

Workplace Solutions Library





Table of Contents

1. Introduction to the Workplace Solutions Library
2. Work Patterns
 - 2.1 Introduction to Work Patterns
 - 2.2 Work Pattern Survey
 - 2.3 A Typical Day in the Life
3. Space Configuration
 - 3.1 Introduction to Team Neighborhood Configuration
 - 3.2 Team Neighborhood Configuration Principles
 - 3.3 Workstation Configuration Principles
4. Furniture
 - 4.1 Introduction to System Furniture Components
 - 4.2 Furniture Selection Criteria
 - 4.3 Selected Products on the GSA Schedule
5. Other Areas of Interest



Introduction to the Workplace Solutions Library

GSA has created the Workplace Solutions Library to help our colleagues think about the way we design, create and use spaces. We have completed many projects, found the most effective tools, and learned how to get the best results from using those tools. With the Workplace Solutions Library, we intend to transfer what we have learned from those projects and research efforts to our professional colleagues and our clients.

Our research and pilot projects tell us that you cannot effectively design space or select the right furniture if you do not understand how people work. In terms of how people work, we have seen that many similarities exist within very diverse projects. By capitalizing on these similarities, we can help our colleagues make the best informed, and easily justified purchase, whether that is furniture, design, or construction.

The most important component of the Library, and the foundation for the rest of the information, is the work patterns section. It introduces you to the similarities we have seen in the way people work. The space configuration section provides neighborhood planning concepts and workstation configuration concepts. You can use these concepts as thought starters when you consider your own projects. The furniture section introduces you to the basic components of system furniture and ideas of selecting furniture components to suit the users' work patterns.

Basically, the Workplace Solutions Library is a documentation of our best practices. It does not cover everything, but it directs you to the right resources. If you need more information on other aspects of your project, such as change management, sustainable design, or interior design, you can visit the "Other Areas of Interest" section of the Workplace Solutions Library. You can reach our specialized assistance on topics such as developing workspace requirements by contracting a workplace specialist at GSA Workspace Delivery Program at: www.gsa.gov/workplace.



Introduction to the Workplace Solutions Library |video script

KK: Hi Bryant, Welcome to the GSA Workplace Solutions Library.

BR: Hey Kevin! Yeah, I've just gotten here and I'm looking around a bit. I guess we're virtual?

KK: Well, it's not really that complicated. It's not a high-tech video game., just a new tool to help our colleagues think about the way we design, create and use space.

BR: Well that sounds like something I could use- How did you go about researching it?

KK: As the senior architect of Workplace Delivery Program for GSA, I've been involved in a lot of projects, and we've looked at the tools that are most effective and the best results from using those tools. Believe it or not, some projects go better than others.

BR: I can DEFINITELY believe that!

KK: This Workplace Solutions Library is designed to transfer what we've learned from those t projects to our professional colleagues and our potential clients You know, this should give them a head start.

BR: Well, I know from personal experience, as a designer, that having access to previous successes . . .and mistakes, is invaluable. It really is amazing how many similarities exist within very diverse projects. AND when I consider how varied and broad the GSA portfolio is . .

KK: We have 362 million sf of space

BR:it's great how you've found these consistencies across all of GSA's projects.

KK: Yeah, and by capitalizing on these similarities, I think we can help our colleagues make the best informed, and easily justified purchase, whether that is furniture, design, or construction..

BR: That seems particularly important now. What are the pieces of the tool, Kevin? And which are in your opinion, the most important?

KK: There are several components, I guess the most important, or at least basic to the rest of the information, is the work patterns section. I've always said that you can't design effective space or select the right furniture if you don't understand how people work. The work pattern section introduces us to the similarities we have seen in the way people work, despite differences in title and grade level.

KK: In fact people work very similarly and need similar things in their space,

BR: And this little tool is going to open that world for me! Let me at it!

KK: Well, hold on there, it's not hard and fast! It's basically a documentation of our best practices. And it doesn't cover everything. But it directs you to the right resource. If you need more information on other aspects of your project, like change management, sustainable design, or interior design, you can visit the "Other Areas of Interest" tab on the main menu. Right up there somewhere. You can reach other specialized assistance on topics such as developing workspace requirements by contacting a workplace specialist such as myself or one in your local region at GSA Workspace Delivery Program at www.gsa.gov/workplace.

BR: Then I would get to work with you?

KK: If you are lucky.

BR: Well I feel lucky. How do I get started.

KK: By taking the work patterns survey. It will determine which of 6 work styles you have . . . and that will lead to furniture choices, neighborhood designs and all sorts of other data. If you are designing for a group, you might take a sampling of your colleagues and ask them to take the survey (or even take it for them).

BR: okay then, I'm off to the survey. And after that, I'm exploring some of the other parts of this tool. Seems to me there's a lot of work that went into this, and I bet I can profit by taking a look. I love getting smarter!

KK: Yes, please, have a look. And get back to me with comments or suggestions.

BR: Don't I always?

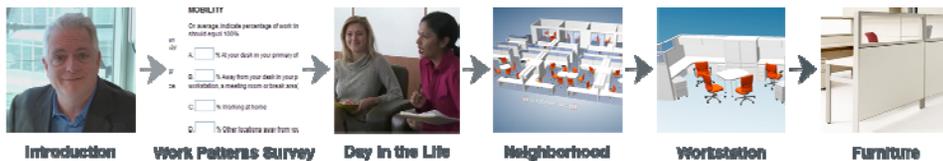
KK: Yep, I can count on you.

Site Tour

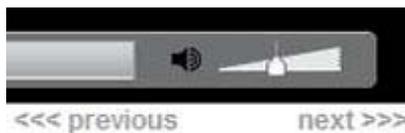
There are several different sections within this library, ranging in topics from work patterns to how to select the right panels for a workstation. As described in the Introduction video, you could either explore the different sections on your own or follow a guided tour.

Read below for more information.

Guided Tour:



If you are new to work patterns and workplace design, we suggest you follow our guided tour. From the Introduction, you can press "next" in the bottom right hand corner of the screen and be taken through the different sections- building on information gained from the previous. It all begins with the Work Pattern Survey which will help determine which work pattern you are. By pressing "next" in each subsequent section, you will see a typical day in the life for your work pattern, how to plan a neighborhood for your work pattern, and even how to configure a workstation and the specific furniture components for your individual work pattern.



Explore on your own:

If you are familiar with work patterns and workplace design or simply wish to explore at your own pace, you may choose to visit any of the five main sections found at the top left corner of the screen. More detailed information about each section can be found below:

The **Introduction Section** displays an introductory video that explains the Workplace Solutions Library. You may access the Site Tour and Visual Portfolio of Workspaces from here. Furthermore, this section is the start of the guided tour.

In **Work Patterns**, you will find details for six work patterns. Central to this section is the Work Patterns Survey that measures your work pattern and provides a tailored multimedia experience depending on your survey result.

Within **Space Configuration**, you may find a database of animations, images, and descriptions of specific space configurations at the neighborhood and workstation levels. You may also access the Visual Portfolio of Workspaces from here.

In **Furniture Selection** you can find details of the furniture components used in the neighborhoods and workstations of your determined work pattern. In addition, you may also find GSA's selected list of furniture.

Within **Other Areas of Interest**, you may access several documents pertinent to workplace solutions that have been provided by the GSA.



Table of Contents: Work Patterns

- 2.1 Introduction to Work Patterns
 - 2.1.1. Desk-bound Interactive
 - 2.1.2. Desk-bound Concentrative
 - 2.1.3. Internally-Mobile Interactive
 - 2.1.4. Internally-Mobile Concentrative
 - 2.1.5. Externally-Mobile Interactive
 - 2.1.6. Externally-Mobile Concentrative
- 2.2 Work Patterns Survey
 - 2.2.1 Introduction to Work Patterns Survey
 - 2.2.2 Work Patterns Survey Questionnaire
 - 2.2.3 Work Patterns Survey Data Analysis
 - 2.2.4 Work Patterns Survey Results
- 2.3 A Typical Day in the Life

Introduction to Work Patterns

Work patterns describe how and where people spend their time at work. Based on mobility and interaction, there are total six work patterns:

1. Desk-bound, interactive
2. Desk-bound, concentrative
3. Internally-mobile, interactive
4. Internally-mobile, concentrative
5. Externally-mobile, interactive,
6. Externally-mobile, concentrative

People are desk-bound if they spend over $\frac{3}{4}$ of the time at their own workstations or offices.

People are internally-mobile if they spend less than $\frac{1}{4}$ of the time outside the office and less than $\frac{3}{4}$ of the time at their own desks

People are externally-mobile if they spend more than $\frac{1}{4}$ of the time working outside the office.

People who have a concentrative work pattern typically report that, when at their desk, over half of their time is devoted to concentrative work including computer-based tasks, composing emails, reading, writing etc.

People who have an interactive work pattern typically report that, when at their desk, over half the time is spent on interacting with others in person or over the phone. To find out what your work pattern is, please take the work pattern survey.

Level of interaction at desk	High	<p>Desk-bound</p> <p>> 75% time at their own desk</p> <p>Interactive</p> <p>> 50% of desk-time communicating with others</p>	<p>Internally-Mobile</p> <p>< 75% time at their own desk < 25% outside the office</p> <p>Interactive</p> <p>> 50% of desk-time communicating with others</p>	<p>Externally-Mobile</p> <p>> 25% outside the office</p> <p>Interactive</p> <p>> 50% of desk-time communicating with others</p>
	Low	<p>Desk-bound</p> <p>> 75% time at their own desk</p> <p>Concentrative</p> <p>> 50% of desk-time working individually</p>	<p>Internally-Mobile</p> <p>< 75% time at their own desk < 25% outside the office</p> <p>Concentrative</p> <p>> 50% of desk-time working individually</p>	<p>Externally-Mobile</p> <p>> 25% outside the office</p> <p>Concentrative</p> <p>> 50% of desk-time working individually</p>
		Low	Time away from desk	High

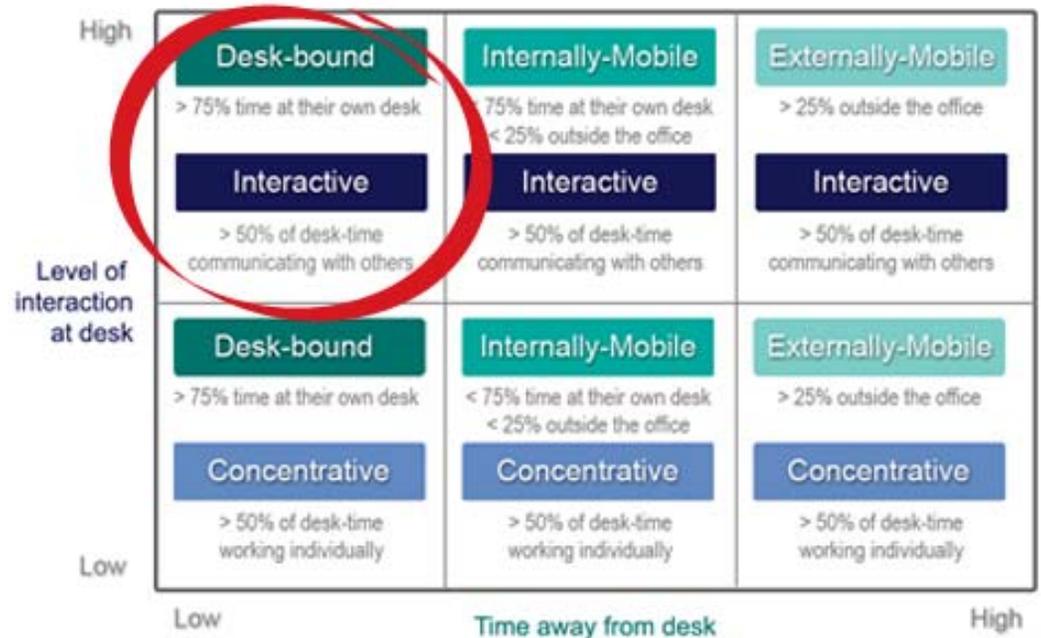
Desk-Bound, Interactive Work Pattern

If you spend over three quarters of the working hours at your own desk then you have a desk-bound work pattern. If over half of the time you spend at your desk is taken up by talking to someone face-to-face or on the phone then you have a desk-bound, interactive work pattern.

Supervisors, program managers, receptionists, call center staff, and help desk employees often have the desk-bound, interactive work pattern.

People with this work pattern often want their workplace to have the following attributes:

- Being able to interact with others at their desk—phone calls, two to three person meetings, or two persons working side-by-side
- Comfortable furniture and lighting at desk for working a long stretch of time
- Access to natural light and outside views from individual workspaces
- Work surface and storage at desk for frequently accessed paper documents
- Quiet places to go for concentrative work and conference calls
- Access to meeting rooms for both ad hoc and scheduled meetings
- Mobile technology and infrastructure for working away from the desk—laptops, power and data outlets everywhere, VOIP phones, etc.



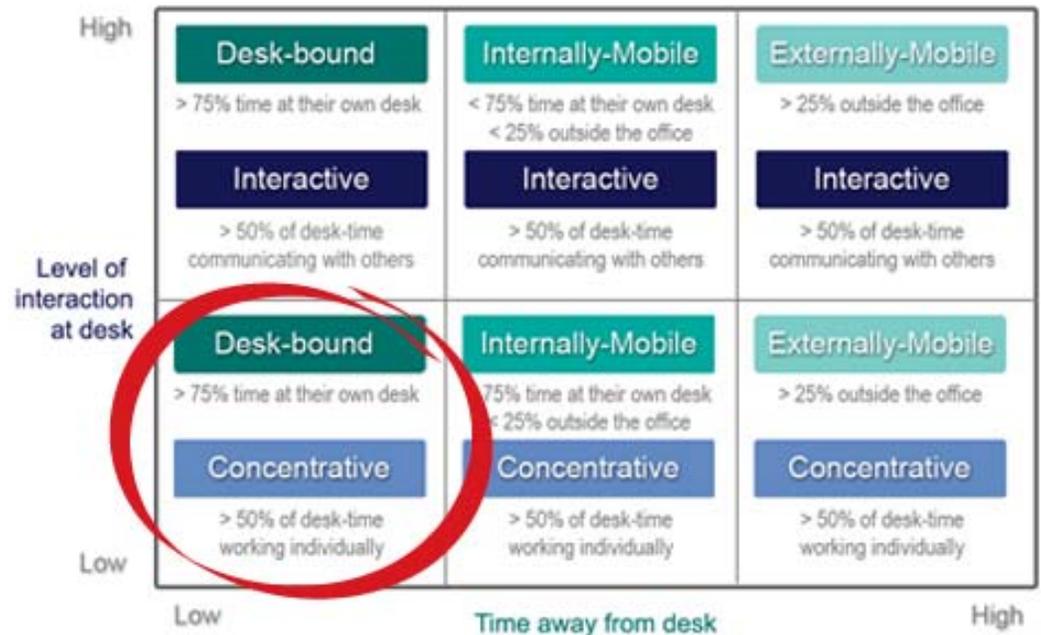
Desk-Bound, Concentrative Work Pattern

Having a desk-bound, concentrative work pattern means you spend over three quarters of your working hours in the office, and over half of that time is spent at your desk with concentrative solo work instead of talking to others.

Accountants, budget analysts, paralegals, programmers, data entry staff, and some researchers often have this work pattern.

People with this work pattern often want their workplace to have features such as:

- Having individual workspaces in a quiet environment in order to concentrate
- Comfortable furniture and lighting at desk for working long stretches of time
- Access to natural light and outside views from individual workspaces
- Work surface and storage at desk for frequently accessed paper documents
- Additional file storage near desk for infrequently accessed paper files
- Having places for phone calls, impromptu interactions, and scheduled meetings without worrying about distracting others
- Access to big work surface for working with unusually large amount of paper documents
- Mobile technology and infrastructure for working away from desk—laptop, VOIP phones, power and data outlets, etc.



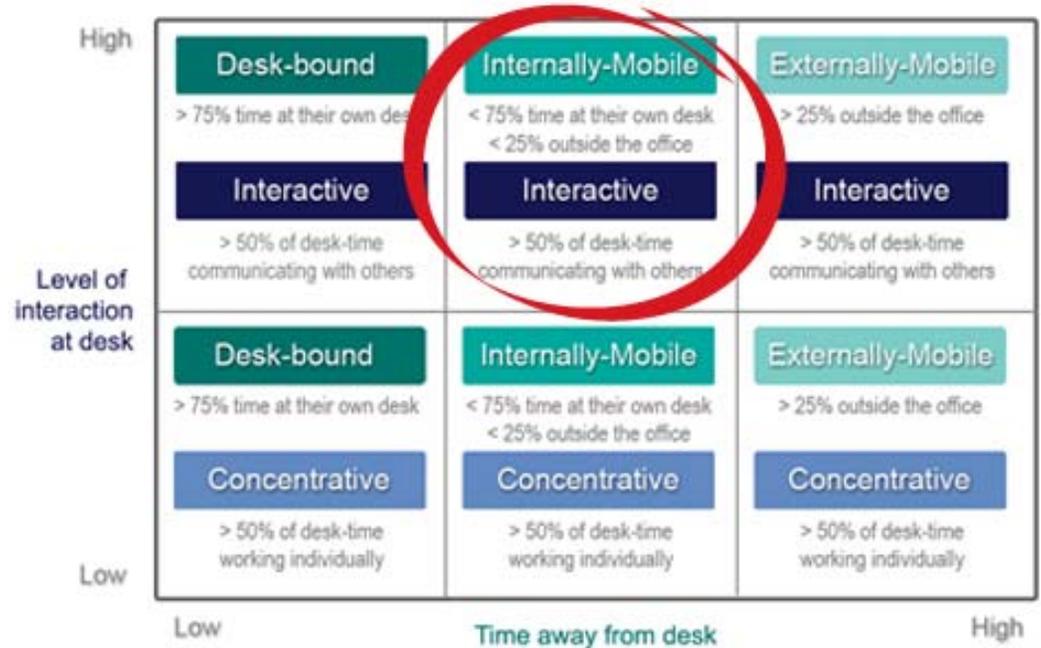
Internally-Mobile, Interactive Work Pattern

If you spend less than ¼ of your working hours outside the office and less than ¾ of the working hours at your own desk, then you have an internally-mobile work pattern. Having an interactive work pattern means that more than half of the time you spend at your own desk is taken up by talking to others either on the phone or in-person.

Project managers, client managers, designers, and some engineers often have this work pattern.

Workplace attributes that are usually desirable to people with this work pattern include:

- Access to a variety of work settings for a broad range of activities—spaces for both ad hoc and scheduled meetings, place for conference calls, a quiet environment when concentration is needed
- Visual access across the work space to know who is where and what is taking place
- Being able to interact with one or two persons at desk meetings or working side-by-side
- Comfortable furniture and lighting at desk for working a long stretch of time
- Access to natural light and outside views from individual workspaces
- Work surface and storage at desk for frequently accessed paper documents
- Mobile technology and infrastructure for working anywhere in the office—laptops, VOIP phones, power and data outlets, etc.



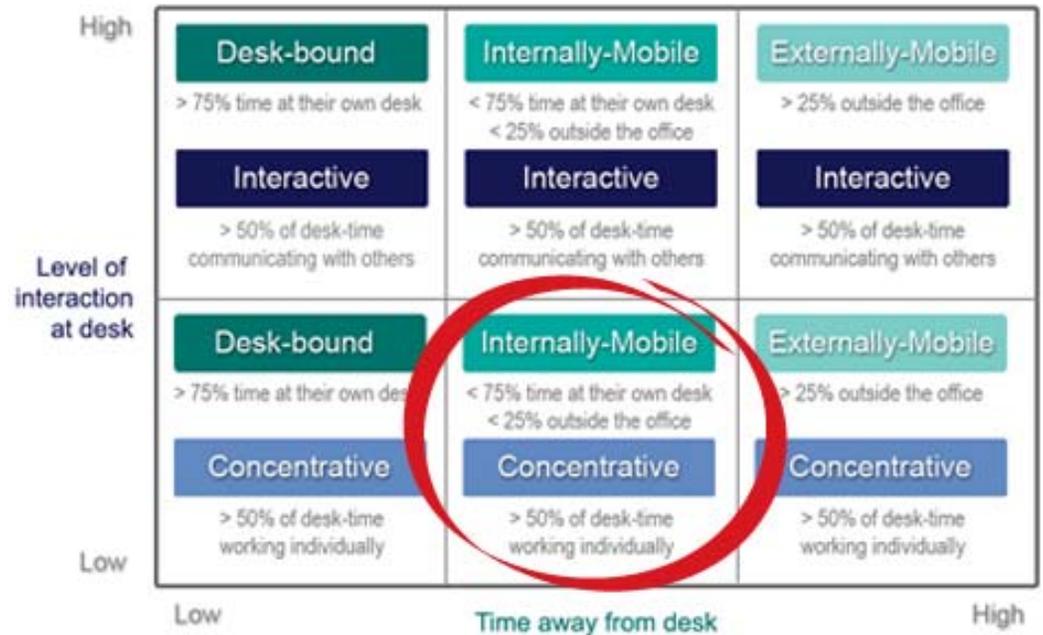
Internally-Mobile, Concentrative Work Pattern

If you spend less than ¼ of your working hours outside the office and less than ¾ of the working hours at your own desk, then you have an internally-mobile work pattern. Having a concentrative work pattern means that more than half of the time you spend at your own desk is taken up by concentrative solo work instead of talking to others.

People who often have the internally-mobile, concentrative work pattern include CFOs, comptrollers, some engineers, and many scientists.

People with this work pattern often want their workplace to have features such as:

- Individual workspaces in a quiet environment in order to concentrate
- Access to a variety of work settings for a broad range of activities—places for both ad hoc and scheduled meetings and places for conference calls.
- Comfortable furniture and lighting at the desk for working a long stretch of time
- Access to natural light and outside views from individual workspaces
- Work surface and storage at desk for frequently accessed paper documents
- Mobile technology and infrastructure for working anywhere in the office—laptops, VOIP phones, power and data outlets, etc.



Externally-Mobile, Interactive Work Pattern

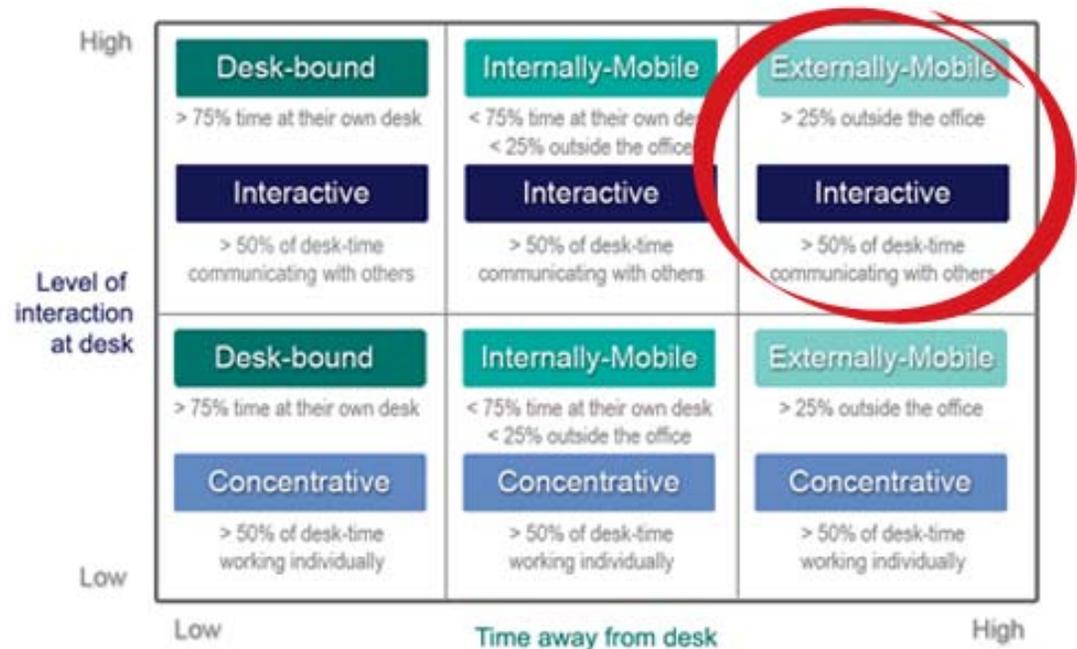
Having an externally-mobile, interactive work pattern means that you spend over ¼ of the total working hours working outside the office and over half of the time you spend in a private office or a workstation is taken up by interacting with others over the phone or in-person.

People who tend to have the externally-mobile, interactive work pattern include many executive managers, sales and marketing staff, and management consultants.

Given the amount of time people with this work pattern tend to spend outside the office, their assigned individual workspaces tend to be under-utilized. Therefore, instead of assigned offices or workstations, they are often provided with access to unassigned workstations, shared offices, and a variety of support workspaces.

