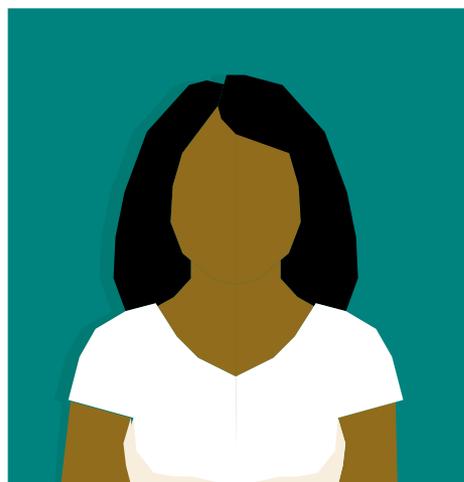


## THE EFFECT OF INDIVIDUALIZED WORK SETTINGS ON PRODUCTIVITY AND WELL-BEING | PHASE 2

three h

PERKINS —  
EASTMAN



There has been extensive research to suggest the positive effect of activity-based work environments on employee performance, collaboration, and well-being. However the same attention has not been paid to the importance of individualization in these environments. We all have such vastly different personalities and it is important to be cognizant of these personal differences when determining in which environments we work and learn best. Activity-based work environments provide flexible work spaces to the degree that they offer a choice of where to work and can support a variety of work activities. However, the furnishings in these spaces often make little allowance for individual user preferences and/or unique work-styles—i.e. employee personality types. To investigate this issue, the second phase of this study includes an in-depth exploration of personality types within an office setting, and how the physical environment may be shaped to optimally support both the individual and the organization as a whole.

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Perkins Eastman Perkins Eastman

- Architecture
- Interior
- Product Design
- Urban Planning

# INTRODUCTION

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**T**his report encompasses the second phase of an investigation into how today's work environments support different personality types and work modes. Multiple studies in the past have examined the positive effect of activity-based work environments (offices where a variety of different workspaces accommodate different tasks and interactions) on employee performance, collaboration, and well-being; however, the same attention has not been paid to the importance of individualization and the connection to employees' personality type and preferences.

The intent of this study is to better understand how different personalities respond to various environmental factors in the workplace, and to determine the impact of individualized work settings on productivity, collaboration and overall employee satisfaction. This was examined both within the larger context of the overall design of the office as well as the micro-scale of individual workstations.

The findings of an in-depth, multi-method approach provide insight into the effect of individualized work settings on employees' productivity and well-being. Based on this analysis, the report concludes with design recommendations and strategies that may be applied to best support different personality types in the workplace. Data collected from observations, interviews and surveys provide clues into how the work environment can be personalized to suit a wide range of employee needs and, as a result, satisfy larger organizational goals.

| LEFT: WORKSPACE

# STUDY METHODS

To obtain a robust and reliable data set, our analysis draws from observational fieldwork (including place-centered maps and artifact archiving) and online surveys. The details of this methodology are described below:



## OBSERVATIONS

Place-mapping examined activity levels throughout the day at each of the sites. Employees' locations within the office, along with their interactions with co-workers, were recorded at 9am, 11am, 1pm, 3pm and 5pm on a typical workday. In addition to quantitative data related to space use & utilization, details regarding the quality of interactions (formal/casual, energetic/subdued, etc.), size of group, and approximate duration were also recorded.

Additionally, observational archaeology analysis was used to learn how users' work processes draw on certain artifacts, tools, equipment, and/or accessories through documentation of every item in an employee's personal workspace.



## ONLINE SURVEY

An online survey assessed employees' perceptions of their work environment as it relates to productivity, collaboration, communication and overall satisfaction. In addition to providing qualitative feedback about personal preferences and work modes, employees completed a Ten Item Personality Inventory (TIPI scale) to identify dominant personality traits based on the "Big Five" model: Extroversion, Agreeableness, Conscientiousness, Neuroticism and Openness.



## PERSONALIZATION INVENTORY

Each workstation and meeting space in the office was assigned a numerical value based on the number of personal items on display, from one (No Personalization) to four (Major Personalization). In addition to the quantity of personal items, the type of objects was also recorded and sorted into categorical groups—each of which ties back to specific personal preferences: Biophilia, Communications, Ergonomics (Kinesthetic), Individualization, Organization, Team, Technology, Comfort & Care, and Visual/Acoustic Privacy.

# SITES

Three activity-based work environments were examined. These work environments varied in industry type, consisting of architecture, design, and financial technology in order for the study to have a varied sample.

The following work environments were examined:





# PERSONALITY MEASURES

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**T**o classify the personality differences among survey respondents we focused on the Big Five personality traits. The Big Five personalities are the result of scientific research that discovered consistent traits among different cultures across the globe. It is a widely accepted taxonomy in the field of personality psychology to simplify personality differences into broad categories (John, O. P., Naumann, L. P., & Soto, C. J., 2008). These traits are Extroversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience. Some of the traits included in these categories are as follows:

**Openness: “having wide interests, and being imaginative and insightful” (Srivastava, 2018)**

**Conscientiousness: “organized, thorough, and planful” (Srivastava, 2018)**

**Extroversion: “talkative, energetic, and assertive” (Srivastava, 2018)**

**Agreeableness: “sympathetic, kind, and affectionate” (Srivastava, 2018)**

**Neuroticism: “tense, moody, and anxious” (Srivastava, 2018)**

Not every individual can accurately be described by this limited classification alone, but for the purposes of this study, distilling the many diverse personalities one may find in any workplace down to a combination of five categories allows us to discover overarching patterns in how different users interact with their physical surroundings. In other workplace studies, the Big Five have been used to effectively determine job and team productivity (Grant, 2013).

There are a number of methods to measure the Big Five traits, most take at least fifteen minutes for an individual to complete (Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. 2003). For the purposes of this particular study, considerable time was needed to assess participants’ responses to a range of

questions about their physical workplace environments and their behavior within them. This meant that including an additional fifteen minutes of questioning in the form of an online survey would jeopardize participants' willingness to take the full survey as well as the efficacy of their responses as they took it. To account for this need we selected the Ten Item Personality Inventory (TIPI) to assess where study participants fall along the Big Five personality traits. While slightly less accurate than standard (and longer) Big Five personality measures (Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. 2003), the brevity of the TIPI assessment helps ensure the larger goals of our study are met. The ability to ask participants

more questions allows for a more extensive analysis of personalities within the workplace than a personality test alone could provide.

Other survey questions included general assessments of introversion vs. extroversion as well as related inquiries into what types of environments users preferred to work in and the modifications they have made or wish to make within them. These responses were then compared with the observations documented during the office archaeology analysis. These findings help form a narrative around a user's daily activities and imply an outward expression of their personality.



survey respondents noted were their most important or desired objects. We then drew parallels between those categories and the surveyed personality types to uncover if there were correlations between the predominant personality traits of employees and how they modified their workspace. After this analysis, we could then see to what degree these two factors had an impact on user collaboration, productivity and general satisfaction with their work environment. The conclusions drawn from comparing personality traits with personal office artifacts will be discussed later in this report.



# BIOPHILIA



LANDSCAPE PAINTING



FLOWER ARRANGEMENT



PLANT

---

# COMMUNICATION



LEGOS



POST-IT NOTES



WHITEBOARD

# ERGONOMICS



**EXERCISE BALL**



**STANDING DESK**



**STEPPER**

---

# INDIVIDUALIZATION



**FAMILY PHOTO**



**PERSONAL ITEMS**



**COFFEE MUG**

# COMFORT & CARE



SNACKS



HAND SANITIZER



BLANKET

---

# ORGANIZATION



COAT STAND



PAPER PILE



PENCIL HOLDER

# VISUAL/ACOUSTIC PRIVACY



**“LOVA” BED CANOPY**



**MOBILE PHONE**



**HEADPHONES**

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# TECHNOLOGY



**LAPTOP**



**PHONE CHARGER**



**IPAD**







# DESIGN FIRM | SITE ONE OVERVIEW

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## DESIGN FIRM | SITE ONE

Site one combines three distinct specialties (architecture/design, luxury interior design, and real estate development) in one office in Washington, DC. One of the main goals of co-locating these groups was to bring the various cultures, experiences and design identities into one harmonious space that fosters collaboration and inspires serendipitous interactions.

| LEFT: WORKSPACE







# BEHAVIOR OBSERVATIONS

## DESIGN FIRM | SITE ONE

### PHYSICAL ENVIRONMENT

Site One comprises two floors (the second and third floors of the building) and 136 individual workstations. The second floor includes the architecture and design studio, as well as the firm's IT group. The studio's accountant and business manager are also seated on the second floor. The third floor includes a smaller number of workstations, with the studio's communications and marketing department, and the real estate development firm seated in adjacent zones. The luxury interior design firm, occupies a small area on the third floor as well.

The physical office space is designed to encourage interactions and collaborations. Workstations throughout the space are located perpendicular to the wall-to-wall glass façade ensuring everyone has access to outdoor views and daylight. Two distinct space types exist on opposite ends of the office, separated by an entrance area and social hub. It was observed that interactions among individuals differed in these two areas. On the side with longer rows, there was more of a "buzz" and interaction, while in the opposite space, interactions appeared to flow less easily and required more travel and physical effort: getting up from the

workstation and walking the length of two or three rows to have a casual conversation. On the side with longer rows, the entire row was engaged in a single conversation on multiple occasions as opposed to two to three occurrences of smaller group conversations on the other side of the office.

The office's two floors are connected vertically with two statement staircases at opposite ends of the floor plate. Each staircase has seating around it which allows for visual connectivity and encourages unplanned interaction. During the observational period, employees from the second floor were not observed on the third floor, except in one instance when they were in a larger meeting room. On the other hand, staff from the third floor were occasionally observed on the second floor, particularly for specific collaborative purposes.

Ample amounts of storage is provided along with a variety of movable and stationary work surfaces. Break-out flexible spaces are available for staff to collaborate or when they require a large space to sketch and design. These spaces vary in their privacy and discreetness with some existing amongst workstations for quick access and others fully removed and equipped with higher

LEFT: RECEPTION

acoustical privacy and dedicated work surfaces. The office supports the nature of staff's work, workstations, for example, support both focused heads-down work as well as collaboration. Meeting rooms of varying sizes are equipped with technology suitable for video conferencing and presenting and are often used for in-person and virtual meetings as well as co-creation sessions internally and with clients.

Sustainable design was a strong design driver to increase staff well-being and productivity. Measures were taken to decrease CO2 emissions and create healthy indoor environments. Additionally, a generous kitchen—the office's largest multipurpose space, known as "The Mall"—is located on the third floor and physically separated from the staff workstations by an open courtyard/terrace. Visually the two spaces are well connected, and it is possible that more staff meet socially either in the courtyard or in the kitchen during good weather.

## SOCIAL ENVIRONMENT

On the day of our observational study there were a large number of meetings and external visitors. In addition, two separate "happy hour" meetings were scheduled, which may have skewed the data that was collected towards the end of the workday.

The office has six dual-purpose spaces intended for working and socializing that vary in layout and atmosphere. During the time of our observation, these spaces were used for casual work sessions as opposed to pure socializing purposes.

Socializing often occurred near the coffee machines on the two

floors as people either waited for their drink or for their turn using the machine. When conversations were sparked in these instances they were brief and fleeting.

Only one person was observed eating in the pantry area on the particular day of observations, which is quite unusual. It is possible that the timing of observations (12pm and 2pm) prohibited capturing a more accurate utilization of the space which may have spiked at 1pm as opposed to the captured times. It should be noted that small groups of staff often left the office to get lunch or to bring back a meal. Additional casual socializing did occur at the workstations between 12 pm and 2 pm, particularly amongst individuals located in long rows.





## WORK MODE

At first glance it appears staff engage mainly in heads-down individual work. Upon further observations however, it became apparent that staff alternate between heads-down high-concentration tasks and varying degrees of collaboration.

Staff used headphones as an indicator signaling they were “plugged-in,” as one individual phrased it, and did not want to be interrupted. For the most part, staff spoke on the phone/Skype etc. from their desk with varying degrees of loudness.

When not working individually, people most often worked in groups of two. Often these collaborations or meetings occurred at an individual’s desk, where someone would pull up a chair, sit on the workstation return, or speak to their colleague from the other side of the workstation. Furniture in the space is relatively flexible and allows groups to shrink and expand as needed through the quick addition of ottomans and lightweight seats.

The second space type most utilized was the small meeting rooms with groups taking calls in them, engaging in a virtual meeting with an off-site group, brainstorming, or having a collaborative work session.

Fifteen instances of two-person meetings were recorded during our observations, followed by groups of three to five (eight instances). Only two instances of larger group meetings (three to five individuals) were observed on this particular day.

## COMFORT IN SPACE

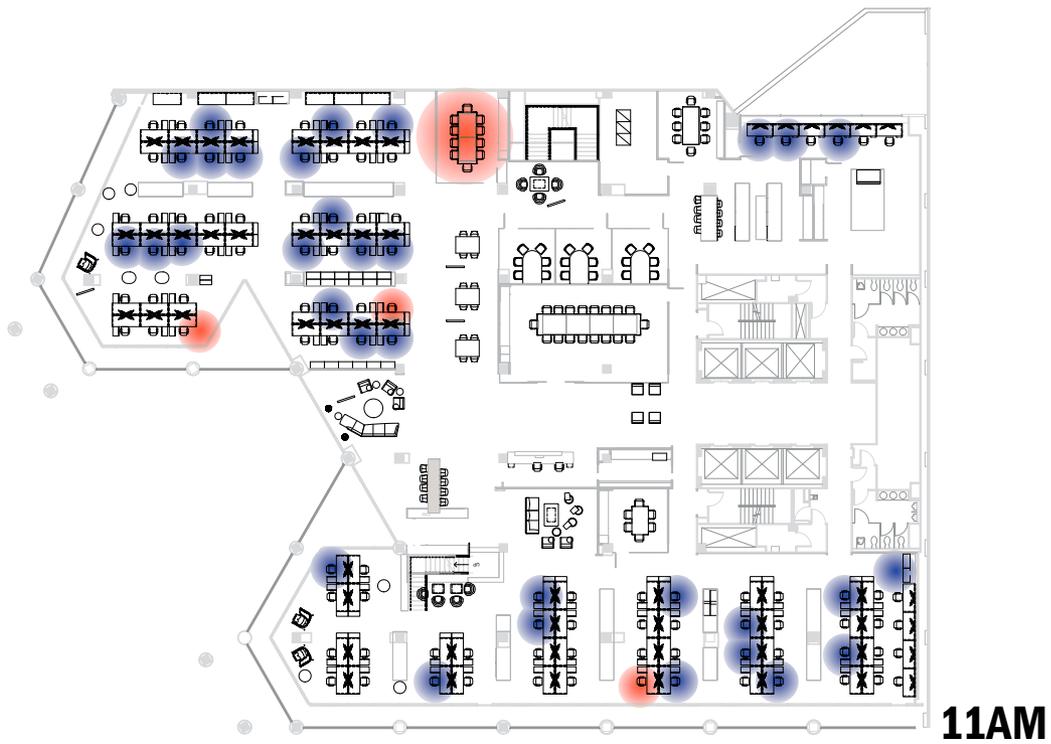
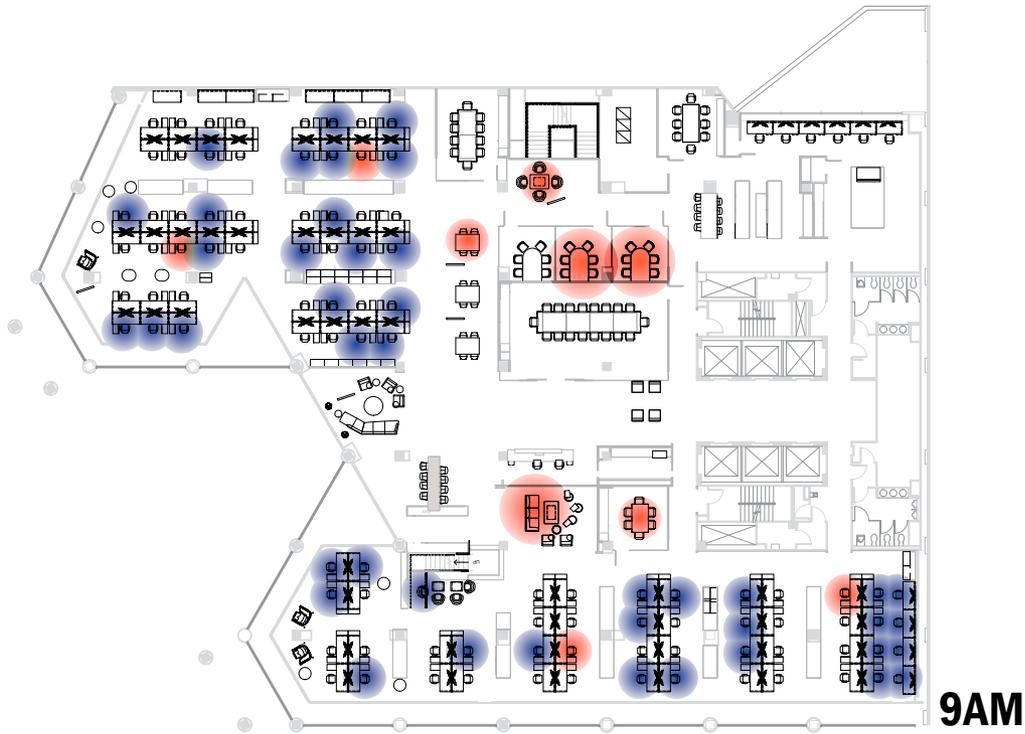
In an open plan environment, voices tend to carry throughout the workspace. In Site One, it was observed that the noise level varied based on the source and distance from it and could range from an inaudible murmur to a clearly intelligible conversation. Social spaces, particularly the centrally located coffee bar, were not the loudest generator of noise; rather, phone calls were often the loudest, followed by groups of two working at a workstation. For the most part, staff seemed adept at dealing with this through using sound-cancelling headphones or relocating to a meeting room to focus.

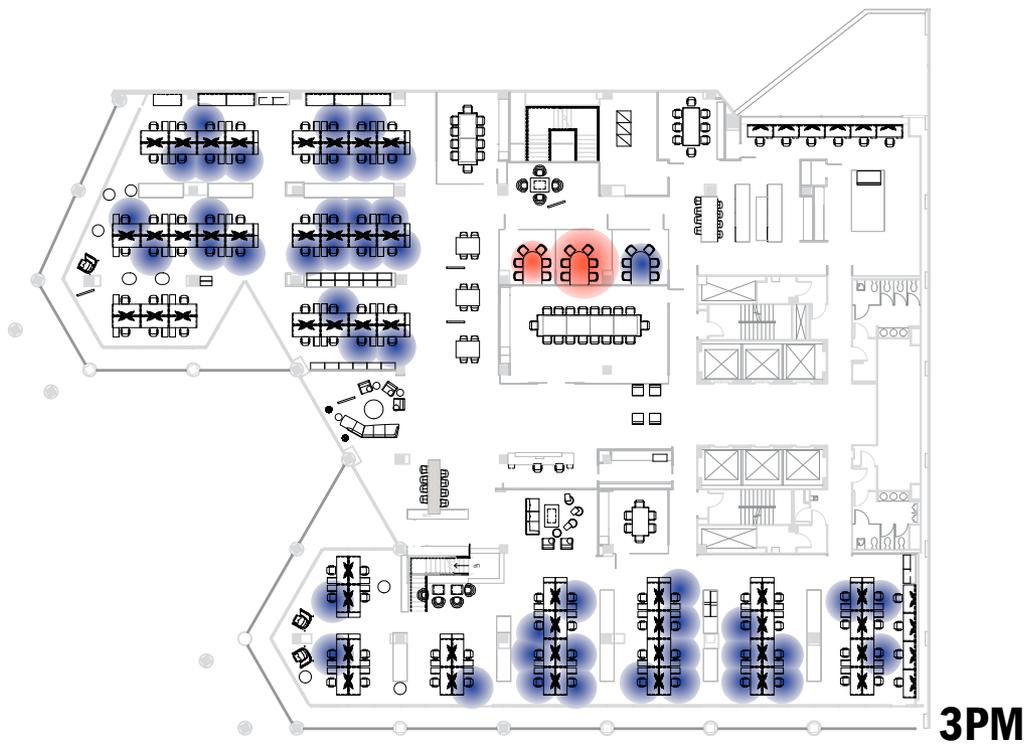
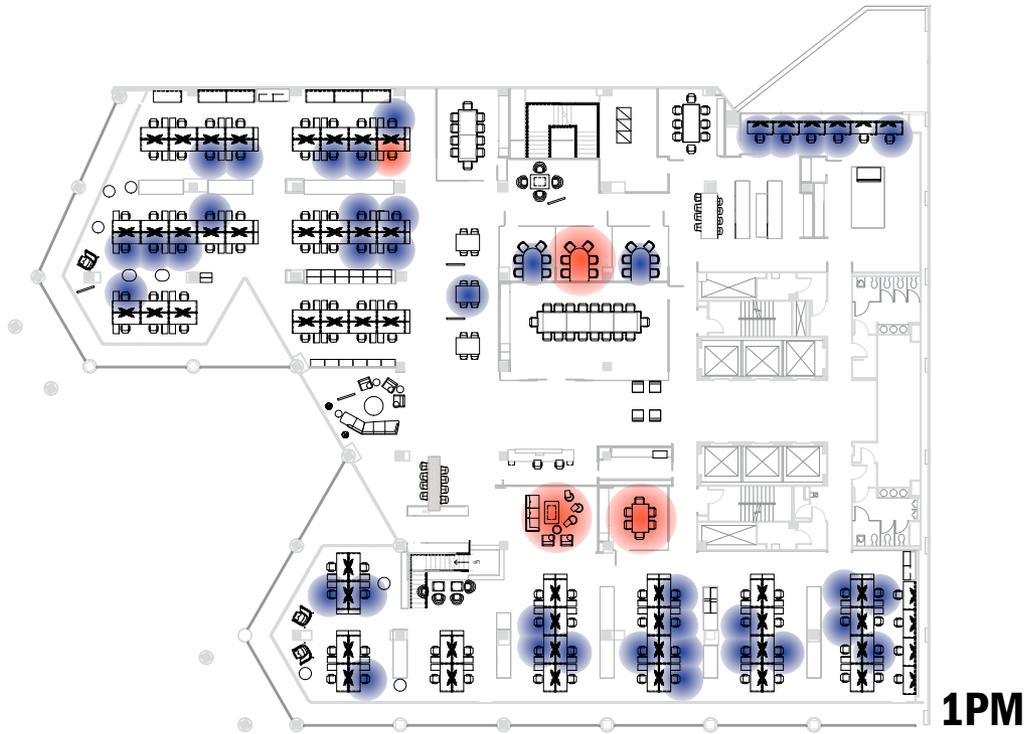
Items relating to thermal and visual comfort were also observed. Several staff members had shawls or blankets draped on their chair, which can indicate a degree of thermal discomfort. Not many staff turned on their task lights, which is probably due to the ample amount of daylight pouring into the space on this particular day.

## TECHNOLOGY

Staff seem to prefer doing heads-down work at desks as opposed to another location around the office even when the individual is equipped with a laptop. One individual noted that the presence of two screens at the workstations helped them to be more efficient. This is a clear indicator of the important role technology plays in individuals’ decisions on where to work. Various communication and presenting technologies exist around the office in both open and closed meeting spaces.

