

# Creating the Sustainable WorkPlace

Bethesda, MD—June 4, 2008



# What Is the Sustainable Workplace?



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A sustainable workplace fully supports the individual and the organization without compromising future generations.

# The Sustainable Workplace Characteristics



- Integrated process
- Collaborative development
- GSA Hallmarks of the Productive Workplace
  - Equitable
  - Sustainable
  - Flexible
  - Comfortable
  - Connectable
  - Reliable
  - Identifiable

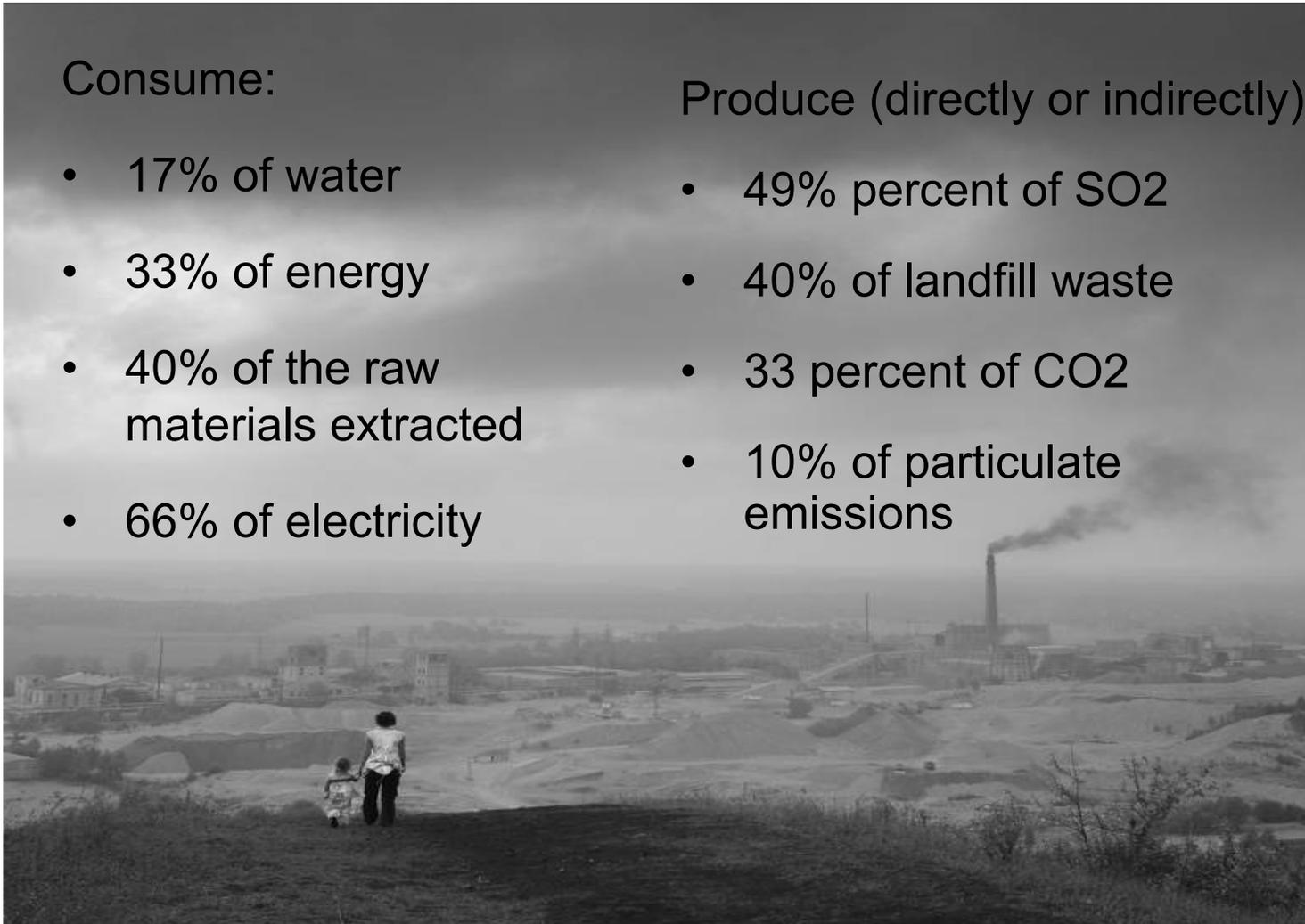
# Why Sustainable WorkPlaces?

## Consume:

- 17% of water
- 33% of energy
- 40% of the raw materials extracted
- 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



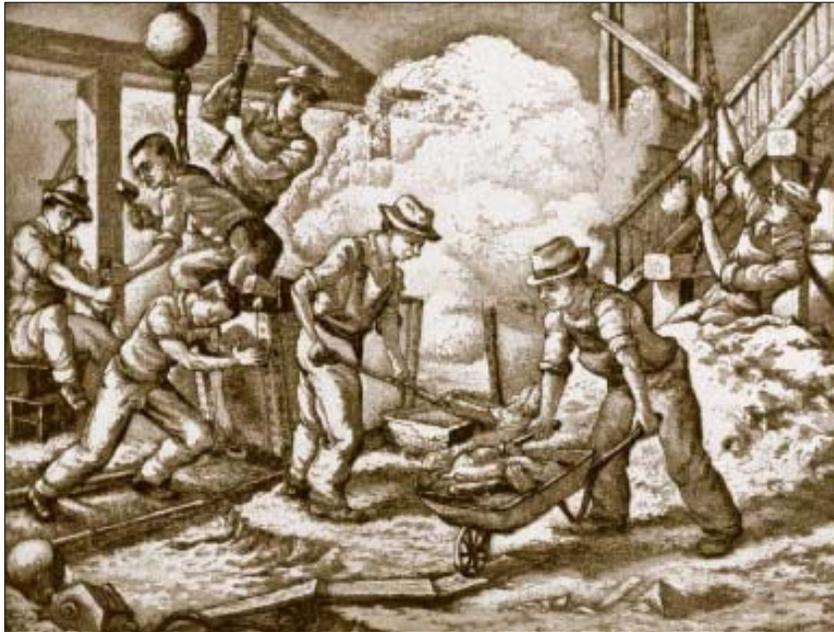
# Why Sustainable WorkPlaces?

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- People spend 87% of their time indoors, 18% at work
- 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

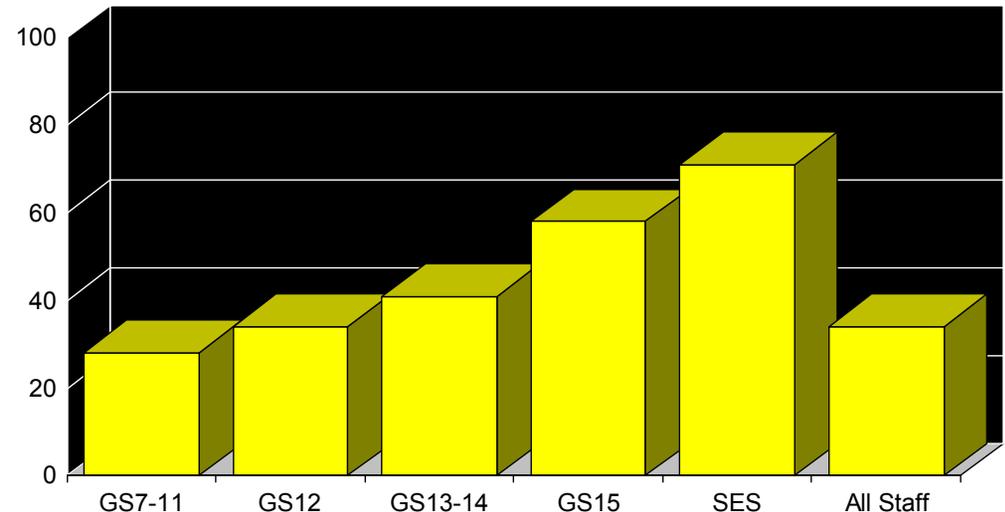
# Sustainable Building Scope



- Planning & Design
- Building Construction
- **Workplace/Interiors**
- Repair & Alterations
- Operations & Maintenance

