace 20·20*

## New GSA Workplace Development Process

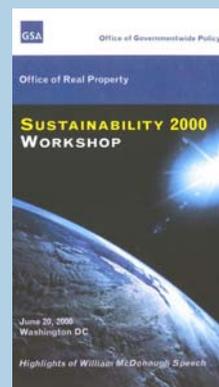
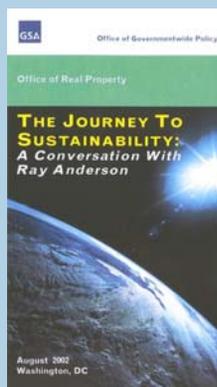
- 17 Pilot Projects
- 4 Federal Agencies
- Over 4,500 Federal Employees



## *GSA Sustainable Development Resources*

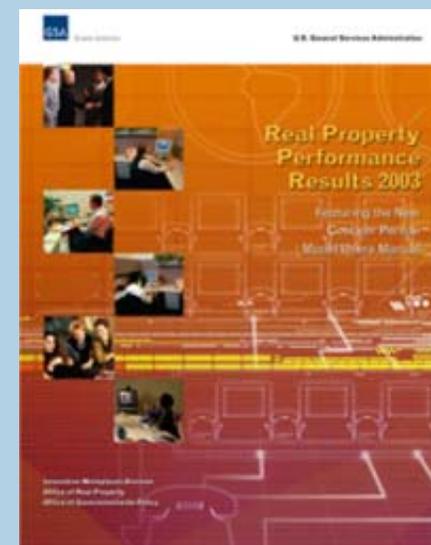


GSA Real Property  
Sustainable  
Development Guide



William McDonough &  
Ray Anderson Videos

Real Property  
Performance  
Measurement

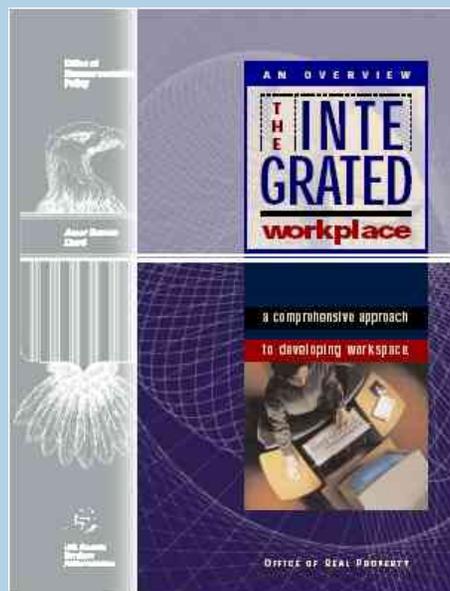


# *GSA Workplace Publications*

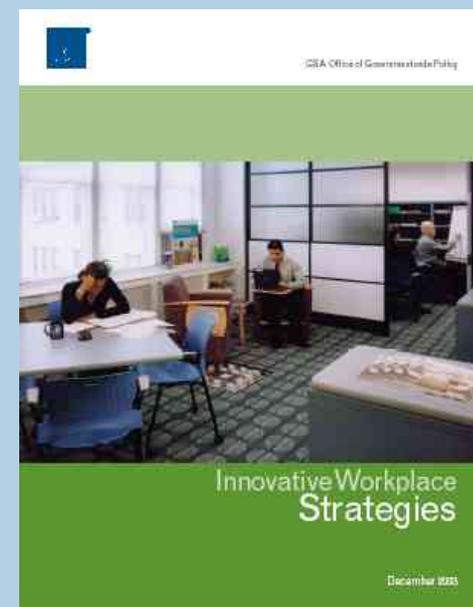
Productivity and People  
and the Workplace



The Integrated Workplace



Innovative  
Workplace Strategies



## *Conclusion*

### **What Can You Do?**

- Re-examine practices
- Think differently
- Advocate change
- Offer more services

“The sustainable workplace goes beyond function and aesthetics to become a strategic business tool .”

## *For More Information On GSA Programs*

### **Sustainable Development**

- **OGP: Jonathan Herz** **202.501.3476**
- **PBS: Don Horn** **202.501.4525**

### **Workplace Programs**

- **OGP Int. Workplace: Rob Obenreder** **202.208.1824**
- **OGP Telework: Billy Michael** **202-273-4663**
- **PBS Workplace 20.20: Kevin Kelly** **202.208.7656**

**[www.gsa.gov/realpropertypolicy.](http://www.gsa.gov/realpropertypolicy)**