# 2<sup>ND</sup> FLOOR





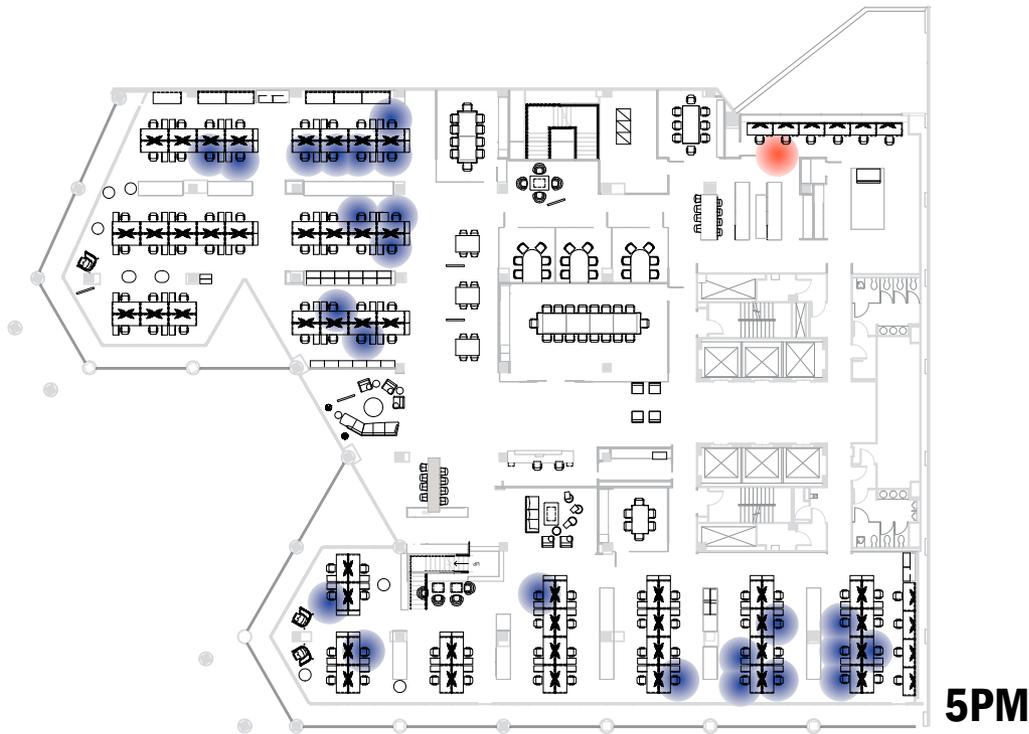
5+ Users

3-5 Users

2 Users

1 User

# 2<sup>ND</sup> FLOOR



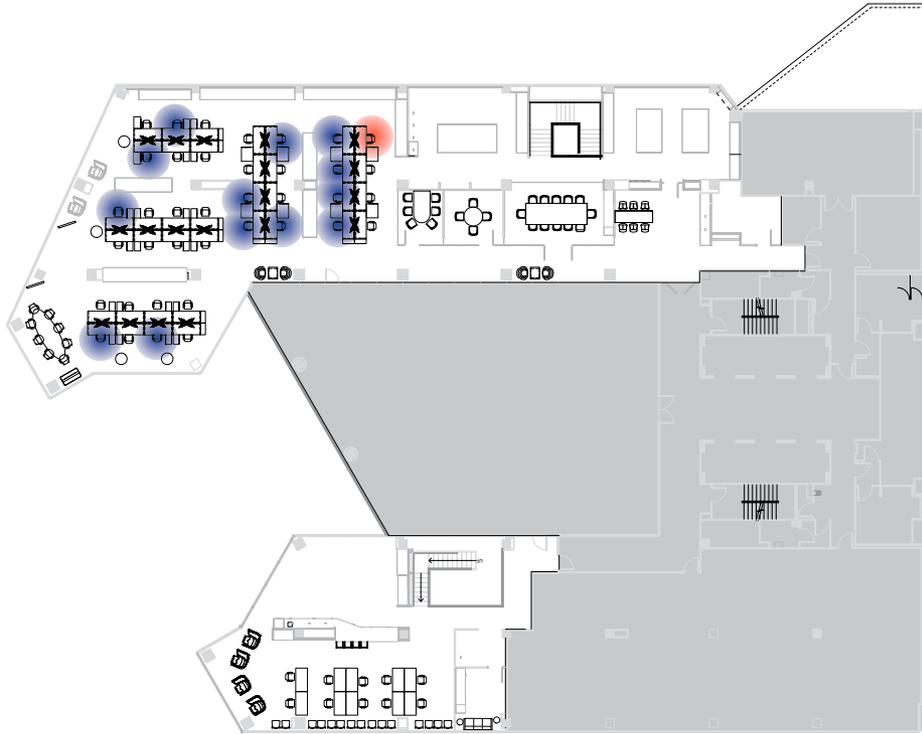
## HIGHLIGHTS

+ STAFF SEEM TO PREFER DOING HEADS-DOWN WORK AT DESKS AS OPPOSED TO A THIRD LOCATION AROUND THE OFFICE EVEN WHEN THE INDIVIDUAL IS EQUIPPED WITH A LAPTOP

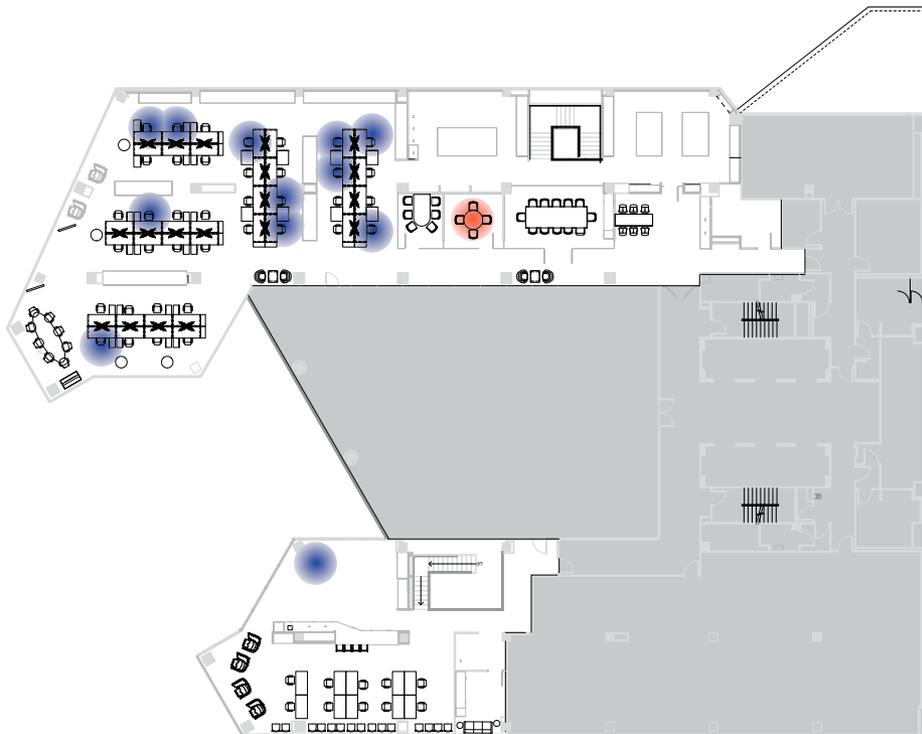
+ MOST COMMON GROUP NUMBER WAS 2 PEOPLE WITH 15 INSTANCES RECORDED DURING THE OBSERVATION

+ STAFF USED HEADPHONES AS AN INDICATOR SIGNALING THEY WERE “PLUGGED-IN,” AS ONE INDIVIDUAL PHRASED IT, AND DID NOT WANT TO BE INTERRUPTED

# 3<sup>RD</sup> FLOOR



9AM



11AM



5+ Users



3-5 Users

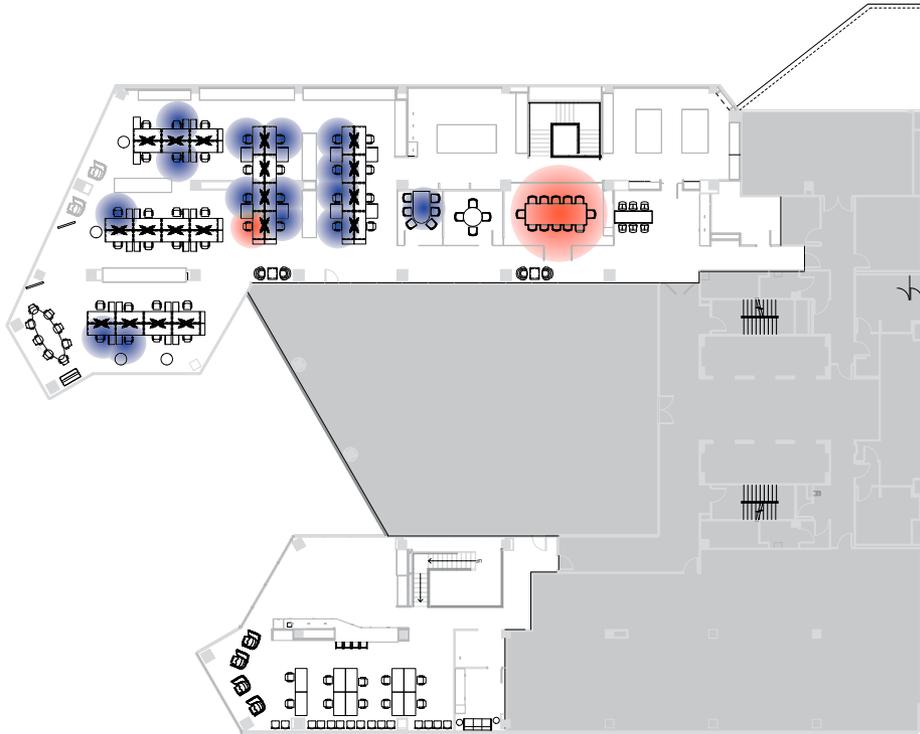


2 Users

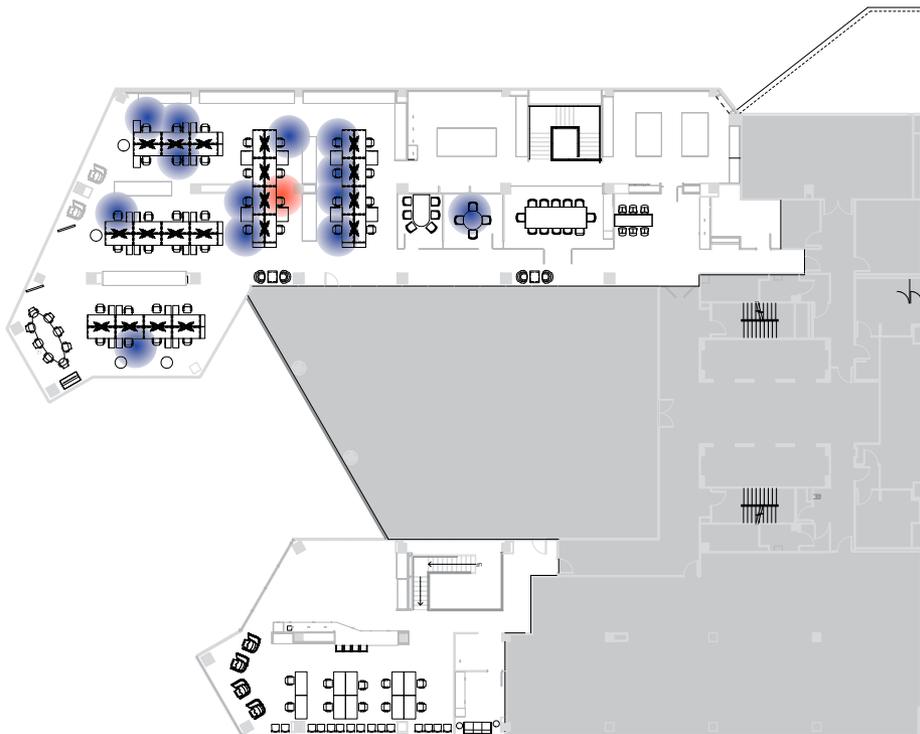


1 User

# 3<sup>RD</sup> FLOOR



1PM



3PM



5+ Users



3-5 Users



2 Users



1 User

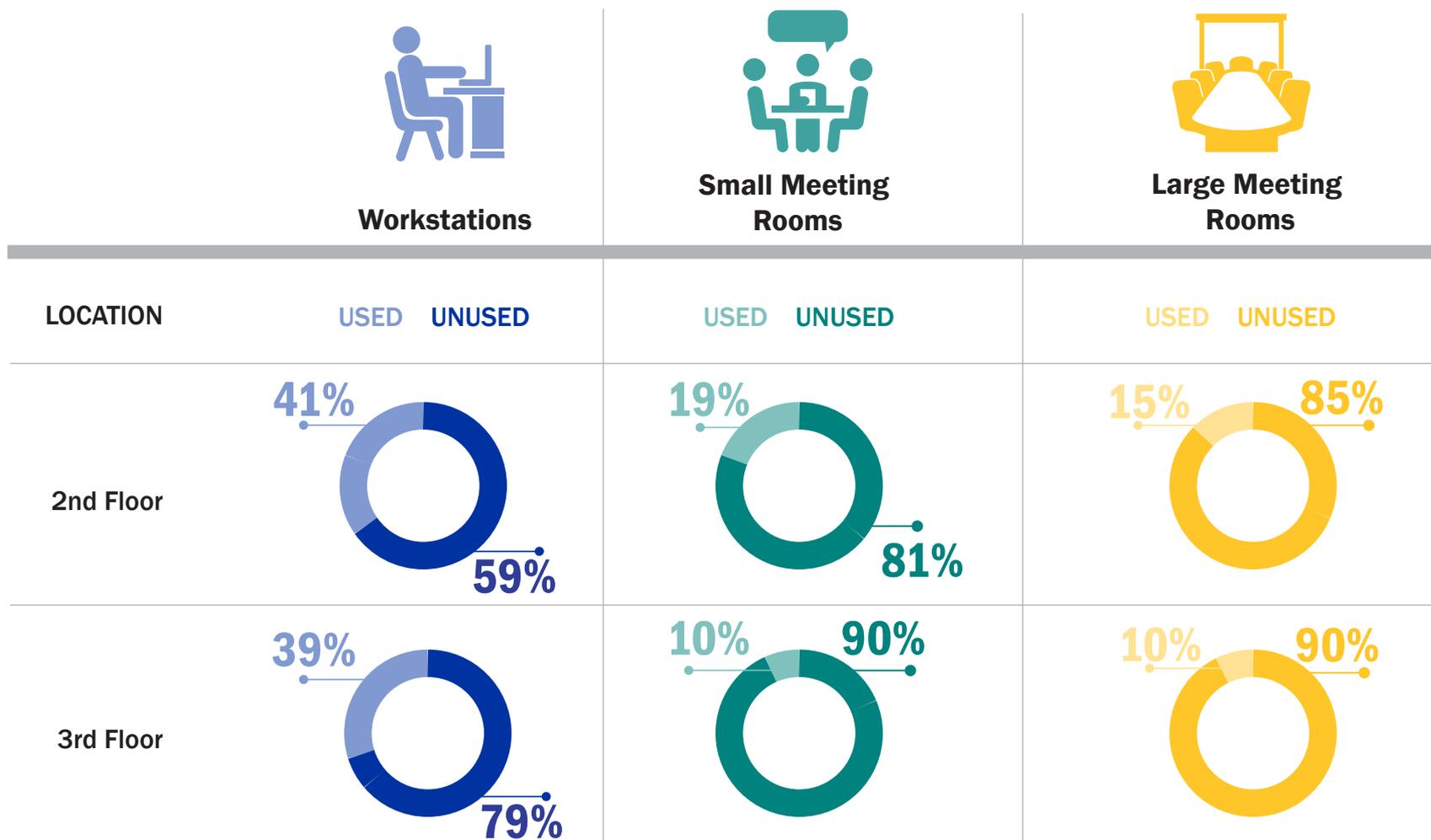
# 3<sup>RD</sup> FLOOR

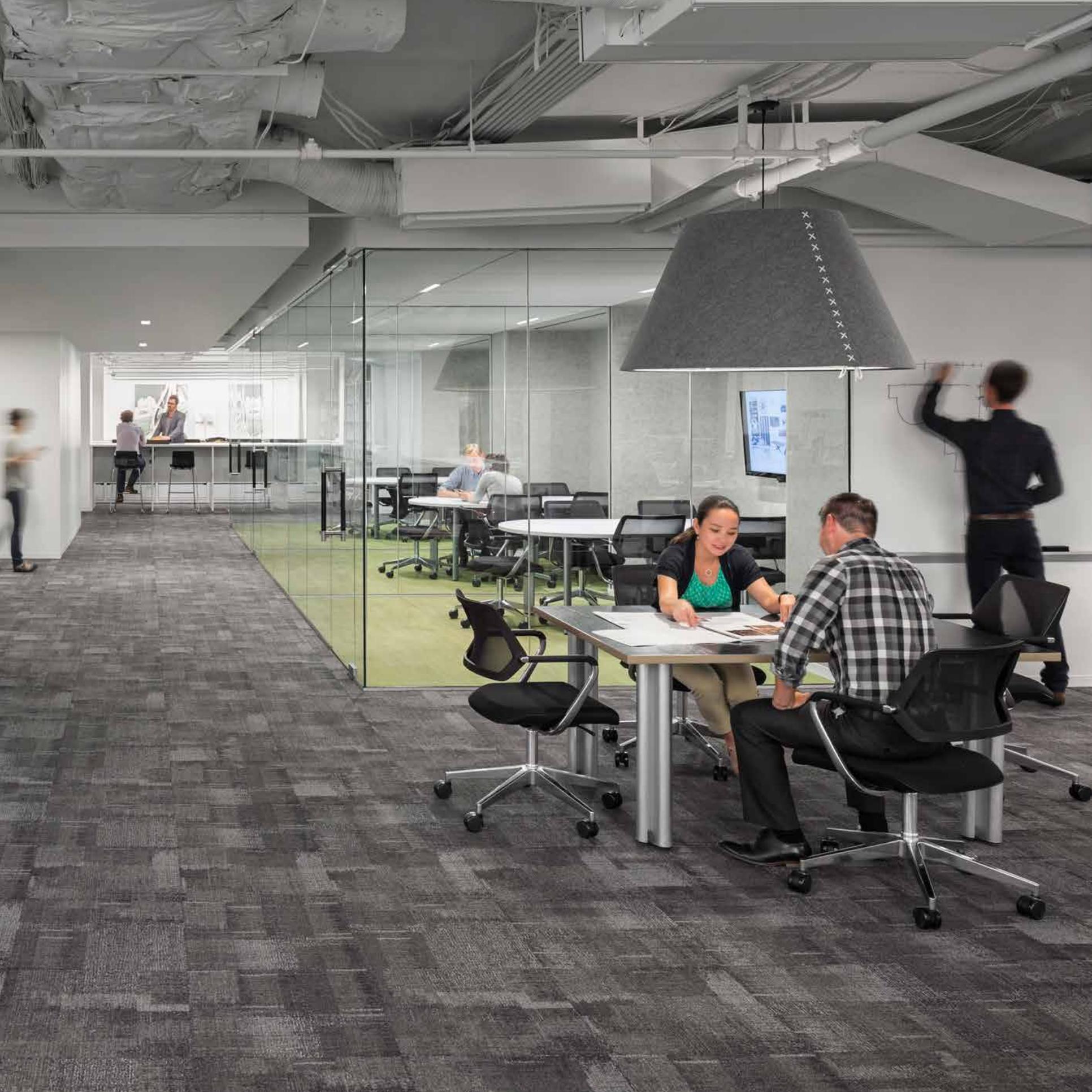


## HIGHLIGHTS

- + OFTEN COLLABORATIONS OR MEETINGS OCCURRED AT INDIVIDUALS' DESKS WHERE SOMEONE WOULD PULL UP A CHAIR, SIT ON THE WORKSTATION RETURN, OR SPEAK TO THEIR COLLEAGUE FROM THE OTHER SIDE OF THE WORKSTATION
- + INTERACTION TYPE AND FREQUENCY VARIED BASED ON LOCATION DUE TO THE DESIGN RESPONDING TO DIFFERENCES IN THE ARCHITECTURE OF THE BUILDING

# SPACE UTILIZATION







# PERSONALIZATION OBSERVATIONS

## DESIGN FIRM | SITE ONE

### QUANTITY OF PERSONALIZATION

Considering the office as a whole, the observational study revealed a fairly even split between workstations with Moderate Personalization (30%), Major Personalization (26%) and Minor Personalization (24%). The office-wide percentage of workstations with No Personalization was slightly smaller (20%).

### TYPES OF PERSONALIZATION

#### COMFORT & CARE

Personal care items and hygiene products were observed at this site. Though these items were less common in this office than others (for instance, hand sanitizer was not observed), items such as lotion, tissues, cleaning supplies and air purifiers were still observed. Over-the-counter medication (e.g. Advil, etc.) was also found at a number of desks.

In terms of food and drink, the focus was mainly on coffee and tea products. For instance, one desk had 9 different types of teas from which to choose. However, other items, including snacks like

peanuts, candy, animal crackers, cookies, fruit and mints were found. Personalized mugs, water bottles, water pitchers and other dishes were found as a complement to these food items.

Items that provide thermal comfort to users were prominent. This included items for warming, such as blankets, sweaters, slippers and heaters, as well as cooling, such as fans.

Finally, comfort was addressed through items like stress balls and fidget tools. Furthermore, home lamps or task lighting was observed to improve the visual comfort of workstations.

#### COMMUNICATION

Similar to other sites, workstations at this location had a variety of Communication items, including pin up boards and writable boards. On these boards, items such as sticky notes, quotes and articles were pinned up with tacks or personalized magnets. The creative nature of employees was clear given that many sticky notes had doodles on them. Furthermore, coloring books were found, along with markers and pencil crayons. Other Communication items of interest included books, calendars and label makers.

| LEFT: OPEN WORKSPACE

## INDIVIDUALIZATION

Individualization items were by far the most common desk items, regardless of the amount of personalization observed at a workstation. Knickknacks and figurines were frequently observed. It was common for these items to represent animals, such as flamingos, frogs, and dinosaurs. Toys and games such as Nerf balls, Legos, rubber balls, and Angry Birds were found throughout the office. Furthermore, cartoons and joke books reinforced this desire for light-hearted play and entertainment.

Art was another major category. Paintings, sculptures, paper cutouts, pottery, drawings, children's art, sketches, and collages were all observed. Window decals, posters, postcards, and letter blocks demonstrated further interest in workstation decoration.

Of particular note, and perhaps the most defining feature of this office, was the interest in architecturally focused items. One of the most common items found were architecture space pictures. Other artistic or decorative items observed were pattern pictures,

a Chrysler building figurine, a hard hat figurine and a metal shovel figurine. Items related to individuals' work, such as furniture models, building models, wall detail models, samples, product images and mood boards were also common. Furthermore, specific architectural tools, including drafting boards, pencil sharpeners, tape measures and hardware were observed. Finally, individuals' architectural licenses were displayed in some cases.