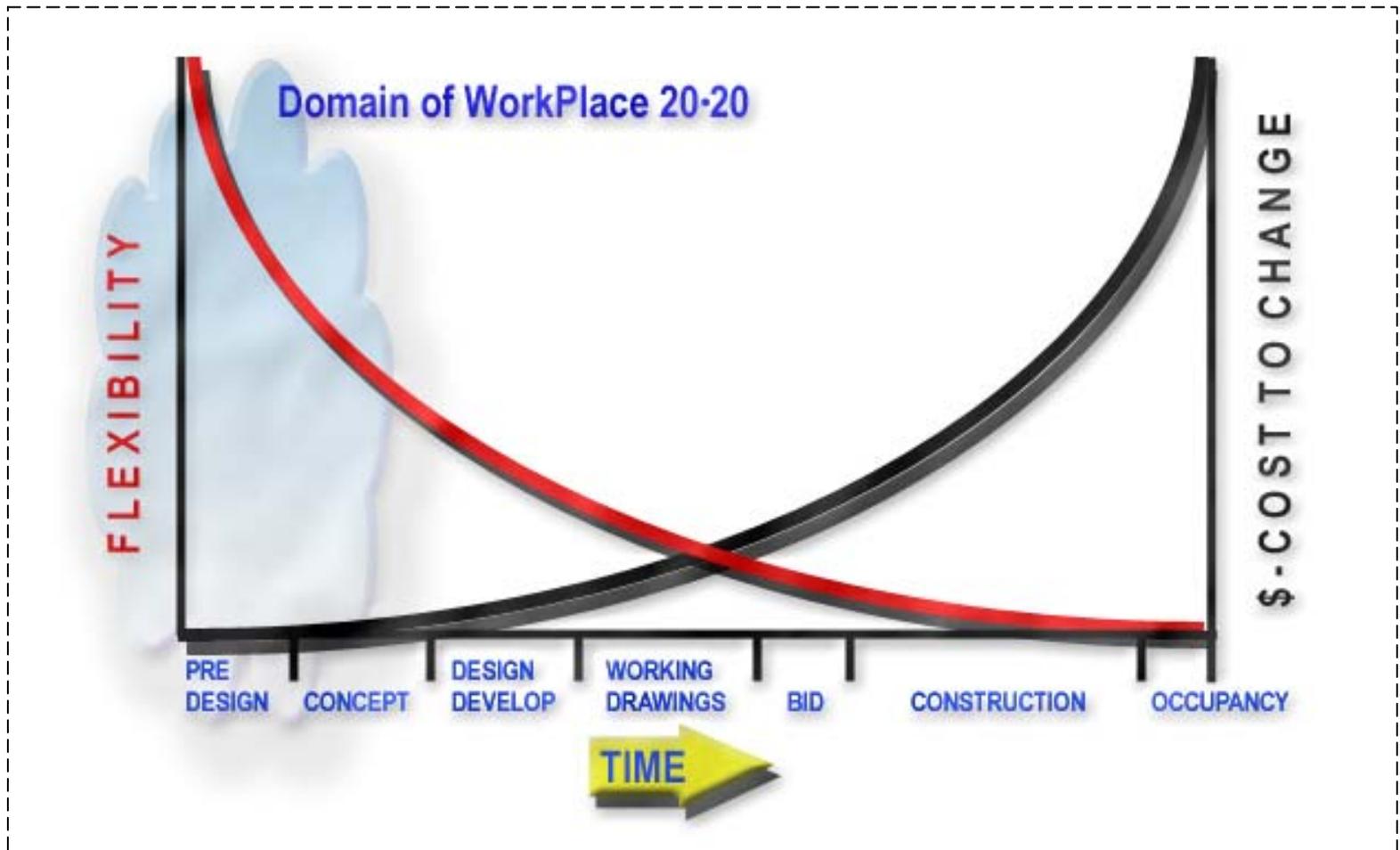
# Why a Sustainable Workplace: The Business Argument

- Work Environment Affects:
  - Satisfaction & Health
  - Hiring and Retention
  - Productivity
  - The Bottom Line



% Federal Employees Eligible  
for Retirement from 1999 to  
2005

# Why a Sustainable WorkPlace: The Process Argument

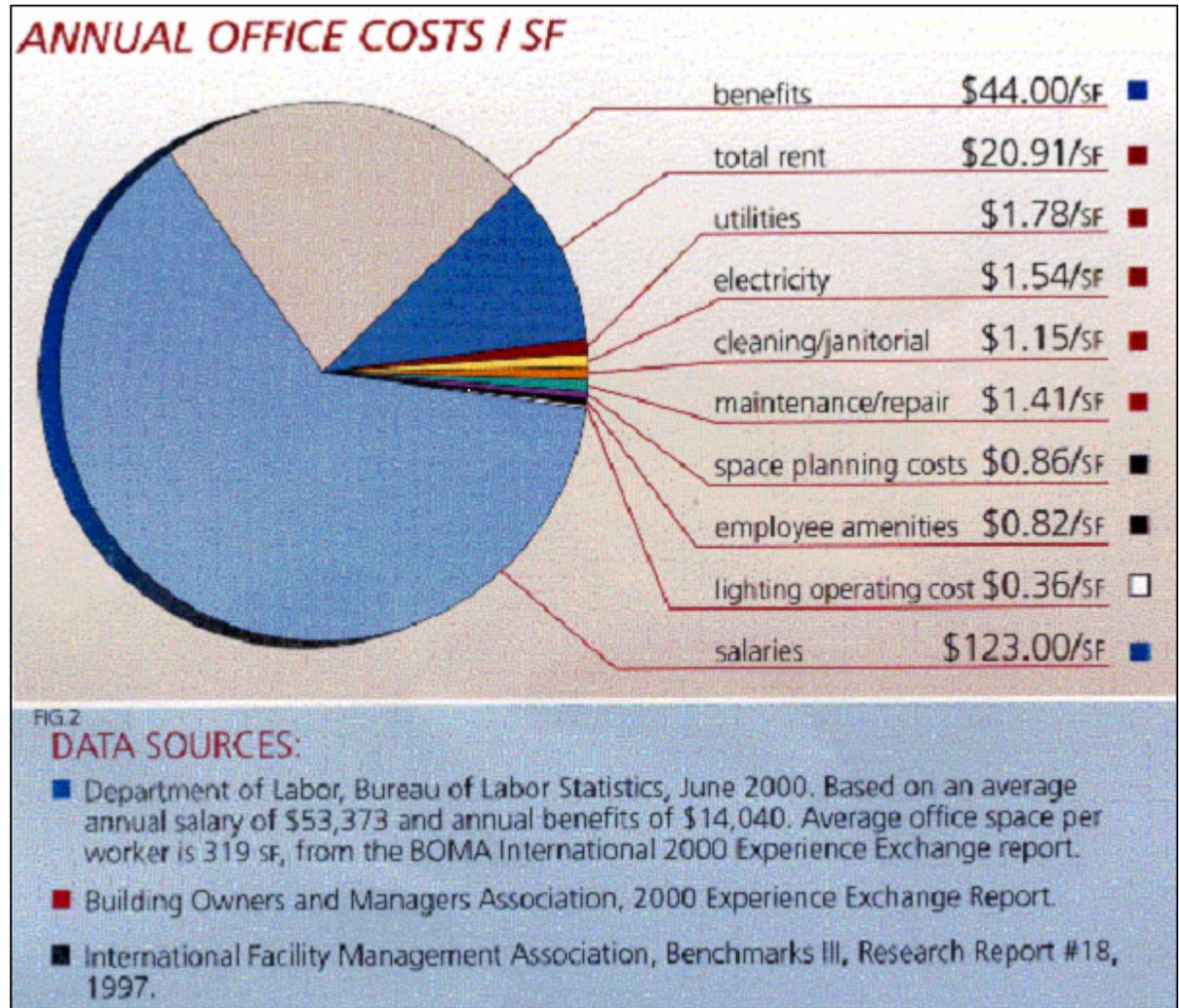


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# Why a Sustainable WorkPlace: The Investment Argument

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Operations	4%
Rent	11%
Salaries/Benefits	85%



# Why a Sustainable WorkPlace: The Final Argument?



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# GSA Mission and Goals

## Mission

“The U.S. General Services Administration leverages the buying power of the federal government to acquire best value for taxpayers and our federal customers. We exercise responsible asset management. We deliver superior workplaces, quality acquisition services, and expert business solutions. We develop innovative and effective management policies.”

## Goals

- **Stewardship** — leading federal agencies in economical and efficient management of federal assets...
- **Superior Workplaces** — delivering and maintaining productive workplaces consisting of office space, furnishings, technology, supplies, and related services.
- **Best Value** — Developing and delivering timely, accurate and cost-effective acquisition services and business solutions
- **Innovation** — Developing new and better ways of conducting business resulting in more productive and effective federal policies and administrative operations.