Workplace attributes that are often desirable to people with this work pattern include:

- Access to a variety of work settings in the office for a broad range of activities—impromptu interactions, scheduled meetings, conference calls, and heads-down work
- Access to shared offices or workstations that support 2 or 3 person meetings or working side-by-side
- Mobile storage units or lockers for those without assigned individual workspaces
- Mobile technology and infrastructure for working anywhere and anytime—laptops, power and data outlets everywhere in the office, VOIP phones, blackberries, VNP, etc.



Externally-Mobile, Concentrative Work Pattern

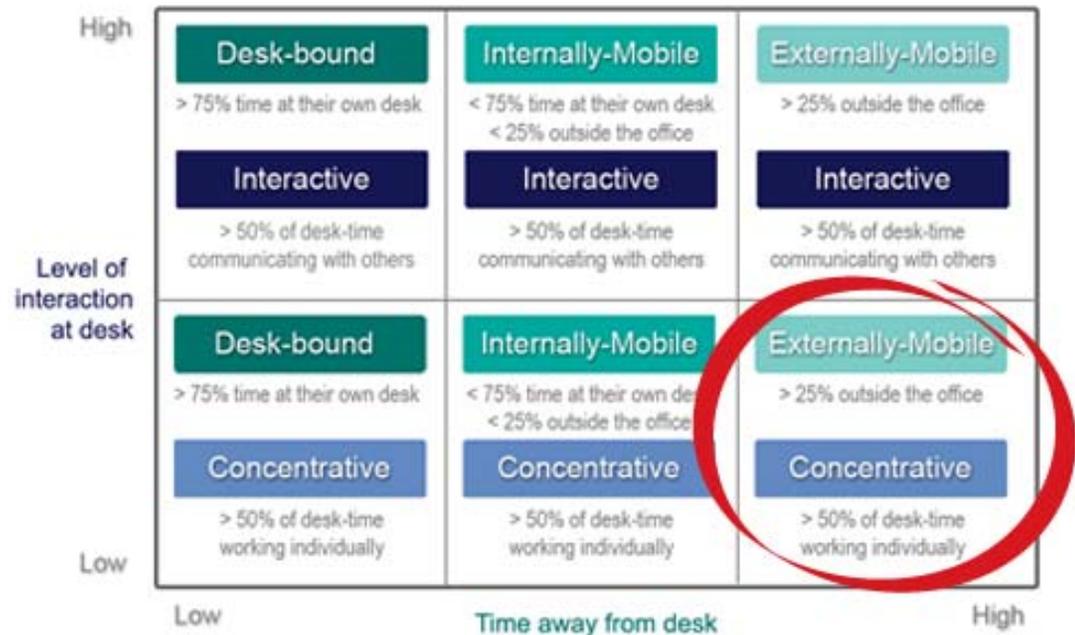
Having an externally-mobile, concentrative work pattern means that you spend over ¼ of the total working hours working outside the office and over half of the time you spend in a private office or a workstation is taken up by concentrative solo work instead of talking to others.

People who tend to have the externally-mobile, concentrative work pattern include auditors, field inspectors, and some attorneys.

Given the amount of time people with this work pattern tend to spend outside the office, their assigned individual workspaces tend to be under-utilized. Therefore, instead of assigned offices or workstations, they are often provided with access to unassigned workstations, shared offices, and a variety of support workspaces.

Workplace attributes that are often desirable to people with this work pattern include:

- Access to individual workspaces in a quiet environment for concentrative work
- Mobile storage units or lockers for those without assigned individual
- Access to a variety of work settings in the office for a broad range of activities—impromptu interactions, scheduled meetings, conference calls, and heads-down work
- Mobile technology and infrastructure for working anywhere and anytime—laptops, power and data outlets everywhere in the office, VOIP phones, blackberries, VNP, etc.





Work Patterns Survey

Hi. Welcome to the Work Pattern Survey section of the Workplace Solutions Library. This survey can be used to identify your unique work pattern or the prevalent work pattern for your group. Once you identify the work pattern for yourself or your group, you're well on your way to discovering the furniture and space configurations that best support the way you work.

This survey is quick and easy to complete. It consists of 8 total questions; 4 questions about your mobility (where you typically spend time working) and 4 about your level of interaction (how often you're talking or meeting with a colleague or team).

You can utilize this survey and its results in a few different ways:

- You can take this survey for yourself to learn more about how you work and what furniture or work environments best support your work.
- You may also take the survey as a representative for an entire team or group. When answering the questions think about how the majority of people work- use the average for your group.
- Another option is to have multiple people within a group take this survey. You would need to collect each of their work pattern results and find the predominant one for their group. If there is no work pattern that stands out, and it seems to vary group by group, you will need to include the different team neighborhoods for each work pattern and plan accordingly. Your workplace designer will be able to strategize the best fit.

After you complete the survey, your results with your identified work pattern will be displayed. You will also be able to view a short video with a day in the life of someone with your work pattern to help validate the results.

If you don't think the results quite fit the bill, feel free to take it again or administer it to more people in your group.

Just press next and the survey will begin.

Work Pattern Survey Questionnaire

Tips:

When considering your average time, visualize your calendar for an entire month. For instance, you may spend three full weeks in the office but spend the fourth week at a client's office or traveling for business; this would be ¼ (or 25%) away from your primary office.

Tips:

When considering your level of interaction, also take into account the unscheduled interactions. For instance, as a manager you may have employees dropping by your office throughout the day, or as an administrative assistant have to direct phone calls throughout the day. These, along with your scheduled meetings and conference calls should be included with your total time for E and F.

Mobility Survey Questions:

On average, indicate percentage of work time you spend at these locations. Your total time should equal 100%

- A. ____% At your desk in your primary office
- B. ____% Away from your desk in your primary office (such as at other employee's workstation, a meeting room or a break area)
- C. ____% At home
- D. ____% Other locations away from your primary office (including other government offices, client sites or business travel)
- ____% TOTAL TIME

Interaction Survey Questions:

On average, when **at your desk** in your **primary office**, indicate what percentage of work time you spend in the following ways. *Your total time should equal 100%. Please indicate a unique percentage for each task, i.e. no two percentages should be equal*

- E. ____% In-person interaction at your desk (such as talking to a colleague or serving a customer)
- F. ____% On the phone at your desk (all phone use, including conference calls)
- G. ____% Focused work including reading and writing (such as research, writing, contracting or legal)
- H. ____% Processing information with paper or electronically (such as accounting, clerical, or data processing)
- ____% TOTAL TIME

Work Pattern Survey Data Analysis

Mobility Survey Questions:

On average, indicate percentage of work time you spend at these locations. Your total time should equal 100%

- A. ____% At your desk in your primary office
- B. ____% Away from your desk in your primary office (such as in other employee's workstation, a meeting room or break area)
- C. ____% Working at home
- D. ____% Other locations away from your primary office (including other government offices, client sites or business travel)
- ____% TOTAL TIME

Interaction survey questions:

On average, when **at your desk** in your **primary office**, indicate what percentage of work time you spend in the following ways. *Your total time should equal 100%. Please indicate a unique percentage for each task, i.e. no two percentages should be equal*

- E. ____% In-person interaction at your desk (such as talking to a colleague or serving a customer)
- F. ____% On the phone at your desk (all phone use, including conference calls)
- G. ____% Focused work including reading and writing (such as research, writing, contracting or legal)
- H. ____% Processing information with paper or electronically (such as accounting, clerical, data processing)
- ____% TOTAL TIME

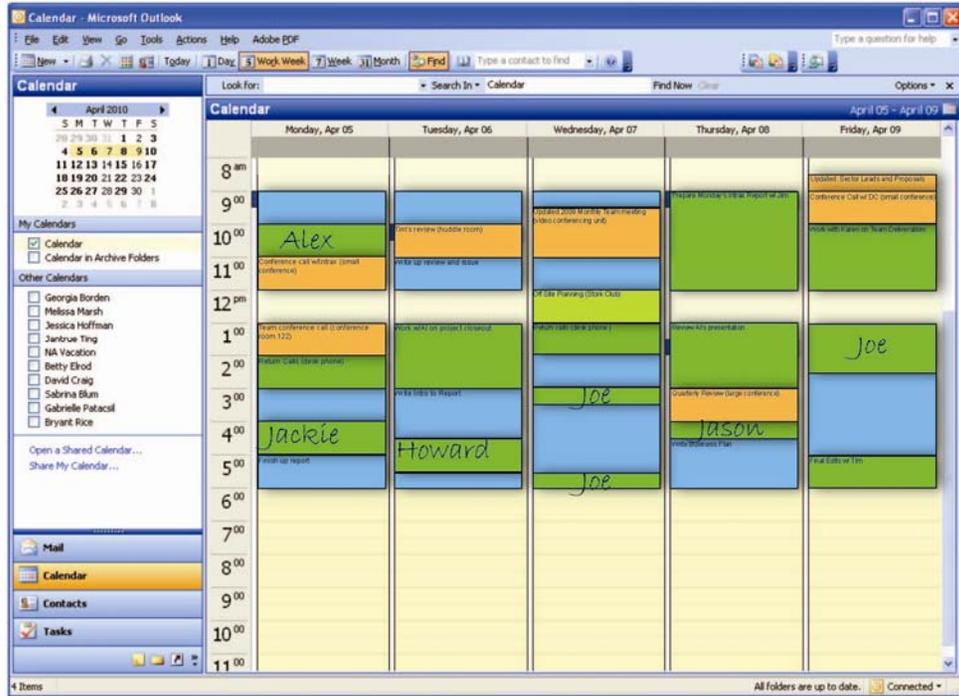
Based on the responses to the mobility survey questions, there are three work patterns:

1. Desk-bound if $A \geq 75\%$,
2. internally-mobile if $A < 75\%$ and $(C+D) < 25\%$,
3. externally-mobile if $(C+D) \geq 25\%$

Based on the answers to the interaction survey questions, there are two work patterns:

1. Interactive if $(E+F) > 50\%$,
2. Concentrative if $(G+H) > 50\%$

Work Pattern Survey Result | Desk-Bound, Interactive



Hi, I am Mike. I am a team manager.

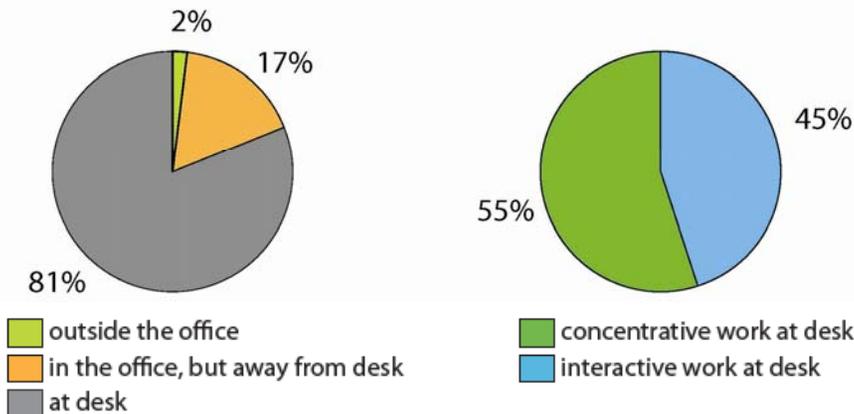
According to your answers to the work pattern survey, we have the same work pattern—desk-bound, interactive. Other people who often share our work pattern include supervisors, program managers, call center staff, and help desk employees.

Having the desk-bound, interactive work pattern means that we spend over three quarters of the time working at our own desk and, when we are at desk, we spend more than half the time interacting with others either on the phone or in person.

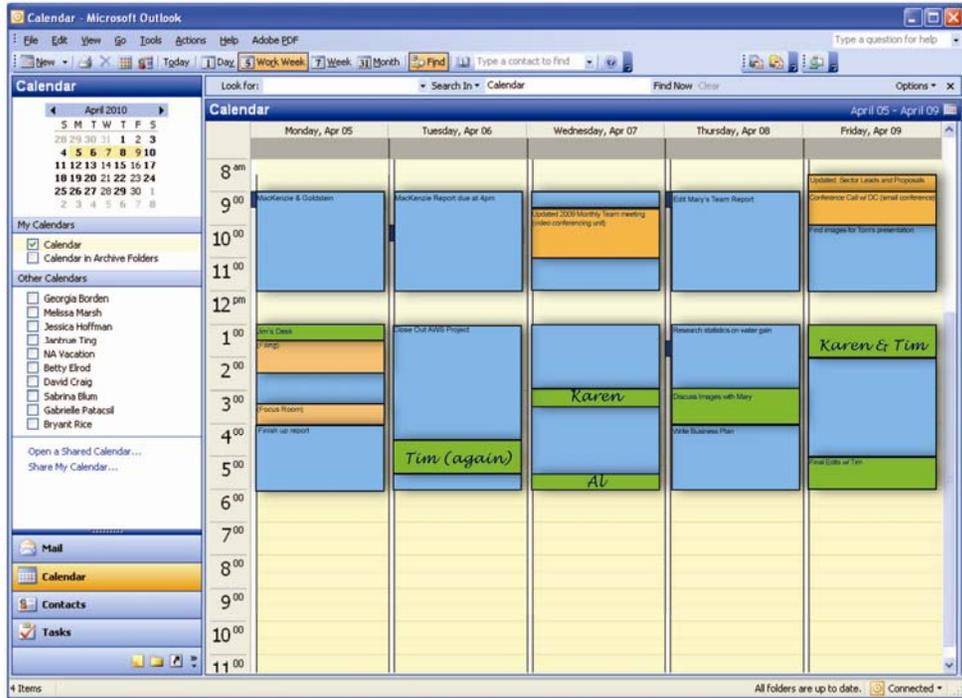
This is what my week usually looks like—the green is when I am at my desk talking to someone on the phone or face-to-face; the blue is when I am at desk working alone; the orange is when I am away from my desk for meetings or other reasons. Overall, over 75% of my working hours are spent at my desk; over 50% of my time at desk is spent talking to someone.

When it comes to workspaces, they need to enable my collaboration with others both at my own desk and elsewhere. Because I spend so much time at my desk, it needs to be comfortable enough for me to work there for a long stretch of time. And, when I need to do heads-down work, there needs to be a quiet environment where I can concentrate.

My workplace does a very good job supporting what I do. Let's take a look at a typical day of my life in the office and how my workplace supports me.



Work Pattern Survey Result | Desk-Bound, Concentrative



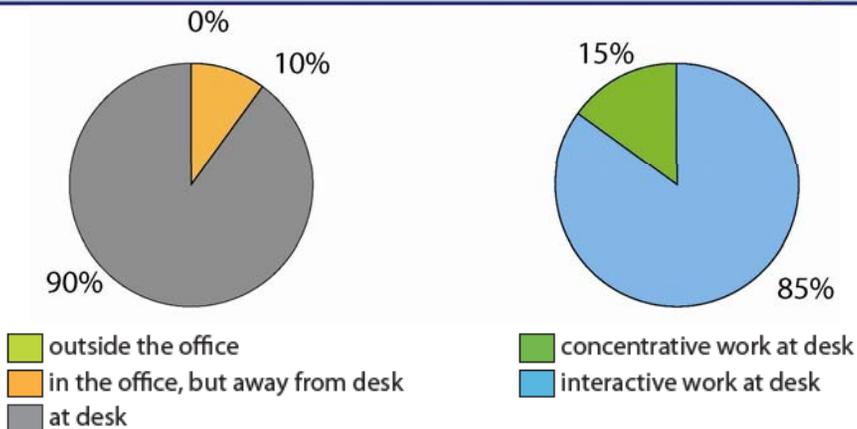
Hi, I am Ellen. I am an accountant.

Your survey result shows that you have the same work pattern as I do—desk-bound, concentrative. Having a desk-bound work pattern means that we spend over three quarters of our working hours at our own desks; having a concentrative work pattern means that, when we are at our own desks, we spend more than half of that time doing work individually instead of talking to someone on the phone or in person. Other professions that tend to have the same work pattern include analysts, paralegals, programmers, data entry staff, and some researchers.

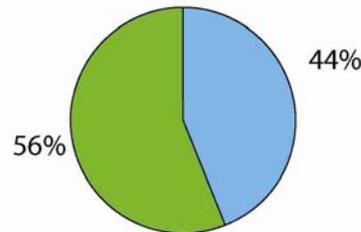
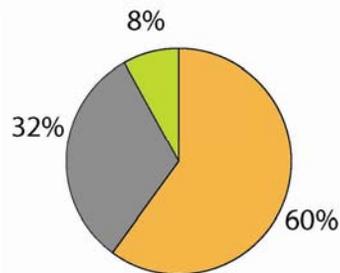
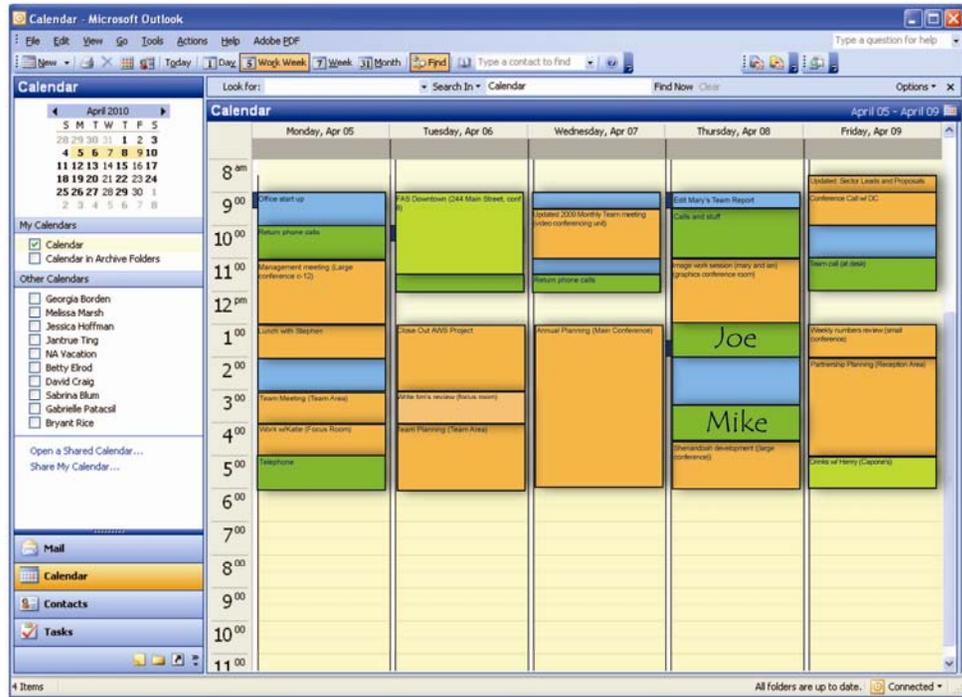
Our typical weeks could look similar to this sample calendar. On this calendar, blue is the time spent at desk doing concentrative solo work; green is the time spent at desk talking to someone in person or on the phone; orange is the time spent away from desk for meetings or other tasks. Taken as a whole, over 75% of our working hours are spent at our desk and over half of that at-desk time is spent on heads-down individual work.

When planning for workplaces, we want our desks to be in a quiet environment so that we can concentrate. Considering how much time we spend at our own desks, we want them to be comfortable enough for us to work for a long stretch of time. On the other hand, we also need places where we can have meetings and conference calls without distracting others.

My workplace works very well for me. Let's take a look at a typical day of my life in the office and how my workplace supports me.



Work Pattern Survey Result | Internally-Mobile, Interactive



- outside the office
- in the office, but away from desk
- at desk
- concentrative work at desk
- interactive work at desk

Hi, I am Jenna. I am a division director.

According to your answers to the work pattern survey, you have an internally-mobile, interactive work pattern just as I do. Other people who tend to have the same work pattern include team managers, program coordinators, designers, and engineers.

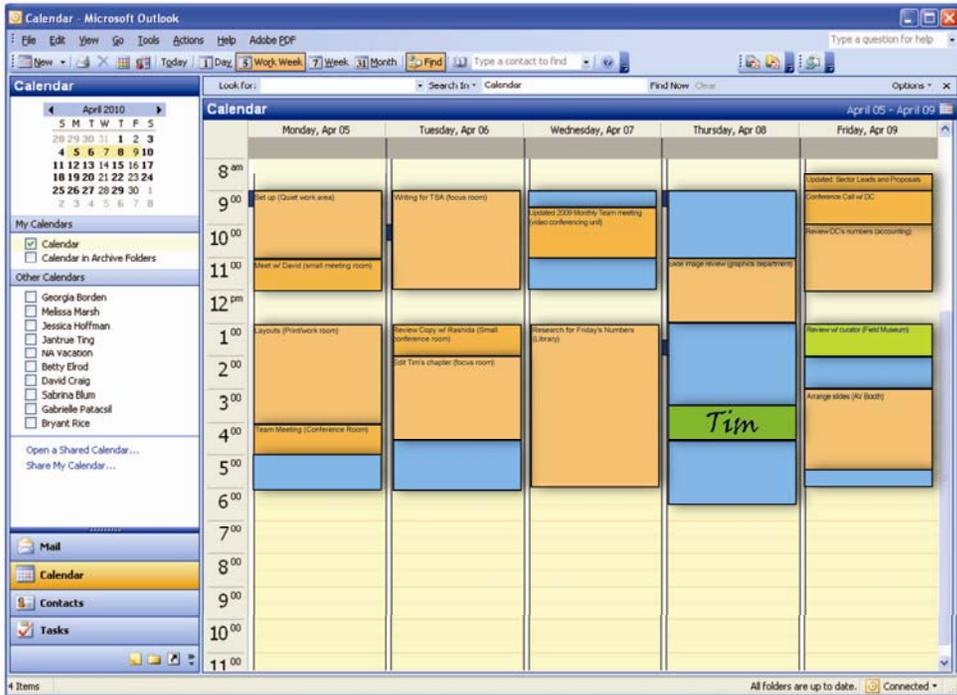
Having an internally-mobile, interactive work pattern means that we, by and large, spend over three quarters of our working hours in the office but much of that time is spent somewhere other than our own desks. When we are at our own desks, we usually spend more than half of the time talking to people either on the phone or in person.

A typical workweek of someone with an internally-mobile, interactive work pattern might look like this sample calendar. On the calendar, orange indicates time spent in the office but away from one's own desk; dark green indicates time spent at one's own desk talking with someone on the phone or in person; blue indicates time spent at desk working alone; light green indicates time spent working outside the office. On the whole, less than 3/4 of the time is spent at desk, less than 1/4 of the time is spent working outside the office.

People with an internally-mobile, interactive work pattern typically look for a variety of work settings in the workplace—individual workspaces for interaction at desk, meeting rooms of different sizes for small to large group interactions, quiet places to go for heads-down work, and acoustic privacy for uninterrupted or confidential phone calls.

My workplace provides all of the above. Let's take a look at a typical day of my life in the office and how my workplace supports what I do.

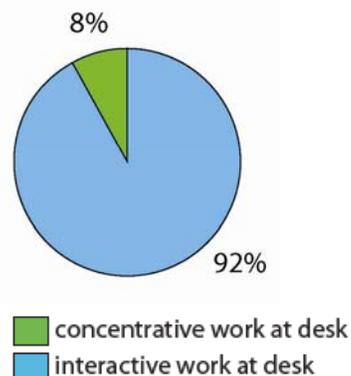
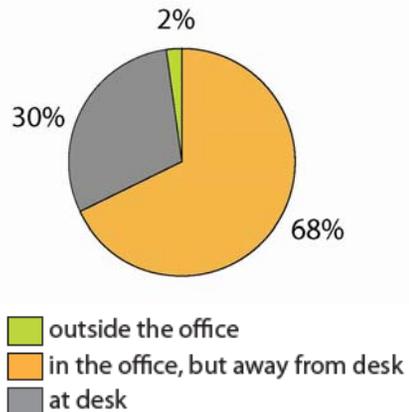
Work Pattern Survey Result | Internally-Mobile, Concentrative



Hi, I am Elliot. I am a realty specialist.

According to your answers to the work pattern survey, you have the internally-mobile, concentrative work pattern like I do. Having an internally-mobile, interactive work pattern means that we spend over ¾ of our working hours in the office but do not always work at our own desks. When we are at our own desk, we spend more than half of the time working alone. Other job functions that often have the internally-mobile, concentrative work pattern include comptrollers, chief financial officers, and some engineers.