Trophies, badges, and ribbons showed pride in accomplishments. Additionally, sports equipment, such as golf items, demonstrated staff areas of interest. An Obama bobble head was observed, which highlights personal interest in politics. School banners and flags show further desire to communicate background and identity.

Personal photos of families, pets and weddings were found with high frequency. Other sentimental items such as cards and travel souvenirs were observed. However, functional items such as coasters and bus schedules could also be found.

### BIOPHILIA



Live or synthetic plants, images of nature, organic materials and other natural elements

### COMMUNICATIONS



Whiteboards, pin-up boards, post-it notes or pinned articles

### ERGONOMICS



Specialized mice and keyboards, foot pads, back support, standing desks

### INDIVIDUALIZATION



Decorative items, toys, family photos, art, figurines

### ORGANIZATION



Desktop organizers, file holders, personal storage

## ERGONOMICS

Ergonomic items were widely adopted at this office. Common items included ergonomic mice and keyboard, footpads, standing desks and stools. Some individuals managed to find unique solutions to their ergonomic needs, creating phone holder “hacks,” tilting keyboards or monitors, and bringing in pillows for back support. Mouse rests and ergonomic hand tools were also observed.

## TECHNOLOGY

There were more Technology items observed in this office when compared to others. This could be in part due to the nature of the work. More than 2 monitors or customized large monitors were observed in a number of cases. Multiple laptops at workstations were found. Smaller technology such as iPads, cameras, external drives, speakers and clocks, along with their associated chargers or docks complemented the use of larger technology.

## BIOPHILIA

There was a significant amount of biophilia-related items observed at this office with around 1 in 5 desks displaying live plants, flowers or moss. Many of these plants were unique, including Aloe Vera and cacti. Plastic flowers and grass were also found. More unique items like rocks or empty fish tanks also displayed an interest in nature. Finally, landscape and nature paintings were found in a number of instances.

## ORGANIZATION

Custom storage was particularly popular in Site One, with over 30% of desks exhibiting this feature. Other items that support organization were also observed, though with less frequency. These include larger items such coat racks and smaller items such as custom pencil holders, plastic storage and business card organizers.

### TEAM



Shared resources,  
team pictures  
or awards

### TECHNOLOGY



Additional laptops,  
tablets, smart  
phones

### COMFORT & CARE



Blankets, sweaters,  
space heaters, fans, lotions,  
and tissues

### ACOUSTIC/VISUAL



Headphones, physical  
and visual barriers  
between desks

## VISUAL/AUDIO PRIVACY

Audio privacy seemed to be a priority for many individuals in this office. Large headphones were commonly observed. On the other hand, no visual privacy items or screens were noted. However, rear mirrors were found in two cases.

## TEAM

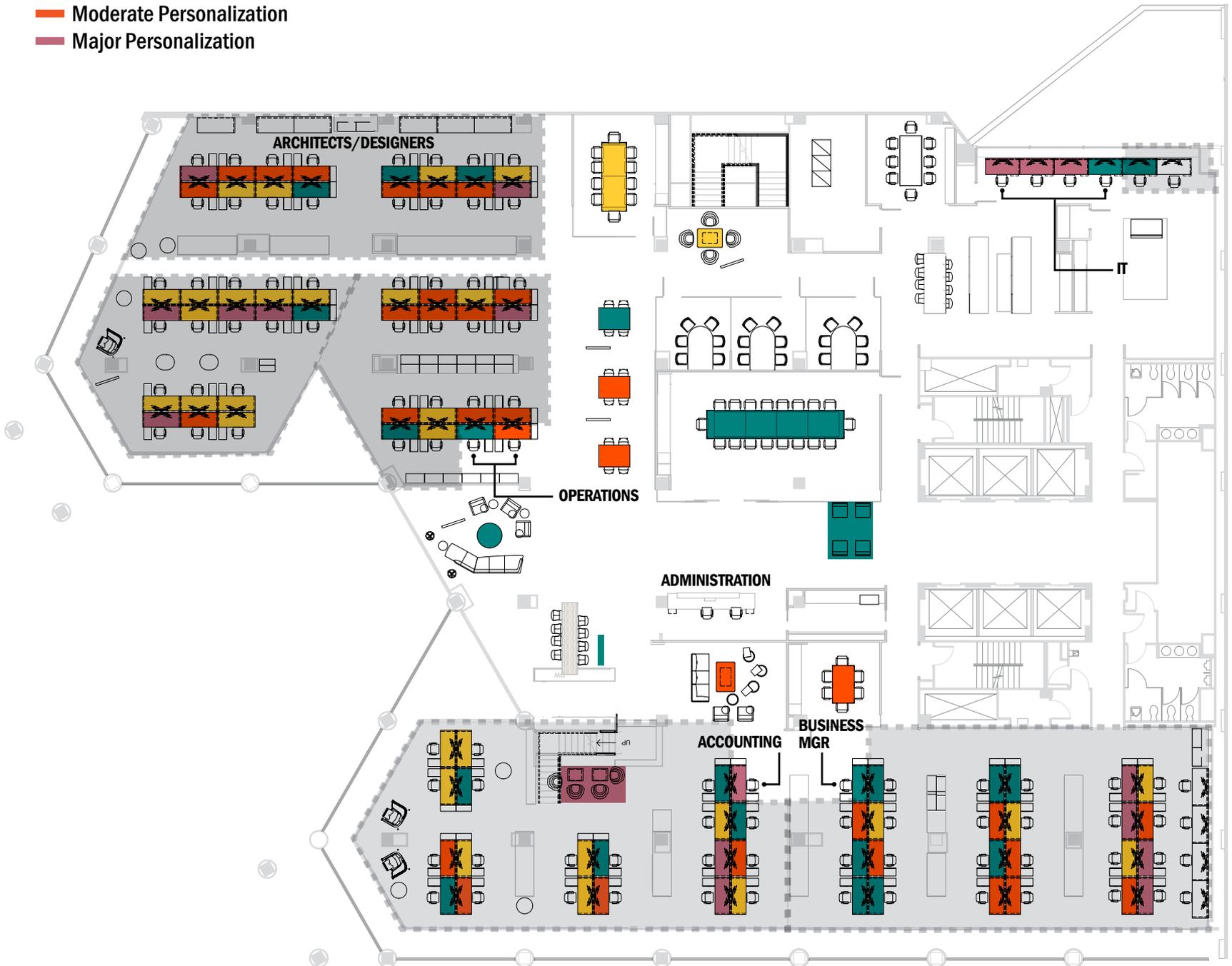
Team-related items were relatively rare, though some desks displayed design awards. In one case, project milestones were pinned up as well.





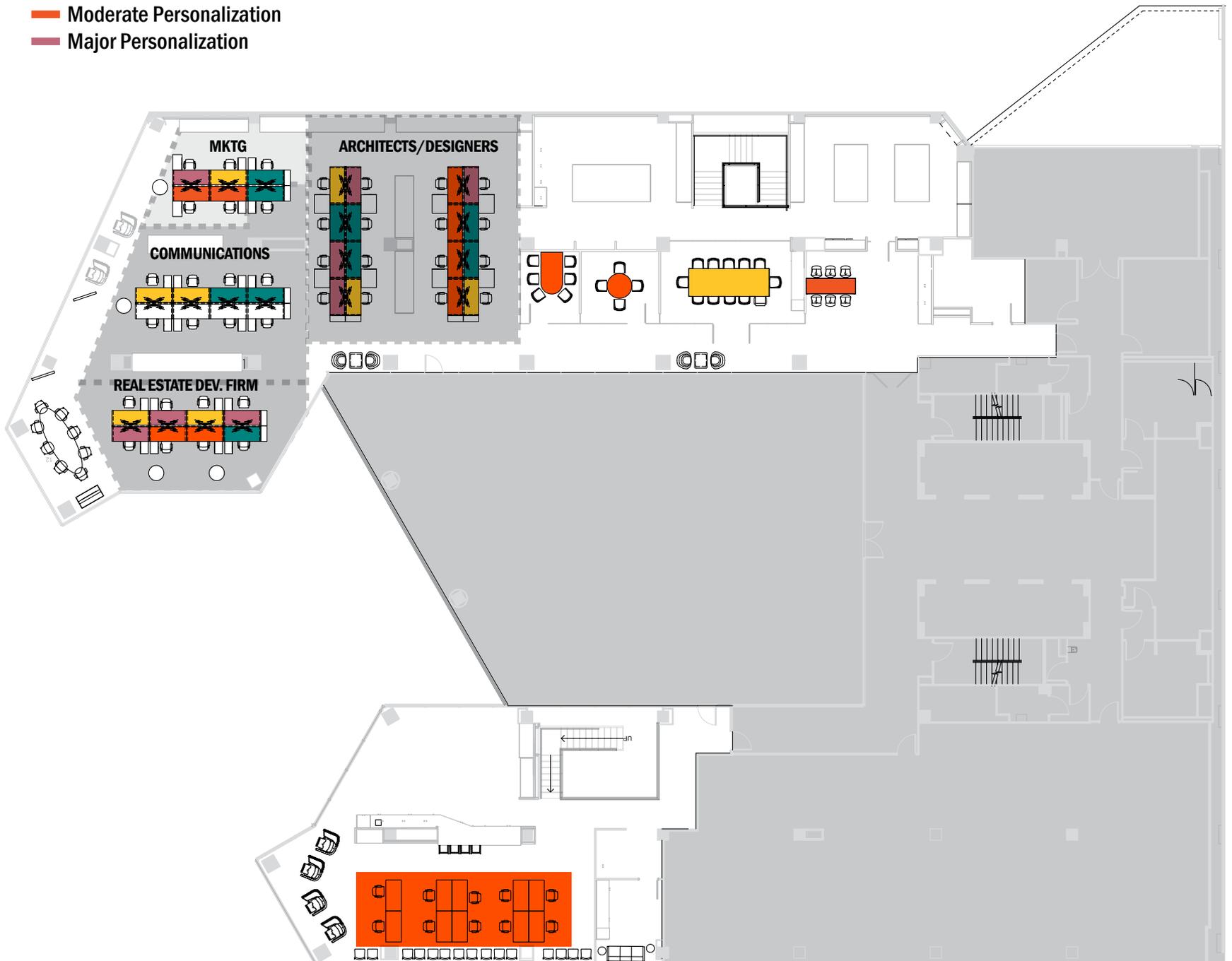
# 2<sup>ND</sup> FLOOR

- No Personalization
- Minor Personalization
- Moderate Personalization
- Major Personalization



# 3<sup>RD</sup> FLOOR

- No Personalization
- Minor Personalization
- Moderate Personalization
- Major Personalization





Mordine  
Jordan  
01870525

Guang  
Chen  
01870524

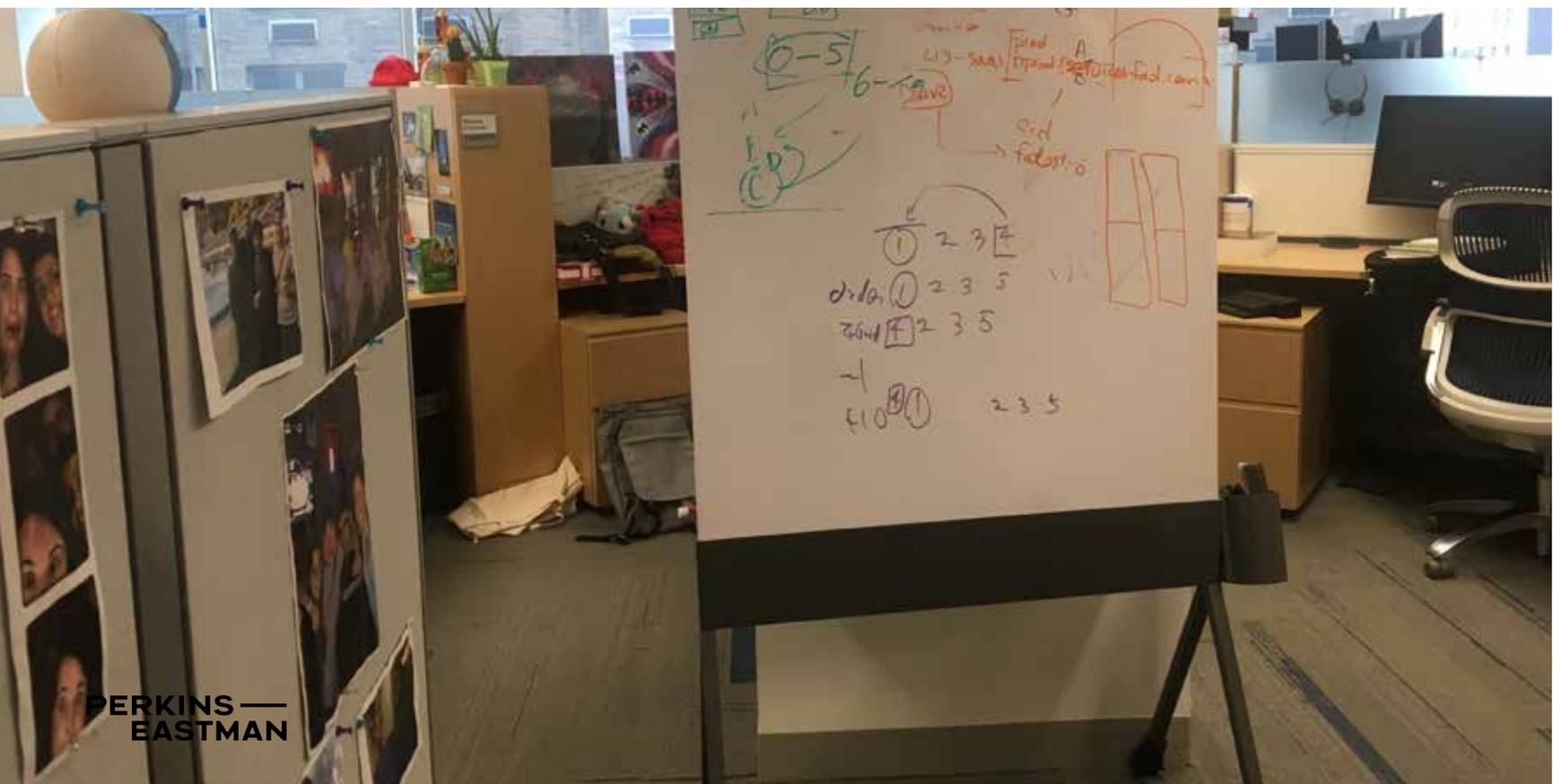
# FINANCIAL TECHNOLOGY COMPANY | SITE TWO OVERVIEW

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FINANCIAL TECH COMPANY | SITE TWO

**S**ite two is a global financial technology company's New York City office. The departments located in this office include Analytic Solutions, Engineering, Sales, and Product Development and each has a unique culture.

| LEFT: WORKSPACE







EXIT

America

# BEHAVIOR OBSERVATIONS

## FINANCIAL TECH COMPANY | SITE TWO

### PHYSICAL ENVIRONMENT

The office comprises three leased floors located two blocks from the transportation hub at Grand Central Station. The majority of the open floor space along the perimeter of the building consists of workstations separated by fabric-wrapped dividers topped with frosted glass panels. The workstations are flanked by window walls which provide natural lighting and city views. The hexagonal module of the furniture allows for larger clusters to form bullpen formations with several desks arranged together to form a circle.

Workstations are outfitted with storage cabinets, whiteboards and name tags which indicate seat assignments. Additional whiteboards are located at end panels, mounted on walls, and freestanding throughout the space. Some circulation pathways are narrow, which results in people needing to step aside between workstations to allow groups to pass by each other. Free-address touch down and adjustable-height desks are distributed throughout the space, mostly located at the perimeter windows

between groups of workstations. One or two of these work surfaces were typically observed in active use on each floor while the rest remained available. Users reported that the closer the touch down points were to their workstations, the more useful they were.

Glass-enclosed conference rooms, flex rooms, and phone rooms are equipped with teleconferencing technology. These rooms wrap the central core of the building, along with storage and copy areas, allowing quick access from the workstations. Conference rooms were consistently used throughout most of the workday, with a slight decrease in occupancy towards the end of the afternoon. Flex rooms were also used often. Utilization of flex rooms most often involved one or two people on a teleconference call, and some face-to-face conversations. Flex rooms were occasionally filled to capacity, although larger conference rooms appeared available nearby at these times. Conversations in these

| LEFT: WORKSPACE



glass-enclosed rooms were sometimes clearly audible from the workstations nearby, indicating room for the improvement of acoustic privacy.

Lounge seating, touchdown stations, and adjustable-height desks are distributed across the floors between the workstations. Some enclosed rooms allow for special uses, such as collaboration rooms, a testing lab, a corporate services room, and rare private offices. Each floor is also equipped with a common pantry area with bar-height seating. The use of frosted glass panels and glass enclosures lend a sense of transparency to the floor.

### **7TH FLOOR**

The 7th floor pantry is located at the central core and has limited seating. Noise from conversations in the pantry was observed spilling into the adjacent workstation area, with several employees wearing headphones nearby. Utilization of enclosed rooms peaked around 1pm. At this time, 7 of 8 conference rooms and 10 of 14 flex rooms were in use. High utilization of flex and conference rooms was also noted at

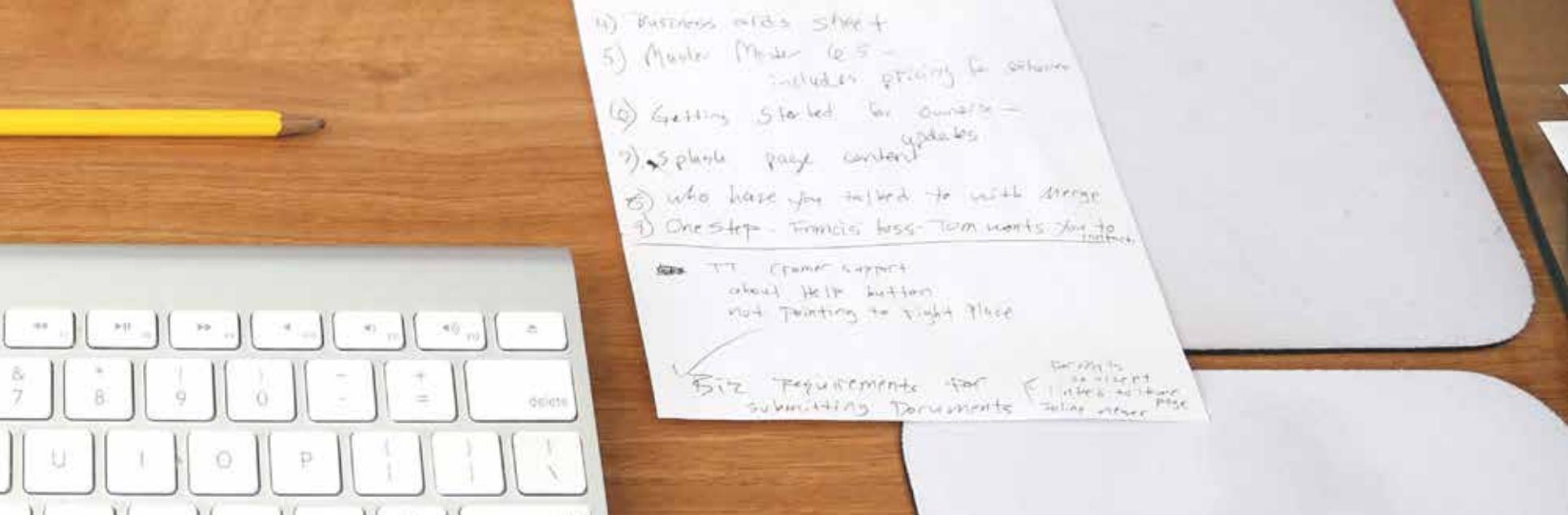
9am. The 7th floor included a specialized collaboration room with several unassigned workstations, a round table, and a whiteboard.

### **10TH FLOOR**

Bright lighting was observed across the open floor plate. The 10th floor had the most specialized spaces including a central reception lobby, a roof terrace, a corporate support services room, dedicated video-conference room, and a training room which was occupied by groups of approximately 10 people for most of the day.

The largest pantry is located on the 10th floor in the corner of the building. The layout provides more natural light, more seating, and a higher degree of separation from workstations. This was observed to be the most actively utilized pantry area between the floors.

All flex rooms were observed to be in use at 9am on the 10th floor. At that time 10 of these 14 rooms were occupied by individuals, often in a teleconference conversation, with their laptops. The 5 conference rooms were also in use, mostly by groups of 4 or more people.



## SOCIAL ENVIRONMENT

Most groups maintain a quiet atmosphere amongst the workstations even during busy hours. Most spontaneous conversations occur at the pantry areas where employees cross paths and are less wary of disturbing neighbors. Many employees were observed bringing lunch to their workstations or conference rooms to work while they eat. Use of headphones by those working alone was widespread.

Soft seating among the workstations was rarely used. Conversations at workstations tend to occur around computer monitors or across divider panels. Pantries were used for drinks and snacks throughout the day, with peak utilization occurring for the morning breakfast/coffee and mid-day lunch hours.

## WORK MODE

The majority of work is individual in nature and requires focus. Phone calls and planned conversations are often moved to enclosed rooms. Whiteboards are often used for a variety of purposes including reminders, charts, inspiration, wayfinding, and personalization.

Occupancy at workstations peaked on all floors around 1pm, with 45% of workstations observed in active use during the hourlong window of observation.

The noise level across the 7th floor was very low. Conversations taking place in the open were typically done with soft voices. Analytical groups on the 10th floor had similarly quiet atmospheres, but notably the sales group on the 10th floor had a higher than average rate of phone calls at workstations with many employees wearing headsets and speaking in loud, cheery voices.

## COMFORT IN SPACE

Many employees were observed taking steps to alter their lighting conditions. Lighting was observed to be bright across the open workstation areas at the 7th and 10th floors. At the 7th floor, there were several instances of employees having set up umbrellas and shades around monitors to limit the brightness from overhead lighting. Employees were frequently seen working in enclosed rooms with the lights off. Multiple observations recorded employees doing quiet work in the collaboration room with the lights off.

Common ergonomic workarounds noted were using raised trays or stacks of paper to adjust the height of monitors, and use of specialized ergonomic keyboards. While most chairs appeared standard, some unique task chairs were observed. Temperature variation was an issue for users at some perimeter workstations near convector heaters and enclosed conference rooms, while the issue appeared to be less pronounced at interior workstations. A user reported sometimes needing to leave meeting room doors open in order to stabilize the temperature, a workaround which can affect the acoustic comfort of those focusing nearby. Another user reported that, due to the prevalence of lunch meetings in conference rooms, lingering food smell and grease on surfaces affect the comfort of meetings occurring after lunch time.