# Current GSA WorkPlace Mandates



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- GSA / PBS Missions
- National Codes & Standards
- 2005 Facility Standards for the Public Buildings Service
- Energy Policy Act of 2005
- Executive Orders 13101, 13123, 13423
- Energy Independence and Security Act of 2007

# Future GSA WorkPlace Mandates



- GSA Requirements Development Process / POR+
- GSA Office of High Performance Green Buildings
- Revised Facilities Standards for PBS
- GSA Internal Space Management
- Interior Design Excellence

# GSA WorkPlace Guidelines

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- The Integrated Workplace
- Real Property Sustainable Development Guide
- Sustainable Development and Society
- Leading By Example
- WorkPlace Matters
- Sustainability Matters (soon)
- Interior Basics (soon)
- Whole Building Design Guide
- LEED CI

# GSA WorkPlace Designer Qualifications



- Requisite interior design experience.
- Integrated design approach
- Organizational & work process analysis expertise, tools
- Sustainable design expertise
- Technology integration expertise
- Portfolio of applicable projects in public and private sectors

# The Sustainable WorkPlace Formula



Organization / Process  
Analysis  
+  
Sustainable Design  
+  
World-Class Workspace

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= The Sustainable  
Workplace

# GSA Programs

## Supporting the Sustainable WorkPlace

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- Office of Applied Science
  - WorkPlace Program
  - Sustainable Design
- Office of Customer Service
  - Requirements Development Process
- Office of Architectural Design
  - Design Excellence
- GSA Regional Offices
  - Construction and Real Estate
  - FAS Furniture Center

# GSA WorkPlace Program

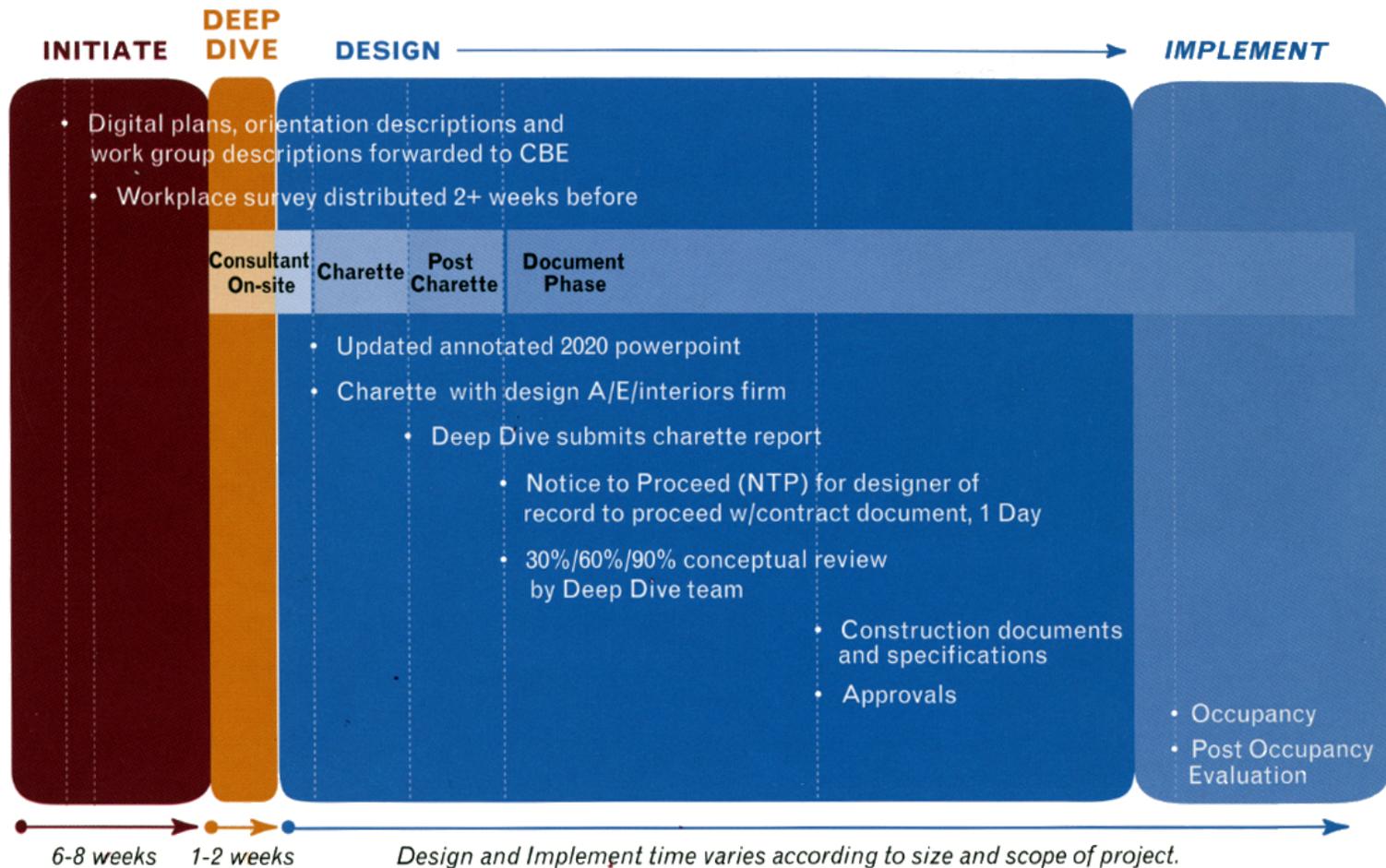
(aka Workplace 20.20)



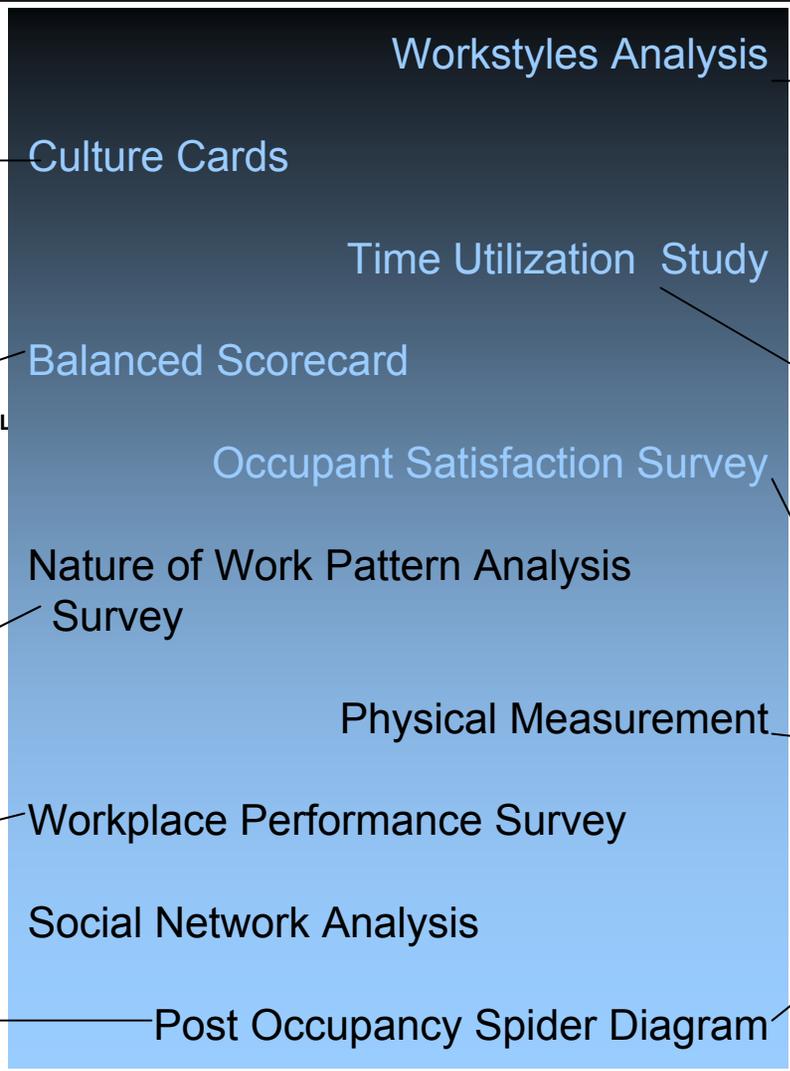
- Requirements Development Process
  - The Deep Dive
- Research
  - Surveys
  - Post Occupancy Evaluations
  - Applied Research