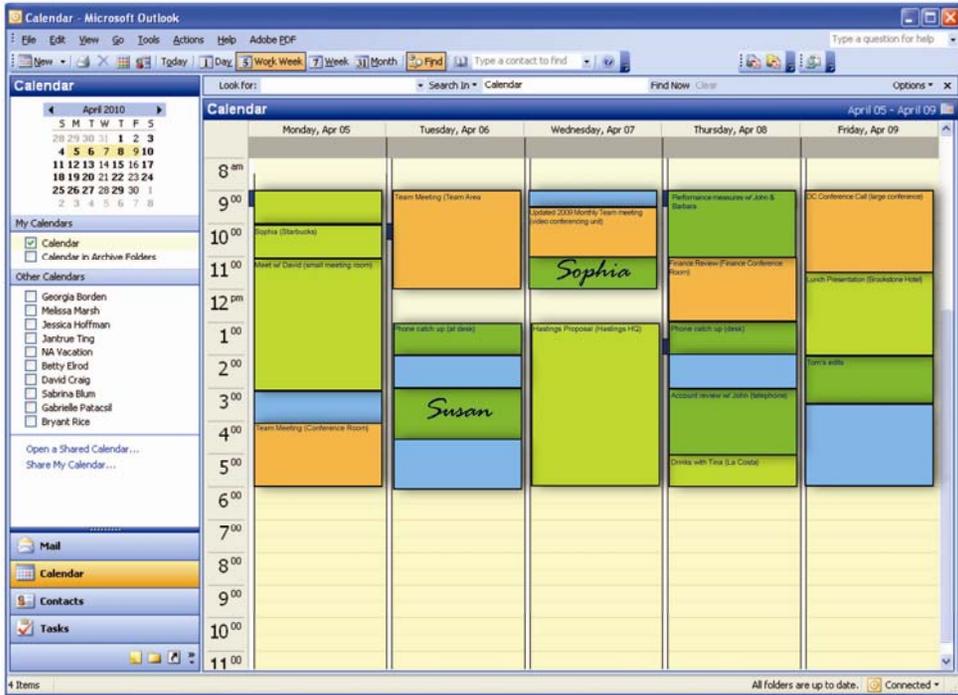
Here is what a typical work week might look like for someone who is internally-mobile, concentrative —orange indicates time spent in the office but away from their desk for meetings and other reasons; blue indicates time spent working alone at their desk; dark green indicates time spent at desk interacting with others on the phone or in person; and light blue indicates time spent working outside the office. On the whole, we typically spend over ¾ of the working hours in the office and a significant amount in places other than our own desks. When we are at our desk, we tend to spend most of the time doing concentrative individual work.



When it comes to workspaces, we look for a variety of work settings to support the full range of our work activities— a quiet work environment for concentrative work, meeting spaces for collaboration, private places for conference calls, and other support spaces.

My workplace allows me to do what I need to do for my job. Let's take a look at a typical day of my life in the office and how my workplace supports what I do.

Work Pattern Survey Result | Externally-Mobile, Interactive



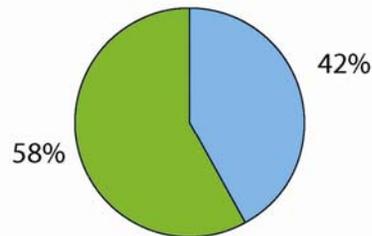
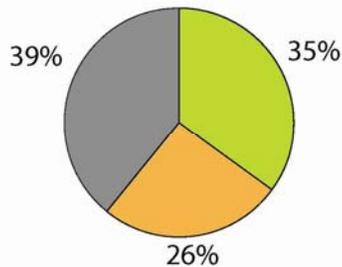
Hi, I am Andrew, I am a marketing and sales rep.

According to your answers to the work pattern survey, we have the same kind of work pattern. We are both externally-mobile, interactive. This means we both spend a lot of time working outside the office, and when we are in the office, we spend a lot of time interacting with others either on the phone or in person. Other professionals working in a similar way include management consultants and many executive leaders.

Our typical work-week could look like this calendar—light green is when we work outside the office, orange is when we are in the office but not at our own desks, blue is when we work alone in the office or at a workstation, dark green is when we are at our own desks talking to others over the phone or in person. Overall, we spend more than ¼ of the time working outside the office and, when we are at our own desks, we spend more than half of that time talking to someone.

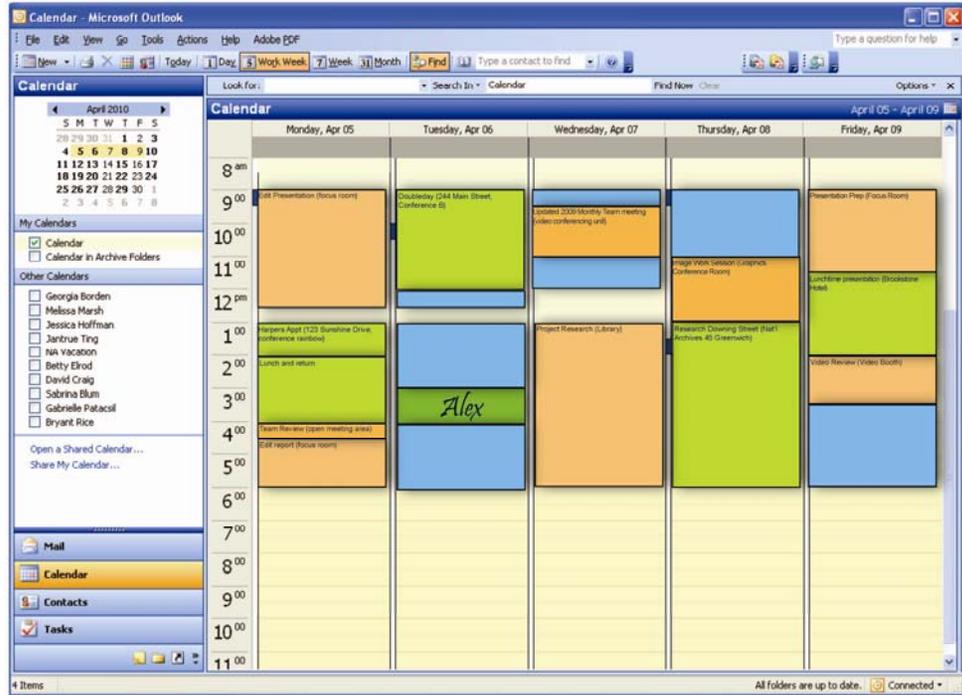
When it comes to workspaces and technology, we need to be able to work anywhere anytime. Laptops and mobile phones are essential to our work. When we are in the office, we want to be able to interact with others both at a desk and in meeting rooms. There are also times when we need a quiet place to go for heads-down work.

My workplace supports what I do very well. Let's take a look at how I'm supported on a typical day.



- outside the office
- in the office, but away from desk
- at desk
- concentrative work at desk
- interactive work at desk

Work Pattern Survey Result | Externally-Mobile, Concentrative



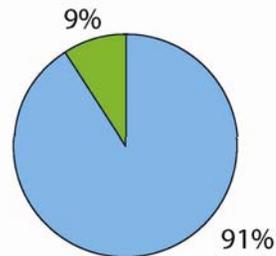
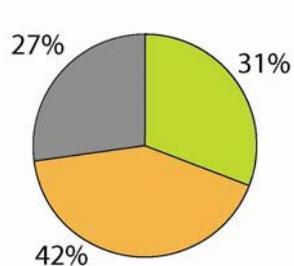
Hi, I am Jackie. I am a client manager.

According to your answers to the work pattern survey, you have an externally-mobile interactive work pattern just as I do. Having an externally mobile, concentrative work pattern means we spend a lot of time working outside the office, usually more than 1/4 of our work hours. When we are in the office, we spend most of the time doing heads-down work. Other people who tend to have this work pattern include auditors and field inspectors.

Our typical week may look like this sample calendar—hours highlighted in light green are when we work outside the office, orange indicates when we are in the office but not at our own desk, blue is when we work at a workstation or in an office alone, dark green is when we are sitting at our own desk talking to someone on the phone or in person. By and large, we spend less than 3/4 of the working hours in the office and, when we are working at our own desks, we spend more than half of that time doing concentrative individual work.

When it comes to workspaces and technology, they have to enable us working anywhere anytime. Laptops and mobile phones are essential to what we do. The workplace needs to allow me to do concentrative work. But there also needs to be places where I can touch base with my colleagues or have meetings with my team.

My current workspaces and technology have been doing a good job at supporting what I do. Let's take a look at how I'm supported on a typical day



- outside the office
- in the office, but away from desk
- at desk
- concentrative work at desk
- interactive work at desk



Day in the Life | Desk-bound Interactive

Time	Text on screen
8:56 AM	An impromptu meeting in the neighborhood coffee area leads to a scheduled meeting later in the day.
9:15 AM	Mike prepares for his day.
10:02 AM	Alex comes by Mike's workspace for an ad-hoc meeting.
10:56 AM	Mike moves on to a scheduled conference call from his desk with a client at 11am.
12:55 PM	Mike has finished lunch. He grabs his laptop and notes and heads for the meeting room for a 1:30 pm team meeting.
1:30 PM	The team gathers in the meeting room. Mike sets up the projector and speakerphone to start.
2:10 PM	After the team meeting, one of Mike's employees asks for his help later in the afternoon. They agree to meet at 4pm in his office.
2:33 PM	Mike reviews his emails when a client calls to check in.
4:00 PM	Jim comes by to review one of the client reports.
4:43 PM	Mike wraps up his meeting with Jim and makes one last call to a colleague before he ends his day.
6:11 PM	Mike packs up his things and heads home.



Day in the Life | Desk-bound Concentrative

Time	Text on screen
8:48 AM	Ellen arrives to work and settles in to her desk.
10:00 AM	Ellen has a scheduled check-in with her manager. She uses her headset and takes the short call from her desk.
11:23 AM	Ellen continues her work and sends an IM to Jim to arrange a time to pick up a Purchase Order after lunch.
12:33 PM	Ellen goes to the break room to grab her lunch. Then she picks up the PO at Jim's desk.
1:40 PM	Ellen calls the file room to schedule a pick-up.
2:19 PM	Ellen continues her work at her desk using the files she collected. She uses the extra work surface to spread out the multiple files she's working with.
4:30 PM	Ellen receives a personal call so she moves to the quiet room to avoid disturbing her neighbors..
5:05 PM	Ellen continues her work, reading through more of the files.
6:00 PM	Ellen is packing up to head home. Jim catches her before she heads out and drops off the proposal she needed.



Day in the Life | Internally-mobile Interactive

Time	Text on screen
9:04 AM	Jenna, a division director, arrives to work.
9:49 AM	Jenna has been going through her emails when her assistant in the adjacent station, asks to transfer a call to her. Jenna puts on her headset and takes the call from her desk.
10:57 AM	Jenna heads to the adjacent conference room with her assistant for a scheduled meeting
12:50 PM	Jenna and her manager leave the meeting together, agreeing to meet for lunch in the cafeteria on the ground floor.
1:43 PM	Jenna and her manager finish their lunch meeting and head back to their desks..
2:50 PM	Jenna's team meeting is soon. She sends files to the printer and picks up the printouts on the way to the team meeting room.
2:58 PM	When Jenna gets to the meeting room, her colleague, Katie, is already seated. She asks to have a private conversation with Jenna after the meeting.
4:04 PM	Jenna and Katie leave the meeting together and go find a nearby focus room for their private conversation.
4:47 PM	Jenna ends her conversation with Katie and heads back to her desk. She has some emails to finish before her day is done.



Day in the Life | Internally-mobile Concentrative

Time	Text on screen
9:13 AM	Elliot, a realty specialist, arrives to work and gets situated for the day.
10:58 AM	Elliot has been working at his desk when his colleague, David, sends him an IM, asking for a quick meeting.
11:15 AM	Elliot walks to the small, non-reservable meeting room where David is already sitting.
12:31 PM	Elliot eats his lunch in the break area while he makes some edits to a document.
1:12 PM	Elliot grabs some reference folders he needs from the shared file area near his workspace.
1:20 PM	Elliot takes the reference folders to an open work table next to his work station where he can spread out.
3:08 PM	A colleague, Amanda, passes by Elliot and stops to see what he's working on. Elliot asks for her opinion on his document.
3:59 PM	Elliot finishes sending out a few emails and then heads over to the large meeting room for his team meeting.
4:42 PM	After the meeting, Elliot returns to his desk and continues his work. He has to go back and forth between the reference documents and his computer.
7:04 PM	Elliot works late to finish up his document. He packs up and heads home.



Day in the Life | Externally-mobile Interactive

Time	Text on screen
9:27 AM	Andrew, a leasing representative, has a morning meeting at his client's office, and is working in a café nearby
10:45 AM	Andrew's colleague, Sophia, calls to let him know she is waiting outside the client's building. He lets her know he will be right over.
11:00 AM	Andrew meets Sophia and they walk into the building to meet with their client.
1:12 PM	After the meeting, Andrew and Sophia take their client out to lunch.
2:20 PM	Andrew and Sophia end lunch with their client and grab a taxi back to the office.
3:00 PM	Andrew and Sophia arrive at their office. They sit down to have an ad hoc, debrief of their meeting at one of the open meeting tables.
3:52 PM	Andrew and Sophia are at an open meeting table working out an action plan for the report. They need to grab their project team members for an impromptu meeting to go over the changes for this project.
4:20 PM	Andrew moves to the small meeting room for his impromptu team meeting. Sophia uses the white board to write up the action items.
5:52 PM	Andrew and Sophia continue to work on the report, including modifications from the day's meetings. They decide to finish in the morning.



Day in the Life | Externally-mobile Concentrative

Time	Text on screen
8:56 AM	Jackie, a client manager, gets her morning coffee from the break room and picks up her laptop and files from her storage in the group storage room.
9:10 AM	Jackie easily finds an open focus room she can work in for the morning. She needs a quiet space for concentrative work.
10:02 AM	Jackie makes a quick call to her client to confirm their afternoon meeting
12:10 PM	Jackie is finishing up her presentation when Devin, the intern, finds her and asks if she is ready to head over to the client's location.
12:58 PM	Jackie and Devin arrive at their client's office. Their client, Adrian, walks them back to the meeting room.
3:04 PM	Jackie and Devin are leaving the client's office. They have a short chat about the meeting while waiting for the elevators. Jackie would like some of Devin's time when they return to the office to debrief.
4:22 PM	Jackie and Devin are wrapping up an unassigned, open meeting table.
5:04 PM	Her meeting over, Jackie finds an adjacent open desk where she can finish up her work for the rest of the day.



Table of Contents: Space Configuration

- 3.1 Introduction to Team Neighborhood Configuration
- 3.2 Team Neighborhood Configuration Principles
 - 3.2.1. Desk-bound Interactive
 - 3.2.2. Desk-bound Concentrative
 - 3.2.3. Internally-Mobile Interactive
 - 3.2.4. Internally-Mobile Concentrative
 - 3.2.5. Externally-Mobile Interactive
 - 3.2.6. Externally-Mobile Concentrative
 - 3.2.7 Work Patterns Mix
- 3.3 Workstation configuration principles
 - 3.3.1. Desk-bound Interactive
 - 3.3.2. Desk-bound Concentrative
 - 3.3.3. Internally-Mobile Interactive
 - 3.3.4. Internally-Mobile Concentrative
 - 3.3.5. Externally-Mobile Interactive
 - 3.3.6. Externally-Mobile Concentrative

Introduction to Space Configuration

Many people will say they need their office for the work they do; they need a quiet place to concentrate and a private place to use the phone or for private conversations with employees. They may also argue that the office needs to be big enough to hold meetings of two to four persons and to have storage for all of their paper documents. What they don't always realize is that the more floor area taken up by private offices, the less is left for shared support spaces such as meeting rooms, group file storage, break-rooms, mother's room, etc. As a result, employees often find their workplace inadequate at supporting all of their work. Other space planning solutions might better support what they do.

One option for employees with a concentrative work pattern is to provide small private offices that have enough work surfaces for day-to-day work, with a guest chair for one-on-one meetings, and with enough storage for files accessed on a daily basis. Small meeting rooms are nearby for meetings of two or more people and open meeting tables in the adjacent open workspace can be used for spreading out and working with unusually large amounts of paper. Shelves and file cabinets near the workstations can store infrequently accessed files.

Another option for people with concentrative work patterns is to provide workstations in a quiet open work area. Noisy activities should take place in the nearby enclosed spaces—long phone calls taken in focus booths, ad hoc and scheduled meetings in small meeting rooms. Mobile work technology such as laptops and voice over IP phones should be in place to enable people to work away from their desks.

The workstations should have enough work surfaces for day-to-day work and enough storage for files accessed on a daily basis. Shelves and file cabinets near workstations can be used to store group files and infrequently accessed individual files. Open meeting tables near workstations can be used for working with unusually large amounts of paper.

Conversely, employees with an interactive work pattern may occupy workstations in collaborative open work areas. Each workstation can have one or two guest chairs for meetings of two or three persons or for two people working side by side. In addition to storage at the desk for frequently accessed files, shelves and file cabinets near workstations can store infrequently accessed individual and group files. Focus booths and enclosed small meeting rooms near workstations provide easy access to quiet places for concentrative work, conference calls, and small meetings. It is important to have mobile technology in place so that employees can fully utilize the variety of work settings.

Employees who primarily interact over telephones may be accommodated by workstations without guest chairs. However, open meeting tables and small meeting rooms should be easily accessible for face-to-face interactions. Focus booths should be provided for both heads-down work and conference calls. Mobile technology should be in place to allow employees working away from desk.

No matter the solution one may adopt, the goal is to plan a work environment that can effectively support the full range of activities employees must perform at work.

Introduction to team neighborhood planning

Many people assume that having a private office is essential to their work because a private office provides a quiet environment for concentration and affords privacy for interaction. They may also argue that the office needs to be big enough to hold meetings of two to four persons and to have storage for all their paper documents. However, the more floor area taken up by private offices, the less square footage left for shared support spaces such as meeting rooms, group file storage, break-rooms, mother's room, etc. As a result, employees often find their workplace inadequate at supporting their work. Other space planning solutions might better support what they do.

One option for employees with a concentrative work pattern is to provide small private offices that have enough work surfaces for day-to-day work, with a guest chair for one-on-one meetings, and with enough storage for files accessed on a daily basis. Small meeting rooms nearby can be used for meetings of two or more people. Open meeting tables nearby can be used for spreading out and working with unusually large amounts of paper. Shelves and file cabinets near the workstations can store infrequently accessed files.

Another option for people with concentrative work patterns is to provide workstations in a quiet open work area. In this case, noisy activities should take place in nearby enclosed spaces—focus booths for long phone calls, small meeting rooms for both ad hoc and scheduled meetings. Mobile work technology such as laptops and voice over IP phones should be in place to enable people to work away from their desks. The workstations should have enough work surfaces for day-to-day work and enough storage for files accessed on daily basis.

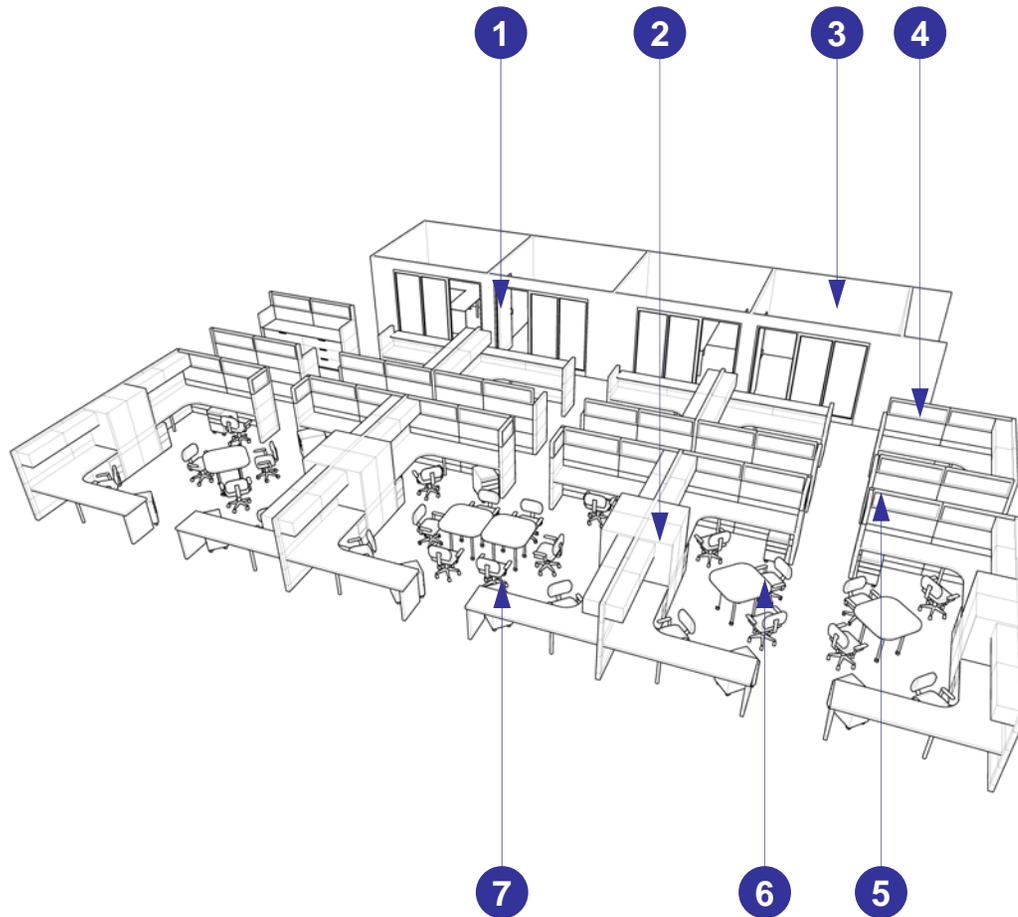
Shelves and file cabinets near workstations can be used to store group files and infrequently accessed individual files. Open meeting tables near workstations can be used for working with unusually large amounts of paper.

Employees with an interactive work pattern may occupy workstations in collaborative open work areas. Each workstation can have one or two guest chairs for a meeting of two or three persons or for two persons working collaboratively. In addition to desk storage for frequently accessed files, shelves and file cabinets near workstations can store infrequently accessed individual and group files. Focus booths and enclosed small meeting rooms near workstations provide easy access to quiet places for concentrative work, conference calls, and meetings. It is important to have mobile technology in place so that employees can fully utilize the variety of work settings.

Employees who primarily interact over telephones may be accommodated by workstations without guest chairs. However, open meeting spaces and small meeting rooms should be accessible for face-to-face interactions. Focus booths should be provided for both heads-down work and conference calls. Mobile technology should be in place to allow employees working away from their desk.

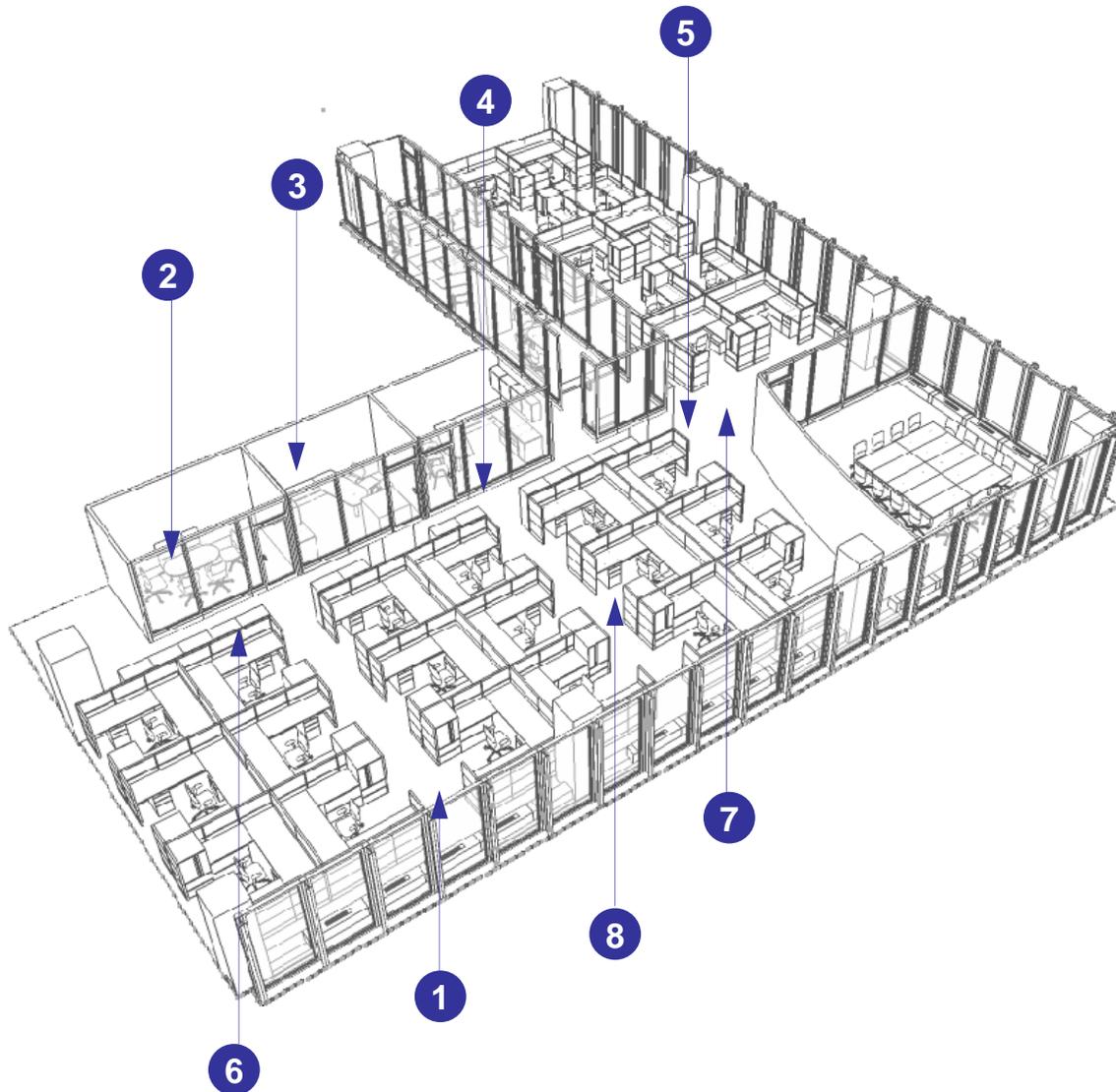
No matter which solution one may adopt, the goal is to plan a work environment that can effectively support the full range of activities employees must perform at work.