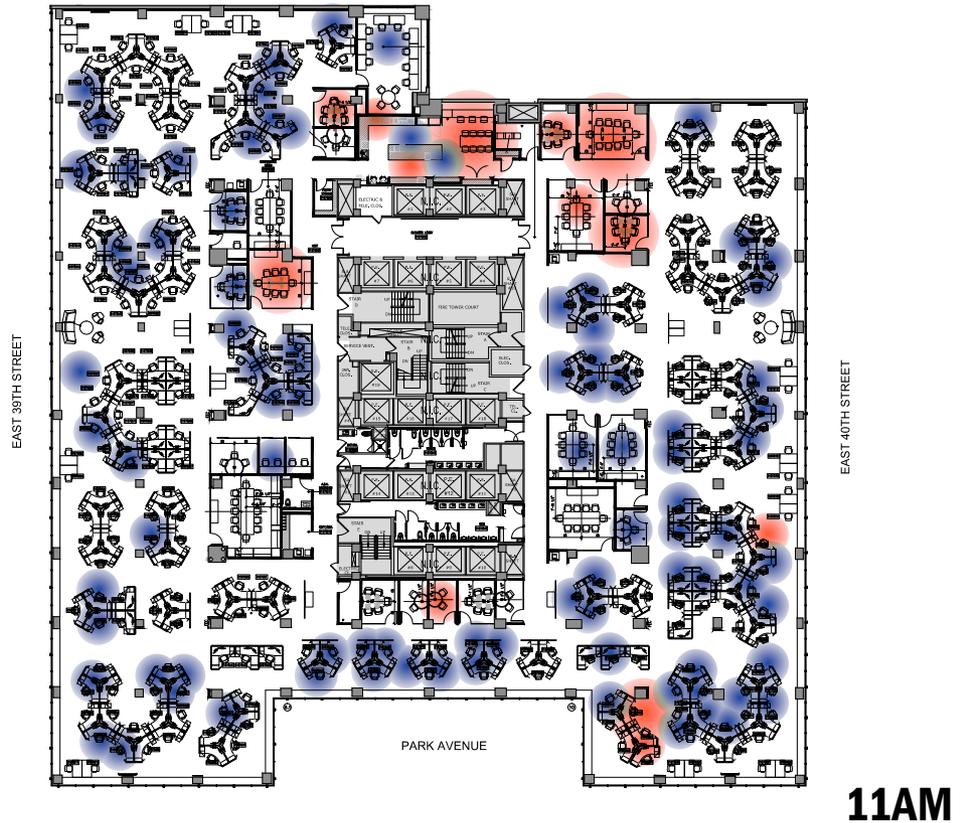
## TECHNOLOGY

Large televisions are placed high up on the perimeter walls to allow visibility of news and tickers from all workstations. Use of laptops and docking stations are standard. Most employees were using dual-monitor setups with some using as many as four monitors at their desks. Employees would often bring their laptop with them to meetings at conference rooms or pantries. A high rate of teleconferencing both in enclosed rooms or with headsets at workstations was observed. While phone rooms include phones equipped with cameras, there was a noticeable preference for taking teleconference calls in flex rooms which contained large digital displays.

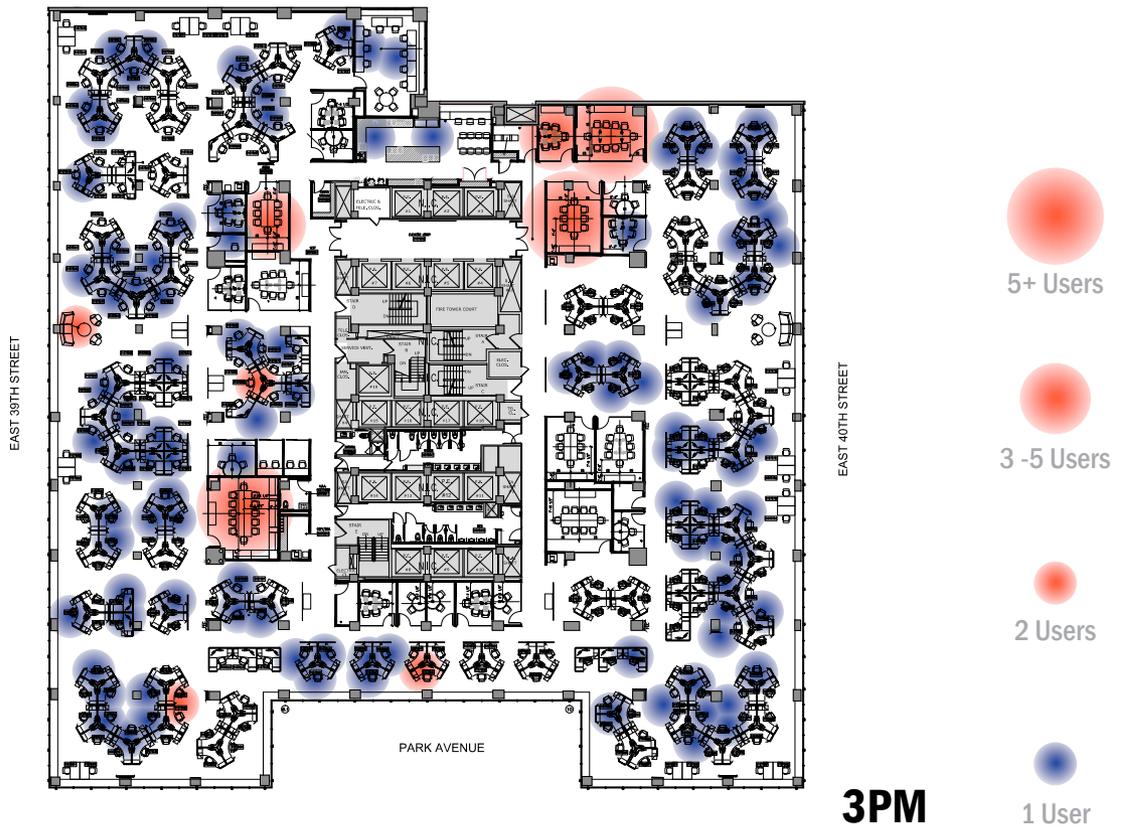
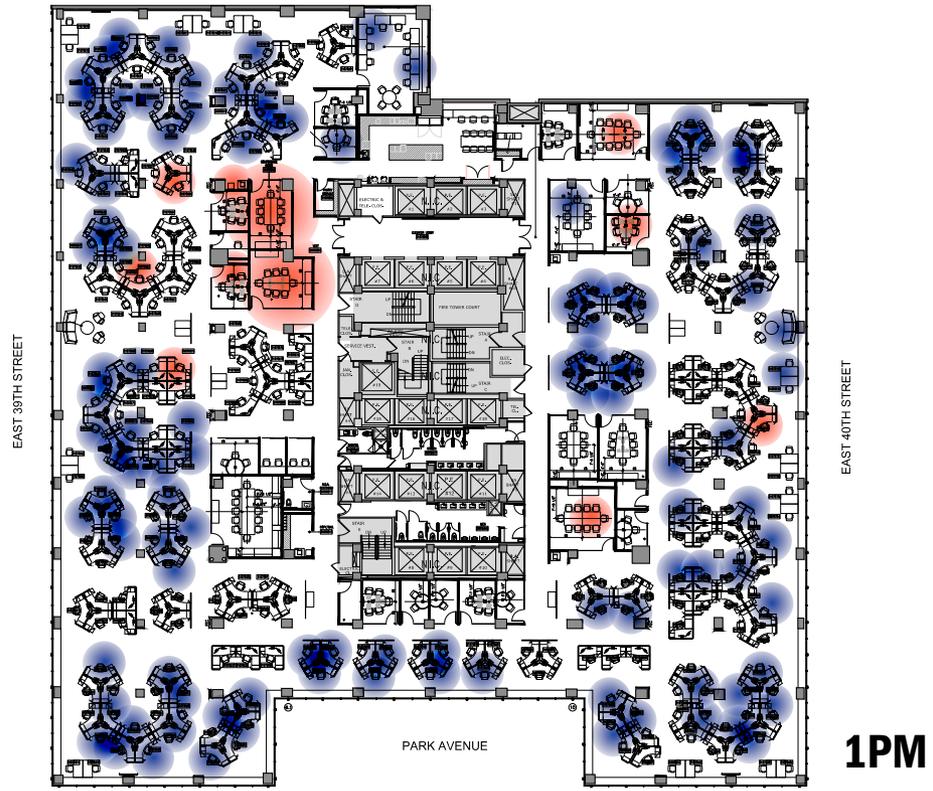


ABOVE: WORK MODES GRAPHIC

# 7<sup>TH</sup> FLOOR



# 7<sup>TH</sup> FLOOR



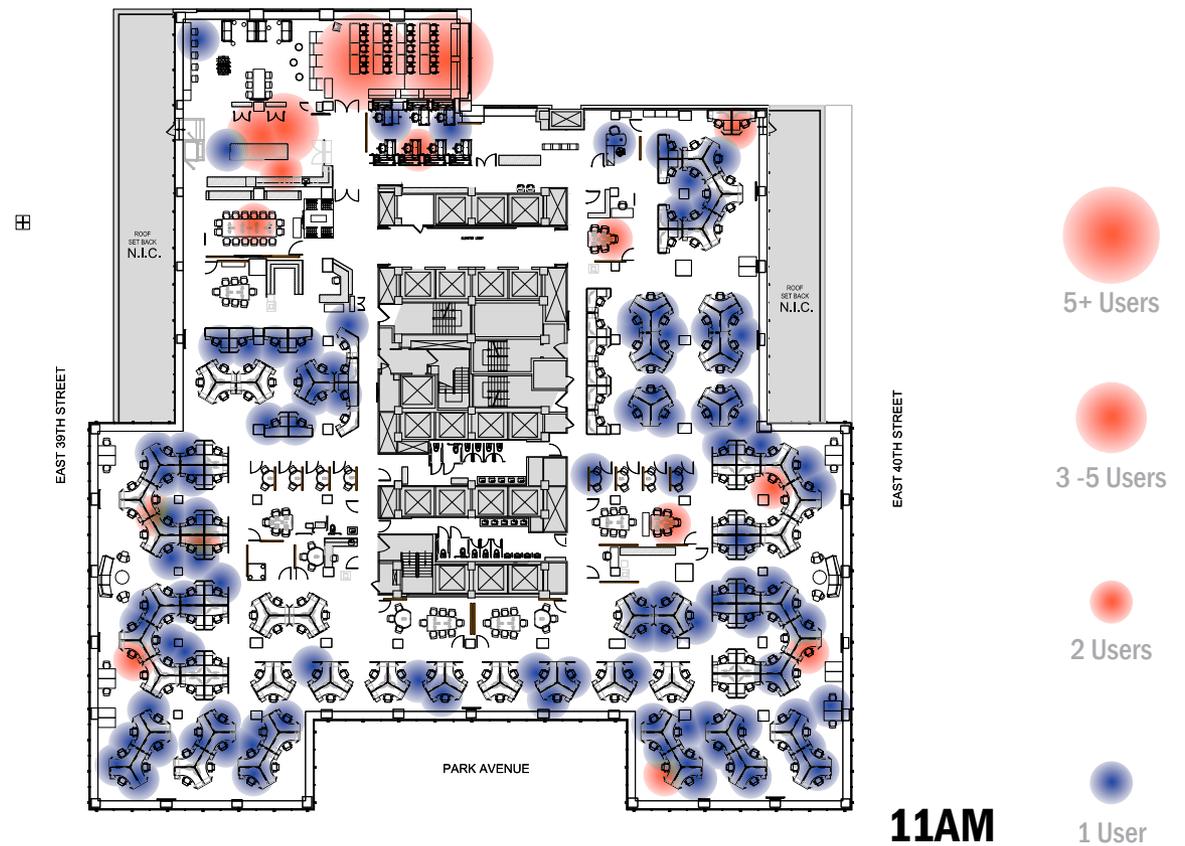
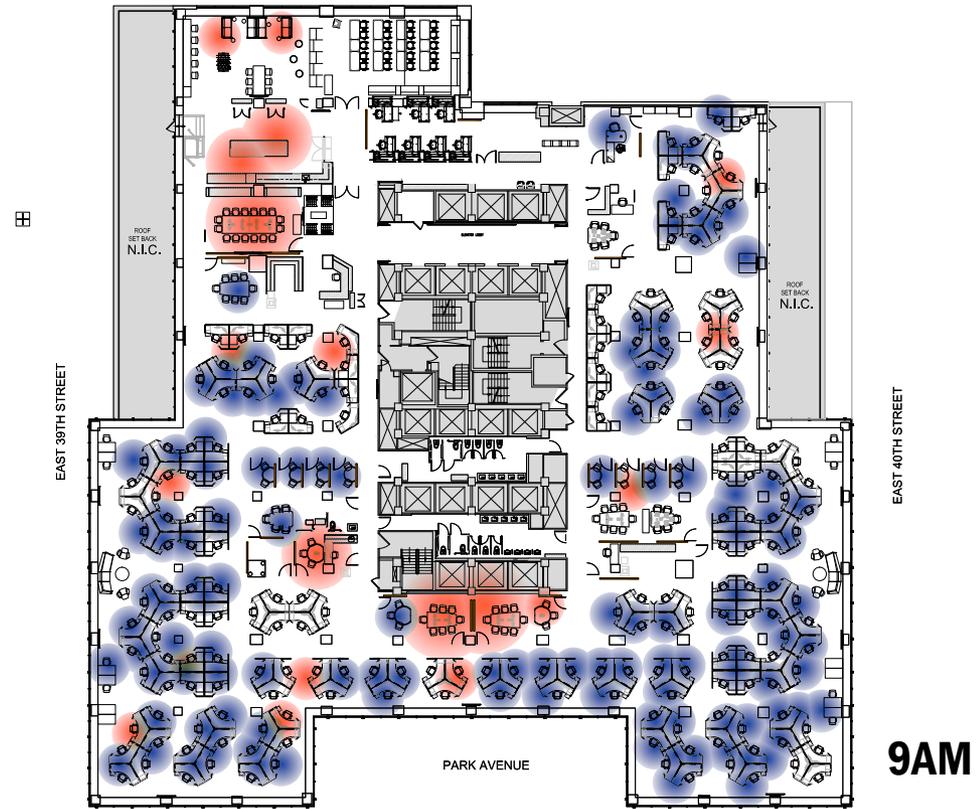
# 7<sup>TH</sup> FLOOR



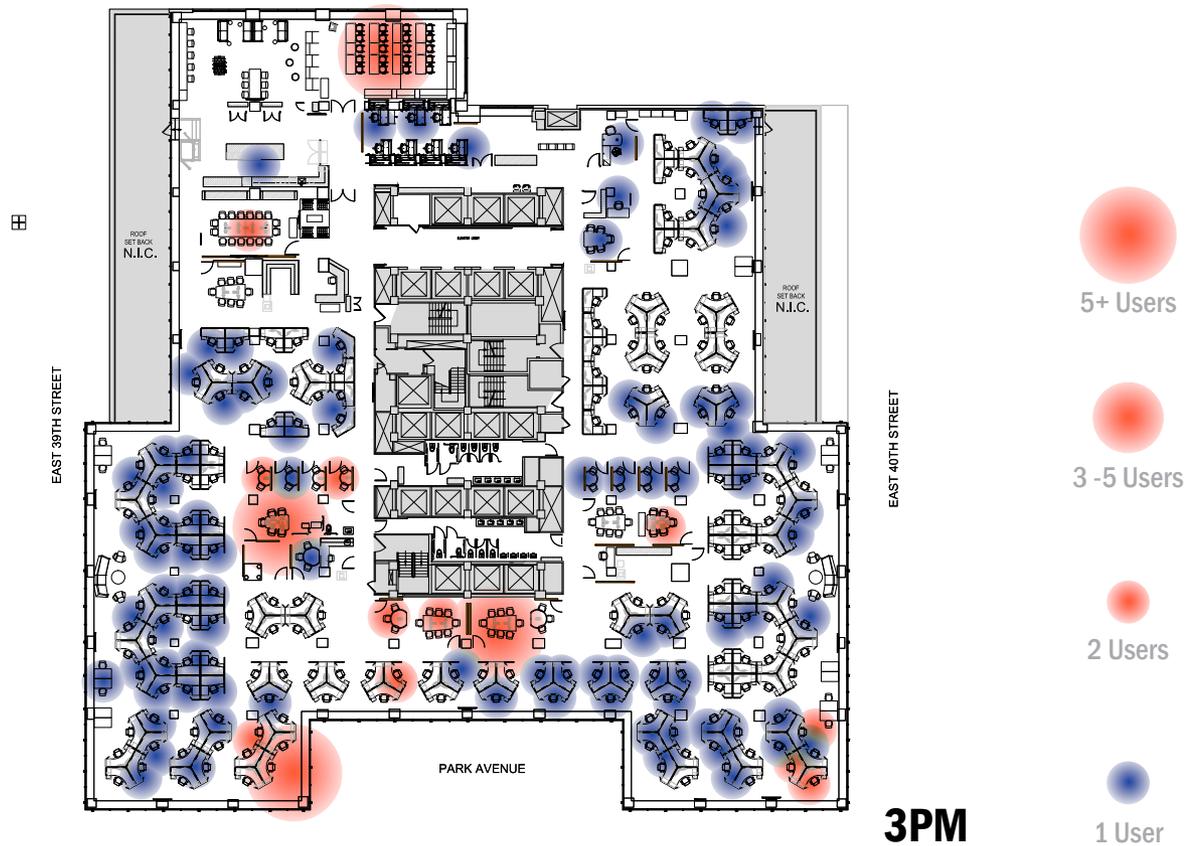
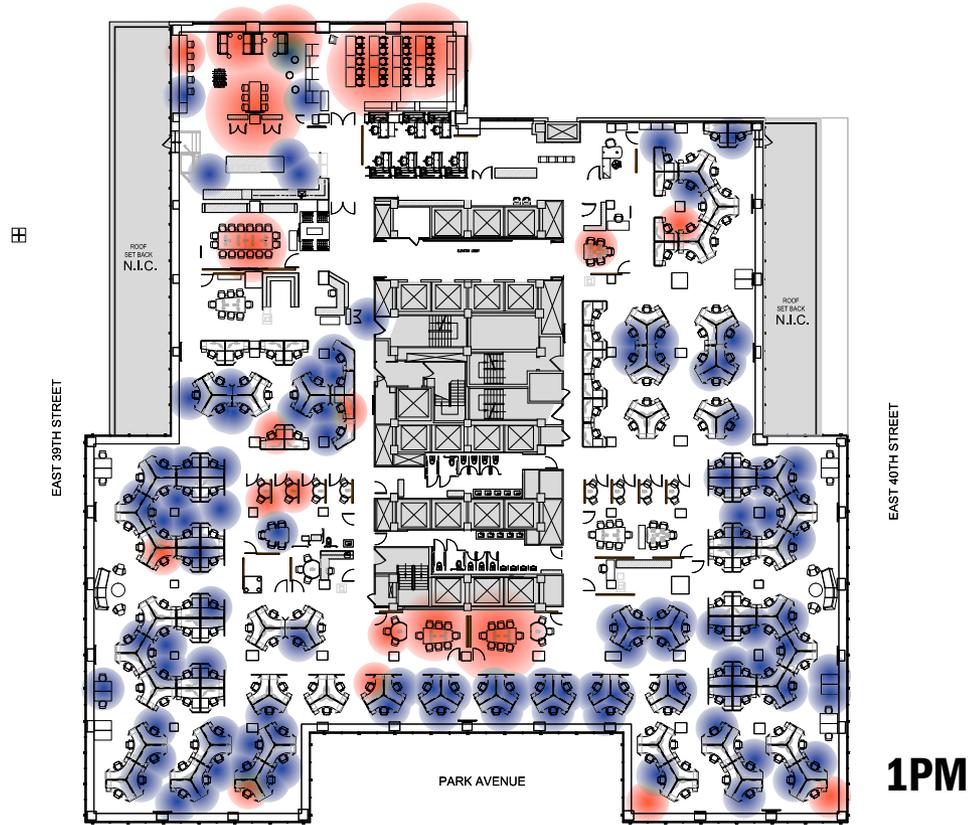
## HIGHLIGHTS

- + UTILIZATION OF ENCLOSED ROOMS PEAKED AROUND 1PM
- + MOST GROUPS MAINTAIN A QUIET ATMOSPHERE AMONGST THE WORKSTATIONS EVEN DURING BUSY HOURS
- + THE 7TH FLOOR APPEARED TO HAVE THE HIGHEST DEGREE OF PERSONALIZATION
- + AT THE 7TH FLOOR, THERE WERE SEVERAL INSTANCES OF EMPLOYEES HAVING SET UP UMBRELLAS & SHADES AROUND MONITORS TO LIMIT BRIGHTNESS FROM OVERHEAD LIGHTING