# The Deep Dive Process

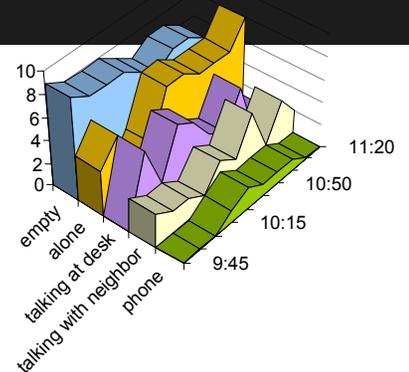
the rapid engagement process



# Deep Dive Tools



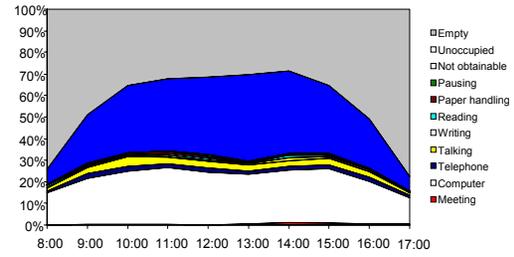
Culture Cards



Time Utilization Study



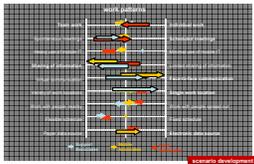
Balanced Scorecard



Occupant Satisfaction Survey



Nature of Work Pattern Analysis Survey



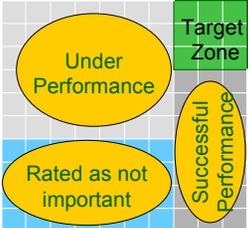
Physical Measurement



Workplace Performance Survey



Social Network Analysis



Post Occupancy Spider Diagram



# The Deep Dive Results



GSA Public Buildings Service

## chicago

pbs renovation project  
post occupancy evaluation  
report



region 5 - public buildings service  
john c. klucynski federal building report  
chicago, il  
february 2008

Organization and Individual

+ Occupant Engagement

+ Space Analysis

+ Deep Dive Report

+ Design Charette

+ Design Review

+ Post-Occupancy Evaluation

= A World-Class Workplace



# Creating the Sustainable Workplace: a Work**Place** case study



**a new space and new way of working** for the Public Buildings Service

# Why a WorkPlace project for PBS, Region 5?

- Enhance work environment for employees
- Re-focus employees on customer needs & support **regional restructuring**
- Shift culture from stove-pipe to cross-disciplinary for **improved service delivery**
- Create a Model Workplace Solution for Customers

# Goals of the new WorkPlace

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# New PBS Space | project directives

- Maximize Flexibility - robust enough to accommodate changes in headcount, composition of & working relationships between teams, & changes in technology
- Sustainability - Meet LEED certification for Commercial Interiors & aim for 20 year life
- Showcase Function & Design – neither too exquisite nor too prosaic
- Maintain an Egalitarian Preference – design for the people who do the work

# Analysis & Research

a new space &  
new way of working  
for PBS

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# WorkPlace | key findings

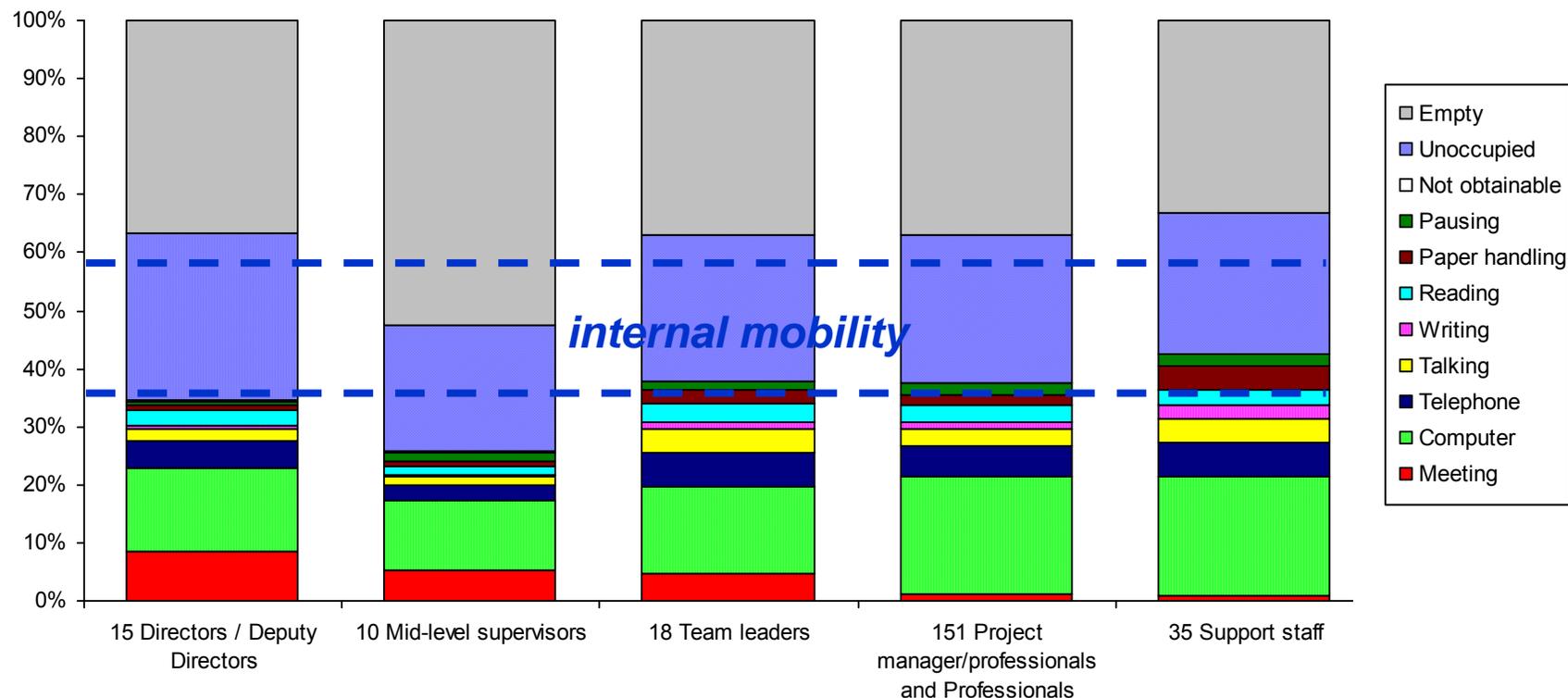
- *High importance placed on cultural change while attachment to older ways of working continues*
- *More openness, transparency, accessibility, and legibility*
- *Key workplace gaps identified; high dissatisfaction with the appearance of function of existing space*
- *Create a more attractive and stimulating environment*
- *Tension between individuals, concentrated work and a demand for increasing interaction*
- *Create neighborhoods, increase diversity in shared work settings*

# WorkPlace | key findings

- *High internal mobility – 35% of the time spent away from desk*
- *More interactive spaces to support teamwork*
- *Continued need for enclosed offices (15%) and “owned” spaces for everyone, not just managers*
- *Shift workspace allocation from primarily owned to primarily shared*
- *Potential for much more intensive space use*
- *Simplify individual work settings; be more flexible and consistent*

# WorkPlace | space study

- Similar mobility across all job functions
- Offices and open workspaces have similar level of occupancy
- Meetings at desks for Directors, Deputies, and Team Leaders



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*internal mobility*

# WorkPlace | key findings

- **Understanding Work Patterns**
  - Directors and Supervisors work in **teams** more than others
  - Everyone has a mix of **spontaneous and scheduled** meetings
  - Everyone **shares information** to accomplish their work
  - Everyone communicates **virtually and face-to-face**
  - Everyone works in a **variety of settings and locations**
  - Everyone works with people in **JCK and elsewhere**
  - Some people work virtually but do not have the **mobile IT** to support them