Team neighborhood for desk-bound, interactive



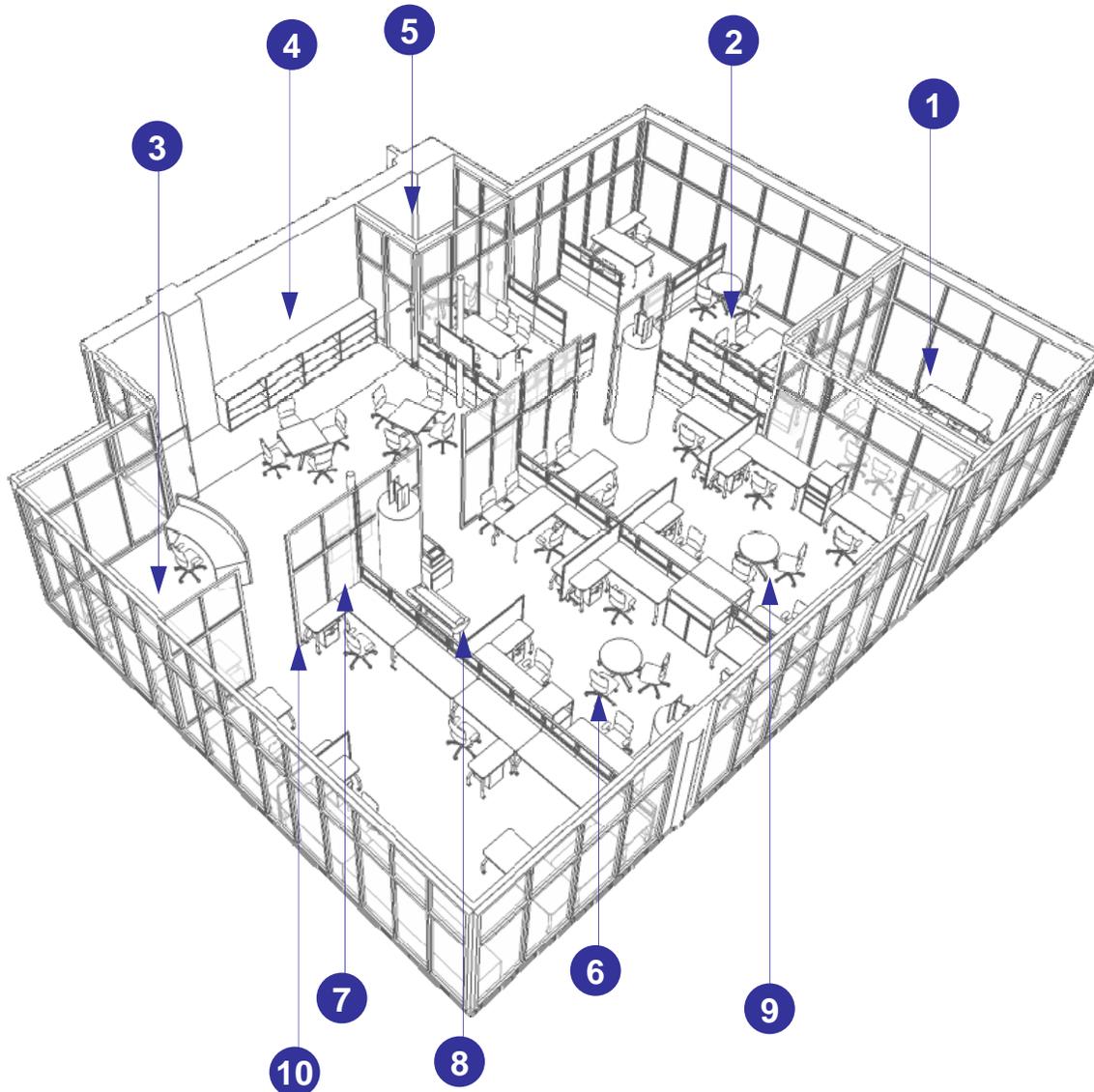
- 1 Enclosed small meeting rooms in or near team neighborhoods for confidential or team meetings.
- 2 Freestanding tables and other types of work surfaces in the team neighborhood for ad hoc meetings and visitor workspace.
- 3 Focus booth in or near the team neighborhood for concentrative work and/or conference calls that require acoustic privacy.
- 4 Strategically placed full-height partition walls for acoustic buffering and branding needs.
- 5 ~ 54" high partition panels to provide seated privacy and visual connection while standing up.
- 6 Guest chairs for meeting at desks.
- 7 Locate open workstations near the exterior windows and enclosed spaces near the building core, thus maximizing natural light penetration.

Team neighborhood for desk-bound, concentrative



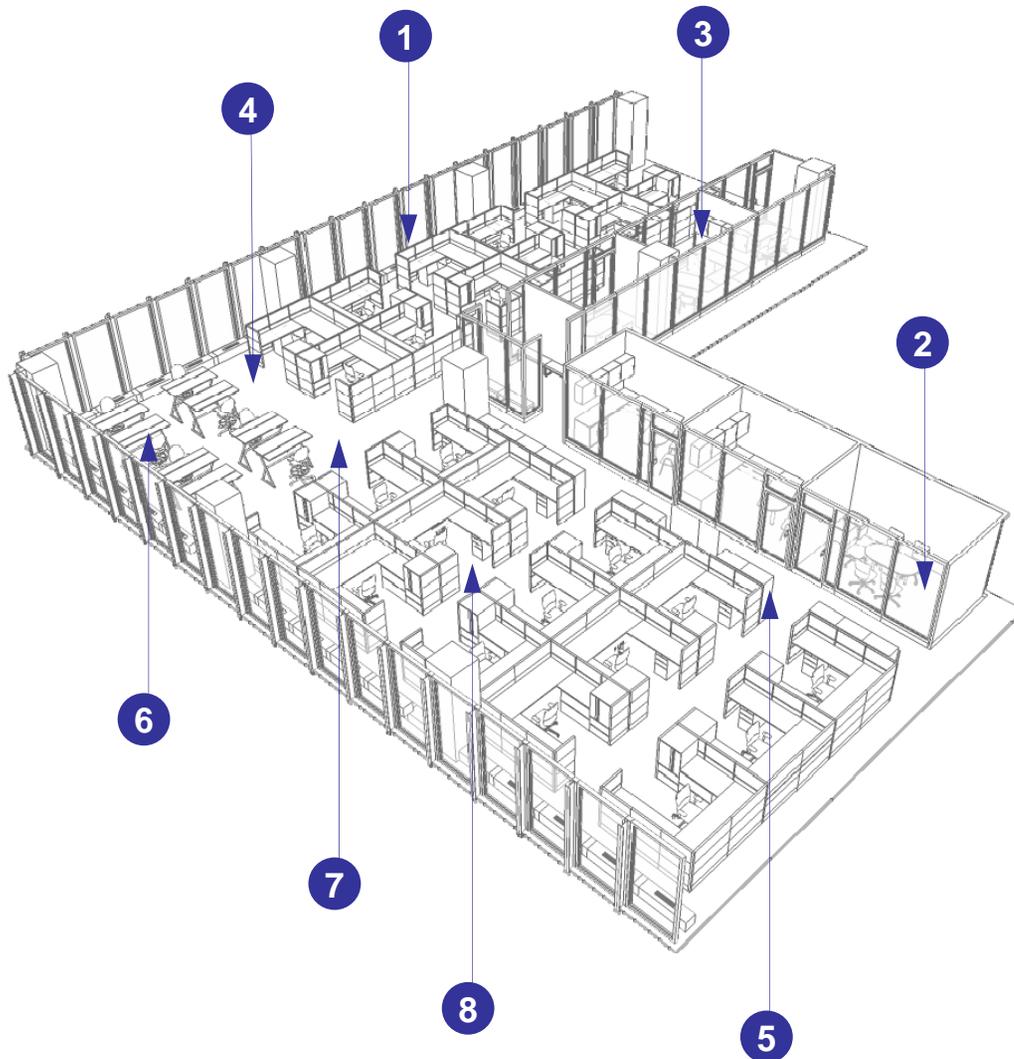
- 1 Locate open workstations near the exterior windows and enclosed spaces near the building core, thus maximizing natural light penetration.
- 2 Use glazed fronts for indirect access to natural light from the enclosed spaces. When appropriate, privacy strips can be used.
- 3 Provide small enclosed meeting rooms and phone booths in or near the team neighborhoods for collaborative activities, thus reducing the noise level in the open work area.
- 4 Acoustically separate the few individuals with interactive work patterns from the quiet open work area.
- 5 Acoustically separate break-rooms and other social spaces from the open work area.
- 6 Storage along circulation paths to provide additional individual file storage, an easy access to shared group files, and a privacy buffer for those seated near the main corridors.
- 7 Avoid having open meeting tables in the quiet open work areas.
- 8 Avoid having guest chairs at open workstations.

Team neighborhood for internally-mobile, interactive



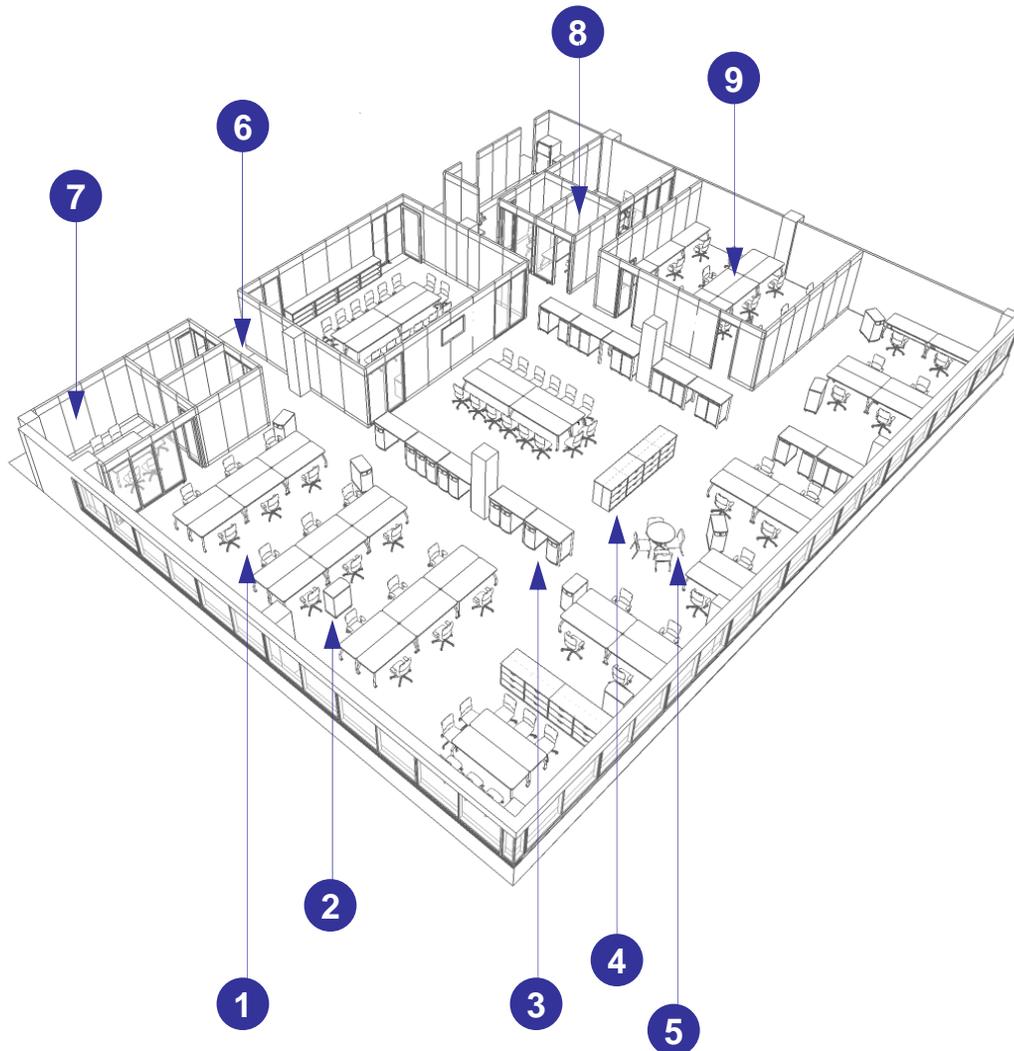
- 1 Enclosed small meeting rooms in or near team neighborhood for confidential and/or team meetings.
- 2 Open meeting tables of various types in or near the team neighborhood for ad hoc meetings and working with large amounts of paper documents.
- 3 Strategically placed full-height partition walls for acoustic buffering and branding needs.
- 4 Shared file storage in or near team neighborhood for team-shared files or additional individual file storage.
- 5 Focus booth in or near the team neighborhood for concentrative work and/or conference calls that require acoustic privacy.
- 6 Freestanding tables and other types of work surfaces in the team neighborhood for ad hoc meetings and visitor workspace.
- 7 ~ 54" high partition panels to provide seated privacy and visual connection while standing up.
- 8 Movable partitions double as whiteboards for brainstorming.
- 9 Guest chairs for meeting at desk spaces.
- 10 Mobile pedestals can double as guest chairs for meeting at desks.

Team neighborhood for internally-mobile, concentrative



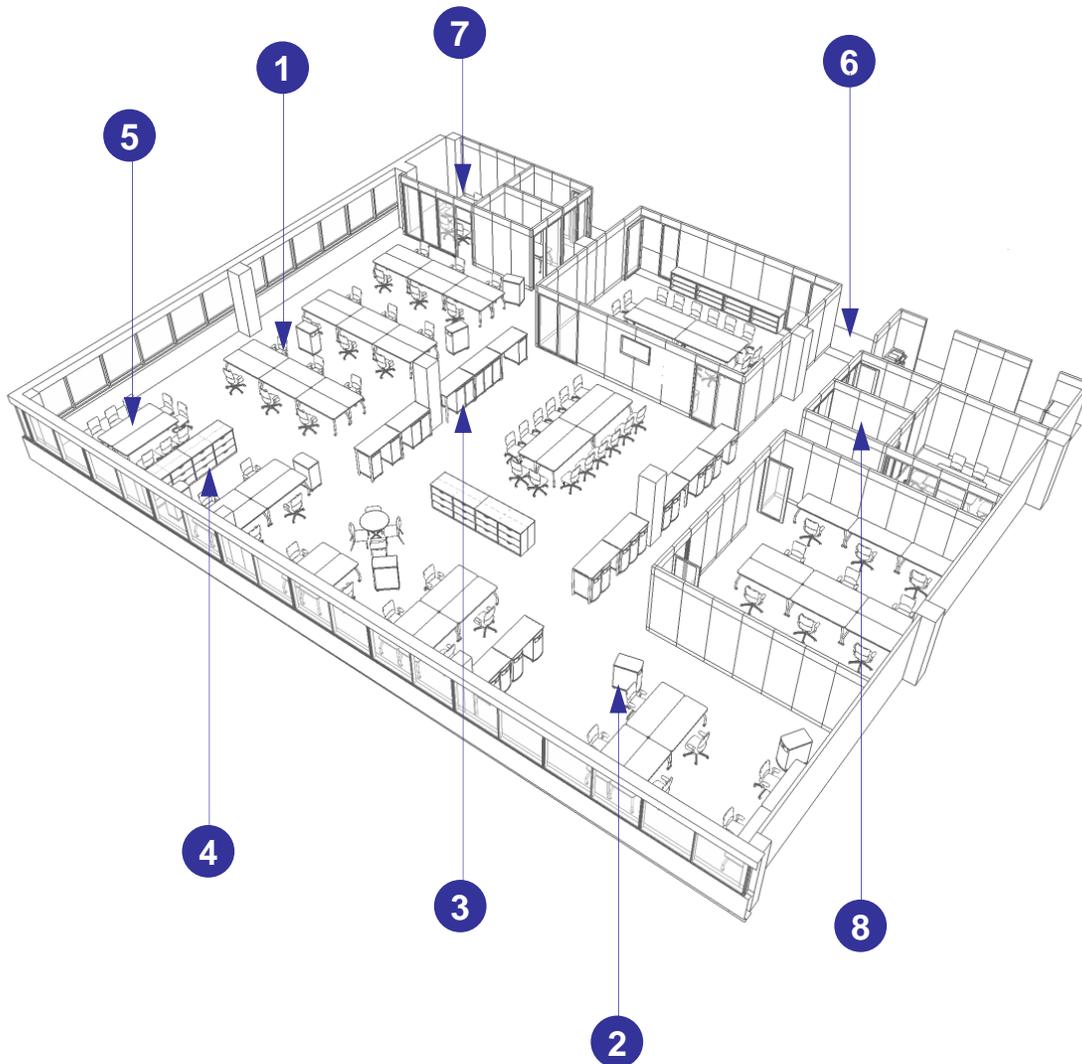
- 1 Assigned or unassigned open workstations near the exterior windows and enclosed spaces near the building core, thus maximizing natural light penetration.
- 2 Use glazed fronts for indirect access to natural light from the enclosed spaces. When appropriate, privacy strips can be used.
- 3 Provide small enclosed meeting rooms and phone booths in or near the team neighborhoods for collaborative activities, thus reducing the noise level in the open work area.
- 4 Acoustically separate the few individuals with interactive work patterns from the quiet open work area.
- 5 Place storage along circulation paths to provide additional individual file storage, an easy access to shared group files, and a privacy buffer for those seating near the main corridors.
- 6 Shared additional work surfaces for work with large drawings or large amounts of paper documents.
- 7 Avoid having open meeting tables in the quiet open work area.
- 8 Avoid having guest chairs at open workstations.

Team neighborhood for externally-mobile, interactive



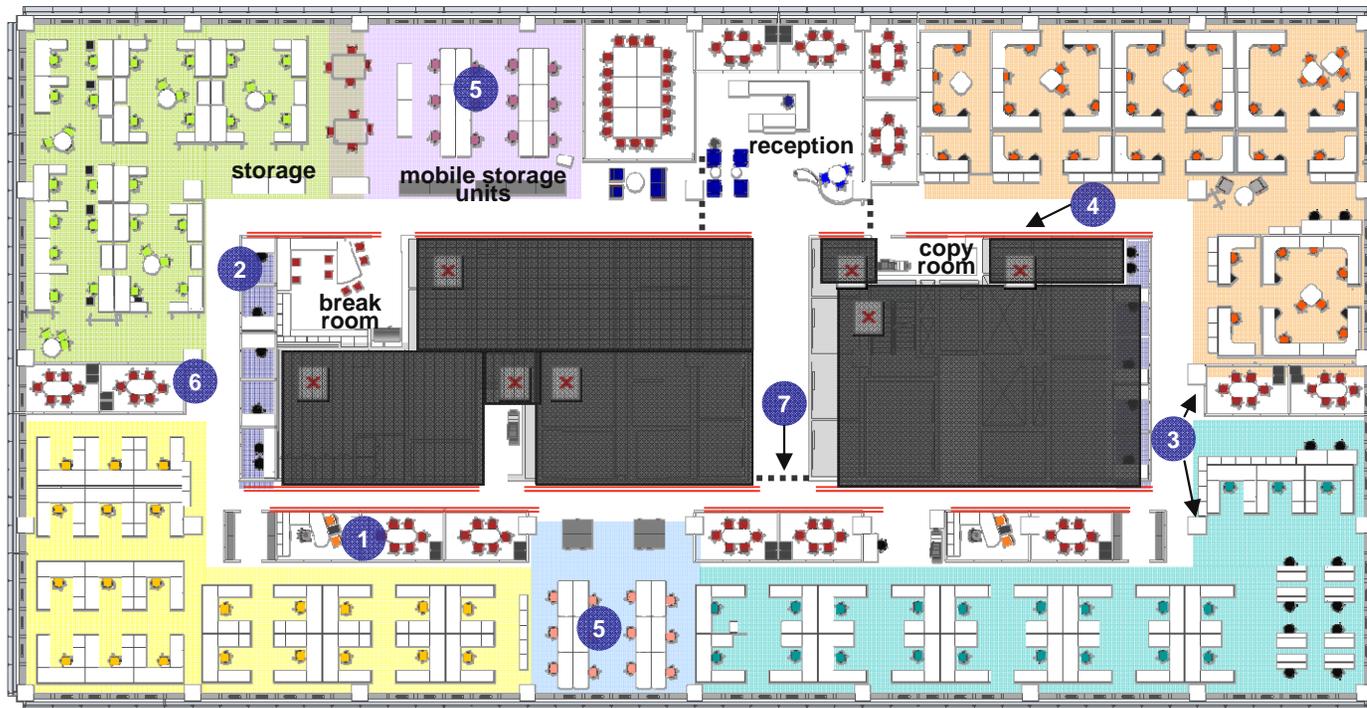
- 1 Provide unassigned individual workspaces in the open and collaborative work areas.
- 2 Assign mobile file storage to individuals for storing frequently-used individual files and other personal items.
- 3 Include “garage” for parking mobile storage units.
- 4 File storage in the team neighborhoods for shared group files and infrequently accessed individual files.
- 5 Provide open meeting tables in the open work area for ad hoc meetings.
- 6 Locate the break-room or other social interaction spaces near the main circulation for impromptu meetings.
- 7 Provide meeting rooms of various sizes. Small rooms to be used on a first-come, first serve basis; medium to large ones can be scheduled.
- 8 Provide focus booths in or near the team neighborhood for concentrative solo work or confidential phone calls.
- 9 Create quiet work zone, where no phone calls or conversations are allowed, for heads-down work.

Team neighborhood for externally-mobile, concentrative



- 1 Provide unassigned individual workspaces in a quiet work area for concentrative work.
- 2 Assign mobile file storage or lockers to individuals for storing frequently-used individual files and other personal items.
- 3 Include “garage” for parking mobile storage units.
- 4 Provide file storage in the team neighborhood for shared group files and infrequently accessed individual files.
- 5 Acoustically separate open meeting spaces from the quiet work areas.
- 6 Acoustically separate break-rooms and other social/interactive spaces from the quiet work areas.
- 7 Provide meeting rooms of various sized to support collaboration. Small ones can used on first-come, first serve basis; medium to large ones can be scheduled.
- 8 Provide focus booths in or near the team neighborhood for confidential phone calls.

Putting it all together on one floor



- Desk-bound Interactive
- Internally-mobile Concentrative
- Externally-mobile Concentrative
- Desk-bound Concentrative
- Internally-mobile Interactive
- Externally-mobile Interactive

- 1** Modular spaces can easily be reconfigured for individual offices or shared meeting rooms
- 2** Shared focus rooms for 1-2 persons to take a private conversation or for short periods of concentrative work.
- 3** Large columns can be painted to differentiate neighborhoods or used to display team achievements or announcements
- 4** Opportunities for branding, display and whiteboards ———
- 5** Externally-mobile employees can share space at a 4:5 ratio
- 6** Enclosed spaces buffer interactive neighborhoods from more concentrative ones
- 7** Potential enclosure for security purposes.

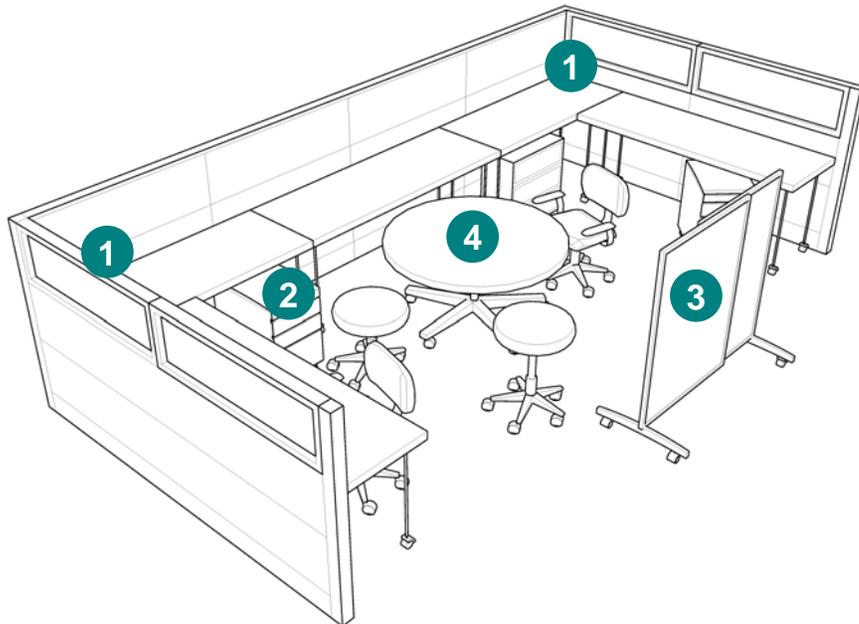


Workstation configuration principles

Having been introduced to the furniture components and work patterns, it is now time to explore the potential combinations of items and their layout. Orientation, height and finishes, among other things, convey messages on how the object and the space it occupies should be used. For example, it is easy to understand what can or cannot be moved. Some other “furniture messages” may indicate openness or interruption, the need for privacy or the anticipation of collaboration.