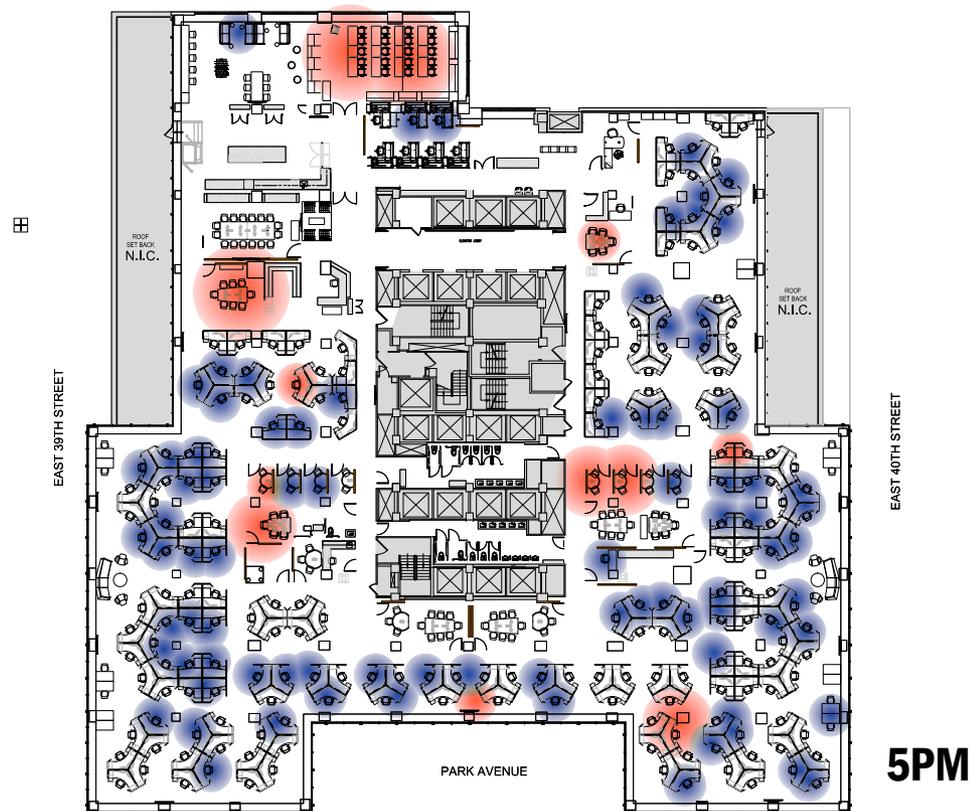
# 10<sup>TH</sup> FLOOR



# 10<sup>TH</sup> FLOOR



# 10<sup>TH</sup> FLOOR

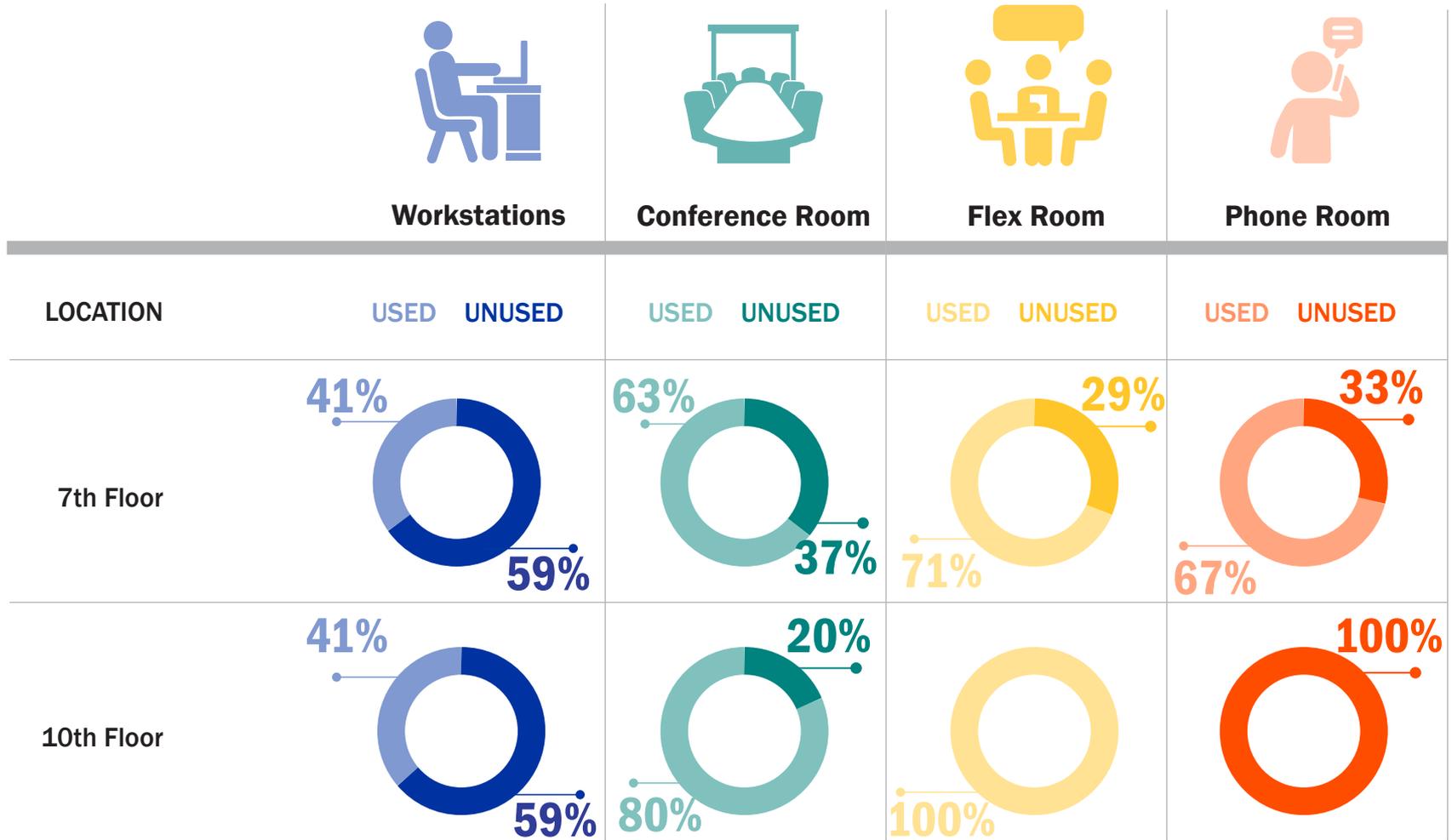


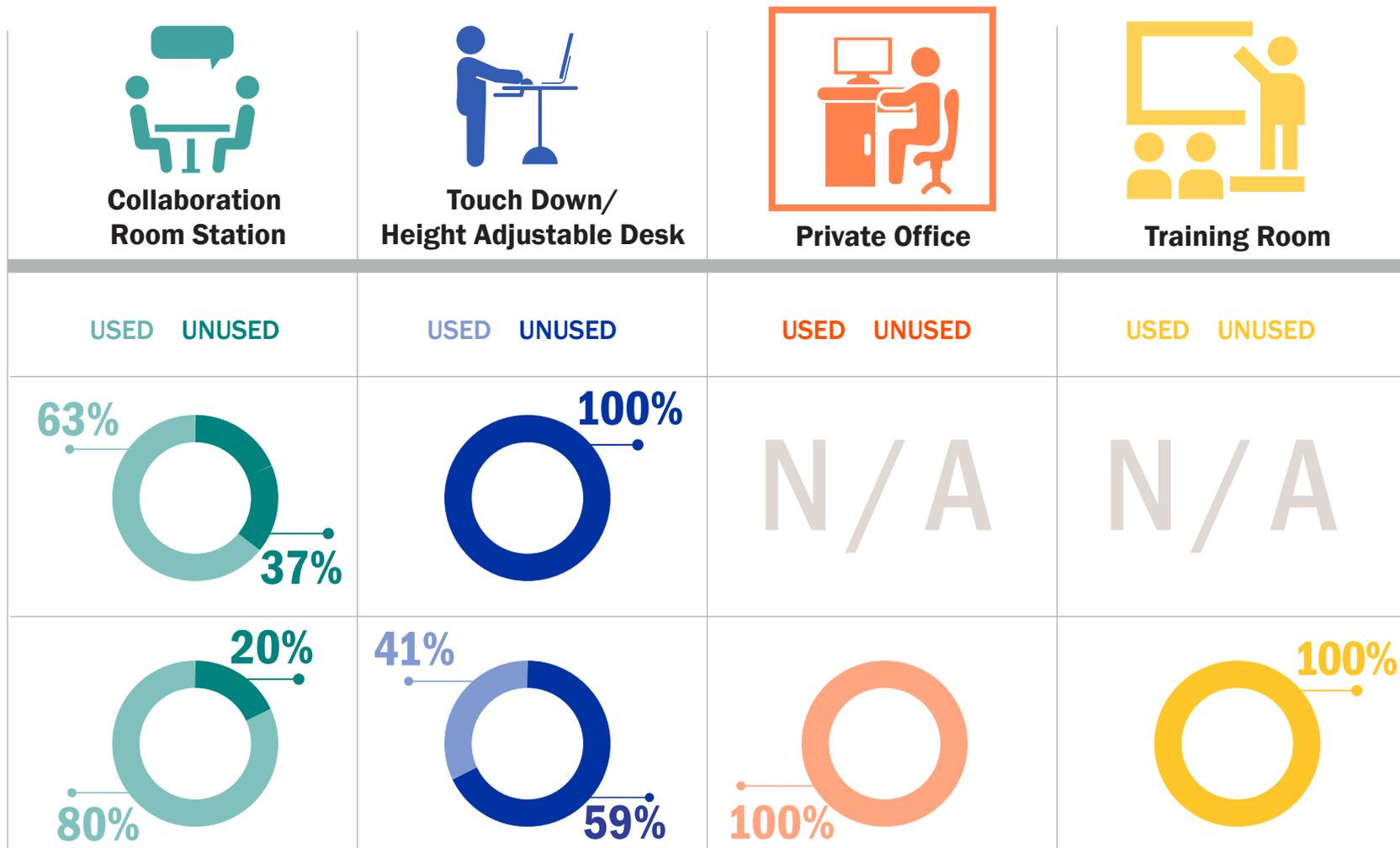
5PM

## HIGHLIGHTS

- + LIGHTING WAS OBSERVED TO BE BRIGHT ACROSS THE OPEN WORKSTATION AREAS AT THE 7TH AND 10TH FLOORS
- + THE PANTRY ON THE 10TH FLOOR WAS OBSERVED TO BE THE MOST ACTIVE PANTRY AREA BETWEEN THE FLOORS
- + ALL FLEX ROOMS WERE OBSERVED TO BE IN USE AT 9AM ON THE 10TH FLOOR. AT THAT TIME, 10 OF THESE 14 ROOMS WERE OCCUPIED BY INDIVIDUALS, OFTEN IN A TELECONFERENCE CONVERSATION, WITH THEIR LAPTOPS CONNECTED TO LARGE DISPLAYS

# SPACE UTILIZATION





clear  
collaboration  
VPN  
cloud



  
**SLEEPING GATOR**  
**DO NOT DISTURB**  
*Gator Park*

zack's JOSH'S  
Still ~~INNA's~~ Cube



# PERSONALIZATION OBSERVATIONS

FINANCIAL TECH COMPANY | SITE TWO

## QUANTITY OF PERSONALIZATION

When considering the office as a whole, nearly half of the workstations are counted as having Moderate Personalization (49%). Major Personalization (36%) and Minor Personalization (14%) make up the other half, with No Personalization (1%) only representing 4 out of 284 workstations. Overall, there is greater variation in the amount of personalization on the 10th floor compared to the 7th floor.

It is interesting to note that people tend to gather and meet around desks with higher personalization levels. To understand this correlation, place maps were cross-referenced with personalization desk scores. Out of the 43 documented meetings of 2 or more people at desks (not in meeting rooms), only 3 (7%) of the conversations occurred near desks with a personalization score of 2 (Minor Personalization). 49% of these small meetings occurred at desks with Moderate Personalization and another

44% occurred at desks with Major Personalization. Compared to the office averages, where 49% of desks are Moderate and 36% of desks are Major, it is clearly more common for individuals to meet around highly personalized spaces rated as 4 (Major Personalization) in this study.

## TYPE OF PERSONALIZATION

There was significant diversity in the types of objects found, including functional items such as ergonomic supports and cleaning supplies, items that express one's accomplishments such as trophies or certificates, and individualized items that reflect interest and hobbies such as small basketball nets or golf balls. The most commonly found items related to ergonomics, including keyboard trays, mouse pads, footrests, and standing desks. Large headphones were also frequently observed and items that regulate temperature, or thermal comfort, were commonly noted.

LEFT: PERSONALIZATION AT DESK

## COMFORT & CARE

Many desks had personal hygiene and personal care products, including hand sanitizer, hand lotion, tissues, brushes, mirrors, mouthwash, mints, perfume, lip balm, nail polish remover, lint rollers and cosmetic cases. Typically, there were more than one of these items found at desks where care items are listed. The exception to this is hand sanitizer, which often exists on its own without other hygiene or care products. Medication was also found on desks, including Advil, Tylenol, Pepto-Bismol, cold medication and other pills. One of the most common items relating to Comfort & Care were stress balls. Similarly, fidget tools were also observed.

Climate control was another major theme. A significant number of workstations included items such as heaters or fans. However, additional hints, such as blankets, sweaters and vests were also observed as low-tech solutions to temperature adjustment. Beyond these items, other clothes such as shoes, ties, and jackets were observed. There may be an opportunity to provide space to hang or store clothes for these individuals.

Food and drink was observed throughout the workspaces. A majority of desks included either a mug or water bottle, if not multiples of each. Other items such as hot sauce, soy sauce, peanut butter, granola, and candies were observed. Tea was commonly found, including tea pots. In addition, health-related items such as vitamins and protein powder could be found.

Cleaning supplies were also very common, including dusters and wipes.

## COMMUNICATION

The most common Communication items found included books as well as article clippings and print outs, which were often pinned up and displayed. This shows an interest in reading and written forms of communication. Furthermore, Post-its were also observed with written reminders or other personalized information. While it is clear that Communication items are important to an individual's personalization of their workspace, whiteboards were only found at a very limited number of desks.

## INDIVIDUALIZATION

People generally had items that showed pride in their accomplishments. Many workstations had trophies, certificates, awards and badges on display. There also appeared to be strong attachments to individuals' universities or colleges. A number of school banners, flags, and posters were found.

Photos were also displayed frequently, including pictures of family and pets. While this provides personal gratification, it also shows individuals' comfort with sharing personal information with their peers and general work environment. Furthermore, families are celebrated through the display of children's art, and drawings.

Beyond children's art, there was also an appreciation for other art forms demonstrated by items such as figurines, sculptures, paintings, posters, and art postcards. Many other cards and postcards were also found. These were often thank-you cards, showing signs of appreciation from colleagues and friends.

Travel was another common theme, with items such as flags, postcards, foreign money, travel photos and other souvenirs being observed. This may further relate to a diverse background of the individuals occupying these workstations. Religious and spiritual objects from various regions were also found, including statues of Buddha, prayer scrolls, prayer beads and a Jesus postcard. Furthermore, holiday-related items were observed, including Christmas trees and a Halloween basket.

Employees' interests clearly came out through the items they included on their desks. Often, personal interests or hobbies were observable. For instance, there were many sports and fitness-related items, including footballs, baseballs, soccer balls, golf balls, sports team memorabilia, printed tickets, workout bands and weights. There was also an attraction to movement and activities within the office. For instance, a number of basketball nets, magnetic darts and even a Nerf gun were seen. Beyond physical activities for the office, games like Rubik's Cubes, Lego, Yo-Yos, Jenga and other board games were observed. Stuffed animals were also commonly found.

The list of items below shows the unique interests and identities of the individuals within this office, and are helpful examples of individuals customizing and personalizing their spaces:

- Small guitar
- Origami
- Curly straw
- "Do Not Disturb" sign
- Magic cards
- Christmas lights
- Skull

- Shot glasses
- Colorful custom keyboard
- Light-up keyboard
- Legos
- Ceramic toilet figurine
- Star Wars/Batman/Superman figurines
- Hamster wheel with stuffed hamster
- Tamagotchi
- Bedazzled stapler
- "Home Sweet Home" pictures
- Dollar bill pinned to the wall
- Blow up flower
- Pez dispenser
- Abacus
- Fish tanks

\*Note: Most of these items were found on desks that were highly personalized (rated 3 or 4). It is observed that workspaces with a lower rating (2) tend to serve more "basic needs," with items like mugs, water bottles, heaters, fans, clothing and ergonomic supports found more often than more specialized and personal items.

## ERGONOMICS

It was clear that ergonomics was a key consideration at a large number of the workstations. Beyond high-tech solutions such as keyboard and mouse pads, simple solutions such as pillows could also be observed. Monitors were frequently propped, showing a need for more flexible monitor stand options. Furthermore, many individuals flipped their monitors, or had 3-4 monitors, showing, again, a need for proper monitor supports.

## **TECHNOLOGY**

Technology unrelated to ergonomics was also found, including iPads, cable organizers and charging stations. Calculators were one of the most common technological accessories observed. Additionally, clocks, calendars, and other scheduling assistants were found with some frequency.

## **BIOPHILIA**

There were not as many plants observed in the New York site as in the DC site, however some plants, terrariums and vases were found.

## **ORGANIZATION**

Additional personal storage is somewhat uncommon at this site, being observed in approximately just 1 of every 5 desks studied. It should be noted however, that the design of the workstations include half-height wardrobes, which may provide sufficient storage for individuals. The items that were identified included change collectors such as bowls which were used to store small change on individuals' desks.

## **VISUAL/AUDIO PRIVACY**

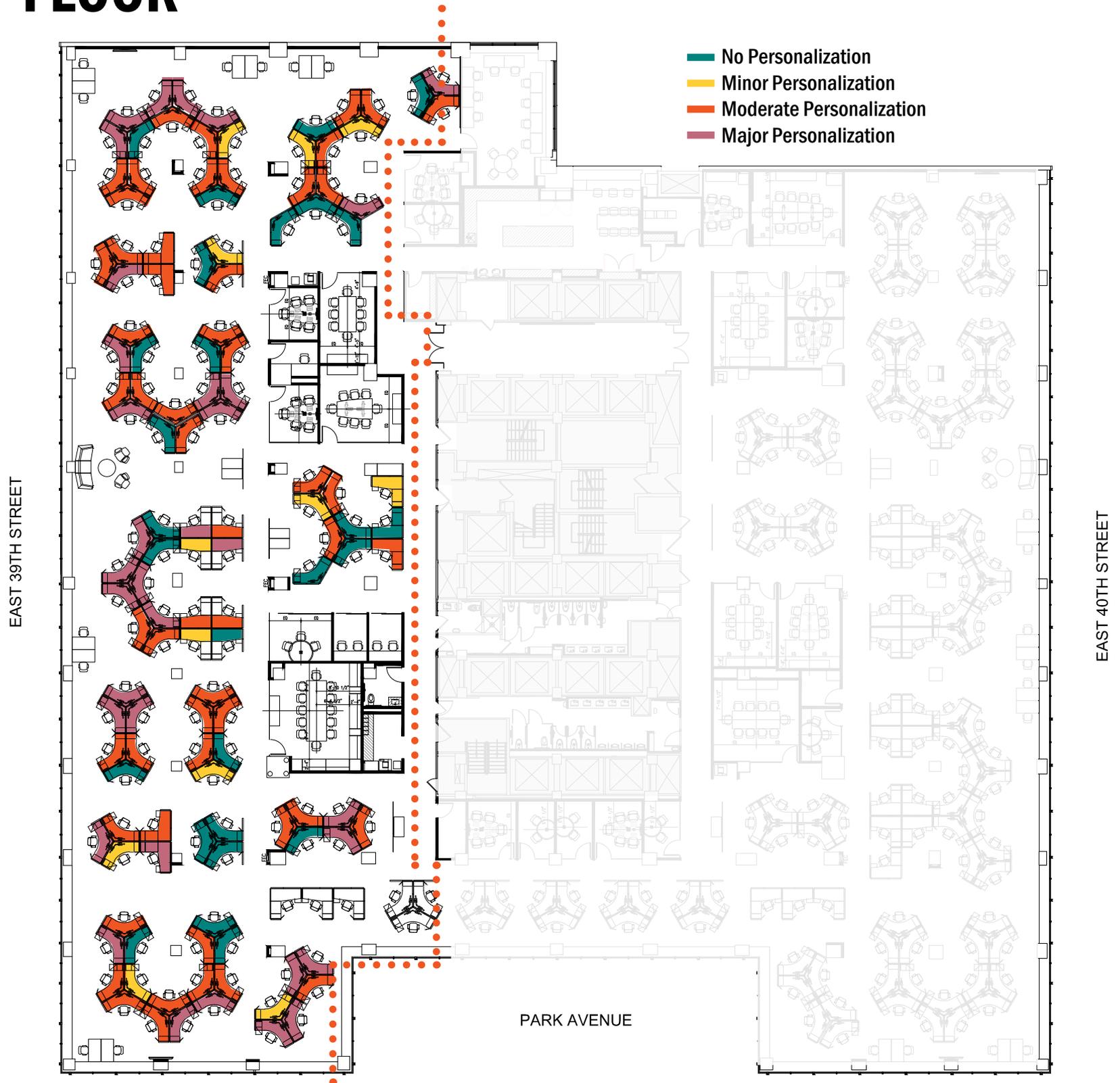
About 10% of workstations had large headphones that could be used to generate audio privacy. No visual barriers or screens were noted.

## **TEAM**

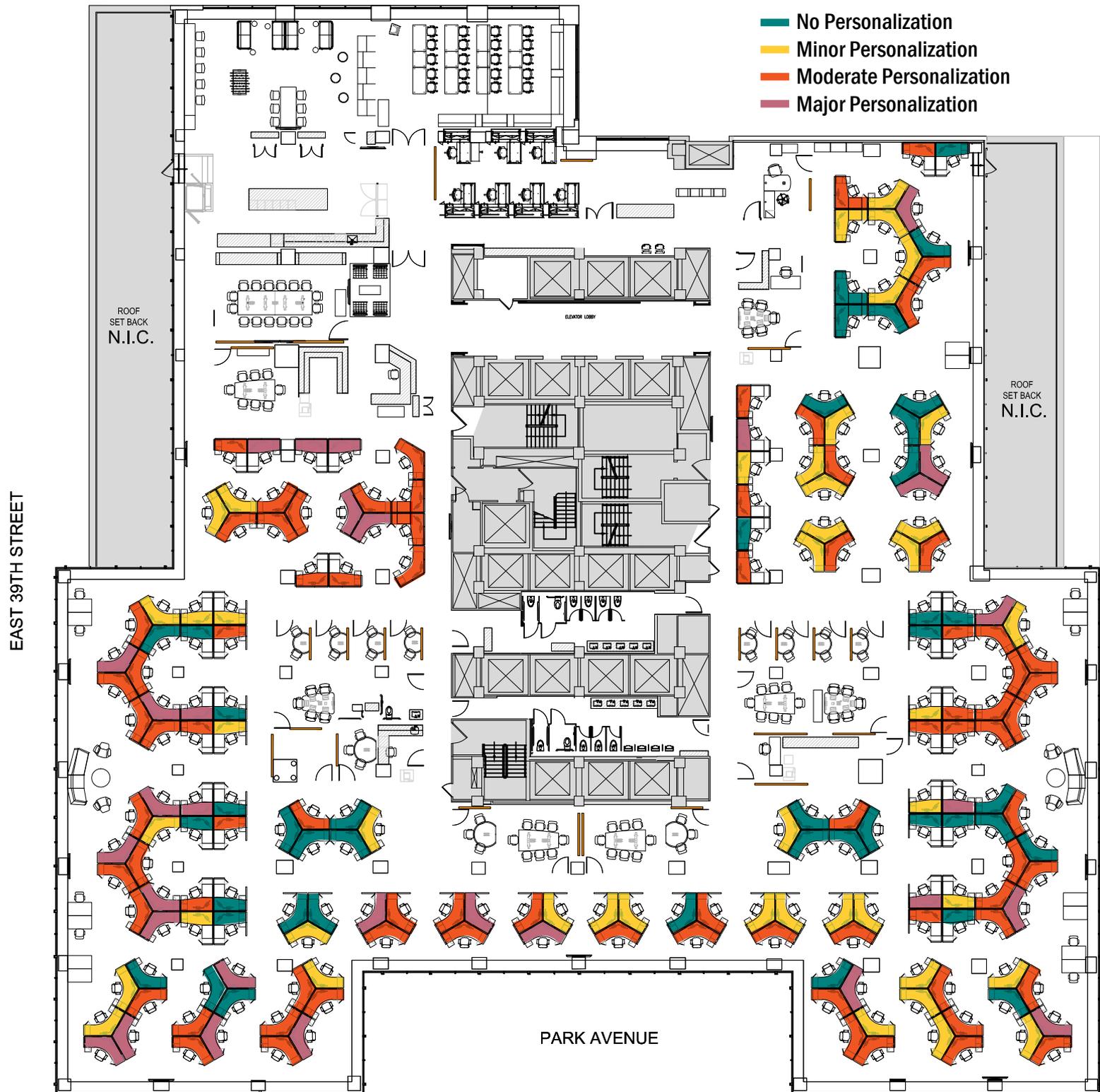
Team-related items were not commonly found at this site.



# 7<sup>TH</sup> FLOOR



# 10<sup>TH</sup> FLOOR





# DESIGN FIRM | SITE THREE OVERVIEW

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## DESIGN FIRM | SITE THREE

**S**ite three is a mid-sized architecture firm, located across the street from the Stamford Transportation Center in Stamford, CT. Most employees are designers and/or architects working with a smaller number of marketing and administrative staff members.

| LEFT: WORKSPACE







EXIT

Awilda Co

# BEHAVIOR OBSERVATIONS

DESIGN FIRM | SITE THREE

## PHYSICAL ENVIRONMENT

Completed in October 2018, the modern office design is defined by an airy workstation area surrounded by storefront windows on three sides. This open workspace is separated from a lobby and support areas by a curvilinear spine formed by a partition clad in perforated metal which serves as a space to visually display project work. The glass walls surrounding the workstations let in natural light, tempered by automatic window shades which respond to the movement of the sun. The color scheme primarily uses whites, light gray, and dark gray tones, which provide a neutral yet high-contrast and crisp aesthetic.