# Design *Development*

a **new space &**  
**new way of working**  
for PBS

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# Design *Development*

Mies **van** der Rohe



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# Design *Development*



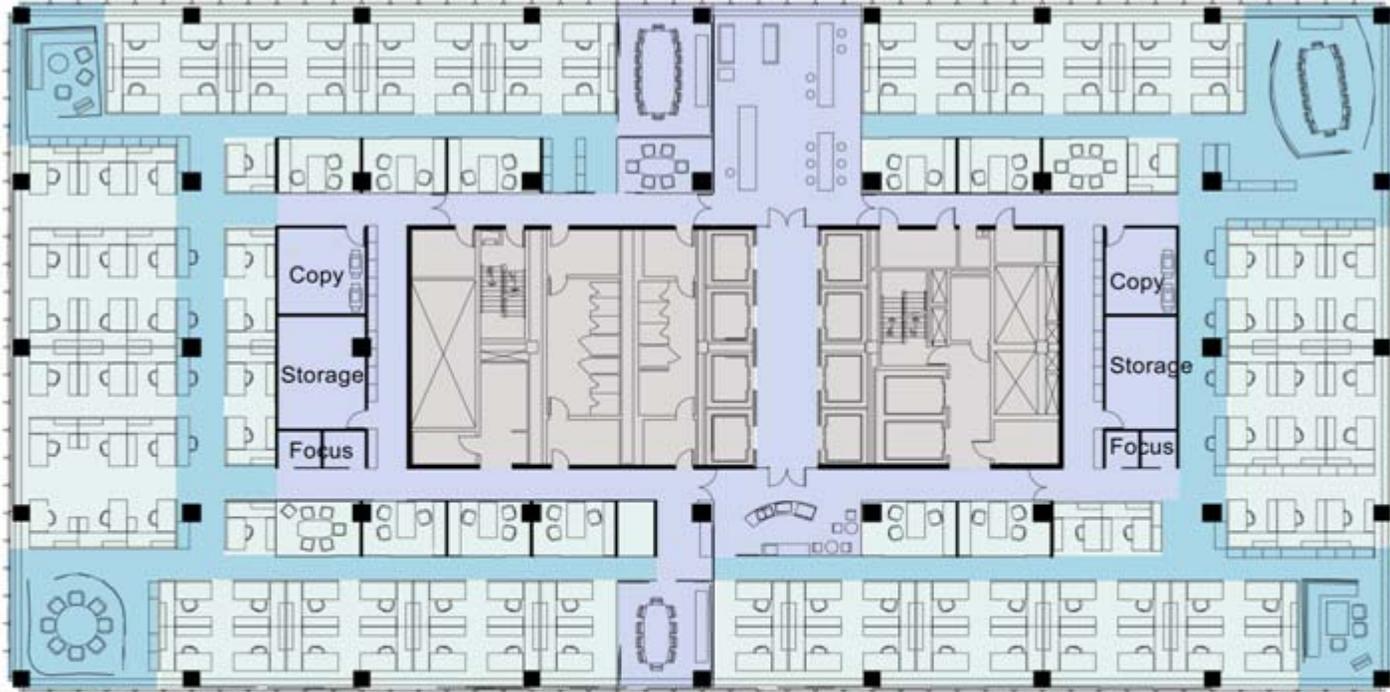
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# Design *Development*



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# Design *Development*

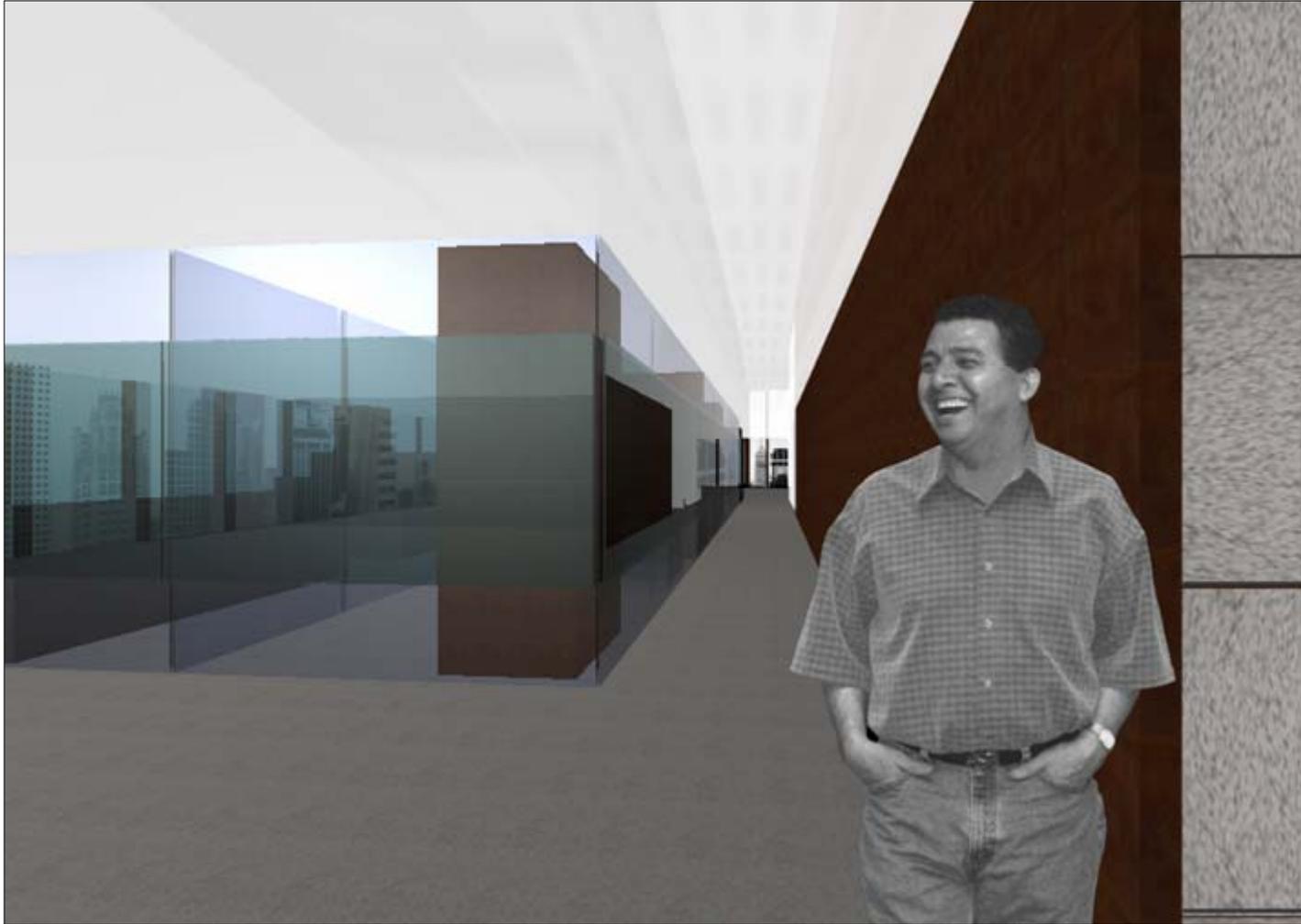


- Public
- Neighborhood Traffic/Collaborative Areas
- Private/Individual Space

JCK Federal Building

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# Design *Development*



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# Project Execution

a new space &  
new way of working  
for PBS

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# Participation | test lab

- Associates asked to consider the requirements of their job / work style and give their opinions on the following issues:
  - Level of privacy: types of panels and heights
  - Level of openness / enclosure: configuration of open workstations
  - Amount of layout space
  - Types of furniture elements located in individual workspaces
  - Use of open meeting spaces
  - Use of touchdown spaces
- Storage:
  - Amount of personal storage required and types of storage unit
  - Amount of local storage required and types of storage units
  - Amount of central storage required and types of storage units
  - Opinions regarding the types of finishes used within offices

# Participation | change management

## Keeping employees in the loop

- Check-out the website!  
<http://insite.greatlakes.gsa.gov/workplace2020>
- Periodic newsletters
- Weekly talks with division representatives
- Sign-up for lab tours
- Ergonomic furniture training

# The New Workspace in JCK

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new way of working  
for PBS

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# WorkPlace Strategy | summary design directions

## OLD SPACE

Mostly private individual work space

Very low visibility of people

Difficult to concentrate

Segregated lines of work



## NEW SPACE

Variety of owned and shared individual and group spaces

More accessibility of individuals and teams

Enclosed settings for concentration and limit disruption through protocols

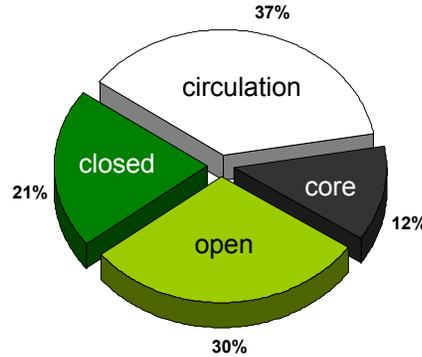
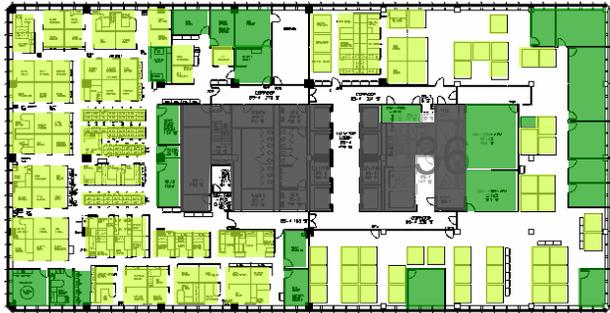
Commons space for informal interaction, display of work and ideas