More importantly, the furniture configurations must respond to, and take advantage of architectural conditions. Where are the most public and active spaces? Those spaces should be closest to interactive zones. If that is not possible, components should be selected to mitigate noise and visual disruption. Similarly, areas with the best views and daylight should be allocated for more of the non-mobile workforce. Components may be necessary to mitigate environmental conditions such as glare or shadows. What areas are best suited for temporary, short term use? Which spaces are best suited for things (storage) rather than people?

Workstation configuration for desk-bound interactive



1 Concentration Corner

Even though these individuals spend more of their day interacting with their colleagues, each workstation should include an area that limits visual disruption. See *Desk-bound Concentrative configurations* for additional information.

2 Personal Storage

Storage, even without casters, should be mobile (with facilities help) to avoid multiple inventories and to facilitate staff with right or left hand preferences. Mobile storage can be used for temporary guest seating. 3 drawer storage (in files or kiosks) can be specified with a countertop to be used for standing height collaboration.

3 Additional screening

Consider stacking components in areas of increased activity or circulation. Additional mobile screen components can be added to facilitate small meetings with whiteboard or tack-able surfaces.

4 Work Surface Layout

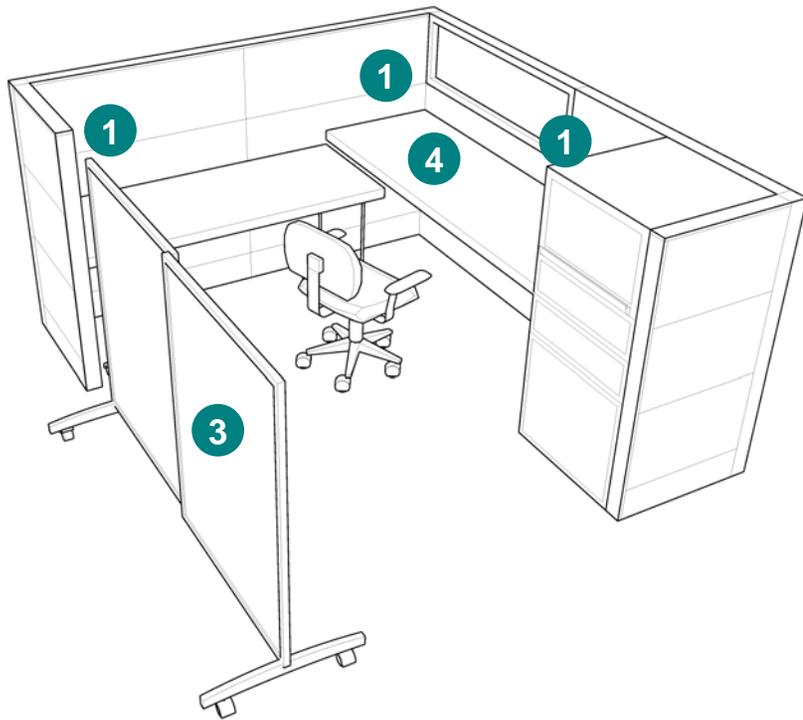
In anticipating visitors (formal and ad hoc), work surfaces should be able to accommodate face-to-face and side-by-side interaction. Mobile components that slide under other work surfaces are ideal. They can also be easily reconfigured to support group work. Shared work surfaces between neighboring work stations also work very well.

Building Services

Because the desk-bound configuration occupies more space than others, attention should be paid to the location of electrical and data outlets (they will not need to be frequently accessed). Ambient and day lighting should be complemented with appropriate task lighting. Work surfaces and screens should be placed to avoid glare and shadows.

- Do not place storage in front of glass panels.
- Light weight temporary screens are preferable to panels.
- Rarely are panels taller than 42" needed adjacent to gypsum walls and never in front of windows.
- Provide shared or group storage along circulation to improve access and provide a visual (and physical) buffer to quieter areas.
- Avoid opening team spaces to major circulation routes.
- Encourage standing visibility to group spaces such as focus/team rooms.

Workstation configuration for desk-bound concentrative



- Do not place storage in front of glass panels.
- Light weight temporary screens are preferable to panels.
- Rarely are panels taller than 42" needed adjacent to gypsum walls and never in front of windows.
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- Avoid opening team spaces to major circulation routes.
- Encourage standing visibility to group spaces such as focus/team rooms.

1 Concentration Corner

All work stations should have a zone where the inhabitant can avoid visual distraction. Typically this is an area where the panels or storage are a minimum of 51" high (for seated privacy). Vertical surfaces should be soft (fabric) to absorb rather than reflect speech. If overhangs are used, these areas will need task lighting.

2 Personal Storage

Storage, even without casters, should be mobile (with facilities help) to avoid multiple inventories and to facilitate staff with right or left hand preferences. Storage can also be used to divide space, create privacy, or provide vertical surfaces for work display.

3 Additional screening

Consider stacking components in areas of increased activity or circulation. Additional mobile screen components can be added to increase visual privacy and indicate the need for quiet or confidentiality.

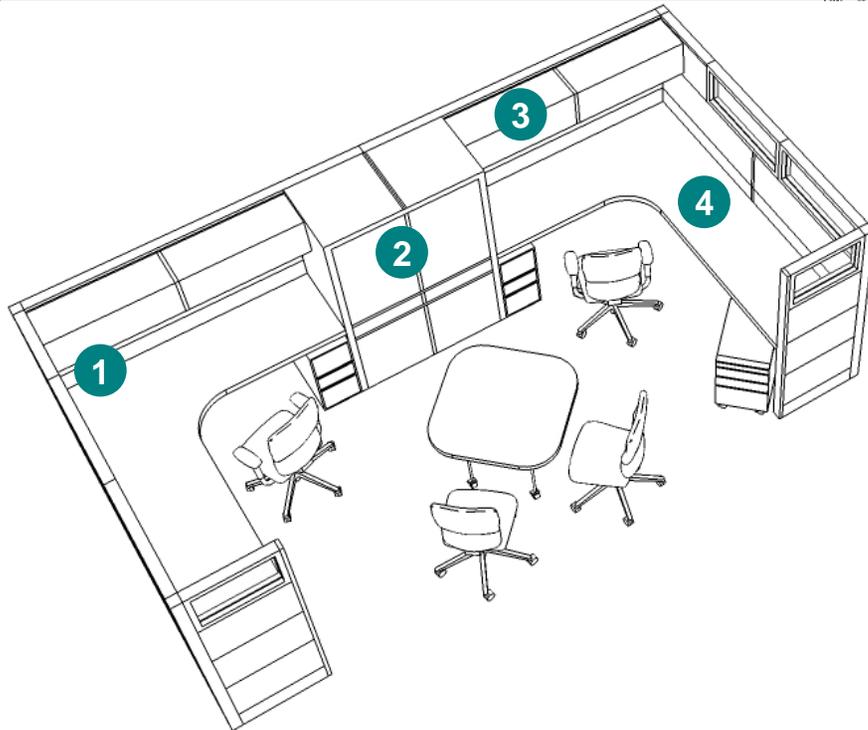
4 Work Surface Layout

The concentrative worker is more isolated in their work pattern. Consequently the preferred work surface layout is a "cockpit" that is usually created in an L or U-shape. Allowing an individual to be "front-facing" is particularly important in areas of higher circulation. Try to place a work surface so it faces the path of potential visitors.

Building Services

Because the desk-bound configuration occupies more space than others, attention should be paid to the location of electrical and data outlets (they will not need to be frequently accessed). Ambient and day lighting should be complemented with appropriate task lighting, and work surfaces should be placed to avoid glare.

Workstation configuration for internally-mobile, interactive



- Do not place storage in front of glass panels.
- Light weight temporary screens are preferable to panels.
- Rarely are panels taller than 42" needed adjacent to gypsum walls and never in front of windows.
- Provide shared or group storage along circulation to improve access and provide a visual (and physical) buffer to quieter areas.
- Avoid opening team spaces to major circulation routes
- Encourage standing visibility to group spaces such as focus/team rooms.
- Pay attention to leg placement, particularly when using multiple free-standing components.

1 Concentration Corner

Even though these individuals spend more of their day interacting with their colleagues, each workstation should include an area that limits visual disruption. See *Concentrative configurations* for additional information.

2 Personal Storage

Storage, even without casters, should be mobile (with facilities help) to avoid multiple inventories and to facilitate staff with right or left hand preferences. Mobile storage can be used for temporary guest seating. Three drawer storage (in files or kiosks) can be specified with a counter top to be used for standing height collaboration.

3 Additional screening

Consider stacking components in areas of increased activity or circulation, similarly lower panels when facing team areas. Additional mobile screen components can be added to facilitate small meetings with whiteboard or tack-able surfaces.

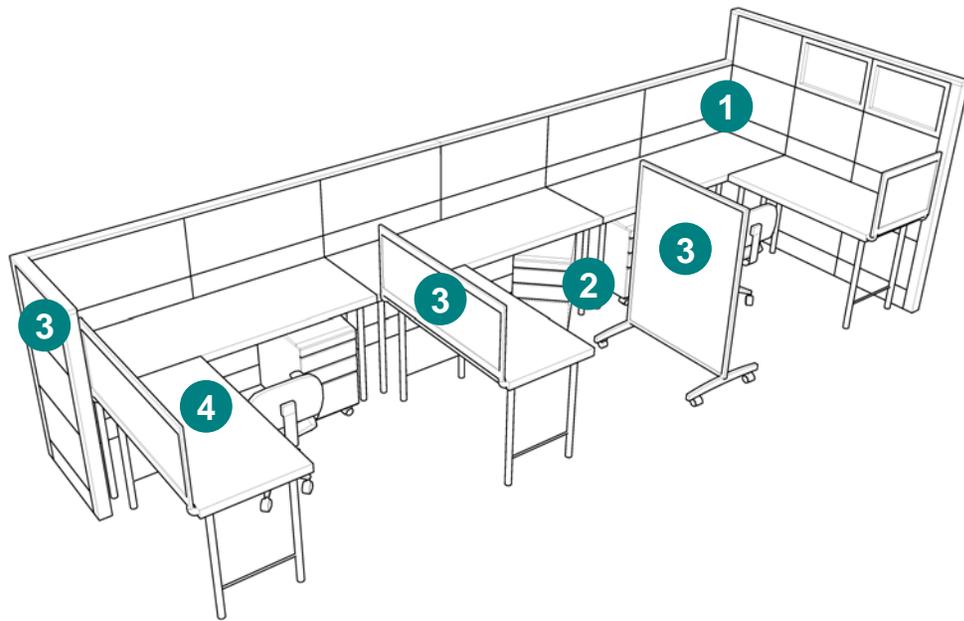
4 Work Surface Layout

Anticipating visitors (formal and ad hoc), work surfaces should be able to accommodate face-to-face and side-by-side interaction. Mobile components that slide under other work surfaces are ideal. They can also be easily reconfigured to support group work. Shared work surfaces between neighboring work stations also work very well.

Building Services

Because this work pattern is mobile, outlets will be accessed more frequently (for laptops and PDAs). Locate electrical and data connections above the work surface with a grommet or reveal to allow wire management if a CPU is located below. Ambient and day lighting should be complemented with appropriate task lighting, and work surfaces should be placed to avoid glare.

Workstation configuration for internally-mobile concentrative



- Do not place storage in front of glass panels.
- Light weight temporary screens are preferable to panels.
- Rarely are panels taller than 42" needed adjacent to gypsum walls and never in front of windows.
- Provide shared or group storage along circulation to improve access and provide a visual (and physical) buffer to quieter areas.
- Avoid opening team spaces to major circulation routes.
- Encourage standing visibility to group spaces such as focus/team rooms.
- Pay attention to leg placement, particularly when using multiple free-standing components.

1 Concentration Corner

All work stations should have a zone where the inhabitant can avoid visual distraction. Typically this is an area where the panels or storage are a minimum of 51" high (for seated privacy). Vertical surfaces should be soft (fabric) to absorb rather than reflect speech. If overheads are used, these areas will need task lighting.

2 Personal Storage

Storage, even without casters, should be mobile (with facilities help) to avoid multiple inventories and to facilitate staff with right or left hand preferences. Storage can also be used to divide space, create privacy, or provide vertical surfaces for work display.

3 Additional screening

Consider stacking components in areas of increased activity or circulation and reducing the height toward team spaces. Because this staff is mobile, allowing additional views into the space can aid in locating colleagues. Consider translucent screens in lieu of end panels. Additional mobile screen components can be added to indicate the need for quiet or confidentiality.

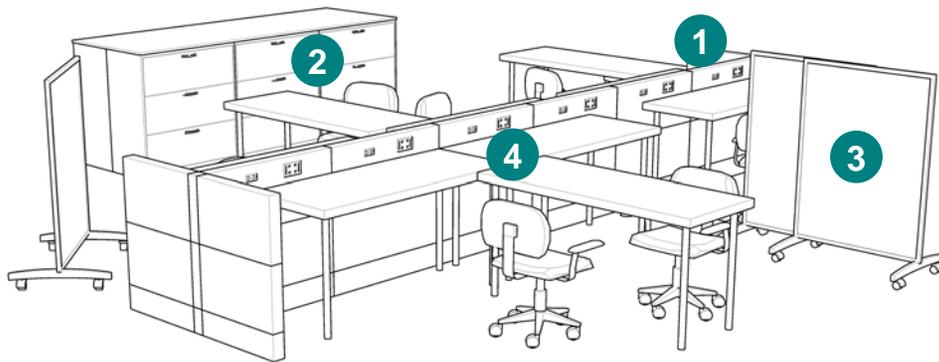
4 Work Surface Layout

The concentrative worker is more isolated in their work pattern. Consequently the preferred work surface layout is a "cockpit" that is usually created in an L or U-shape. Accomplishing this with independent, free standing surfaces increases flexibility for reconfiguration (or repair).

Building Services

Because this work configuration has mobile outlets that will be accessed more frequently (for laptops and PDAs). Locate electrical and data connections above the work surface with a grommet or reveal to allow wire management if a CPU is located below. Ambient and day lighting should be complemented with appropriate task lighting, and work surfaces should be placed to avoid glare.

Workstation configuration for externally-mobile interactive



- *Light weight temporary screens are preferable to panels.*
- *Provide shared or group storage along circulation to improve access and provide a visual (and physical) buffer to quieter areas.*
- *Encourage standing visibility to group spaces such as focus/team rooms.*
- *Pay attention to leg placement, particularly when using multiple free-standing components.*
- *Consider electrical source locations when zoning degrees of flexibility.*

1 Benching Solutions

Creating a large format, interactive area for work can be accomplished with a variety of products. From simply grouping tables, to panel/table combinations and specialized products, benching is an increasingly popular, flexible and affordable solution. Panels offer flexibility in later raising or lowering visual screens as well as efficient data/power distribution.

2 Personal Storage

All storage is provided in group areas. While this staff has little need for paper documentation, space should still be provided for mobile storage.

3 Additional screening

Consider stacking components in areas of increased activity or circulation, similarly lower panels when facing team areas. Additional mobile screen components can be added to facilitate small meetings with whiteboard or tack-able surfaces.

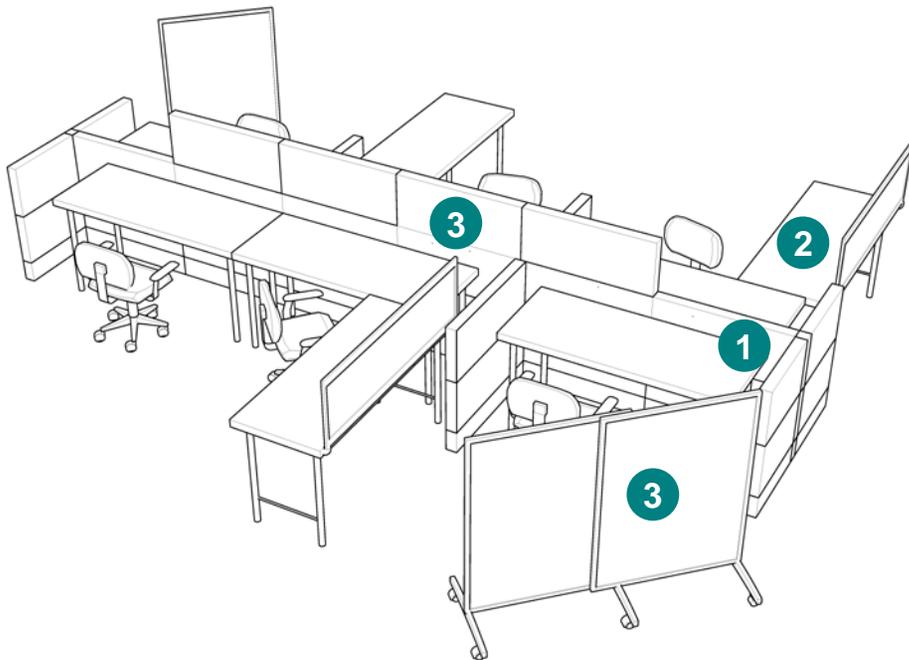
4 Work Surface Layout

Anticipating visitors (formal and ad hoc), work surfaces should be able to accommodate face-to-face and side-by-side interaction. Mobile components that slide under other work surfaces are ideal. They can also be easily reconfigured to support group work. Shared work surfaces between neighboring work stations also work very well.

Building Services

Because this work configuration is mobile, outlets will be accessed more frequently (for laptops and PDAs). Locate electrical and data connections above the work surface with a grommet or reveal to allow wire management if a CPU is located below. Ambient and day lighting should be complemented with appropriate task lighting, and work surfaces should be placed to avoid glare.

Workstation configuration for externally-mobile concentrative



- *Light weight temporary screens are preferable to panels.*
- *Rarely are panels taller than 42" needed adjacent to gypsum walls and never in front of windows.*
- *Provide shared or group storage along circulation to improve access and provide a visual (and physical) buffer to quieter areas.*
- *Group storage may also be used within team spaces for shared document review.*
- *Encourage standing visibility to group spaces such as focus/team rooms.*
- *Pay attention to leg placement, particularly when using multiple free-standing components.*

1 Concentration Corner

All work stations should have a zone where the inhabitant can avoid visual distraction. Typically this is an area where the panels or storage are a minimum of 51" high (for seated privacy). Because these spaces are not dedicated, more options for finishes on vertical surfaces can be considered.

2 Work Surface Layout

The duration of concentrated work with externally mobile staff is usually shorter. While a "cockpit" layout is still preferred, a single work surface is sometimes all that is needed. Supplying additional, independent, free standing surfaces allows individual customization or reconfiguration.

3 Additional screening

Consider stacking components in areas of increased activity or circulation. Because this staff is mobile, allowing additional views into the space can aid in locating colleagues. Because of the short duration of most staff's stay in these spaces, eliminate end panels and consider table mounted screening. Additional mobile screen components can be added as needed to indicate the need for quiet or confidentiality.

Personal Storage

All storage is grouped. Space should be allowed in the work station for mobile storage to be relocated on a temporary basis.

Building Services

Because this work pattern is mobile, outlets will be accessed more frequently (for laptops and PDAs). Locate electrical and data connections above the work surface with a grommet or reveal to allow wire management if a CPU is located below. Ambient and day lighting should be complemented with appropriate task lighting, and work surfaces should be placed to avoid glare.



Table of Contents: Furniture

- 4.1 Introduction to system furniture components
 - 4.1.1 Panels
 - 4.1.2 Work surfaces
 - 4.1.3 Storage
 - 4.1.4 Accessories
 - 4.1.5 Seating
 - 4.1.6 Demountable walls
 - 4.1.7 Component application table
- 4.2 Furniture selection criteria
- 4.3 Selected products on the GSA schedule

Introduction to furniture selection

The selection and layout of furniture components can have a major impact on the perception of space and accommodation by the people who use the space. It's an opportunity to provide additional choice, storage, privacy or layout space. Each work pattern demands a furniture design that supports its predominant type of work with accessories that allow customization for specific conditions or requirements. Paying attention to details such as leg placement, right-hand or left-hand location of storage, the height of screening or the number and type of monitor supports can make a big difference as new or remodeled spaces are occupied.

This section provides some direction on the design of furniture settings. Please make sure to visit the furniture component section to gain more information on the individual pieces that combine to create these spaces. As always, consider the needs of your colleagues and partners as you review these recommendations.



Introduction to system furniture components

The selection of a furniture type or manufacturer should consider all potential work place settings. Most furnishings are offered as families of components. They match individual items to the function that is required while preserving an aesthetic similarity. Analyzing existing inventories is extremely important prior to any selection exercise. In most cases, some aspect of the existing environment can be re-used if costs, schedules and the degree of disruption is acceptable.

The following components are the building blocks for all of the individual settings listed in the Workplace Solutions Library. Combinations and types of products will change for the different work styles. Some tools may be added to support interactivity such as guest seating or shared work surfaces. Similarly other components will be used to facilitate concentrated activities where visual disruption must be minimized. A list is included at the end of this section. Each work style configuration also lists its most likely components.

4.1.1 Component definition: panels



Panels can support furniture components or be used for data/electrical distribution and space division.



Stack-on panels can be fabric, glass or other finish



Mobile and Desk attached screens complement more traditional panels



Clip on acrylic screens can diminish visual distraction

Panel/Screen: Panels are used for space division and electrical/data distribution. With the widespread use and increased capacity of wireless data, accompanied by voice-over internet protocol (VOIP), electrical distribution is the final “tether” to the panel. Traditionally, panels have also provided support for work surfaces and storage through 1” slots located within their vertical frames. Panel supported components, while “leg-free,” are usually moved by experienced personnel and therefore limit flexibility by the inhabitant

Most panel solutions offer a wide variety of electrical components, supporting a number of different circuit configurations. Power is fed from the wall, floor or ceiling with a “base feed” and possibly a power pole. It is then distributed through the use of “boxes” and “harnesses” which are basically flexible conduit with snap-on connections.

The best panel systems allow electrical outlets and junction boxes to be located throughout the panel and distribute “harnesses” easily between panels. Simpler, less expensive panels limit electrical distribution to specific zones or locations.

Panel height is extremely important in maintaining views and access to daylight. We recommend a typical panel height of 51-54” which maintains seated privacy, limiting distractions while seated, and maximizing light and the ability to find co-workers. Robust panel solutions will allow “stacking” which will increase flexibility by allowing the panel to grow or shrink vertically. Other recommended panel heights are 42” to qualify for LEED credits and encourage openness and 30” to align with the work surface height.

No panels should be used when furniture is being located against walls or in front of windows. Panel skins are made up of a variety of materials including glass, wood, whiteboard, metal or fabric. They can be monolithic or segmented. The most flexible solutions allow skins or tiles to be changed without affecting adjacent surfaces (non-sequential)

4.1.2 Component definition: work surfaces



User height adjustability is increasingly popular (and affordable) especially for shared spaces.



Casters create easily moved secondary work surfaces. Height adjustability allows nesting/ space savings.



Work Surfaces & Tables: Seemingly a simple component, work surfaces still need to meet a number of standards. In addition to BIFMA/ANSI compliance, they should be evaluated for weight, construction quality, ease of mobility and maintenance of finish.

Recommended solutions are C-leg construction with “metal to metal” connections to the underside of the work surface. Work surface tops should be specified with an FSC certified substrate. Plastic laminate tops are most durable, however there are powder coats now available that hold up well and eliminate the need for PVC edging. Acrylic and polypropylene edges are also available. Where mobile tables are specified we recommend 2 “stationery” legs and 2 legs with casters to eliminate the need for “locking” devices.

Work surfaces often come with options for “table screens” or wire management. Final selections should be made from product lines that offer all options.

User height adjusted tables are an increasingly popular option. These tables come with crank, counter-balance and electronic controls. Selection criteria is based on budget and user acceptance. In all instances an adjustment range of 26-42” is recommended. When work stations are used to support multiple staff, user height adjustability is very important.

4.1.3 Component definition: storage



Personal storage is often located under work surfaces.



Shelves (or open storage) are easier to manage/maintain



Kiosks or “towers” are strong solutions in lieu of “overhead bins”



Storage: Storage falls into 2 major categories, drawer and shelf. Occasionally, wardrobe units are required, but these functions are often grouped and sometimes provided architecturally (closets). Shelf units are often enclosed creating “lockers” or cabinets. Drawer storage can be specified in several widths and heights. We recommend any drawer solution have multiple configurations to support filing numerous paper types. When specifying, drawer construction should include “fully extending” hardware and ball bearing suspensions. Shelves should be specified with height, width, depth and typically adjustable hardware. Make sure the shelf dimensions are clearly stated. Cabinet hardware should have “European” hinges with an opening capability of 135 degrees (at minimum).

Individual Storage: This term refers to storage (drawers and shelves) within an individual setting. It can be, in fact, shared if multiple employees use that space. Often individual storage can be specified with individual drawer locks. Typically individual storage consists of “pedestals”, “laterals”, “overheads” and shelves. Often storage is used for work surface support. Although this practice can reduce cost, it greatly limits flexibility and increases cost and disruption in moves. Free standing storage is recommended.