White shelving units filled with mesh metal bins are positioned at the ends of each row of adjustable-height workstations, providing shared storage for each neighborhood. Workstations are each mounted with low felt divider panels which absorb some sound but do not impede sight lines across the office. Central printers and high-top tables are placed between clusters of workstations.

Visual work products are displayed on the walls, organized by project. Linear pendant light fixtures create a perception of perspective lines defining a permeable ceiling plane hanging below the varied ceiling heights. The space has a slightly industrial look, with the ceiling structure and piping left exposed, sprayed with gray fireproofing which dampens noise transmission.

Enclosed rooms are situated at the interior of the space, with transparent glass walls to let in light. The interior support zone includes enclosed conference rooms, a multipurpose meeting zone with reconfigurable furniture, a materials library, a print room, a wellness room, and a pantry. The three conference rooms are identified with accent walls of acoustic panels in unique colors which stand out against the otherwise restrained color palette.

| LEFT: WORKSPACE

## SOCIAL ENVIRONMENT

The atmosphere in the workplace ranges from quiet and focused to active and noisy throughout the day. Social interactions tend to take place either at the pantry or at workstations, where employees happen upon each other. In the morning people greet each other at the coffee machine or when they arrive at their workstation neighborhoods. There is a high rate of impromptu collaboration which occurs at the workstations. People walking through the aiseways often strike up conversations with people using the centralized printers on the open floor. Discussions would sometimes move to the high-top tables near the printers or involve leaning on the shelving units, which line a more public zone a few feet away from the assigned workstations. Interactions frequently involve visual references (looking together at computer screens, drawings posted on the walls, or drawing sets on tables). Lunch presentations by visiting vendors and all-staff meetings occur in the open multipurpose zone adjacent to the pantry.

## WORK MODE

While all individuals need to collaborate multiple times per day, some spend a high proportion of time focusing on production work individually at their desks, then occasionally call colleagues over to discuss specific questions or ideas. Use of visual communication methods for problem-solving is very common, such as sharing computer screens. Only scheduled formal meetings occur in the conference rooms, which must be reserved in advance.

Many employees also use paper for sketching or reviewing printed construction document sets. Most employees have a large number of pens, pencils and drafting tools at their desks, and many also store samples of building materials at their workstations or in the shared storage bins. Each workstation has two rolling storage pedestals including shelf and drawer space. Phone calls are typically taken at desks using hands free headsets and involve screen-sharing software. On occasion, multiple people from the same workstation cluster will engage in phone calls at the same time, sometimes with the same client.

## COMFORT IN SPACE

Ergonomic mouse pads and wrist rests are common accessories at desks, as many employees spend a lot of time working on the computer. On average, 1 out of 8 employees appeared to be using their adjustable-height desks in the standing position at any given time. Employees often spend part of their day standing and sit at other times. Informal conversations often take place in standing position, and employees reported that the high tables in the open area encourage active collaboration.

The office uses a raised-floor HVAC system with local vents in the floor which can be dialed open or closed. Due to the large expanses of glass, lighting conditions vary based on the position of the sun. Automatic window shades close for part of the day to prevent direct sunlight from causing screen glare.

The noise levels in the open area vary considerably throughout the day depending on how many people are talking. Background noise levels are low, but when three or more conversations were occurring in the same vicinity, each had to increase their volume. This effect results in swells in noise which hinders focus. Use of headphones was occasionally observed. A white noise system is not used, but traffic background noise is lightly audible coming from a nearby raised highway. Some employees described the space as too exposed and overstimulating, while others reported the ability to see across the room significantly boosted their productivity due to the ease of interacting with their colleagues.

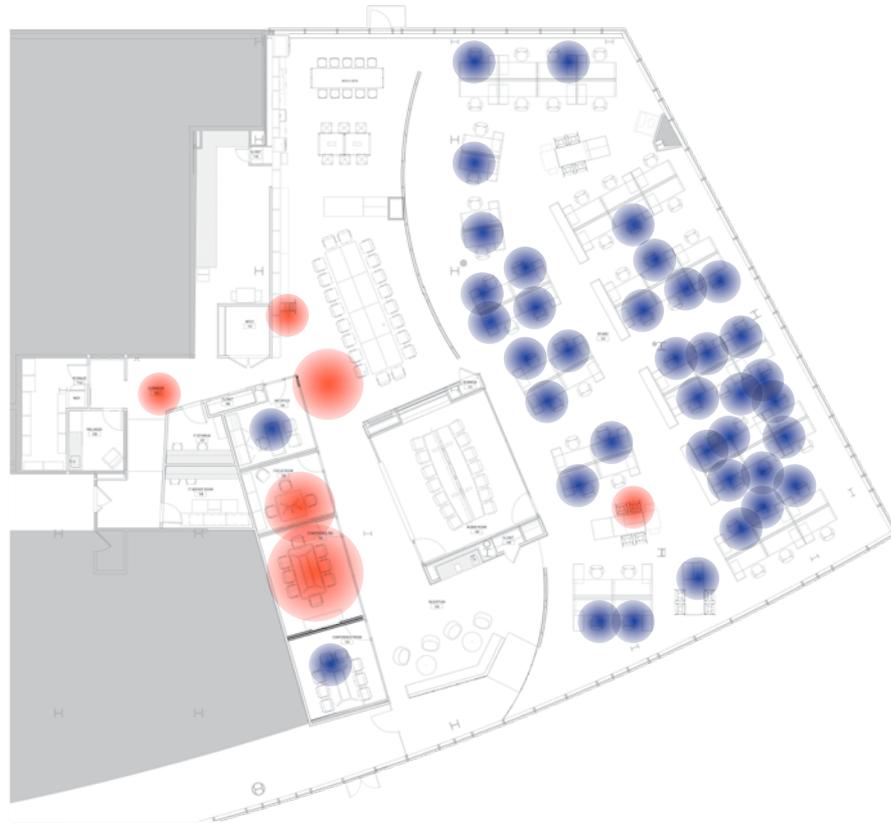
## TECHNOLOGY

Dual monitor setups are standard at workstations. Some employees use laptops with docking stations or USB hubs. Each conference room contains a large display integrated into the wall and connected to a computer that can be used to remotely connect to individuals' primary desktop computers. The conference rooms also include poly-coms for voice conferencing. The multipurpose space has a large display for vendor presentations and all-staff meetings.

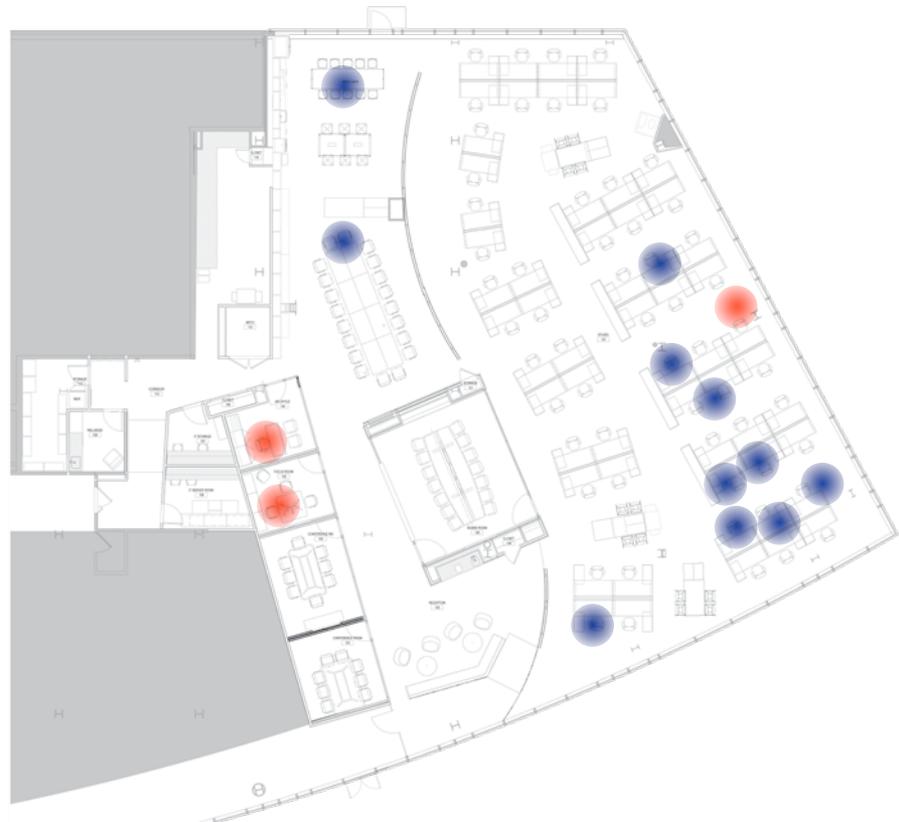
# SITE 3



9AM



11AM



**1PM**



**3PM**



5+ Users



3-5 Users



2 Users



1 User

# SITE 3



5+ Users



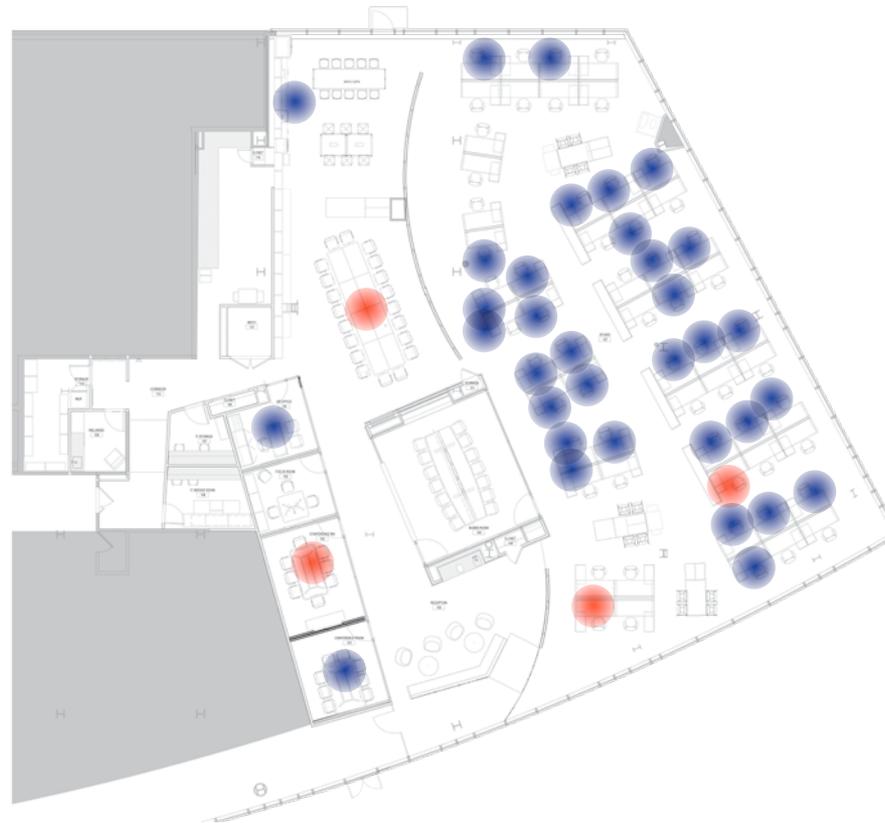
3-5 Users



2 Users



1 User



**5PM**

## HIGHLIGHTS

+ OCCUPANCY AT WORKSTATIONS PEAKED ON ALL FLOORS AROUND 1PM, WITH 45% OF WORKSTATIONS OBSERVED IN ACTIVE USE

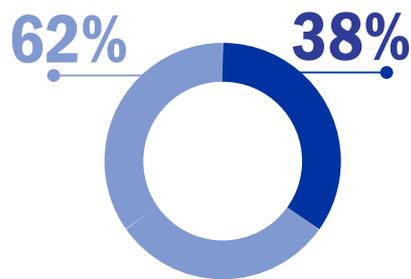
+ THE TECHNOLOGY AVAILABLE IS A KEY DRIVER IN DETERMINING WHICH ROOMS GET USED, AS A HIGH PROPORTION OF COLLABORATIVE WORK DEPENDS ON SHARING DIGITAL DISPLAYS

# SPACE UTILIZATION



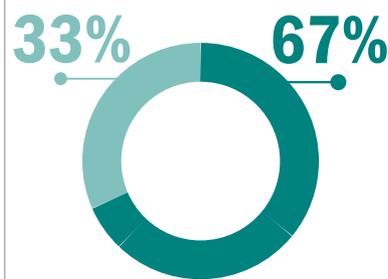
**Workstations**

USED UNUSED



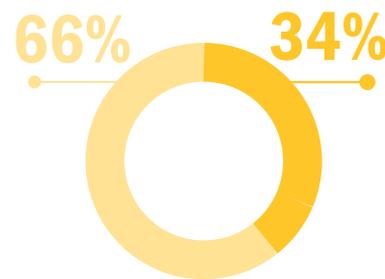
**Large Meeting Room**

USED UNUSED



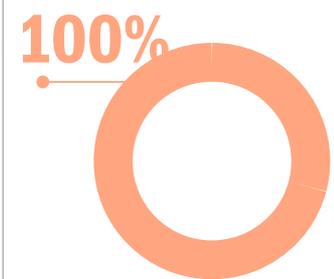
**Small Meeting Room**

USED UNUSED



**Private Office**

USED UNUSED





# PERSONALIZATION OBSERVATIONS

DESIGN FIRM | SITE THREE

## QUANTITY OF PERSONALIZATION

The office consists of 58 workstations, of which 8 are not occupied. Of the 50 occupied stations, 46% showed high levels of personalization with 8 or more items. 26% of desks showed moderate levels of personalization (4 to 8 items) and 26% showed low levels (1 to 3 items). Only one occupied desk (representing 2%) had no visible personalization.

## TYPES OF PERSONALIZATION

The majority of personal items observed are functional in nature, such as specialized work tools. Decorative and cultural items, such as awards and figurines, are present but do not dominate the impression of the spaces. It is important to note that occupants had only occupied their space for one month prior to the observations, due to an office relocation between buildings. The following sections describe the most common personal items observed at desk, and are categorized by use.

## COMFORT & CARE

Personal mugs and water bottles were very common, with 14 desks (28%) having one or both types present (not including mugs which are provided by the office). Some accompanied these with unique coasters. Several desks also had snacks or beverages stored in shelving in the mobile pedestals, most commonly chips or soda.

Skin products were frequently stored on desks, the most common being hand sanitizers, followed by moisturizing creams and lip balms. Several kept containers of Lysol wipes and cans of air duster nearby for cleaning work surfaces and keyboards.

Accessories for thermal comfort are also common. Five workstations (10%) had personal fans, and several others had either blankets, personal space heaters, or jackets present. Three desks had squeezable stress balls. Only one desk had an individual desk lamp.

| LEFT: PERSONALIZATION AT DESK

## COMMUNICATION

Writing utensils and pencil sharpeners are extremely common. 56% of the workstations had personal pencil holders (in addition to the standard one issued by the office) filled with large collections of pens and pencils. Many stations had multiple pencil holders, sometimes as many as four. Box sets of pens are also common. Employees frequently use pencil and paper to think through ideas or communicate details with each other. Other drafting tools such as scales, triangles, magnifying glasses and cutting boards are frequently used. 12% of desks also had business card holders visible.

The occurrence of Post-it notes was widespread, with 13 desks (26%) having them ready for use. Several had written reminders posted to the work surface or monitors. Pads of scratch paper and trace paper are similarly very common. A minority of desks had printed articles or written notes tacked to the standard felt divider panels, but most left the panels clean. Whiteboards do not appear at workstations, although white board walls are used in the conference rooms.

## INDIVIDUALIZATION

The most popular individualized items were family photos, personal awards, and certifications. 24% of desks had one or more personal photos displayed, either in picture frames or pinned to divider panels. Some artwork and images were also used to personalize the workspaces. Mementos such as figurines, shells or stones are sometimes used to personalize areas, and small pumpkins were frequently used as seasonal decorations. Some unique examples of individualized items at desks are as follows:

- College flag
- Sports memorabilia
- Miniature decorated masks
- 3D printed model/prototypes
- Posted cartoons and retro advertisements
- Decorative ceramic bowls

## ERGONOMICS

Ergonomic accessories are common, with keyboard wrist rests and ergonomic mouse pads observed most frequently. Half of all stations had either a mouse pad or keyboard wrist rest, and many had both. Some desks used special ergonomic computer mice. One occupant had an extra cushion on their chair, while another used a footrest.

## TECHNOLOGY

While desktop computers and dual monitors on swing-arms are standard for the office, some employees use laptops. 26% of desks contained a laptop docking station, and 24% used a USB hub on their desks to connect either laptops or computer accessories. One desk arranged their monitors with one above the other, but typically they are arranged side-to-side. The available movement of the standard monitor arms only allows the two monitors to touch in the center when they are pulled toward the front of the desk. Some employees separate their monitors in order to push them further back and reclaim usable desk space. Wireless headsets are standard equipment, but 12% opted to also keep a traditional desk phone.

**BIOPHILIA**

12% of employees had small plants at their desk, and some had multiple plants such as cacti or aloe. Plants were contained in pots or small planter boxes and typically positioned toward the back of the desk.

**ORGANIZATION**

34% of employees used shelving in the mobile pedestals to store books. File organizers were commonly placed on desks, seen in use by 30% of employees. 12% had one or more magazine holders present, and several had inbox bins as well. 14% had either a desk calendar or a calendar pinned to their divider panel. A few employees had additional baskets under their desk for storage of building material samples.

**VISUAL/AUDIO PRIVACY**

No customized visual dividers were observed, and the layout does not provide much opportunity for this type of modification. Headphones were occasionally observed in use during the day, but tend to be stored in drawers or in personal bags kept under the desk.

**TEAM**

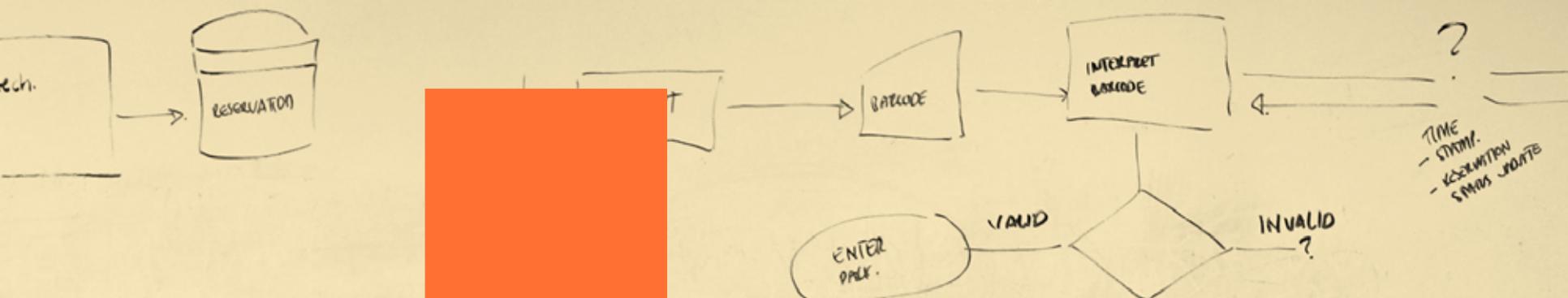
No team-related items were observed. This might have to do with the short amount of time this new office space has been occupied.

# SITE 3

- No Personalization
- Minor Personalization
- Moderate Personalization
- Major Personalization







**70%**

**AMBIVERT**

**10%**

**EXTROVERT**

**20%**

**INTROVERT**

# SURVEY FINDINGS

## SITES ONE, TWO, AND THREE

### SITE ONE

An online survey was administered to employees at Site One. The survey asked questions pertaining to personal preferences, perceptions of their current office environment and personal workspace, how and where they worked best as well as a description of the items used to individualize their workstation along with the modifications they wish they could make. Embedded in this online survey was the Ten Item Personality Inventory (TIPI) assessment, mentioned earlier in this report under “Study Methods,” used to identify the composition of personality types within each office location based on the Big Five categories (Openness, Conscientiousness, Extroversion, Agreeableness, Neuroticism).

Overall, the respondents of Site One primarily identified themselves as Ambiverts, indicating a mix of Introvert and Extrovert qualities. Less than one-third of Site One survey participants (30%) considered themselves to be either purely Introverts or purely Extroverts. This correlated with their predominant workspace preference of a highly flexible environment that could be modified for a variety of working

conditions. A number of survey respondents also enjoy working in open spaces with multi-disciplinary teams. Fewer individuals preferred work environments that were either highly organized or independent and focused.

It is important to note that, at this particular site, most employees work primarily at the office rather than remotely, and the majority of those employees preferred to conduct their heads-down, focused work at individual workstations. However, some respondents did mention a desire for more private spaces away from their desks where they could get focused work done. Considering that all employees at this site were assigned workstations as their primary work settings it can be reasonably inferred that there would be a stronger personal connection to their desks than employees of companies with more flexible work policies and/or workspace options. This point is supported by survey data which showed that almost two-thirds of respondents felt attached to their personal workstation and half of them would miss their personal workstation if they moved to a different office even though almost all respondents had worked in their current location for less than three years.

When considering the user-reported workstation artifacts, Individualization items were the most commonly observed items, followed closely by Comfort & Care items and Organization items. This confirms what was observed during the personalization inventory. Team and Technology items were the least commonly found, and there was also a limited desire for these items in the future.

In terms of environmental features that impact individuals' abilities to get work done, thermal comfort was the biggest obstacle. The physical distance between team members as well as between departments that work together was also a significant concern for many individuals surveyed. Visual privacy, furthermore, can be an obstacle to getting work done.

## SITE TWO

A group of employees from Site Two were handed surveys to fill out and return. Questions included the same questions as Site One. However, unlike Site One, this survey was not done online due to logistical considerations.

The majority of the sample identified as millennials but included a small percentage of Generation X and an even smaller number of the younger Generation Z demographic. Most employees had been with the firm anywhere between 1–7 years with some having been there more than 10 years. The vast majority identified as Ambiverts (70%) followed by Introverts and, finally, a very small percentage of Extroverts. As explained above, Ambiverts contain a mixture of Introvert and Extrovert qualities which may be why the physical office characteristics staff

preferred the most were those that are flexible and adjustable to different needs. As for their workstyle, staff preferred working alone over working in multi-disciplinary teams. Most employees almost always work at the office. When working outside the office, some staff members work from home either once or multiple times a month, while working in transit was relatively limited.

Working at individual workstations is the overwhelming norm on the floors surveyed. To varying degrees of frequency, flex meeting rooms were the second most popular workspace followed by small and then medium conference rooms. Height-adjustable desks were not commonly used, however, some people made use of them multiple times a week. It is worth noting here that a height-adjustable desk was one of the main items people indicated they would like to have if given the opportunity.

Compared to other locations in the office, only a small percentage of people worked in an informal setting (huddle, lounge, and pantry), but it is unclear from the survey why this was the least used space. One insight to this limited usage could be that only 50% of surveyed staff members agreed that the office provided adequate spaces for informal collaboration.