# Great Lakes Region | WP20.20 parameters

- Standardize Workstation size: 64 sf, located on perimeter
- Standardize Private Office size: 120 sf, located on interior
- Lower workstation panel height to 51”
- Centralize file and storage system
- Increase the number of teaming/conference rooms to 1:5 ratio
- Increase personal storage
- Increase exposure to natural light and city views

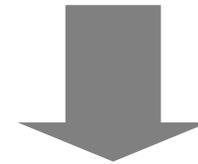
# Plan Analysis 36<sup>th</sup> floor | open vs. enclosed

pre 36



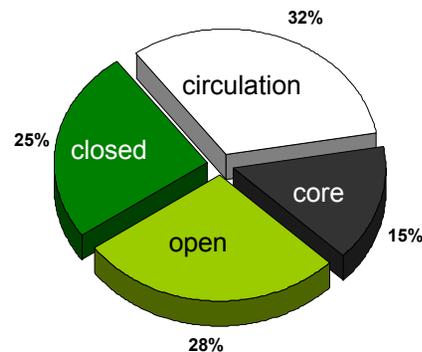
unclear wayfinding  
irregular space sizes  
random space distribution

**workstation size: 45 - 64 sf**  
**office size: 122 - 200 sf**



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post 36



logical wayfinding  
regular space sizes  
symmetrical space distribution

**workstation size: 64 sf**  
**office size: 115 sf**

# Great Lakes Region | WP20.20 Floor plan



# Before & After



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# Before & After



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# Before & After



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# Before & After



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# Before & After



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# Before & After



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# Before & After



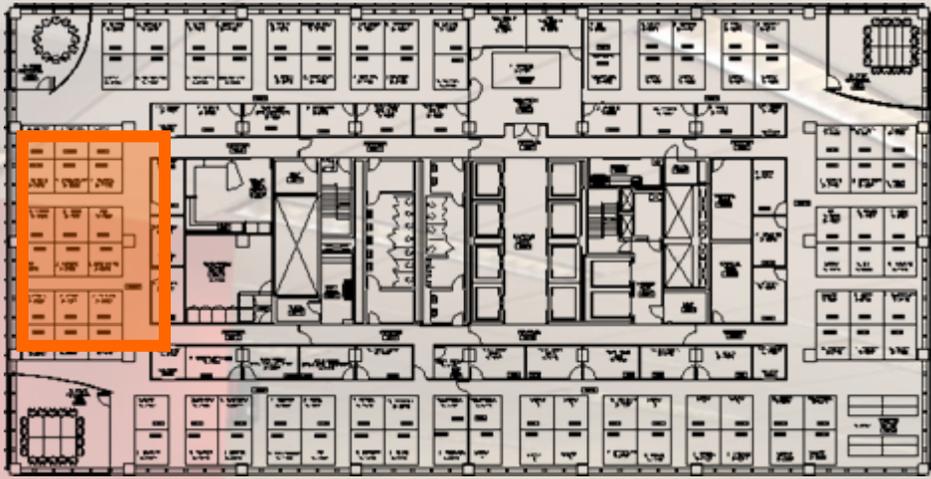
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# Post Occupancy Evaluation

a new space &  
new way of working  
for PBS

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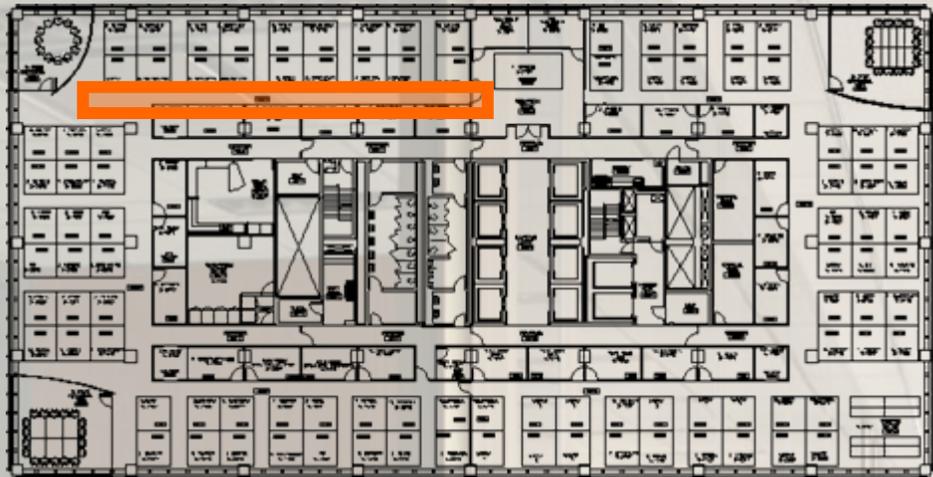