4.1.3 Component definition: storage *continued*



Mobile storage facilitates moves and changes and can transition from individual to group storage easily.



Group storage is often “ganged” and located adjacent to circulation, or shared within “pods” of individual stations



Condensed or high density files are for specific uses and require structural evaluation.



Mobile Storage: Mobile storage is similar to individual storage with the addition of casters to allow easy re-location. Often mobile storage does “double duty” by defining space, creating additional seating or work surface. Wherever possible mobile storage should be used: it reduces disruption during moves, it eliminates “handedness” and it increases user adaptability.

Group Storage: Group storage is much easier to maintain and monitor. By co-locating storage, it decreases the “territoriality” of the user. It also simplifies the increase of storage for one employee or the decrease of storage for another. Unusual storage requirements (oversized, rolled tubes, equipment requirements) should always be located in group settings to avoid duplication and underutilization. Multiple units should always be “ganged” or connected together with mechanical fasteners. When possible, the top of group storage should be used as a seat, or work surface at standing height (appropriate pad or countertop to be specified)

Condensed Storage: There are specific systems designed to increase storage within the same footprint. Typically they reduce the amount of circulation required between rows of storage. Special planning and structural requirements must be considered if these systems are to be used.

4.1.4 Component definition: accessories



Monitor arms, paper flow, CPU holster and keyboard trays are some examples of accessories.

Accessories: There are a number of items that are designed to be used in combination with the larger furniture components. Usually they improve ergonomics or increase useable (and visible) surfaces. Accessory options should be considered prior to making a panel or work surface decision.

Keyboard trays: These are typically mounted to the underside of the work surface. They support a computer keyboard (and usually a mouse pad). They can be adjusted in height and slide under the work surface.

Monitor Arms: Free standing or attached to the panel or work surface, monitor arms (or stands) frees work surface area and aligns the monitor with the employees seated eye height.

Paper Management: This category consists of binder bins, flow trays and in/out bins. Typically they are supported by “slat wall” tiles or “tool bars” attached to the work surface or panel.

Lighting: Task lighting at the work station can be specified with a number of light sources (incandescent, halide, fluorescent, LED, etc.). It can be work surface or panel mounted. It can also be attached to the underside of overhead bins (if they exist).

Privacy Screens: These screens are typically attached to the work surface to create a barrier to visual distraction. They are often tack-able fabric to support pin up space, but they can be made of acrylic or white board material. Privacy screens can be permanently attached or fitted with a “clamp on” device to simplify installation (and increase user adaptability) Often privacy screens are accompanied by a tool rail for additional accessory attachment.

4.1.4 Component definition: accessories *continued*



Modesty Screens: Modesty screens are similar to privacy screens but are attached to the underside of the work surface.

Wire Management: There are two basic types of wire management: horizontal and vertical. Horizontal management is accomplished through the use of a tray, or clips. Often these are mounted to the work surface, or to a privacy/modesty screen. Vertical wire management uses clips (to the work surface support, or panel) or “umbilicals” a series of plastic holsters used to gather cords and move them from a floor or wall outlet to the work surface.

Desk top outlets: Additional accessories are used to deliver data and power connections to the work surface when panels are not used. Typically these are clamped on to the work surface.



Electrical access, screens, shelves and tool rails increase a work surface's functionality.

4.1.5 Component definition: seating



Task Seating with seat slider and height adjustable back



Guest Seating (shown with sled base)



Conference Seating has fewer ergonomic adjustments

Seating: There are three types of seating in most projects: 1) task seating, 2) guest seating and 3) conference/lounge seating. The requirements of all three are very different with task seating taking the most ergonomically correct program. Most manufacturers offer a range of products based on a “family”. Therefore it is possible to have a single source supply, consistent aesthetic and a limited stock of parts.

Task Seating is the set of chairs where individuals spend most of their working time. Because of this, they are usually provided with a number of ergonomic adjustments, the most common are:
 Height: pneumatic cylinders in the base allow seat height adjustment
 Back Angle: a locking device places seat back in desired angle (or remains free)
 Tilt Pressure: adjusts the tension of the back tilt
 Arm Height: incremental height adjustment
 Arm Width: to increase seat width
 Seat Depth: sliding seat pan
 Lumbar Support: mobile horizontal to align with lumbar muscle

Guest Seating is the simplest of chair specifications with the fewest (if any) ergonomic adjustments. They can be specified with or without arms, sled or 4 leg base, stacking or non-stacking.

Conference Seating is usually a simplified specification for task seating. Usually it has only 2 ergonomic adjustments (height and tilt).

4.1.6 Component definition: demountable wall



Demountable partitions are cost neutral for certain applications



Finishes can be easily changed, from glass to wood, from fabric to whiteboard

Demountable walls: Having been used for decades in Europe, demountable walls have recently become a popular alternative to traditional, gypsum board (drywall) construction in North America. They offer the following advantages:

- They can be removed or moved to accommodate change in function or tenancy
- Their finishes may be changed without typical construction noise, dust or disruption
- Doors or windows may be removed, replaced or added easily
- They accommodate modular electrical systems which allow increase or relocation of electrical service
- They support wall hanging elements with no additional blocking or brackets.

The initial **costs** for demountable walls is higher than drywall, but comparable to storefront assemblies that include doors and hardware. When comparing costs, it is important to consider all the trades that will be affected by installing completed walls at the same time as the furniture (as opposed to typical construction processes). This includes painters who will have fewer corners and less trim. Also, carpets, floor bases and ceilings will have fewer stops or cuts. Demolition, sanding and other debris producing actions will be reduced.

Demountable walls have many forms. The greatest distinction between products is whether they are “**unitized**” or “**stick-built**”. Unitized products usually have a frame that determines height and width, limiting adaptation to field conditions, but improving inventory control. Stick-built products include verticals and horizontals that can be used in a variety of combinations. While stick-built systems are usually designed to maximize consistency, the module is totally dependent on the designer and the facility.

4.1.7 Component application table

<i>Work Pattern</i>	Panel (where needed)	Panel Stacker (above 54")	Table	Secondary work surface	Pedestal storage	Add'l storage (multi-options)	Personal storage at shared setting	Mobile screen	Task seating	Guest seating, stool, or pedestal
Desk-bound, Interactive	definitely include in personal space		definitely include in personal space	possibly include in personal space	definitely include in personal space	possibly include in personal space	possibly include in personal space	possibly include in personal space	definitely include in personal space	possibly include in personal space
Desk-bound, Concentrative	definitely include in personal space	definitely include in personal space	definitely include in personal space	possibly include in personal space	definitely include in personal space	possibly include in personal space	possibly include in personal space	possibly include in personal space	definitely include in personal space	
Internally-mobile, Interactive	definitely include in personal space		definitely include in personal space	possibly include in personal space	definitely include in personal space	possibly include in personal space	possibly include in personal space	possibly include in personal space	definitely include in personal space	possibly include in personal space
Internally-mobile, Concentrative	definitely include in personal space	definitely include in personal space	definitely include in personal space	possibly include in personal space	definitely include in personal space	possibly include in personal space	possibly include in personal space	possibly include in personal space	definitely include in personal space	
Externally-mobile, Interactive	definitely include in personal space		definitely include in personal space				definitely include in personal space	possibly include in personal space	definitely include in personal space	possibly include in personal space
Externally-mobile, Concentrative	definitely include in personal space		definitely include in personal space				definitely include in personal space	possibly include in personal space	definitely include in personal space	possibly include in personal space

 definitely include in personal space
 possibly include in personal space

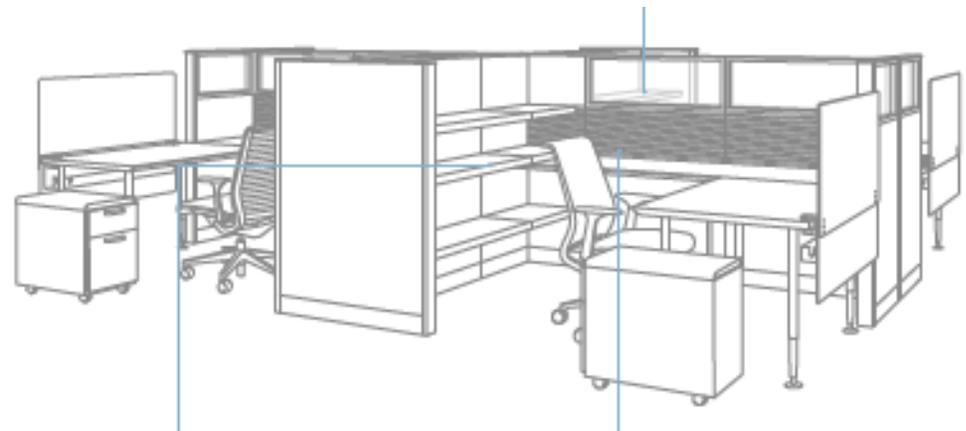
4.2.1 Furniture selection criteria for desk-bound, interactive work pattern



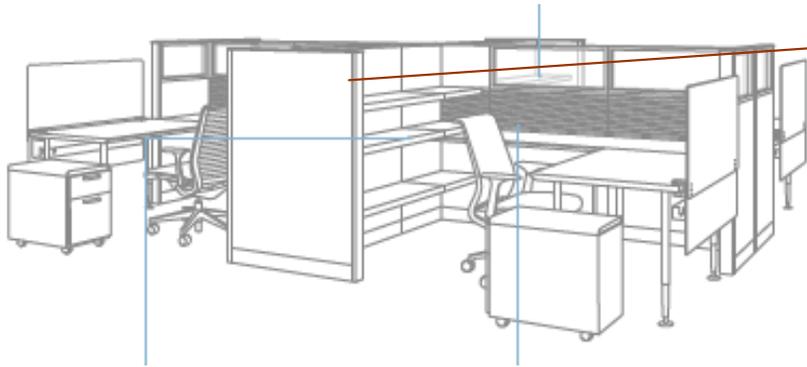
Desk-bound interactive staff, spend a large portion of their time interacting in person or on the phone with colleagues or team mates. Much of this activity is ad hoc and unplanned, so in addition to providing a productive and comfortable workstation for individual work, these settings must accommodate guests.

In addition to physical accommodations, components of these settings must facilitate communication and collaboration. Pin up surfaces, whiteboards and large monitors are prevalent amongst these staff.

Protocols for phone use and small meetings are extremely important for these employees. Enclosed spaces for larger meetings and “quiet zones” or focus booths for concentrated work are essential.



4.2.1 Furniture selection criteria for desk-bound, interactive work pattern



- Use higher panels (without clear glass) along major circulation routes.
- Where possible specify “stacking” components between employees
- Make sure electrical/data connection heights, location and number are specified.
- Avoid “runs” of over 8 stations (4 on each side)
- Look for opportunities to reduce the number of panels, between employees, or within “pods” or teams.

Panel Height

The height of panels should provide seated privacy yet standing visual access. This usually means 54” plus or minus 4” high. Standing visual access refers to the ability for people to see others when standing in a workstation. Without standing visual access, people are less aware of their neighbors, tend to speak louder, and thus create distractions to others nearby. Seated privacy refers to the inability to see others when seated at the desk, which reduces distraction caused by frequent eye contact. Glass stacks can sometimes be added on top of the 54”H panels.

Panel Skins

Vertical surfaces are work surfaces as valuable as table surfaces. When choosing panel fabrics, or “skins,” tack-able acoustical fabric can provide valuable pinup surfaces, slat tiles allow users to add accessories ranging from paper sorter and pencil holder to task light and photo frames.

Panel acoustics

Panel fabric and substrate can marginally reduced transferred sound. Historically, this aspect of the material was overly “sold” in order to assuage fears of disruption. It has been proven that lower panels reduce noise levels for the height reasons listed above. Nevertheless, fabric does provide an absorptive rather than reflective surface. It is specifically helpful above the work surface where the employee’s view is focused. The typical STC for acoustical panels 20. NRC is .65

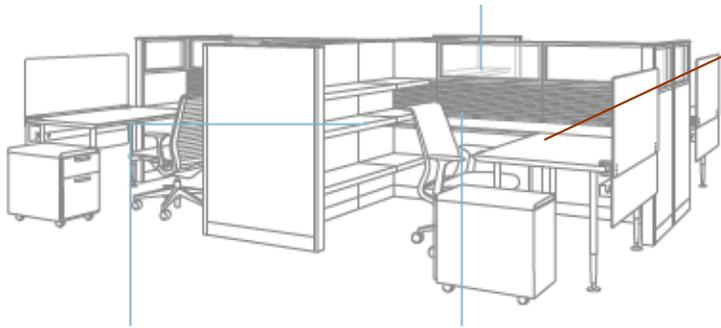


Tack-able surface



Slat tiles for attaching accessories

4.2.1 Furniture selection criteria for desk-bound, interactive work pattern



Work surface depth

The depth of main work surface should be between 24" and 36" for working with paper documents. Secondary work surfaces should be 18" or deeper.

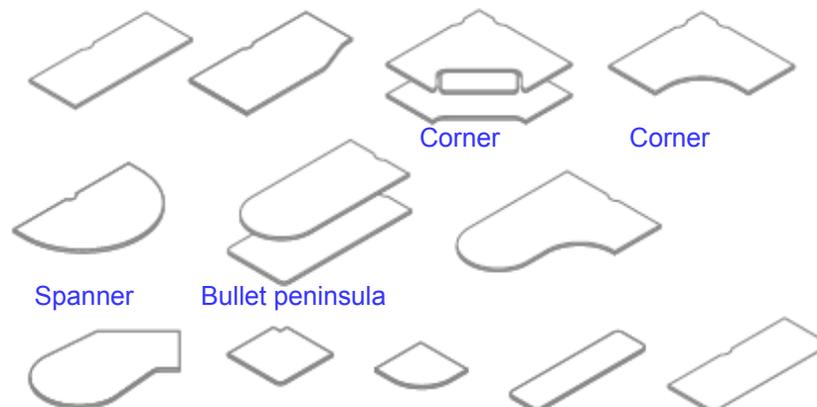
Work surface shape

Look for work surfaces that not only provide the right function now but are also easy to reconfigure in the future. Corners are excellent for accommodating large LCD monitors. With flat panel monitors becoming more common, rectangular work surfaces are better choice for the flexibility to reconfigure. For supporting 2-3 persons meeting at desk, free standing tables may be added to the workstation. Spanners and peninsulas are alternative choices.

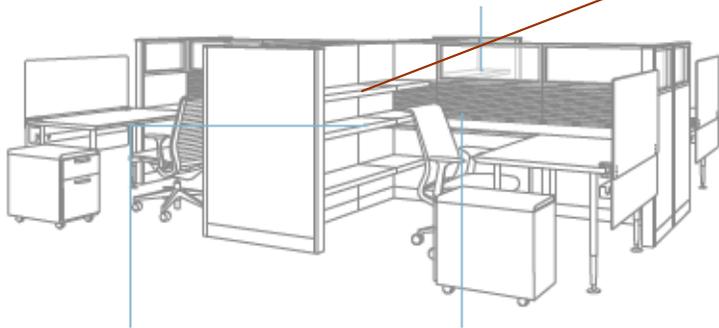
Work surface configuration

The desks should be arranged to support 2 people working side-by-side or 2-3 person meetings at desk. The arrangement should avoid having users' backs being exposed to the main circulation.

- *Pay attention to leg placement. "C" leg supports can often increase user mobility.*
- *Where possible, specify "metal to metal" connectors which allow work surfaces to be de-constructed, stored and re-installed without reducing structural integrity.*
- *Try to layer work surfaces to increase storage within the smallest "cockpit" area*
- *Make sure work surfaces support accessory items such as tool rails, privacy screens and electrical/data management.*



4.2.1 Furniture selection criteria for desk-bound, interactive work pattern



- *Avoid using storage for work surface support.*
- *If possible use mobile storage to avoid “handedness”*
- *Make sure storage heights are coordinated with panel heights (they can be different, but they should be different on purpose)*
- *Pay attention to cabinet door swings and drawer pull outs*
- *Use open shelves when possible, displayed storage is more easily managed.*
- *Use storage towers or under counter shelves in lieu of “overheads” for binder storage.*

Avoid over-providing storage at desk

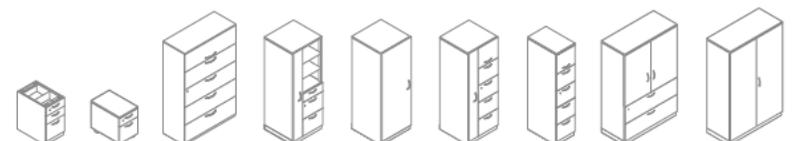
If planned for the worst scenario, many employees will end up having under-utilized storage occupying valuable space at workstations or filling the storage spaces with non-essential items. When providing storage at desk, it is more advisable to provide just enough storage for average employees. Additional storage near desk can be provided to those with exceptionally high file storage needs, for example, lateral files along the circulation.

Avoid blocking standing visual access

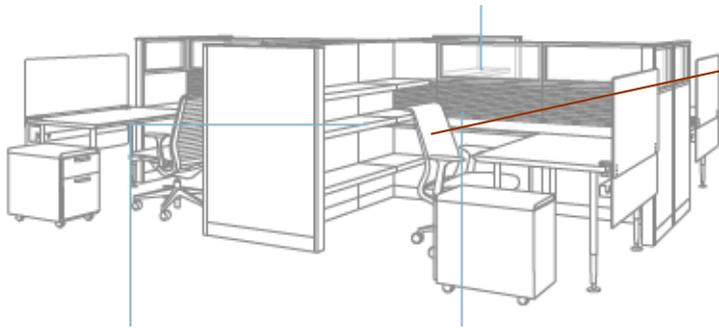
To preserve visual access across the space, one should avoid extensive use of overhead storage bins, which usually require 60” or higher panels to support, and tall storage towers. Pedestals, lateral files, storage towers, and freestanding shelves usually provides better visual access as well as more flexibility for future space re-configuration.

Storage units sometimes can do more than just store things

The top surface of mobile pedestals can often be used as additional work surface for laying out paper documents. With a seating pad on top, some mobile pedestals can double as guest seats. When lateral files are 58” or lower, the surface on top can be used for laying out paper and displaying items.



4.2.1 Furniture selection criteria for desk-bound, interactive work pattern



- *Make sure the seating is BIFMA compliant*
- *Review durability tests for fabrics*
- *Verify replacement parts are available (and check pricing)*
- *Specify casters that are correct for the floor material (carpet or not)*

Task Chair

A comfortable and ergonomically sound chair helps prevent fatigue and increases productivity.

Key ergonomic considerations:

- Allows one to change position while staying orientated to one's work
- Has a backrest that changes shape to conform to one's unique back shape (lumbar support)
- Provides adjustable tilt pressure for the back
- Provides seat depth adjustment so one can adjust to satisfy one's leg length
- Enables adjustment of the chair's arms – both the height and width – to support one's specific torso width



Guest Chairs

To support interaction and collaboration at the desk, each workstation should have one to two guest seats. Some mobile pedestals can double as guest seat. Rolling stools or pull up chairs are other options.



4.2.1 Furniture selection criteria for desk-bound, interactive work pattern



- *Monitor arms and keyboard trays should be intuitively adjustable*
- *Verify weight capacity of the arm with the weight of the monitors*
- *Pay attention to cord management when locating ancillary outlets*
- *Avoid locating additional outlets on any mobile components*
- *Mobile components should be planned as fixed furniture to make sure there is storage/resting space for all pieces*
- *Avoid items of multiple heights, select one height for mobile components and maintain it.*



Accessories

Sharing information at the desk may require additional monitors. Monitor arms that adjust the height and direction of display screens can facilitate collaboration. Additional electrical (and data) outlets help visitors plug in laptops to work on projects for a short time with their colleague.

Similarly, small pull out tables that are height adjustable to slide under adjacent work surfaces when not in use are very helpful when colleagues stop by to share their progress. Mobile white boards or tack boards also support sharing ideas.



Mobile white boards facilitate meetings and create privacy



Mobile tables can serve for additional lay out or ad hoc meeting space

4.2.2 Furniture selection criteria for desk-bound, concentrative work pattern



Considering the amount of time desk-bound / concentrative employees spend at their desks, their workstations are the most important work setting for them.

The key to highly functional workstations for these employees is to ensure that they can work productively and comfortably in a quiet open work environment. This means choosing the right workstation components as well as providing enclosed support spaces nearby for noisy activities



4.2.2 Furniture selection criteria for desk-bound, concentrative work pattern



- Use higher panels (without clear glass) along major circulation routes.
- Where possible specify “stacking” components between employees
- Make sure electrical/data connection heights, location and number are specified.
- Avoid “runs” of over 8 stations (4 on each side)
- Look for opportunities to reduce the number of panels, between employees, or within “pods” or teams.

Panel Height

The height of panels should provide seated privacy yet standing visual access. This usually means 54” plus or minus 4” high. Standing visual access refers to the ability for people to see others when standing in a workstation. Without standing visual access, people are less aware of their neighbors, tend to speak louder, and thus create distractions to others nearby. Seated privacy refers to the inability to see others when seated at the desk, which reduces distraction caused by frequent eye contact. Glass stacks can sometimes be added on top of the 54”H panels.

Panel Skins

Vertical surfaces are work surfaces as valuable as table surfaces. When choosing panel fabrics, or “skins,” tack-able acoustical fabric can provide valuable pinup surfaces, slat tiles allow users to add accessories ranging from paper sorter and pencil holder to task light and photo frames and white boards help organize and share thoughts.

Panel acoustics

The panel fabric and substrate can marginally reduce transferred sound. Historically, this aspect of the material was overly “sold” in order to assuage fears of disruption. It has been proven that lower panels reduces noise levels for the height reasons listed above. Nevertheless, fabric does provide an absorptive rather than reflective surface. It is specifically helpful above the work surface where the employee’s view is focused. The typical STC (sound transfer coefficient) for acoustical panels is 20, NRC (noise reduction coefficient) is .65.



Tack-able surface

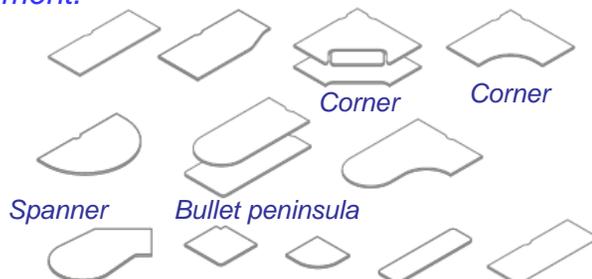


Slat tiles for attaching accessories

4.2.2 Furniture selection criteria for desk-bound, concentrative work pattern



- *Pay attention to leg placement. “C” leg supports can often increase user mobility.*
- *Where possible, specify “metal to metal” connectors which allow work surfaces to be de-constructed, stored and re-installed without reducing structural integrity.*
- *Try to layer work surfaces to increase storage within the smallest “cockpit” area*
- *Make sure work surfaces support accessory items such as tool rails, privacy screens and electrical/data management.*



Work surface depth

The depth of main work surface should be between 24” and 30” for working with paper documents. Secondary work surfaces should be 18” or deeper. As more and more work goes virtual, work surface depths are becoming narrower.

Work surface shape

Look for work surfaces that not only provide the right function now but are also easy to reconfigure in the future. Corners are excellent for accommodating large CRT monitors when they are still used. With more and more flat panel monitors entering the workplace, rectangular work surfaces are the better choice because of increased flexibility to reconfigure. To keep the open work environment quiet for concentrative work, spanners, peninsulas and other types of work surfaces for small group meetings at the desk, should be avoided. Employees should be encouraged to use enclosed meeting rooms for interaction.

Work surface configuration

The desks should be organized in an L or U shape. The arrangement should avoid having users’ backs exposed to the main circulation.

4.2.2 Furniture selection criteria for desk-bound, concentrative work pattern



Avoid using overhead bins

To preserve visual access across the space, one should avoid using overhead storage bins. Overhead bins usually require 60" or higher panels to provide ample work space under the bin. Thus, they compromise standing visual access. Pedestals, lateral files, storage towers, and freestanding shelves usually provide better visual access as well as more flexibility for future space re-configuration.

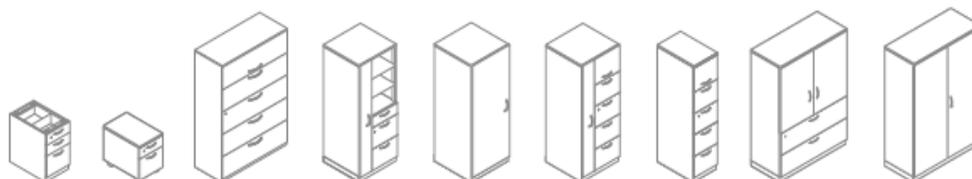
Avoid over-providing storage at desk

If planned for the worst scenario, many employees will end up having under-utilized storage occupying valuable space at their workstations or filling the storage spaces with non-essential items. When estimating the amount of storage to be provided at work stations, it is advisable to provide just enough storage for average employees. Additional storage near the desk can be provided to those with exceptionally high file storage needs, for example, lateral files along the circulation.