The survey also found the number of wellness and phone rooms were unsatisfactory. Both types of support spaces are important for the holistic wellbeing of staff. An increase in phone rooms could also help address the two main acoustical obstacles to productivity shared by staff, namely; speech privacy (ability of an unintentional listener to hear and understand another person's conversation) and people talking on the phone. Even when rated against other environmental issues, speech privacy was still seen

as dissatisfactory followed closely by thermal comfort, views to outdoors and amount of daylight.

About one-quarter of respondents felt that an inability to individualize their personal workspace can create an obstacle to getting their work done. Interestingly, when comparing this group to those who do not believe individualizing their workspace is an obstacle to their work, this group showed a slightly higher level of attachment to their personal space and were more likely to indicate they would miss their workspace if they moved to another office location. The sample, however, was relatively small and therefore these findings cannot be immediately generalized. Aside from Individualization items, staff had a high percentage of Communication items, Comfort & Care, as well as Ergonomic objects. As for their desired items, the main request related to Ergonomic items followed by Comfort & Care items. As mentioned above, the item most frequently requested was a height-adjustable desk. Privacy items, both audio and visual, were the third most desirable types of items, which is in line with other findings pointing to speech privacy being a major obstacle in the office.

Despite minor shortcomings regarding collaboration, meeting spaces, and acoustical privacy concerns, the majority of staff enjoyed being at the office, were happy working at their individual workspaces and found the configuration conducive to working well. In fact, the majority of participants said they felt attached to their workspace and a little over one-third indicated they would miss it if they had to move to another office location.

## SITE THREE

The survey for Site Three was administered online. The questions asked were the same as those in earlier surveys, allowing comparison between offices as well as between personality types.

Compared to the other offices surveyed, Site Three was, on average, older. While 45% of the office identified as Millennials, the other 55% were between the ages of 38 and 72. Specifically, 23% of those surveyed were Baby Boomers, or individuals over the age of 53, which brought the average age of the office up. Given this background, it is not surprising to see that there were a number of staff members who had been at the office for over 10 years. At the same time, around 37% had only been at the office for less than 3 years, showing the generational divide in the office.

The vast majority of individuals (74%) identified themselves as Ambiverts. Following that, Introverts made up 19% of the office, with Extroverts accounting for the final 6%. Similar to the other sites, most employees enjoy working in highly flexible environments. As noted above, the Ten Item Personality Inventory (TIPI) was conducted as part of the survey, providing additional insight into personality types. As in the other sites, the two most common personality types were Conscientiousness (35%) and Agreeableness (26%). Fewer individuals were identified as having an Openness personality type (19%). Extroverts and Neurotic individuals made up the final portion of the population surveyed, each representing approximately 10% of the office.

In this regard, it is important to consider that individuals spend most of their time working at the offices in Stamford, while less time is spent working from home, in transit or at other office locations. When in the Stamford office, individuals spend most of the day at their own desk or workstation. However, touchdown desk areas and informal spaces are also popular. Meeting rooms are used, but typically not more than a few times a week. Small conference rooms and small flex meeting rooms are the most popular, with medium-sized conference rooms used less frequently.

Overall, it seems that some improvements could be made to the office environment to better serve its users. While the majority of people did not find their personal workspace distracting, many staff indicated that they are not satisfied with speech privacy and noise levels. On average, respondents did not feel that the work environment provided adequate choices for heads-down, focused work.

In terms of space concerns, those surveyed were mostly dissatisfied with the amount of phone rooms or quiet rooms available. Additionally, there was some reported dissatisfaction with the amount of space available for individual work. Again, given that individuals in this office typically spend time at their own desks doing heads-down work, it seems important to provide adequate space for workstations.

When compared to the other sites surveyed, most respondents at this location currently had standing adjustable-height desks. As a result, this item was less desired compared to other ones, including noise-cancelling headphones and visual privacy

screens. This reinforces the importance of quiet space for getting work done as noted above. Additionally, visual privacy was also noted as an obstacle to getting work done.

While standing desks were already widely implemented, other ergonomic items such as computer mice, chair cushions and footrests were desired. Furthermore, biophilic and decorative items such as plants and art were also highly desired. Finally, thermal comfort was a concern for those working at this office, who indicated it can impact their ability to get work done. Generally, items that provide additional warmth, rather than cooling, were desired. This included blankets, space heaters and sweaters. Only 3% of those surveyed desired a personal fan, while 6% already had access to one.

Given that there were many people who did not feel personally attached to their individual workspace, one way to overcome that may be by implementing improvements and addressing the concerns outlined here, including providing personalized audio and visual privacy items, ergonomic support and thermal comfort items at individual workstations.

## GENERAL FINDINGS

Findings from surveying 103 individuals across 3 offices were analyzed and used to reach general findings. The findings indicate the sample's preferred work mode, obstacles to their productivity and the effect of individualization on their office attachment. This allowed an exploration of prevailing characteristics among personality types. It is important to note that the sample size within each personality varied and was generally small. The findings, however, are an indication of patterns that can be explored further in future research.

General findings showed the percentage of staff who preferred working in multi-disciplinary teams was close to the percentage of those who preferred to work alone. Flexible and adjustable spaces that are well designed can meet the needs of both those workstyles. This may be why that was the overwhelmingly preferred space for working as opposed to a highly organized space. The majority of staff indicated they work at their personal workspace almost all the time and the most commonly desired improvement to their space was a height adjustable desk. More staff preferred to hold informal meetings at their desk as opposed to a dedicated informal space like a huddle room, lounge, etc. Accommodating this through furniture and space design can be crucial. Informal and impromptu interactions on the other hand, occurred frequently in both informal dedicated spaces and open work areas.

The most notable obstacle to productivity that staff mentioned was thermal comfort, followed by visual privacy. Both the quantity of conference rooms and people's ability to modify their personal space to meet their needs were indicated as potential obstacles. Other notable obstacles related to acoustics, particularly noise generated by people on phones,

speech privacy and people talking nearby. Some of the acoustical challenges may be improved by adding phone rooms which were generally unsatisfactory to over 50% of the sample.

Of all the items people currently have at their desk, Individualization items were at the top of the list including personal water bottles, pictures, mugs and coasters. Individualization was followed closely by Communication and Comfort & Care items with the latter being used to increase thermal comfort through items such as space heaters, fans and scarfs. The top desired item, as mentioned previously, was a height-adjustable desk. This demonstrates an increased awareness of wellness which should be supported in offices. Increase in Comfort & Care items along with Communication tools were also highly desired in future spaces.

Some personality types stood out in their evaluation of topics surveyed. For example, Extroverts were likely to make use of informal spaces for various tasks. Conscientious individuals had the most people who would enjoy working in a highly organized space. Individuals with a predominant Openness trait had the most respondents indicating they were satisfied with their ability to modify their personal workspace. Those with an Agreeable personality showed the highest attachment to their personal workspace and one of the highest indications that they were likely to miss it should they move to another office location. Finally, only half of the Neurotic personalities indicated they were satisfied with their overall personal workspace, which was the lowest among the personality types. They were also one of the groups that had the lowest percentage of people satisfied with their ability to individualize their space. The next section will take an in-depth look into the survey results for each of the five personality types.

**Conscientious**  
**31.5%**



**Extroverted**  
**11.5%**



**Openness**  
**20%**



**Agreeable**  
**34%**

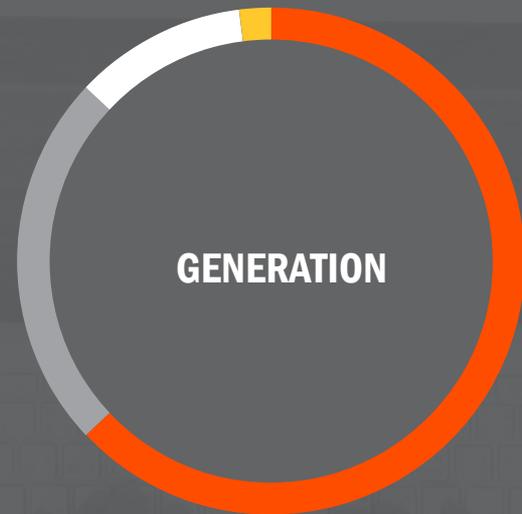


**Neurotic**  
**3%**

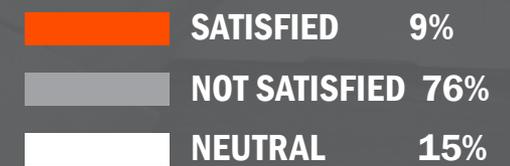
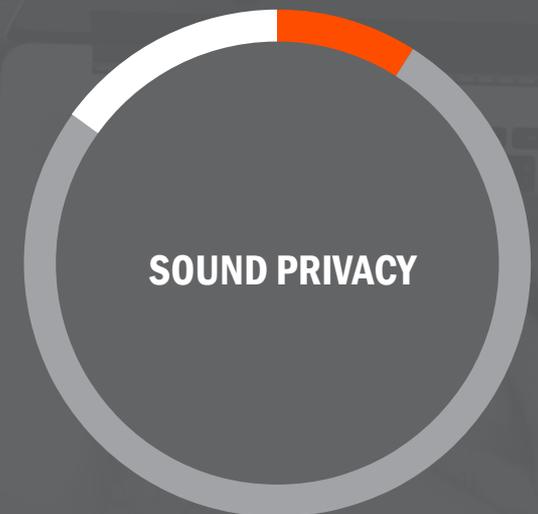
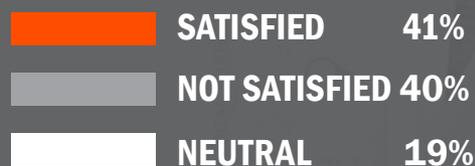
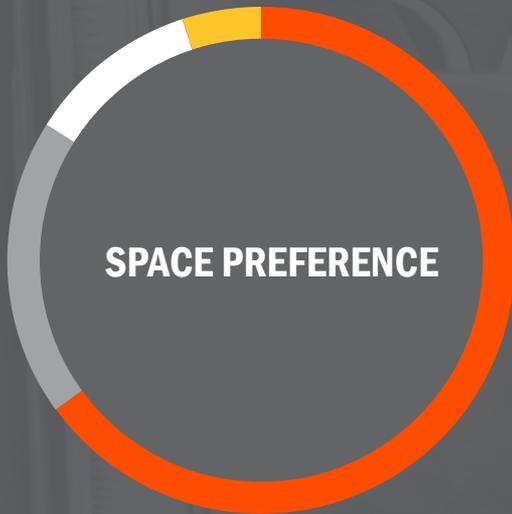
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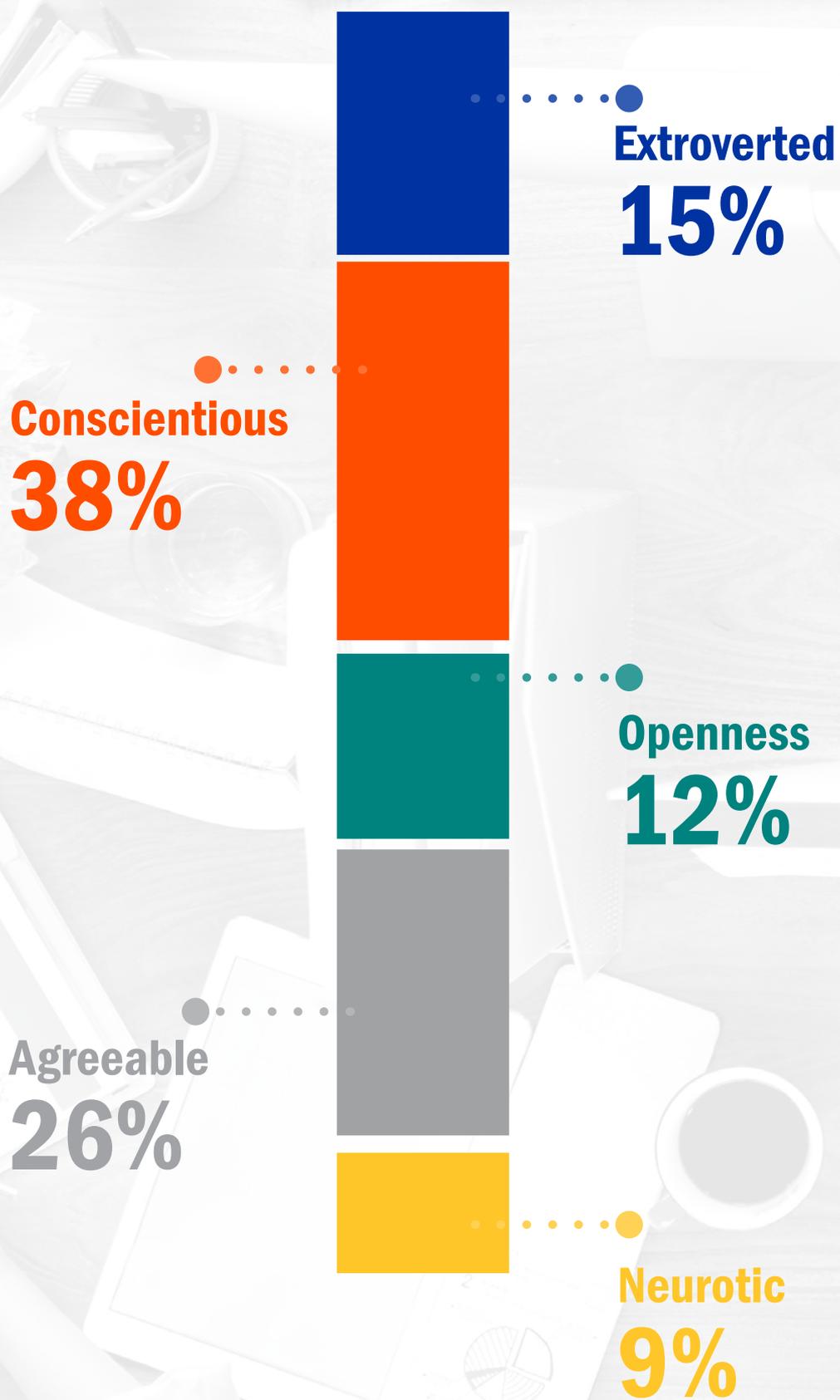


- AMBIVERT 70%**
- INTROVERT 19%**
- EXTROVERT 11%**

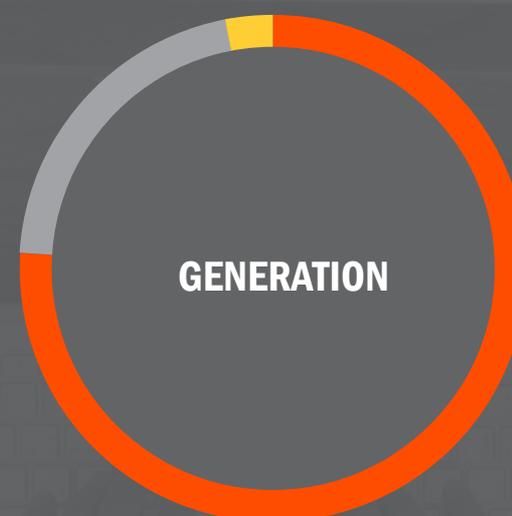


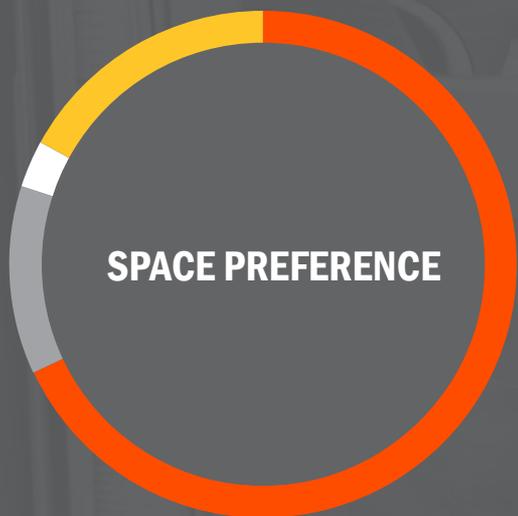
- GENERATION Z 2%**
- MILLENNIALS 63%**
- GENERATION X 24%**
- BABY BOOMER 11%**





## SITE TWO





- HIGHLY FLEXIBLE 67.5%**
- COLLABORATIVE OPEN 12%**
- ORGANIZED 3%**
- SOLITARY 17.5%**



- AGREE 27%**
- DISAGREE 35%**
- NEUTRAL 38%**



- AGREE 38%**
- DISAGREE 27%**
- NEUTRAL 35%**



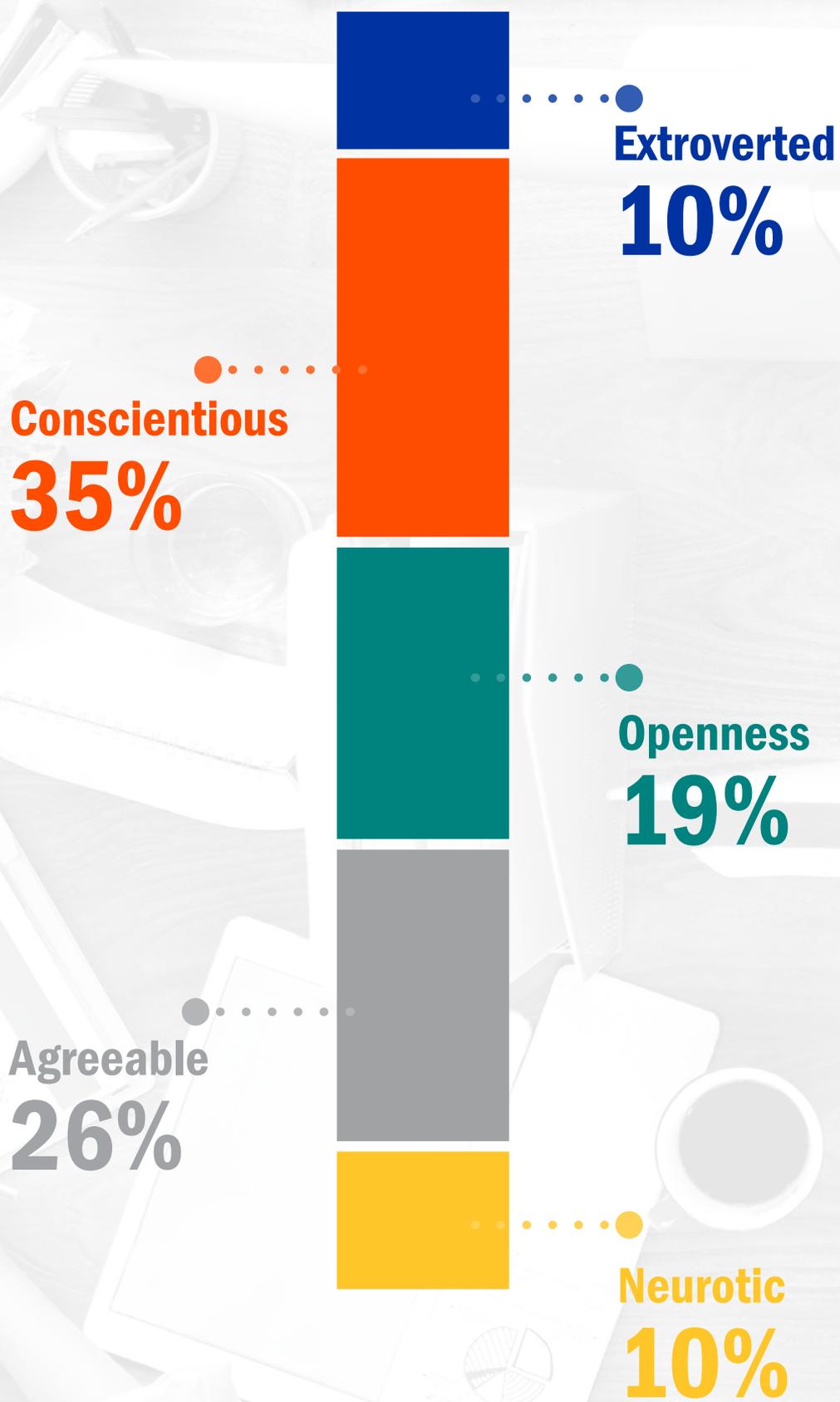
- AGREE 59%**
- DISAGREE 20.5%**
- NEUTRAL 20.5%**



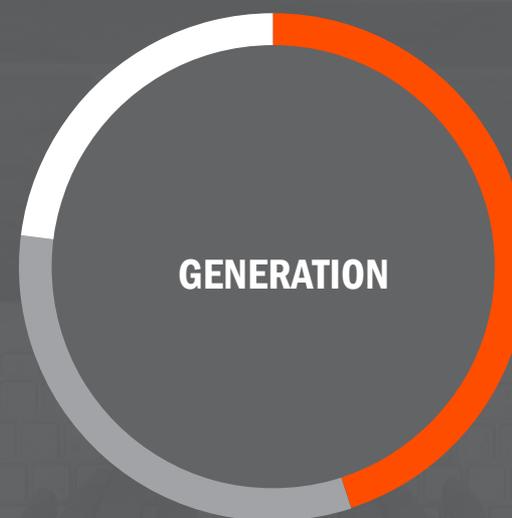
- SATISFIED 32.5%**
- NOT SATISFIED 32.5%**
- NEUTRAL 35%**

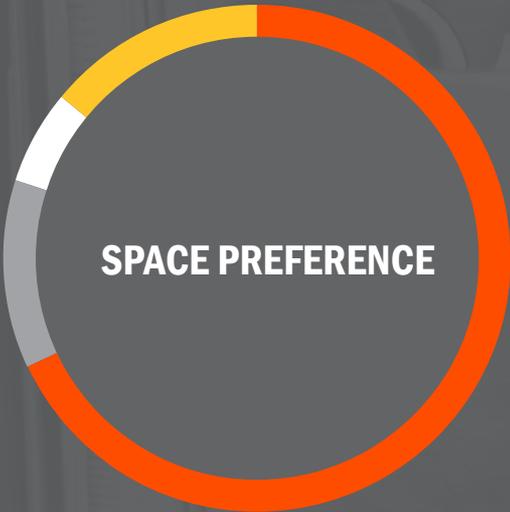


- SATISFIED 24%**
- NOT SATISFIED 41%**
- NEUTRAL 35%**



## SITE THREE





- HIGHLY FLEXIBLE 68%**
- COLLABORATIVE OPEN 12%**
- ORGANIZED 6%**
- SOLITARY 14%**



- AGREE 18%**
- DISAGREE 46%**
- NEUTRAL 36%**



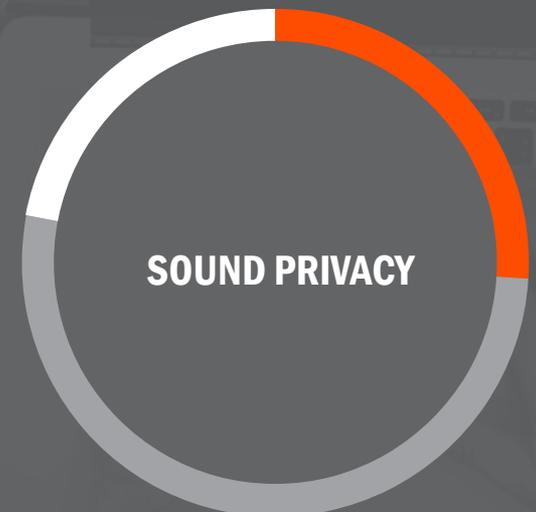
- AGREE 39%**
- DISAGREE 36%**
- NEUTRAL 25%**



- AGREE 53%**
- DISAGREE 11%**
- NEUTRAL 36%**



- SATISFIED 60%**
- NOT SATISFIED 27%**
- NEUTRAL 13%**



- SATISFIED 26%**
- NOT SATISFIED 51.5%**
- NEUTRAL 22.5%**



# PERSONALITY ANALYSIS

## SITES ONE, TWO, AND THREE

### EXTROVERTED PERSONALITY TYPE

Extroverted individuals like being around other people and find social interactions to be energizing. These individuals are often outgoing, talkative, and assertive, displaying high amounts of emotional expressiveness. People who rate high on this personality type tend to enjoy meeting new people and starting conversations. They also make friends easily and typically have a wide social circle.