**OPEN WORKSTATIONS  
INCREASED VISUAL ACCESS**

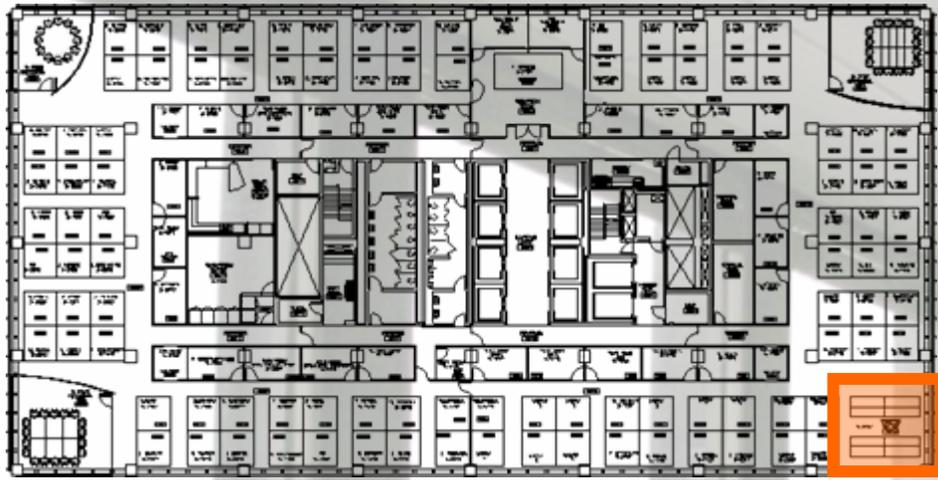


**NEW WORKPLACE**

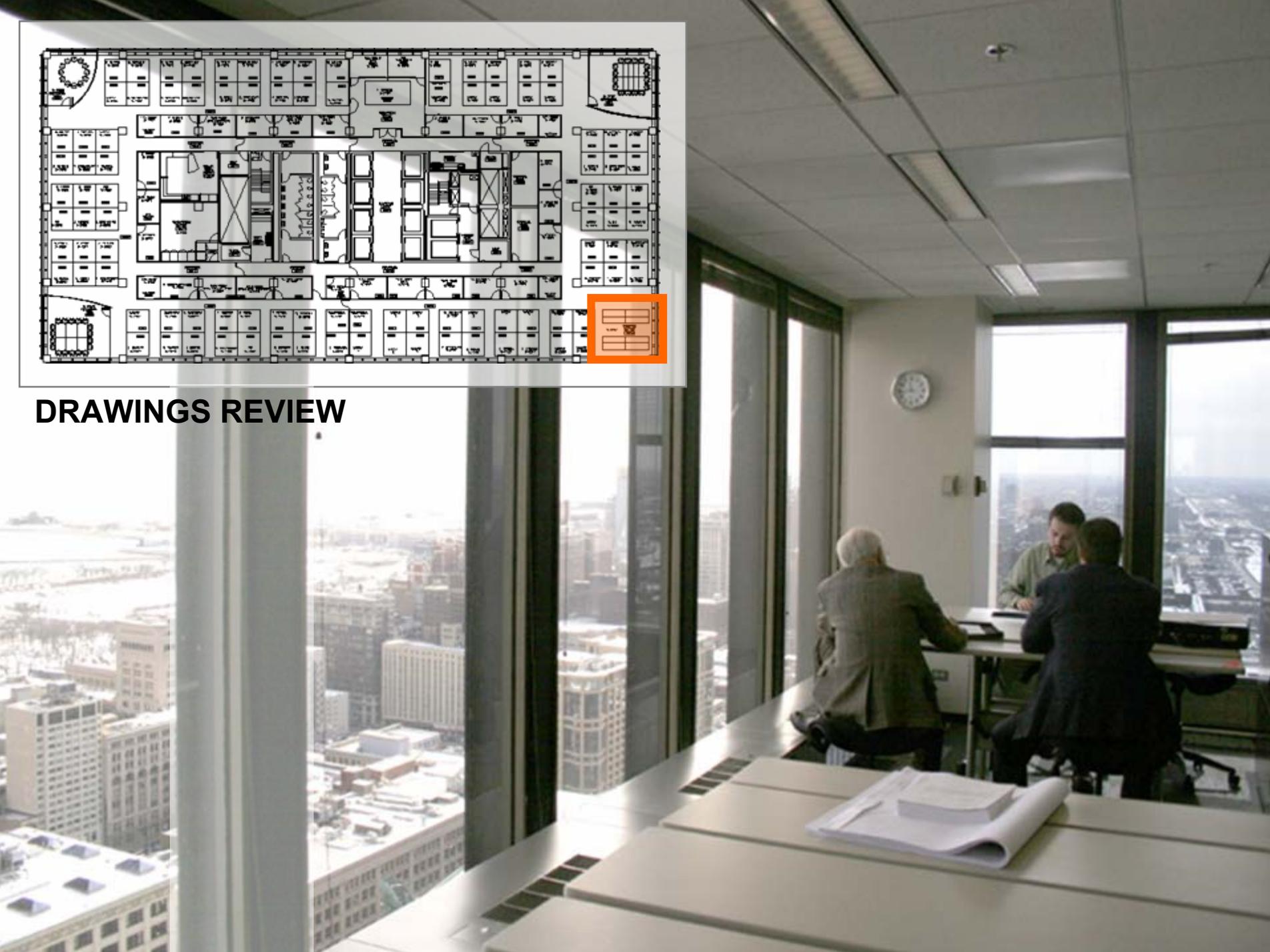


## GLAZED OFFICES PERIMETER WORKSTATIONS



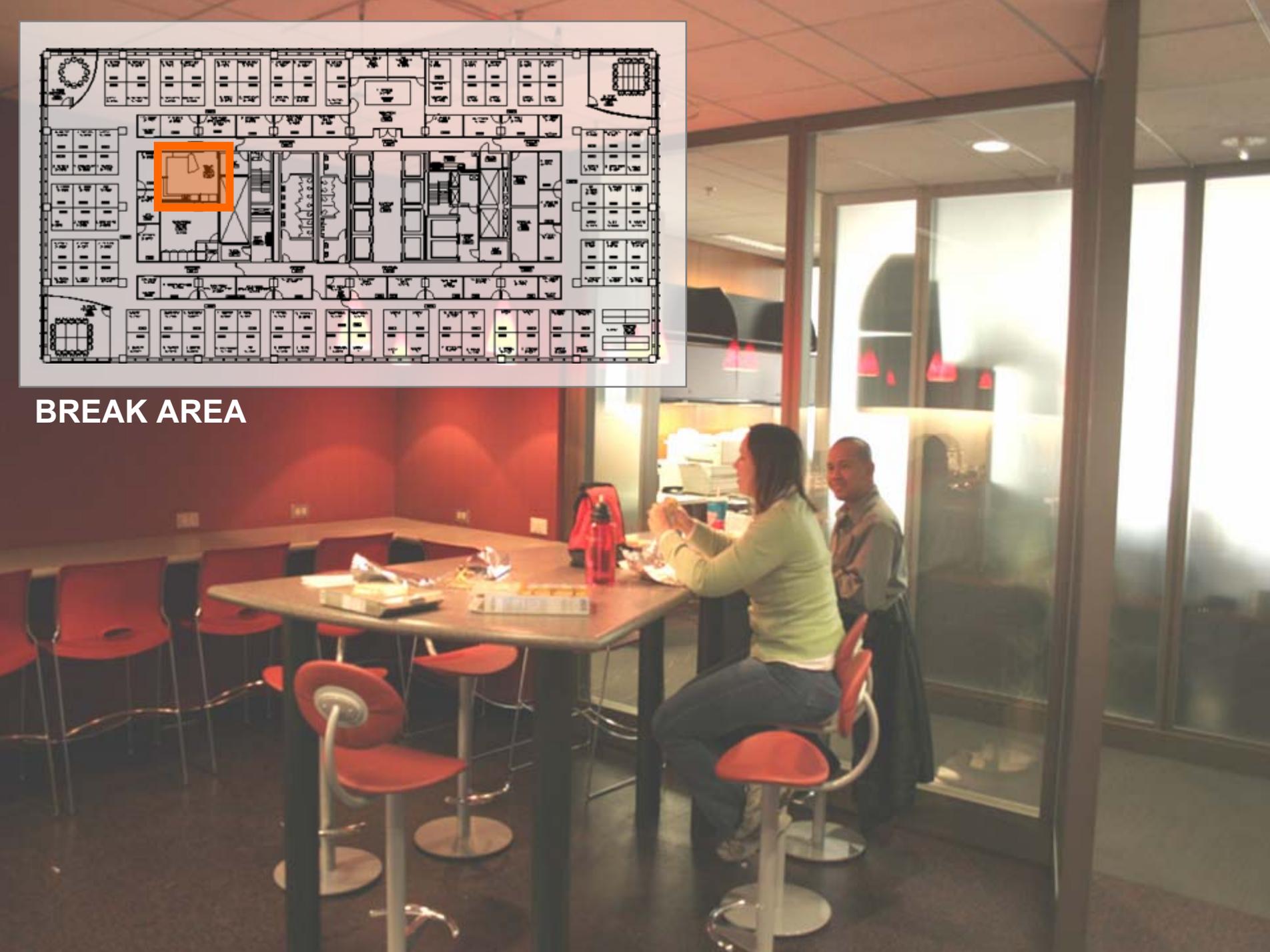


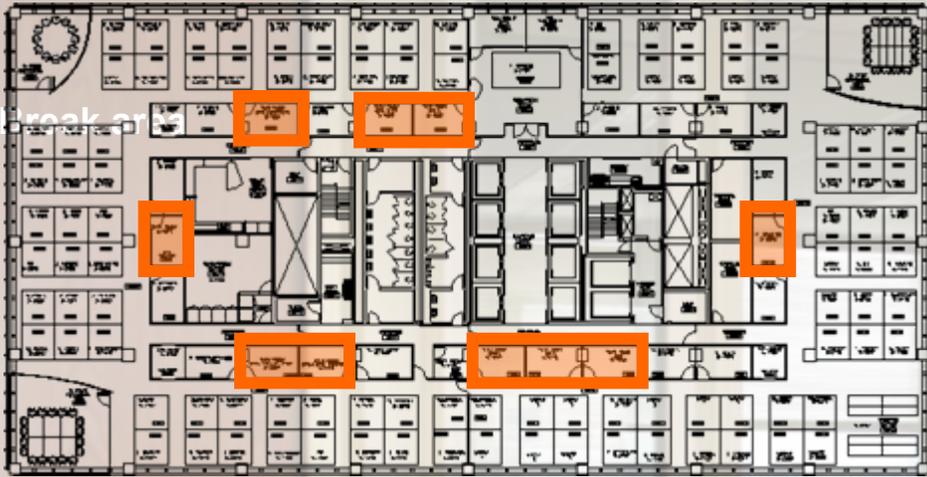
## DRAWINGS REVIEW





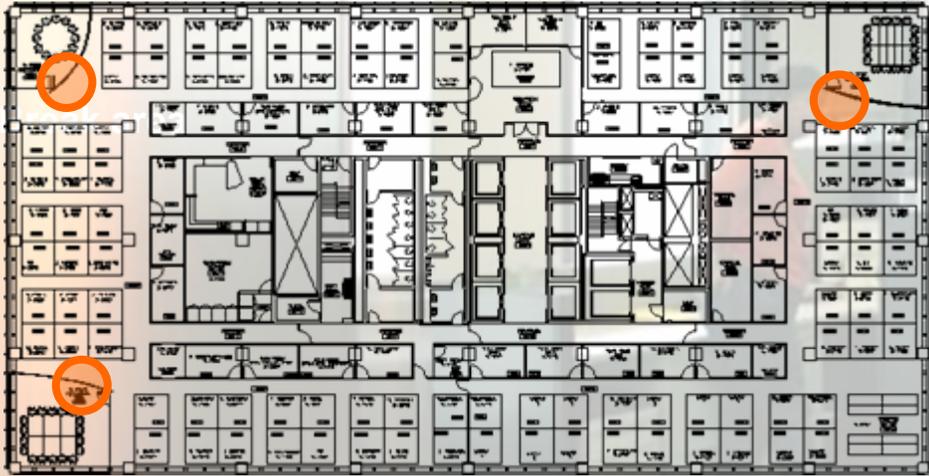
**BREAK AREA**





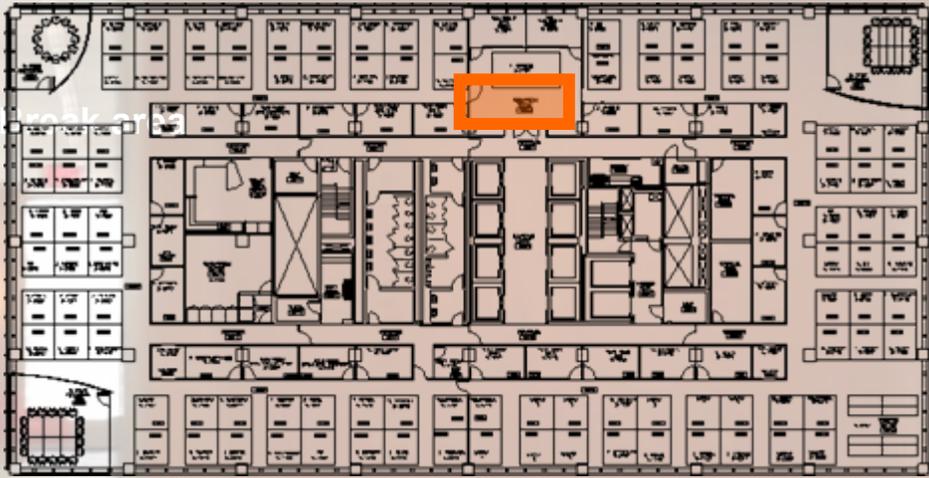
## GLAZED TEAM ROOMS





**OPEN  
SEATING  
AREA**





## RECEPTION / LOBBY



# Post Occupancy Tools

a new space &  
new way of working  
for PBS

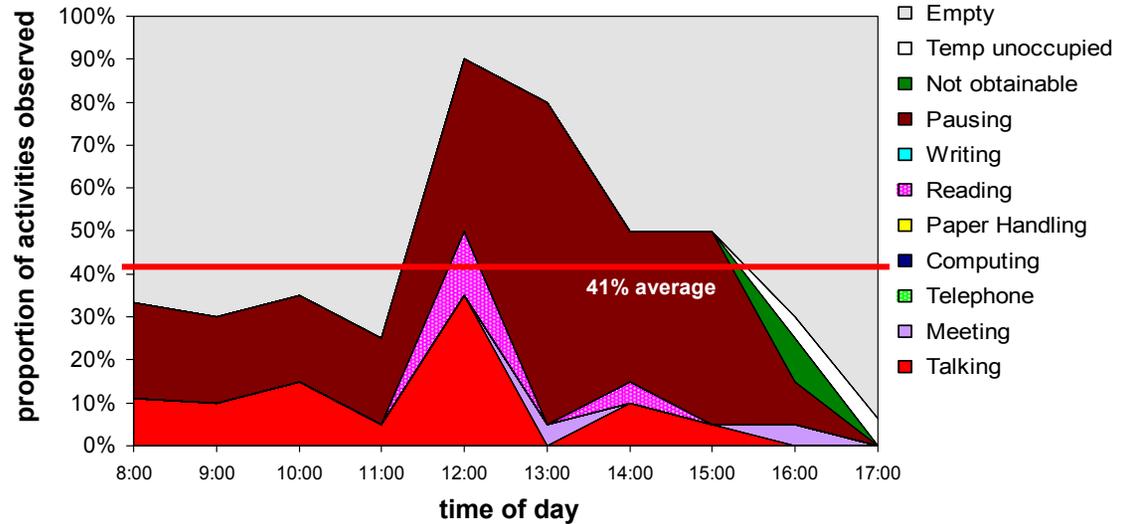
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# Work Patterns | number of people

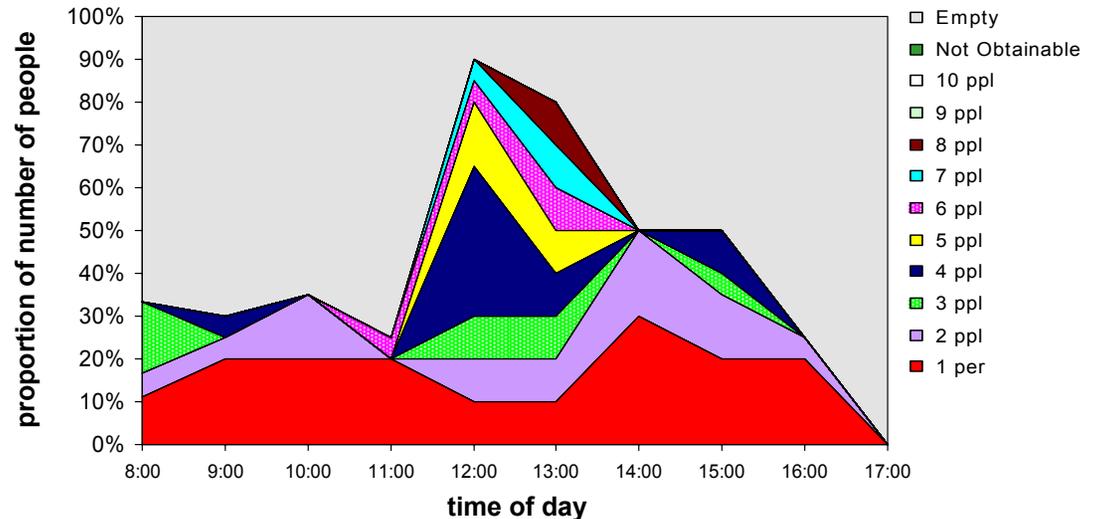
## Activity Patterns

support spaces | break room (2)



## Occupancy Patterns

support spaces | break room (2)



# Lighting

productivity

concentration

face to face  
communication

virtual  
communication

information  
sharing

support  
spaces

lighting

image

culture



- There are high levels of **satisfaction** with amount and quality of light
- Actual measured levels are **lower** than the previous space (no task lights, etc.)
- *How is the new space contributing to improvements?*

*Data source: Carnegie Mellon NEAT survey*

# Workplace 2020

## Maintaining a World-Class Work Environment

### Workplace 2020 Guidelines

2008



# Workspace Guidelines - Acoustical Privacy

- Open landscape design requires special considerations:
  - Keep sounds levels to a minimum in the open workspace
  - Speaker conference phone calls should take place in team or conference rooms
  - Quiet rooms or team rooms are available for necessary personal conversations
  - Avoid conversing across two or more workstations

# Lessons Learned

a new space &  
new way of working  
for PBS