- *Avoid using storage for work surface support.*
- *If possible use mobile storage to avoid "handedness"*
- *Make sure storage heights are coordinated with panel heights (they can be different, but they should be different on purpose)*
- *Pay attention to cabinet door swings and drawer pull outs*
- *Use open shelves when possible, displayed storage is more easily managed.*
- *Use storage towers or under counter shelves in lieu of "overheads" for binder storage.*

Storage units sometimes can do more than just store things

The top surface of mobile pedestals can often be used as a guest seat or an additional work surface for laying out paper documents. When lateral files are 48" or lower, the surface on top can be used for laying out paper and displaying items.



4.2.2 Furniture selection criteria for desk-bound, concentrative work pattern



- *Make sure the seating is BIFMA compliant*
- *Review durability tests for fabrics*
- *Verify replacement parts are available (and check pricing)*
- *Specify casters that are correct for the floor material (carpet or not)*

Task Chair

A comfortable and ergonomically sound chair helps prevent fatigue and increases productivity.

Key ergonomic considerations:

- Allows one to change position while staying orientated to one's work
- Has a backrest that changes shape to conform to one's unique back shape (lumbar support)
- Provides adjustable tilt pressure for the back
- Provides seat depth adjustment so one can adjust to satisfy one's leg length
- Enables adjustment of the chair's arms – both the height and width – to support one's specific torso width

Because of the wide variety of seating available, make sure the function of the chair is demonstrated, and test the seating for a week (minimum).

Guest Chairs

To keep the open work environment quiet for concentrative work, guest chairs should not be provided in workstations for desk-bound concentrative employees. Employees should be encouraged to use enclosed meeting rooms for interaction.

4.2.2 Furniture selection criteria for desk-bound, concentrative work pattern



- *Monitor arms and keyboard trays should be intuitively adjustable*
- *Verify weight capacity of the arm with the weight of the monitors*
- *Mobile components should be planned as fixed furniture to make sure there is storage/resting space for all pieces*
- *Avoid items of multiple heights, select one height for mobile components and maintain it.*



Accessories

Because desk-bound workers spend a larger portion of their day in a single location, ergonomic adjustment becomes more important. Repetitive motion is the leading cause of office injuries. Monitor arms and keyboard trays provide flexibility where it matters the most.

Desk-bound staff can also have legitimate reasons for increased storage. Providing additional storage in movable form, creates more flexibility in work station layout and simplifies future moves.

Mobile white boards or mountable screens work to increase privacy and reduced visual disruption.



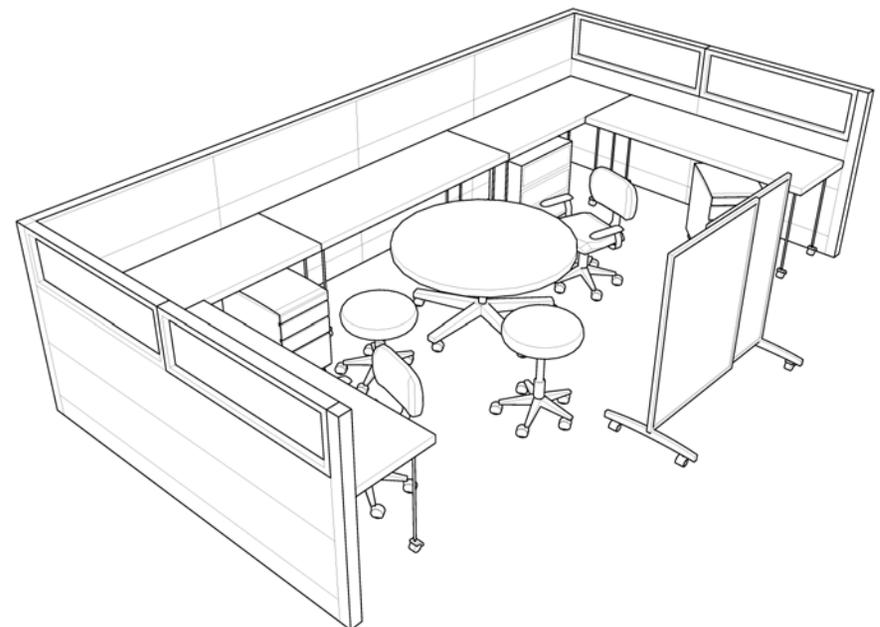
Mobile credenza/work surface can do “double duty” as layout space or signal to “stay out”

4.2.3 Furniture selection criteria for internally-mobile, interactive work pattern

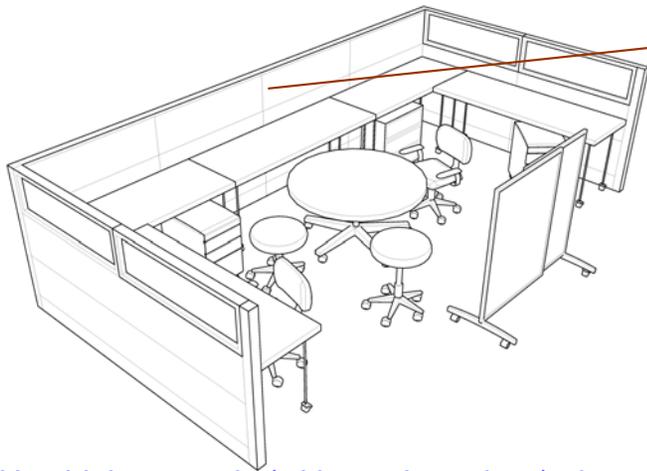


While these staff are often away from their primary desks, they are also often working with other individuals or teams. Their work stations should accommodate quick ad hoc meetings of short duration for 2-3 people including the ability to share information from computer monitors.

In addition to the right workstation components there must be access to a variety of collaborative environments: enclosed and open, formal and informal. Access to enclosed spaces for occasional concentrative tasks is also helpful.



4.2.3 Furniture selection criteria for internally-mobile, interactive work pattern



- *Use higher panels (without clear glass) along major circulation routes.*
- *Where possible specify “stacking” components between employees*
- *Make sure electrical/data connection heights, location and number are specified.*
- *Avoid “runs” of over 8 stations (4 on each side)*
- *Look for opportunities to reduce the number of panels, between employees, or within “pods” or teams.*

Panel Height

The height of panels should provide seated privacy yet standing visual access. This usually means 54” plus or minus 4” high. Standing visual access refers to the ability for people to see others when standing in a workstation. Without standing visual access, people are less aware of their neighbors, tend to speak louder, and thus create distractions to others nearby. Seated privacy refers to the inability to see others when seated at the desk, which reduces distraction caused by frequent eye contact. Glass stacks can sometimes be added on top of the 54”H panels.

Panel Skins

Vertical surfaces are work surfaces as valuable as table surfaces. When choosing panel fabrics, or “skins,” tack-able acoustical fabric can provide valuable pinup surfaces, slat tiles allow users to add accessories ranging from paper sorter and pencil holder to task light and photo frames.

Panel acoustics

Panel fabric and substrate can marginally reduce transferred sound. Historically, this aspect of the material was overly “sold” in order to assuage fears of disruption. It has been proven that lower panels reduce noise levels for the height reasons listed above. Nevertheless, fabric does provide an absorptive rather than reflective surface. It is specifically helpful above the work surface where the employee’s view is focused. The typical STC for acoustical panels 20. NRC is .65

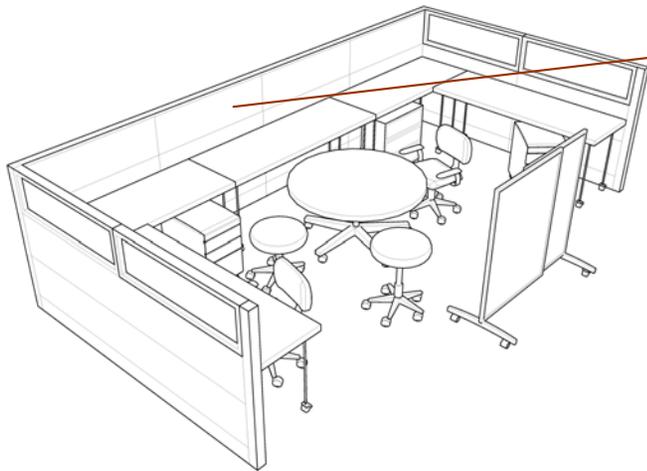


Tack-able surface



Slat tiles for attaching accessories

4.2.3 Furniture selection criteria for internally-mobile, interactive work pattern



Work surface depth

The depth of main work surface should be between 24” and 36” for working with paper documents. Secondary work surfaces should be 18” or deeper.

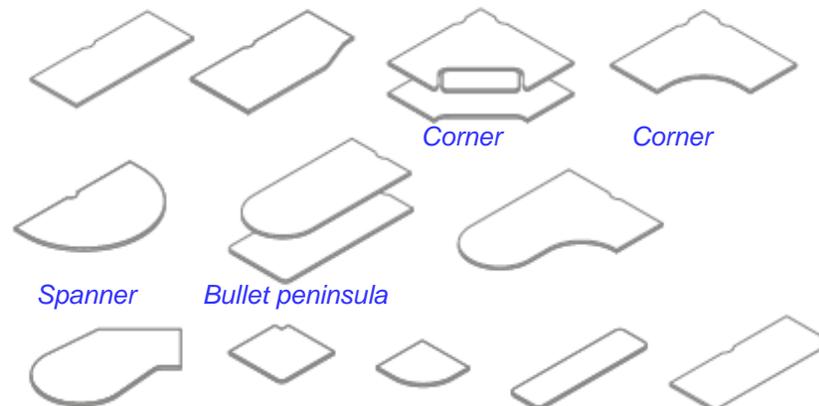
Work surface shape

Look for work surfaces that not only provide the right function now but also easy to reconfigure in the future. Corners are excellent for accommodating large LCD monitors. With flat panel monitors becoming more common, rectangular work surfaces are better choice for the flexibility to reconfigure. For supporting 2-3 persons meeting at desk, free standing tables may be added to the workstation. Spanners and peninsulas are alternative choices.

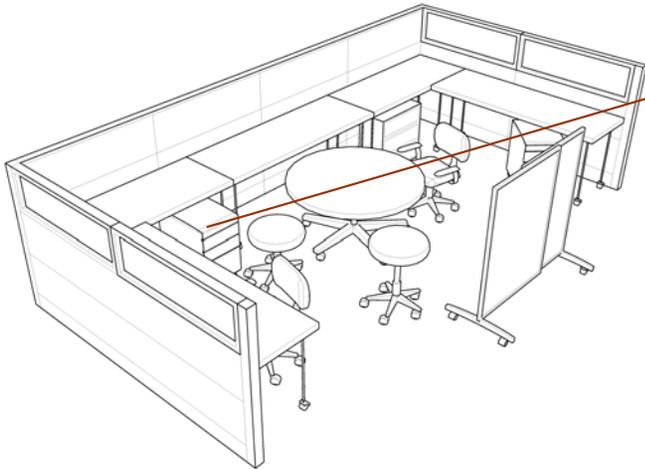
Work surface configuration

The desks should be arranged to support 2 person working side-by-side or 2-3 person meetings at desk. The arrangement should avoid having users’ backs being exposed to the main circulation.

- *Pay attention to leg placement. “C” leg supports can often increase user mobility.*
- *Where possible, specify “metal to metal” connectors which allow work surfaces to be de-constructed, stored and re-installed without reducing structural integrity.*
- *Try to layer work surfaces to increase storage within the smallest “cock pit” area*
- *Make sure work surfaces support accessory items such as tool rails, privacy screens and electrical/data management.*



4.2.3 Furniture selection criteria for internally-mobile, interactive work pattern



Avoid over-providing storage at desk

If planned for the worst scenario, many employees will end up having under-utilized storage occupying valuable space at workstations or filling the storage spaces with non-essential items. When providing storage at desk, it is more advisable to provide just enough storage for average employees. Additional storage near desk can be provided to those with exceptionally high file storage needs, for example, lateral files along the circulation.

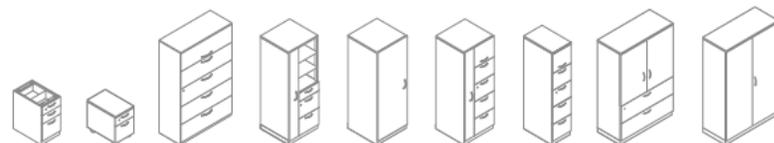
Avoid blocking standing visual access

To preserve visual access across the space, one should avoid extensive use of overhead storage bins, which usually require 60” or higher panels to support, and tall storage towers. Pedestals, lateral files, storage towers, and freestanding shelves usually provides better visual access as well as more flexibility for future space re-configuration.

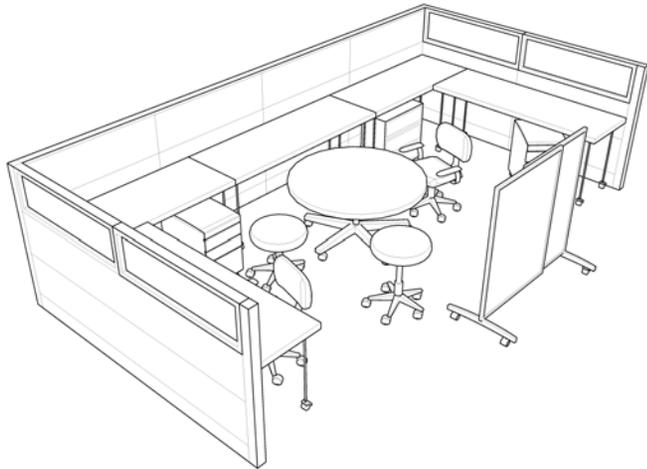
- *Avoid using storage for work surface support.*
- *If possible use mobile storage to avoid “handedness”*
- *Make sure storage heights are coordinated with panel heights (they can be different, but they should be different on purpose)*
- *Pay attention to cabinet door swings and drawer pull outs*
- *Use open shelves when possible, displayed storage is more easily managed.*
- *Use storage towers or under counter shelves in lieu of “overheads” for binder storage.*

Storage units sometimes can do more than just store things

The top surface of mobile pedestals can often be used as additional work surface for laying out paper documents. With a seating pad on top, some mobile pedestals can double as guest seats. When lateral files are 58” or lower, the surface on top can be used for laying out paper and displaying items.



4.2.3 Furniture selection criteria for internally-mobile, interactive work pattern



- *Make sure the seating is BIFMA compliant*
- *Review durability tests for fabrics*
- *Verify replacement parts are available (and check pricing)*
- *Specify casters that are correct for the floor material (carpet or not)*

Task Chair

A comfortable and ergonomically sound chair helps prevent fatigue and increases productivity.

Key ergonomic considerations:

- Allows one to change position while staying orientated to one's work
- Has a backrest that changes shape to conform to one's unique back shape (lumbar support)
- Provides adjustable tilt pressure for the back
- Provides seat depth adjustment so one can adjust to satisfy one's leg length
- Enables adjustment of the chair's arms – both the height and width – to support one's specific torso width

Guest Chairs

To support interaction and collaboration at the desk, each workstation should have one to two guest seats. Some mobile pedestals can double as guest seat. Rolling stools or pull up chairs are other options.



4.2.3 Furniture selection criteria for internally-mobile, interactive work pattern



- *Monitor arms with display screens should be intuitively adjustable*
- *Verify weight capacity of the arm with the weight of the monitors*
- *Pay attention to cord management when locating ancillary outlets*
- *Avoid locating additional outlets on any mobile components*
- *Mobile components should be planned as fixed furniture to make sure there is storage/resting space for all pieces*
- *Avoid items of multiple heights, select one height for mobile components and maintain it.*



Accessories

Mobile interactive staff are organizing and coordinating actions with a variety of colleagues. A large part of their day is made up of meetings (planned and ad hoc). Additional accessories within a neighborhood of interactive staff should include: mobile whiteboards, rolling tables for 2-3, rolling stools or mobile pedestals.

Sharing information at the desk may also require additional monitors. Monitor arms with laptop connections that adjust the height and direction of display screens can facilitate collaboration. Additional electrical (and data) outlets help visitors plug in laptops to work on projects for a short time with their colleague.

Similarly, small pull out tables that are height adjustable to slide under adjacent work surfaces when not in use, are very helpful when colleagues stop by to share their progress. Mobile whiteboards or tack boards also support sharing ideas.



Mobile white boards facilitate meetings and create privacy



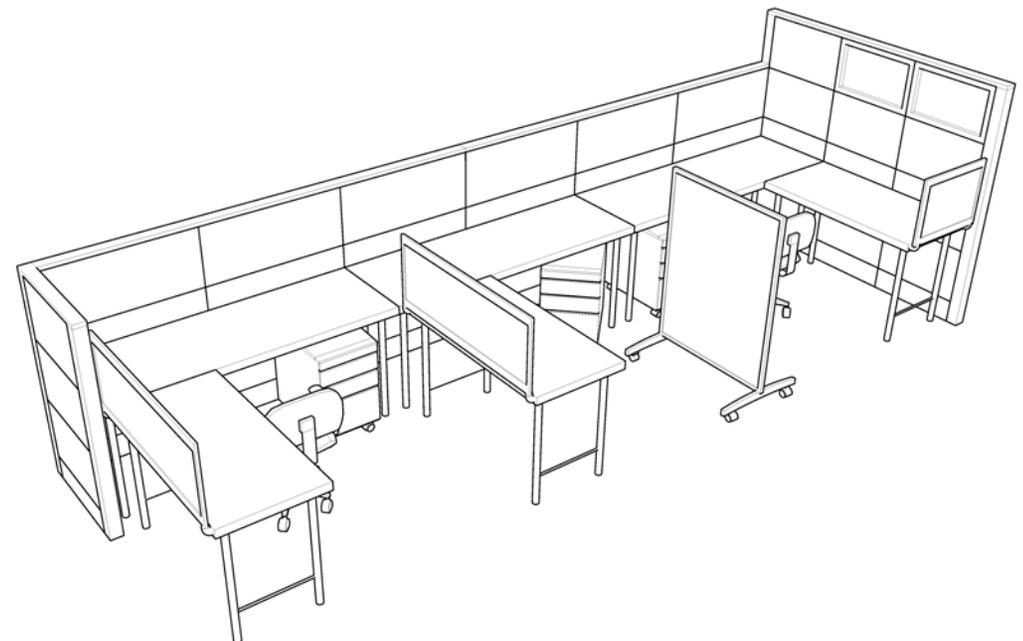
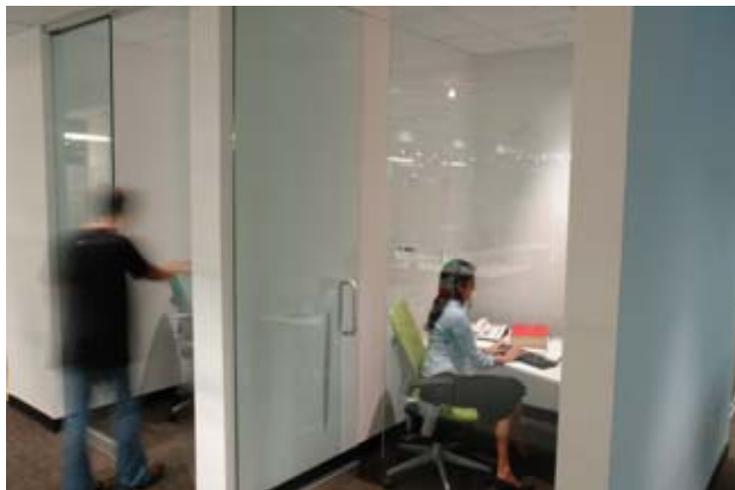
Mobile tables can serve for additional lay out or ad hoc meeting space

4.2.4 Furniture selection criteria for internally-mobile, concentrative work pattern

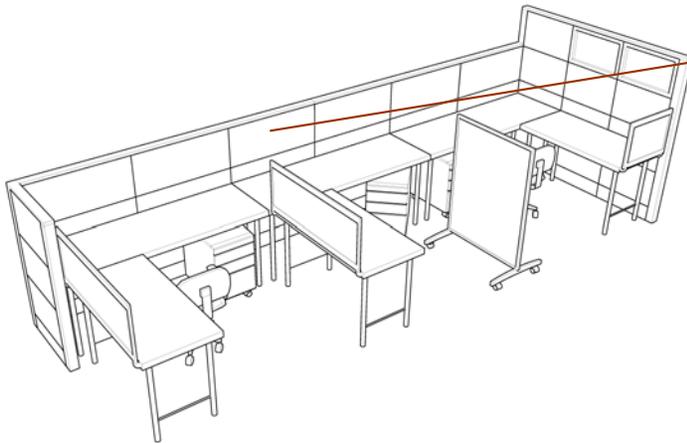


Internally-mobile/concentrative employees are often somewhere else in the building. While their individual work setting continues to be important, having easy access to formal and informal spaces for meetings or concentrative work throughout the building or campus is essential.

The key to highly functional workstations for these employees is a quiet open environment, sheltered from noisy functions and circulation. Work station components that signal “concentrative work” (like mobile screens or tables) are critical.



4.2.4 Furniture selection criteria for internally-mobile, concentrative work pattern



- Use higher panels (without clear glass) along major circulation routes.
- Where possible specify “stacking” components between employees
- Make sure electrical/data connection heights, location and number are specified.
- Avoid “runs” of over 8 stations (4 on each side)
- Look for opportunities to reduce the number of panels, between employees, or within “pods” or teams.

Panel Height

The height of panels should provide seated privacy yet standing visual access. This usually means 54” plus or minus 4” high. Standing visual access refers to the ability for people to see others when standing in a workstation. Without standing visual access, people are less aware of their neighbors, tend to speak louder, and thus create distractions to others nearby. Seated privacy refers to the inability to see others when seated at the desk, which reduces distraction caused by frequent eye contact. Glass stacks can sometimes be added on top of the 54”H panels.

Panel Skins

Vertical surfaces are work surfaces as valuable as table surfaces. When choosing panel fabrics, or “skins,” tack-able acoustical fabric can provide valuable pinup surfaces, slat tiles allow users to add accessories ranging from paper sorter and pencil holder to task light and photo frames and white boards help organize and share thoughts.

Panel acoustics

The panel fabric and substrate can marginally reduce transferred sound. Historically, this aspect of the material was overly “sold” in order to assuage fears of disruption. It has been proven that lower panels reduces noise levels for the height reasons listed above. Nevertheless, fabric does provide an absorptive rather than reflective surface. It is specifically helpful above the work surface where the employee’s view is focused. The typical STC (sound transfer coefficient) for acoustical panels is 20, NRC (noise reduction coefficient) is .65.

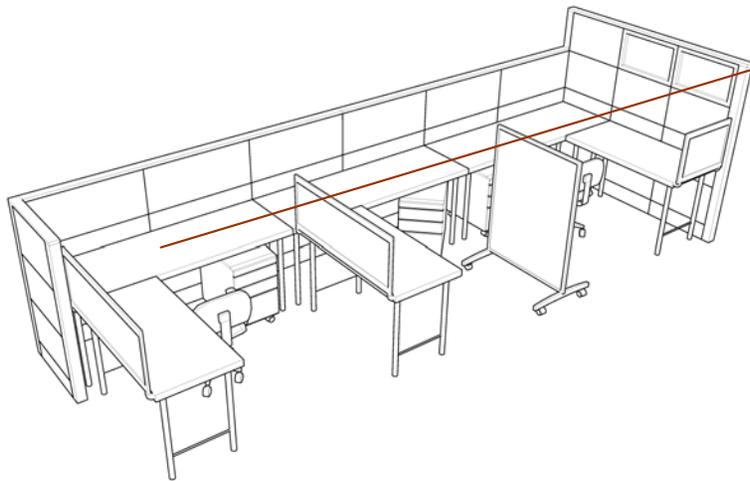


Tack-able surface



Slat tiles for attaching accessories

4.2.4 Furniture selection criteria for internally-mobile, concentrative work pattern



- *Pay attention to leg placement. "C" leg supports can often increase user mobility.*
- *Where possible, specify "metal to metal" connectors which allow work surfaces to be de-constructed, stored and re-installed without reducing structural integrity.*
- *Try to layer work surfaces to increase storage within the smallest "cock pit" area*
- *Make sure work surfaces support accessory items such as tool rails, privacy screens and electrical/data management.*

Work surface depth

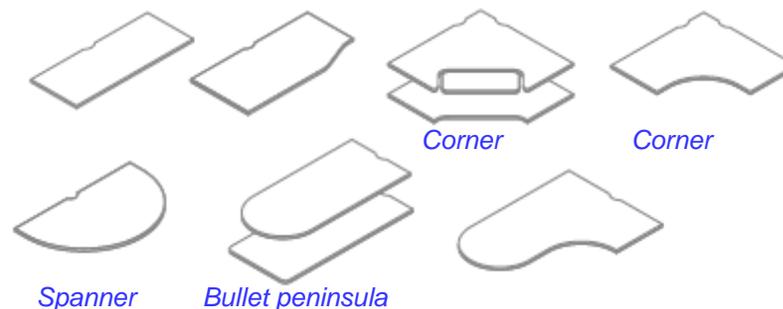
The depth of main work surface should be between 24" and 30" for working with paper documents. Secondary work surfaces should be 18" or deeper. As more and more work goes virtual, work surface depths are becoming narrower.