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# Creating the Sustainable WorkPlace

## Tips for Designers

- Offer organizational development/analysis skills
- Ask client “why?”
- Consensus on goals, strategies, measures – then solutions
- Design for change thru flexibility
- Advocate & deliver sustainability
- Address GSA Hallmarks
- Do post-occupancy analysis

# Creating Your OWN Sustainable Workplace

## Tips for Owners and Tenants

- Hire good talent
- Involve all stakeholders
- Organization first, space second
- Use integrated design process
- Use workplace as strategic tool
- Consider non-space options
- Pursue LEED CI Silver or more
- Plan for change
- Commission
- Evaluate

# GSA Sustainable WorkPlace Resources

- GSA WorkPlace Program
- GSA Workplace Consultants  
Business Place Strategies, DEGW, Gensler, HOK Advance Strategies, Interior Architects, Studios Architecture
- GSA Office of Governmentwide Policy: Sustainable Development, Telework, Asset Management
- GSA Sustainable Design Program
- GSA Office of High Performance Buildings (coming soon)
- Whole Building Design Guide

*A sustainable workplace fully supports the individual and the organization without compromising future generations.*

# What we'd like our partners to remember...

- Powerful concepts mold detailed decisions
  - openness, transparency, accessibility, nimbleness
- Listen to nuance & tensions—address both
  - Privacy vs Accessibility
- Expose agency to broad ideas/trends—accept that not all fit the organization's culture or direction
  - Team Building vs Hoteling & Work at Home
- Evaluate early and often—using the organization's **own** goals as benchmark
  - Found Team Space, Convector, Privacy, Proximity
- Partner: Recognition, Awards, LEED

# The Sustainable Workplace

Questions?  
Comments?

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# Thank You