Work surface shape

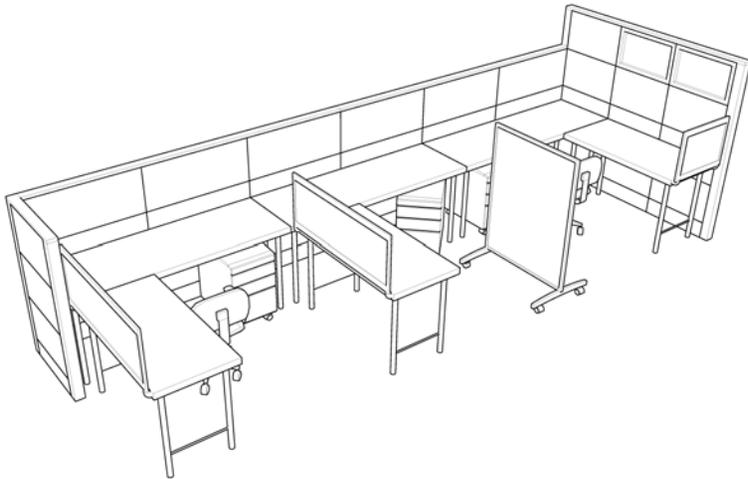
Look for work surfaces that not only provide the right function now but are also easy to reconfigure in the future. Corners are excellent for accommodating large CRT monitors when they are still used. With more and more flat panel monitors entering the workplace, rectangular work surfaces are the better choice because of increased flexibility to reconfigure. To keep the open work environment quiet for concentrative work, spanners, peninsulas and other types of work surfaces for small group meetings at the desk, should be avoided. Employees should be encouraged to use enclosed meeting rooms for interaction.

Work surface configuration

The desks should be organized in an L or U shape. The arrangement should avoid having users' backs exposed to the main circulation.



4.2.4 Furniture selection criteria for internally-mobile, concentrative work pattern



- *Avoid using storage for work surface support.*
- *If possible use mobile storage to avoid “handedness”*
- *Make sure storage heights are coordinated with panel heights (they can be different, but they should be different on purpose)*
- *Pay attention to cabinet door swings and drawer pull outs*
- *Use open shelves when possible, displayed storage is more easily managed.*
- *Use storage towers or under counter shelves in lieu of “overheads” for binder storage.*

Storage/Layout

Often these workers divide their time between collecting data and synthesizing or analyzing it. Storage components that can be added to an individual’s work space based on project load are helpful. Also items that do “double duty” as layout space are encouraged.

Avoid using overhead bins

To preserve visual access across the space, one should avoid using overhead storage bins. Overhead bins usually require 60” or higher panels to provide ample work space under the bin. Thus, they compromise standing visual access. Pedestals, lateral files, storage towers, and freestanding shelves usually provide better visual access as well as more flexibility for future space re-configuration.

Avoid over-providing storage at desk

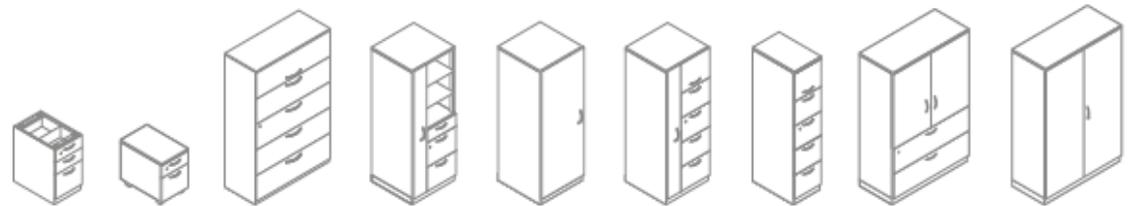
If planned for the worst scenario, many employees will end up having under-utilized storage occupying valuable space at their workstations or filling the storage spaces with non-essential items. When estimating the amount of storage to be provided at work stations, it is advisable to provide just enough storage for average employees. Additional storage near the desk can be provided to those with exceptionally high file storage needs, for example, lateral files along the circulation.

4.2.4 Furniture selection criteria for internally-mobile, concentrative work pattern

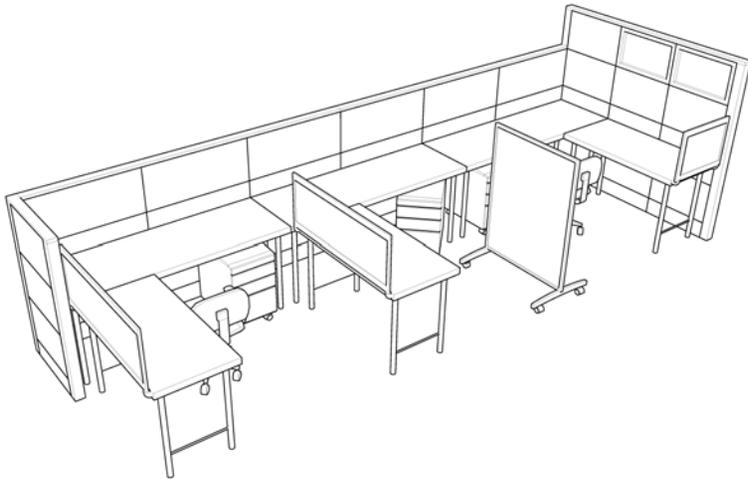


Storage units sometimes can do more than just store things

The top surface of mobile pedestals can often be used as a guest seat or an additional work surface for laying out paper documents. When lateral files are 48" or lower, the surface on top can be used for laying out paper and displaying items.



4.2.4 Furniture selection criteria for internally-mobile, concentrative work pattern



- *Make sure the seating is BIFMA compliant*
- *Review durability tests for fabrics*
- *Verify replacement parts are available (and check pricing)*
- *Specify casters that are correct for the floor material (carpet or not)*

Task Chair

A comfortable and ergonomically sound chair helps prevent fatigue and increases productivity.

Key ergonomic considerations:

- Allows one to change position while staying orientated to one's work
- Has a backrest that changes shape to conform to one's unique back shape (lumbar support)
- Provides adjustable tilt pressure for the back
- Provides seat depth adjustment so one can adjust to satisfy one's leg length
- Enables adjustment of the chair's arms – both the height and width – to support one's specific torso width

Because of the wide variety of seating available, make sure the function of the chair is demonstrated, and test the seating for a week (minimum).

Guest Chairs

To keep the open work environment quiet for concentrative work, guest chairs should not be provided in workstations for internally-mobile concentrative employees. Employees should be encouraged to use enclosed meeting rooms for interaction.

4.2.4 Furniture selection criteria for internally-mobile, concentrative work pattern



Accessories

Performing concentrative work in a variety of settings requires active use of protocols expressing availability when working among your colleagues. A simple sign attached to a tack-able panel, or the relocation of a whiteboard or storage unit will signal your availability or conversely your need to avoid interruptions. Active use of alternative settings such as libraries, focus rooms, file rooms or team areas will also help you concentrate on a specific task.



Mobile screens (shared by staff) can be employed when the individual needs limited interruption

4.2.5 Furniture selection criteria for externally-mobile, interactive work pattern



Externally-mobile interactive employees are often not in the building. They share a variety of work spaces adjacent to whichever team they are supporting or client they are visiting. The most important aspects of these working spaces are technology connections, location protocols and easily adjusted furniture components.

A wide variety of settings including open work stations, team spaces and conference facilities are essential to maintaining productivity. These individuals function best where they can be seen, and they can see others. Making sure they have all the tools available for collaboration and documentation of shared activities is extremely important.



4.2.5 Furniture selection criteria for externally-mobile, interactive work pattern



- Use higher panels (without clear glass) along major circulation routes.
- Where possible specify “stacking” components between employees
- Make sure electrical/data connection heights, location and number are specified above work surface
- Avoid “runs” of over 8 stations (4 on each side)
- Look for opportunities to reduce the number of panels, between employees, or within “pods” or teams.

Panel Height

The height of panels should provide seated privacy in some locations. Visibility is extremely important for these workers. This usually means a maximum of 54” plus or minus 4” high. Most panels will be 36 or 42” high. With visual access, people are aware of their neighbors and can modulate their voices to appropriate levels. They can also engage their colleagues in ad hoc, informal meetings. There should still be settings with seated privacy. This refers to the inability to see others when seated at the desk, which reduces distraction caused by frequent eye contact.

Panel Skins

Vertical surfaces are work surfaces as valuable as table surfaces. When choosing panel fabrics, or “skins,” tack-able acoustical fabric can provide valuable pinup surfaces, slat tiles allow users to add accessories ranging from paper sorter and pencil holder to task light and photo frames.

Panel acoustics

Panel fabric and substrate can marginally reduce transferred sound. Historically, this aspect of the material was overly “sold” in order to assuage fears of disruption. It has been proven that lower panels reduce noise levels for the height reasons listed above. Nevertheless, fabric does provide an absorptive rather than reflective surface. It is specifically helpful above the work surface where the employee’s view is focused. The typical STC for acoustical panels 20. NRC is .65



Tack-able surface



Slat tiles for attaching accessories

4.2.5 Furniture selection criteria for externally-mobile, interactive work pattern



- *Pay attention to leg placement. “C” leg supports can often increase user mobility.*
- *Where possible, specify “metal to metal” connectors which allow work surfaces to be de-constructed, stored and re-installed without reducing structural integrity.*
- *Make sure work surfaces support accessory items such as tool rails, privacy screens and electrical/data management.*

Work surface depth

The depth of main work surface should be between 24” and 30” for working with paper documents. Secondary work surfaces should be 18” or deeper. As more and more work goes virtual, work surface depths are becoming narrower.

Work surface shape and height

Look for work surfaces that not only provide the right function now but are also easy to reconfigure in the future. Because mobile workers are almost always laptop based, corners for large CRT monitors are seldom used. With laptops and flat panel monitors, rectangular work surfaces are the better choice because of increased flexibility to reconfigure. Because these areas are likely to be used by multiple staff, work surfaces that are height adjustable by the employee (electronically, counter-balanced or crank) are preferred. To provide plenty of opportunities for ad hoc, informal collaboration consider spanners, peninsulas and other types of work surfaces for small group meetings at the desk

Work surface configuration

Although often grouped, these settings should take every opportunity to direct views and voices away from neighboring team mates. Space the settings to allow multiple small meetings to occur simultaneously. The arrangement should also avoid having users’ backs exposed to the main circulation.



rectangular



Convex end



peninsula

4.2.5 Furniture selection criteria for externally-mobile, interactive work pattern



- *Locate group storage in easily accessible areas, adjacent to touchdown stations or community zones*
- *Create banks of storage that can easily be apportioned to a variety of staff in differing quantities*
- *Combine forms of storage to accommodate bulky items as well as typical files and binders*

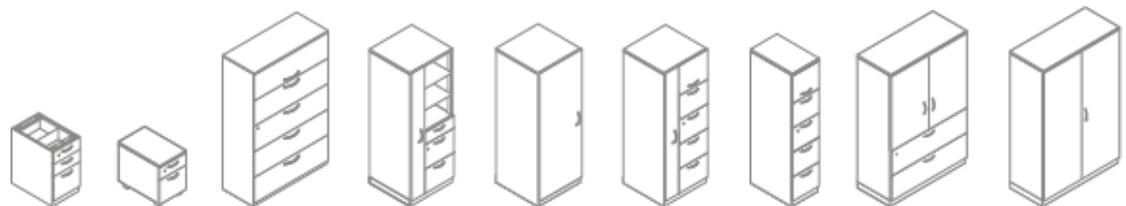
Storage/Layout

Externally-mobile workers place their personal storage in shared storage locations. They may require an individually locking drawer within a bank of files, or a combination locker adjacent to the conference center. Some locations have provided mobile storage components that are stored in a “garage” space or storage closet.

Individual settings used by mobile workers must still have simple storage. A single mobile pedestal, outfitted with paper, stapler, pens, tape and other office supplies is adequate. The externally-mobile worker will maintain electronic access to a number of documents and keep essential print outs or files in their individual drawer storage.

Storage units sometimes can do more than just store things

The top surface of mobile pedestals can often be used as a guest seat or an additional work surface for laying out paper documents. When lateral files are 48” or lower, the surface on top can be used for laying out paper and displaying items.



4.2.5 Furniture selection criteria for externally-mobile, interactive work pattern



- *Make sure the seating is BIFMA compliant*
- *Review durability tests for fabrics*
- *Verify replacement parts are available (and check pricing)*
- *Specify casters that are correct for the floor material (carpet or not)*



Task Chair

A comfortable and ergonomically sound chair helps prevent fatigue and increases productivity.

Key ergonomic considerations:

- Allows one to change position while staying orientated to one's work
- Has a backrest that changes shape to conform to one's unique back shape (lumbar support)
- Provides adjustable tilt pressure for the back
- Provides seat depth adjustment so one can adjust to satisfy one's leg length
- Enables adjustment of the chair's arms – both the height and width – to support one's specific torso width

Because of the wide variety of seating available, make sure the function of the chair is demonstrated, and test the seating for a week (minimum). Because each chair will have multiple users, the best solution will have the durability of a conference room chair with the fullest ergonomic function possible.

Guest Chairs

To support interaction and collaboration at the desk, each workstation should have one to two guest seats. Some mobile pedestals can double as guest seat. Rolling stools or pull up chairs are other options.

4.2.5 Furniture selection criteria for externally-mobile, interactive work pattern



- *Monitor arms and keyboard trays should be intuitively adjustable*
- *Verify weight capacity of the arm with the weight of the monitors*
- *Pay attention to cord management when locating ancillary outlets*
- *Avoid locating additional outlets on any mobile components*
- *Mobile components should be planned as fixed furniture to make sure there is storage/resting space for all pieces*
- *Avoid items of multiple heights, select one height for mobile components and maintain it.*



Accessories

Mobile interactive staff are organizing and coordinating actions from a variety of colleagues. A large part of their day is made up of meetings (planned and ad hoc). Additional accessories within a neighborhood of interactive staff should include: mobile whiteboards, rolling tables for 2-3, rolling stools or mobile pedestals.

Sharing information at the desk may also require additional monitors. Monitor arms that adjust the height and direction of display screens can facilitate collaboration. Additional electrical (and data) outlets help visitors plug in laptops to work on projects for a short time with their colleague.

Similarly, small pull out tables that are height adjustable to slide under adjacent work surfaces when not in use are very helpful when colleagues stop by to share their progress. Mobile whiteboards or tack boards also support sharing ideas.



Mobile white boards facilitate meetings and create privacy



Mobile tables can serve for additional lay out or ad hoc meeting space

4.2.6 Furniture selection criteria for externally-mobile, concentrative work pattern

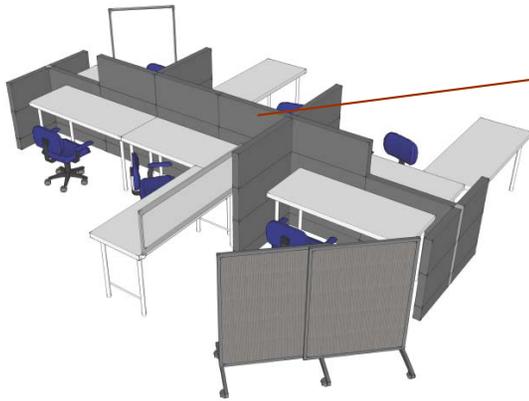


Externally-mobile concentrative employees are often not in the building. They share a variety of work spaces adjacent to whichever team they are supporting. The most important aspects of these working spaces are technology connections, location protocols and easily adjusted furniture components.

Quiet zones that contain a variety of settings including open work stations, focus rooms, team spaces and conference facilities are essential to maintaining productivity. Reservable settings where these staff can spend two hours to a full day doing heads down work are ideal.



4.2.6 Furniture selection criteria for externally-mobile, concentrative work pattern



- Use higher panels (without clear glass) along major circulation routes.
- Where possible specify “stacking” components between employees
- Make sure electrical/data connection heights, location and number are specified (usually above work surface)
- Avoid “runs” of over 8 stations (4 on each side)
- Look for opportunities to reduce the number of panels, between employees, or within “pods” or teams.

Panel Height

The height of panels should provide seated privacy yet standing visual access. This usually means 54” plus or minus 4” high. Standing visual access refers to the ability for people to see others when standing in a workstation. Without standing visual access, people are less aware of their neighbors, tend to speak louder, and thus create distractions to others nearby. Seated privacy refers to the inability to see others when seated at the desk, which reduces distraction caused by frequent eye contact. Glass stacks can sometimes be added on top of the 54”H panels.

Panel Skins

Vertical surfaces are work surfaces as valuable as table surfaces. When choosing panel fabrics, or “skins,” tack-able acoustical fabric can provide valuable pinup surfaces, slat tiles allow users to add accessories ranging from paper sorter and pencil holder to task light and photo frames and white boards help organize and share thoughts.

Panel acoustics

The panel fabric and substrate can marginally reduce transferred sound. Historically, this aspect of the material was overly “sold” in order to assuage fears of disruption. It has been proven that lower panels reduces noise levels for the height reasons listed above. Nevertheless, fabric does provide an absorptive rather than reflective surface. It is specifically helpful above the work surface where the employee’s view is focused. The typical STC (sound transfer coefficient) for acoustical panels is 20, NRC (noise reduction coefficient) is .65.

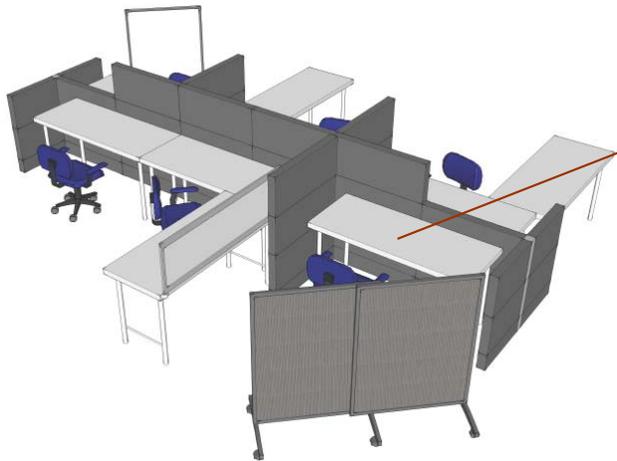


Tack-able surface



Slat tiles for attaching accessories

4.2.6 Furniture selection criteria for externally-mobile, concentrative work pattern



- *Pay attention to leg placement. “C” leg supports can often increase user mobility.*
- *Where possible, specify “metal to metal” connectors which allow work surfaces to be de-constructed, stored and re-installed without reducing structural integrity.*
- *Make sure work surfaces support accessory items such as tool rails, privacy screens and electrical/data management.*

Work surface depth

The depth of main work surface should be between 24” and 30” for working with paper documents. Secondary work surfaces should be 18” or deeper. As more and more work goes virtual, work surface depths are becoming narrower.

Work surface shape and height

Look for work surfaces that not only provide the right function now but are also easy to reconfigure in the future. Because mobile workers are almost always laptop based, corners for large CRT monitors are seldom used. With laptops and flat panel monitors, rectangular work surfaces are the better choice because of increased flexibility to reconfigure. Because these areas are likely to be used by multiple staff, work surfaces that are height adjustable by the employee (electronically, counter-balanced or crank) are preferred. To keep the open work environment quiet for concentrative work, spanners, peninsulas and other types of work surfaces for small group meetings at the desk, should be avoided. Employees should be encouraged to use enclosed meeting rooms for interaction.

Work surface configuration

Although often grouped, these settings should take every opportunity to direct views and voices away from neighboring team mates. The arrangement should also avoid having users’ backs exposed to the main circulation.



rectangular



convex



transition

4.2.6 Furniture selection criteria for externally-mobile, concentrative work pattern



- *Locate group storage in easily accessible areas, adjacent to touchdown stations or community zones*
- *Create banks of storage that can easily be apportioned to a variety of staff in differing quantities*
- *Combine forms of storage to accommodate bulky items as well as typical files and binders*

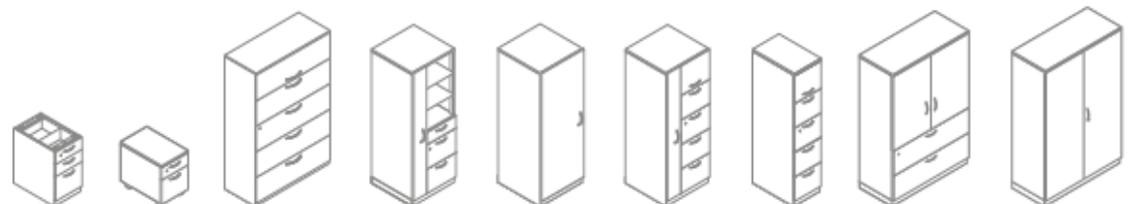
Storage/Layout

Externally-mobile workers place their personal storage in shared storage locations. They may require an individually locking drawer within a bank of files, or a combination locker adjacent to the conference center. Some locations have provided mobile storage components that are stored in a “garage” space or storage closet.

Individual settings used by mobile workers must still have simple storage. A single mobile pedestal, outfitted with paper, stapler, pens, tape and other office supplies is adequate. The externally-mobile worker will maintain electronic access to a number of documents and keep essential print outs or files in their individual drawer storage.

Storage units sometimes can do more than just store things

The top surface of mobile pedestals can often be used as a guest seat or an additional work surface for laying out paper documents. When lateral files are 48” or lower, the surface on top can be used for laying out paper and displaying items.



4.2.6 Furniture selection criteria for externally-mobile, concentrative work pattern

- *Make sure the seating is BIFMA compliant*
- *Review durability tests for fabrics*
- *Verify replacement parts are available (and check pricing)*
- *Specify casters that are correct for the floor material (carpet or not)*

Task Chair

A comfortable and ergonomically sound chair helps prevent fatigue and increases productivity.

Key ergonomic considerations:

- Allows one to change position while staying orientated to one's work
- Has a backrest that changes shape to conform to one's unique back shape (lumbar support)
- Provides adjustable tilt pressure for the back
- Provides seat depth adjustment so one can adjust to satisfy one's leg length
- Enables adjustment of the chair's arms – both the height and width – to support one's specific torso width

Because of the wide variety of seating available, make sure the function of the chair is demonstrated, and test the seating for a week (minimum). Because each chair will have multiple users, the best solution will have the durability of a conference room chair with the fullest ergonomic function possible.

Guest Chairs

To keep the open work environment quiet for concentrative work, guest chairs should not be provided in workstations for externally-mobile concentrative employees. Employees should be encouraged to use enclosed meeting rooms for interaction.

4.2.6 Furniture selection criteria for externally-mobile, concentrative work pattern



Accessories

Performing concentrative work in a variety of settings requires active use of protocols expressing availability when working among your colleagues. A simple sign attached to a tack-able panel, or the relocation of a whiteboard or storage unit will signal your availability or conversely your need to avoid interruptions. Active use of alternative settings such as libraries, focus rooms, file rooms or team areas will also help you concentrate on a specific task.



Mobile screens (shared by staff) can be employed when the individual needs limited interruption



Privacy screens may be attached to mobile components serving for layout space and increased privacy.



5.0 Other Areas of Interest

- [GSA Workspace Requirement Development Process \(RDP\)](#)
- Sustainable workplace
- World class workplace scorecard
- Interior design basics
- Change management
- Reconfigure historical buildings

4.3 Selected products on the GSA Schedule

Notes on GSA Advantage

Having done some research on GSA Advantage, I wanted to pass along my findings. Originally intending to link recommendations from the Workplace Solutions Library to actual product found on GSA Advantage's web site, I ran into some difficulties.

The site is difficult to navigate. In the furniture subsection, all material is listed according to specification number with spare parts intermingled with "whole pieces". There are typically 16-25 pages of these items with few photos.

The majority of the product listed, when sorted by type, is of inferior, "commodity-type" purchase. Much of it is manufactured off-shore with non-sustainable materials. The quality and durability for many items are questionable. Different service models may apply as well, with the same product being offered by several contractors (dealers).

Items appear multiple times in different finishes or with options (arms, no arms, etc.)

Providing items on this web site is a pre-condition for being placed on GSA Contract. Consequently all major manufacturers have some product listed. Haworth has their cappuccino mugs on the site. However, this site generates few sales, so the diversity of the product lines available to GSA is not reflected. More importantly, key product types such as mobile pedestals are not listed.

Additional product available to GSA can be found on individual manufacturers' web sites but in different formats and without pricing. Some websites simply explain the terms of the contract and methods to get in touch with local sales staff.

Potential actions:

1. Create a list of products (with equivalents from several manufacturers) to be placed on the web site and link directly to them.
2. Edit the existing web site placing "whole products or assemblies" in a different category than parts or options.
3. Direct visitors from the Workplace Solutions Library to the 6-7 recommended manufacturers (I can imagine this would be quite controversial and make me very unpopular).
4. Create a separate "e-commerce" function.