In a professional setting, Extroverts enjoy having strong social relationships with co-workers, allowing them to quickly integrate into new roles (Educational Testing Service, 2012). As a result, Extroverts are less likely to quit, and there are associated benefits to performance and job satisfaction (Educational Testing Service, 2012).

### TYPES OF PERSONALIZATION

Extroverts like most of the other personalities had a number of items that they used to individualize their space. The most common items used for Individualization among this group included coasters, water bottles, and mugs. They had slightly more Comfort & Care items, compared to other groups, like sweaters, task lighting, and hand sanitizers. The Organizational items they selected included pen/pencil holders, bookshelves and paper/file organizers. In terms of their most desired items, many items relating to ergonomics were cited here such as height-adjustable desks, footrests, and ergonomic keyboard trays. More than other personality types, Extroverts desired privacy-related items at their personal workstations.

### WORK PREFERENCES/COLLABORATION TOOLS/PRIVACY NEEDS

It is notable that despite their characteristically open and outgoing nature, an equal percentage of individuals indicated they enjoy working in multi-disciplinary teams as did those who preferred to work alone and focus on their work. The majority of Extroverts surveyed here enjoyed working in highly flexible spaces that can

be adjusted to their needs. These preferences viewed together may indicate Extroverts alternate from highly collaborative work to individual focused work, which is why they prefer spaces they can adjust based on their tasks. All types of communication are key to their workstyle, including online, phone and in-person interactions. Furthermore, these individuals also spend time workshopping on whiteboards, reinforcing their preference for informal and collaborative work environments.

Extroverts spend a lot of time at their own desk but also make use of informal spaces often. When it comes to impromptu socializing some use these spaces multiple times a day. They also use informal spaces for focused heads-down work several times a day or week, surpassed in this group only by those with Conscientious and Open personalities.

This group is unsatisfied with speech privacy in the office and had the largest percentage of staff who found this lack of privacy along with people speaking on the phone as obstacles to their work. Increasing the number and access to phone rooms can help overcome this as all Extroverts were not satisfied with the current quantity of phone rooms. Another obstacle to productivity identified by some of the people in this personality type more than in others was the current location of conference rooms. Although half the group thought the location was not an obstacle, this finding is worth noting compared to the evaluation of other personality groups. Future planning for Extroverts may need to pay closer attention to the quantity and location of conference rooms, as well as phone rooms, ensuring there are sufficient numbers, adequate access, and flexibility within their designs to respond to different needs.

## INDIVIDUALIZATION

Extroverts, like most personality types, had a lot of Individualization items at their workspace which may be why almost half (one of the highest among all personalities) was satisfied with their ability to individualize their setting. However, very few Extroverts identified an inability to individualize as an obstacle to them getting their work done. The relatively high percentage of individualization at their desk may be why they did not desire many items of that category in the future if offered. Instead, Extroverts were in line with the top desired category across the sample, namely Ergonomics, which is discussed below.

## ERGONOMICS AND COMFORT & CARE

Overall, Extroverted personality types were satisfied with the ergonomics and comfort of their furnishings second to those with an open personality. In the survey, few Comfort & Care items were noted as desirable in the future, which may mean Extroverted individuals here have satisfied their comfort needs already.

## SUMMARY

Roles that encourage social interaction and leadership are well suited to Extroverts. The findings of the survey confirm that Extroverts are generally satisfied with their workspace and have few complaints in relation to their physical environment. It may also be noted that while Extroverts enjoy socializing and working in informal spaces more than other personality types, they spend just as much time at their own desk and require some level of privacy to get work done.

## CONSCIENTIOUS PERSONALITY TYPE

Conscientious individuals tend to be thoughtful and goal-oriented. They are typically organized and pay attention to details. This allows them to be effective at meeting deadlines as they typically plan ahead, spend time preparing and avoid procrastination on important tasks. These individuals also enjoy having a set schedule. Professionally, Conscientious individuals are highly consistent, which correlates with their overall job performance and leadership (Educational Testing Service, 2012).

### TYPES OF PERSONALIZATION

When compared to the other personality types, Conscientious individuals had the largest share of communication items such as notebooks, books, pin-up/tack boards, personal whiteboards and Post-It notes. Individualization items were reported as well and included things like personal photos, water bottles, and name placards. Conscientious individuals kept a number of Comfort & Care items along with Organizational ones but reported very little Biophilic or Ergonomic items. As a result Ergonomic items were the most desired objects followed by an increase in the amount of Individualization and Privacy items. There was a desire for increasing biophilia in the office through plants expressed across all personality types, and the Conscientious personality was no different.

### WORK PREFERENCES/COLLABORATION TOOLS/PRIVACY NEEDS

Conscientious individuals indicated they enjoy working in groups more so than working alone. Other than a very small percentage of Agreeable personalities, a slightly larger percentage of Conscientious individuals indicated they value a highly organized space with easy access to information. This is compatible with the side of their personality that values organization and structure.

The majority did, however, value having a flexible space that can meet their needs. To a Conscientious mind, a flexible environment may mean one that is responsive enough for them to organize in a manner that best suits them. All types of communication are key to their workstyle, including online, phone, and in-person interactions.

Conscientious employees spend most of their time at their own desks focused on heads-down work while only a small percentage do focused work in informal spaces. They also tend to have informal meetings at their individual workspace/office more so than in an informal setting. This inclination to use personal space may be an attempt to reduce distraction as Conscientious individuals were the largest group to feel that the office was distracting and that it was not conducive to their workstyle. To be fair, this was the view of a small percentage of people with this personality type, however, this evaluation appeared more so among this group than others. They also scored lower than other types in their overall satisfaction with their personal workspace, with only a little more than half indicating they were satisfied and most of the rest taking a neutral position. It is unclear from the survey why they were not as satisfied as other groups but it is definitely a point for further exploration.

Not many of the Conscientious individuals in this survey perceived visual privacy as an obstacle to their work. Acoustical issues on the other hand were a concern to about half the sample who found people speaking on the phone, people talking in neighboring areas and others overhearing their conversations to present obstacles. They were also one of the groups to identify thermal comfort as an obstacle to their workflow. Perhaps if these items are better addressed, their overall evaluation of their workspace would also improve.

## **INDIVIDUALIZATION**

Individuals with a Conscientious personality type were generally satisfied with their ability to individualize their personal workspaces to suit their preferences. For the most part they also did not perceive an inability to individualize their spaces as an obstacle to their work process. While they indicated having some amount of Individualization at the time of the survey in the form of photos and water bottles, Conscientious individuals desired some more Individualization items at their desks. Some items they highlighted wanting included more personal photos, art, mugs and college/university or sports memorabilia.

## **ORGANIZATION TOOLS**

Conscientious individuals had a fair number of organization items at their desks (more so than others), including pen/pencil holders, bookshelves and paper/file organizers. They seem to be content with this amount of organizational tools and generally did not desire much more than they currently had.

## **ERGONOMICS AND COMFORT & CARE**

Conscientious individuals had one of the highest percentages (a little under one-third) of people who were not satisfied with the office ergonomics and furnishings. However, they had taken little steps to rectify their dissatisfaction with Ergonomics, but they had indicated a high desire for Ergonomic items in the future. The items requested included a standing desks, a footrest, and an ergonomic computer mouse. Unlike Ergonomic items, they did have many Comfort & Care objects, second only to Extroverts, and seemed to be content with that amount as they did not express a big desire for more in the future.

## **SUMMARY**

Although Conscientious individuals demonstrated a comparatively lower level of overall satisfaction with their workspace, half of the group indicated they would miss their current personal workspace if they moved to another office location. This may suggest that given some modifications to ergonomics and a reduction in distractions, this group would be more satisfied and productive in their office space.

## OPENNESS PERSONALITY TYPE

Traits of individuals who exhibit Openness typically include imagination, creativity and insight. They are often curious about the world and enjoy learning new things and having new experiences. People who exhibit this personality type tend to have a broad range of interests and are open to trying new things. They also like to think about and discuss abstract or philosophical concepts.

Professionally, people who demonstrate Openness are typically more creative than other personality types, allowing them to find unique and innovative solutions in a work environment (Educational Testing Service, 2012). These individuals are easy to train, given their enjoyment of learning and their positive attitudes toward it (Educational Testing Service, 2012).

### TYPES OF PERSONALIZATION

Individualization items were most commonly found among people with an Openness personality type. These items included personal water bottles and mugs, personal photos, art, and college and sports memorabilia to name a few. Additionally, besides those who identified as Conscientious, people with an Openness personality trait were the only group that had team-related items at their current workspace. Organization items, such as pen/pencil holders, paper/file organizers and bookshelves were also common. Ergonomic items were again the most common items desired in a future workplace followed by Communication and Comfort & Care objects. Some additional privacy items were requested but to a limited extent.

### WORK PREFERENCES/COLLABORATION TOOLS/PRIVACY NEEDS

The majority of individuals in this survey with an Openness personality type enjoyed working in highly flexible environments. The vast majority of them felt their current work environments were conducive to their work. Furthermore, the majority worked on heads-down tasks at their desk multiple times a day and some used informal spaces multiple time a week. They also partook in informal meetings at workstations and formal meetings in conference rooms. Interestingly, the aesthetics/appearance of the work environment was important to Openness individuals as a higher percentage of them indicated the aesthetic created a barrier to getting work done compared to other personality types.

### INDIVIDUALIZATION

Individuals with an Openness personality type had the highest number of Individualization items present at their desk. Personal water bottles and mugs, photos, and art were all frequently cited. They were also mostly satisfied with their ability to individualize their own work space to suit their preferences. However, some more individualization was still desired for a small percentage of this group.

### ORGANIZATION TOOLS

Openness personality types had a fair amount of Organization items compared to other personality types. Although still desired in the future, it wasn't one of the more popular items requested by this group.

## ERGONOMICS AND COMFORT & CARE

While individuals with an Openness personality type had some of the fewest Ergonomic items as well as Comfort & Care items, they were generally satisfied with the ergonomics and comfort of their furnishings, as well as with their ability to modify their personal workspaces to suit their needs. Furthermore, they were satisfied with thermal comfort in their work environment and did not feel it was an obstacle to getting their work done.

## SUMMARY

As demonstrated in the survey, Openness personality types had very high levels of Individualization items at their own workstations and were generally satisfied with their ability to individualize their workspace. Additionally, they indicated the aesthetics and appearance of their work environment could be affecting their work.

## AGREEABLE PERSONALITY TYPE

Agreeable individuals are typically very cooperative and avoid competition. They care about others and are interested in the people around them. They are empathetic and show concern for others. As a result, they enjoy helping others, especially those who are in need of assistance. Overall, these individuals exhibit altruism, kindness and affection (Educational Testing Service, 2012).

## TYPES OF PERSONALIZATION

Similar to the Openness personality type, Individualization items were an important component of the Agreeable personality type's workspace. Photos were common, as well as personal mugs and water bottles. Communication items also accounted for a good number of objects that they currently possessed. Perhaps most notably, Biophilic elements, such as plants, were cited the most by this personality group in the survey. In the future, these individuals would like to see more ergonomic items at their workstations including standing desks, chair cushions, footrests, exercise balls and ergonomic computer mice.

## WORK PREFERENCES/COLLABORATION TOOLS/PRIVACY NEEDS

The majority of Agreeable individuals enjoy working in highly flexible environments. When compared to other personality types, Agreeable individuals spend the most time doing heads-down focused work at their personal workspace. However, a small percentage indicated they feel distracted at work, while a notable percentage felt there weren't adequate choices for conducting heads-down work. They also identified visual privacy as an obstacle to getting work done. Ensuring that there are

desk spaces that provide visual privacy will support Agreeable personality types. If an Agreeable individual is to spend time in an informal space, it is usually to socialize. In this survey it was relatively unlikely that these individuals would use informal spaces for heads-down work, preferring instead to work at their own personal desks. Given this preference, it is not surprising to see that Agreeable personality types had one of the highest levels of individualization items at their desks.

### **INDIVIDUALIZATION**

Agreeable users showed relatively high levels of Individualization and were generally content with their ability to individualize their personal workspaces to suit their preferences. To some extent, however, they desired some more individualization items. At the time of the survey, Agreeable individuals had items such as personal mugs and water bottles, name placards, and art.

### **ORGANIZATION TOOLS**

Compared to other personality types, Agreeable individuals had an average to low amount of Organization items at their workstations, including notebooks, pencil holders, paper/file organizers, bookshelves. To some extent, they desired more organization tools at their personal desks, such as more bookshelves, pencil holders and paper/file organizers.

### **ERGONOMICS AND COMFORT & CARE**

Agreeable individuals had an average number of Ergonomic items and Comfort & Care items at their desk, and generally felt satisfied with the ergonomics and comfort of their furnishings. However, they were slightly dissatisfied with their ability to modify their personal workplace to suit their needs.

### **SUMMARY**

Those with an Agreeable personality type are typically quite adaptable and kind, which allows them to develop and maintain strong relationships with their coworkers. These relationships encourage them to stay within their organization (Educational Testing Service, 2012). As well, their positive attitudes increase job performance (Educational Testing Service, 2012). While these individuals prefer working with a team, they are typically less successful in leadership roles (Educational Testing Service, 2012). The results of the survey indicate that Agreeable individuals typically prefer working at their own desk to complete heads-down work and if they are to spend time in informal spaces, it is typically to socialize and not to do work. Their desks, where they primarily work, are highly personalized.

## NEUROTIC PERSONALITY TYPE

Neurotic individuals are typically more sensitive than other personality types and are prone to psychological stress. These individuals often experience unpleasant emotions such as anxiety, anger, depression and vulnerability. Stress can be a major issue for this personality type, and individuals often struggle to bounce back after a stressful event. At the same time, however, they typically benefit from high levels of intelligence, more realistic expectations, greater self-awareness, lower risk-taking, greater creativity and imagination, and a strong need to provide for others.

### TYPES OF PERSONALIZATION

As there were limited Neurotic personality types in this study, it is difficult to establish patterns. However, in this sample group, it was clear that Ergonomic and Individualization items were important. In the future, additional ergonomic supports was desired, as well as Organization, Comfort & Care, and Biophilic items.

### WORK PREFERENCES/COLLABORATION TOOLS/PRIVACY NEEDS

The Neurotic personality, like most others, prefer working in highly flexible environments. This group did not feel that there were adequate options for heads-down/ -focused work. Additionally, some felt that meeting rooms and conference rooms weren't set up for them to work effectively. It seems that most aspects of the physical office environment affect these individuals' abilities to get work done, including thermal comfort and the quantity of and ability to modify informal spaces. Individuals with a Neurotic personality type typically engaged in online communication the most. They partook more frequently

in informal meetings rather than formal meetings. They also typically worked at their own workstation, as opposed to doing heads-down, focused work in an informal space.

### INDIVIDUALIZATION

Some Neurotic individuals are not currently satisfied with their ability to individualize their personal workspaces to suit their preferences. However, they do show high levels of Individualization items at the desk space, including items such as personal photos or personal water bottles. It is interesting to note, however, that they don't appear to desire more Individualization items, even though they are dissatisfied with their current levels of individualization.

### ORGANIZATION TOOLS

Neurotic personality types had the lowest levels of Organization items at their disposal. As a result, they desired more organization tools in the future.

### ERGONOMICS AND COMFORT & CARE

Thermal comfort was an issue identified by this group as an obstacle to getting work done. Similar to Extroverts, who seem to adjust to their surroundings through Comfort & Care items, Neurotic individuals also had Comfort & Care items at their desk. However, they desired more in the future such as a scarves, space heaters and sweaters. Ergonomics items were also highly used by this personality type, and more were desired in the future, including a standing desk and a footrest.

## SUMMARY

Neurotic individuals are often more difficult to please than other personality types, which can impact their ability to perform well in a work environment. Furthermore, Neurotic individuals tend to be uncertain about their job performance and their ability to complete required tasks (Educational Testing Service, 2012). As a result, these individuals typically have lower job satisfaction, which can lead to quitting (Educational Testing Service, 2012). However, due to the fear of failure and self-criticism, Neurotic personality types can be very hard-working and strive to achieve perfection, especially in careers that they are passionate about or in an entrepreneurial setting. As well, because Neurotic individuals are concerned about what others think of them, they are driven to build positive relationships with their co-workers. Furthermore, these individuals spend time ruminating about future challenges that may arise, which can later help them handle these challenges if and when they occur. Overall, the survey found that Neurotic individuals were less satisfied with their work environment, desiring more personalization at their workstation, such as ergonomic items. Additionally, Neurotic individuals were sensitive to their physical environment and its impact on their ability to get work done, desiring more thermal comfort for instance.





## EXTROVERTED USER

12% of those surveyed

**Traits:** Talkative, energetic, and assertive.

**Strengths in the Workplace:** Extroverts enjoy having strong social relationships with co-workers, allowing them to quickly integrate into new roles. Roles that encourage social interaction and leadership are well suited to Extroverts.

**Obstacles:** Thermal comfort.

### THERMAL COMFORT



### ERGONOMICS



### PRIVACY



### COLLABORATION



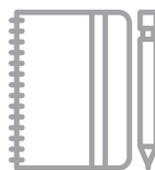
### Common Items



Coasters



Task Lighting



Notebooks



Personal Water Bottle



Noise-cancelling Headphones

### Desired Items



Footrest



Standing-height Desk



Personal Whiteboard



Noise-cancelling Headphones

**CATEGORIES OF PERSONAL OBJECTS** (\*Denotes categories with existing/desired objects significantly higher than the average)

**TECHNOLOGY**

Existing



Desired


**\*COMFORT & CARE**

Existing



Desired


**\*PRIVACY**

Existing



Desired


**INDIVIDUALIZATION**

Existing



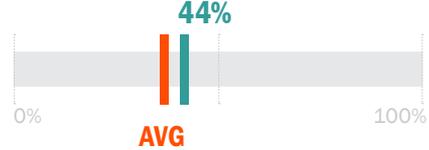
Desired


**\*ERGONOMICS**

Existing



Desired


**BIOPHILIA**

Existing



Desired


**\*COMMUNICATION**

Existing



Desired


**TEAM**

Existing



Desired

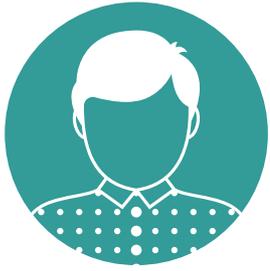

**ORGANIZATION**

Existing



Desired





## CONSCIENTIOUS USER

35% of those surveyed

**Traits:** Organized, thorough, and planful.

**Strengths in the Workplace:** Conscientious individuals are highly consistent, which correlated with overall job performance and leadership. They are organized and pay attention to details, allowing them to meet deadlines.

**Obstacles:** Thermal comfort, visual privacy, quantity and location of conference rooms, lighting quality, ability to modify and individualize personal work area.

### THERMAL COMFORT

### ERGONOMICS

### PRIVACY

### COLLABORATION



### Common Items



Personal Photos



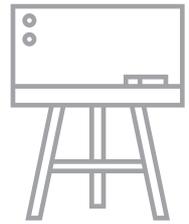
Pen/Pencil Holder



Notebooks



Personal Water Bottle



Personal Whiteboard

### Desired Items



Plants



Standing-height Desk



Privacy Screen



Noise-cancelling Headphones

**CATEGORIES OF PERSONAL OBJECTS** (\*Denotes categories with existing/desired objects significantly higher than the average)

**TECHNOLOGY**

Existing



Desired


**COMFORT & CARE**

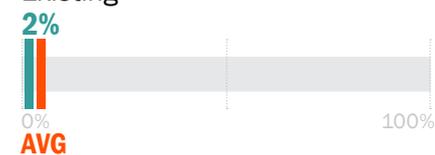
Existing



Desired


**PRIVACY**

Existing



Desired


**INDIVIDUALIZATION**

Existing



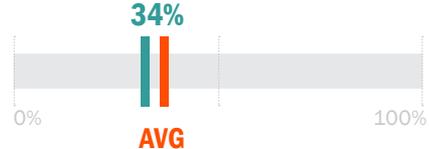
Desired


**ERGONOMICS**

Existing



Desired


**BIOPHILIA**

Existing



Desired


**\*COMMUNICATION**

Existing



Desired


**TEAM**

Existing



Desired


**\*ORGANIZATION**

Existing



Desired





## OPENNESS USER

17% of those surveyed

**Traits:** Having wide interests, imaginative and insightful.

**Strengths in the Workplace:** People who demonstrate Openness are typically creative, allowing them to find unique and innovative solutions in a work environment. These individuals are easy to train, given their enjoyment of learning.

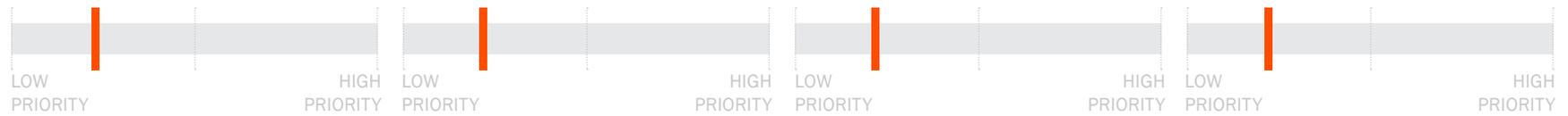
**Obstacles:** Physical distance between departments and team members.

### THERMAL COMFORT

### ERGONOMICS

### PRIVACY

### COLLABORATION



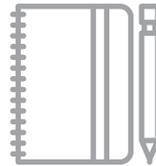
### Common Items



Personal Photos



Task Lighting



Notebooks



Personal Water Bottle



Pen/Pencil Holder

### Desired Items



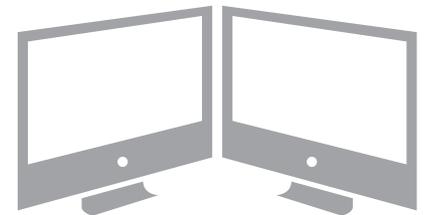
Plants



Standing-height Desk



Books/  
Bookshelf



More than 2  
Computer Monitors

**CATEGORIES OF PERSONAL OBJECTS** (\*Denotes categories with existing/desired objects significantly higher than the average)

**TECHNOLOGY**

Existing



Desired


**COMFORT & CARE**

Existing



Desired


**PRIVACY**

Existing



Desired


**\*INDIVIDUALIZATION**

Existing



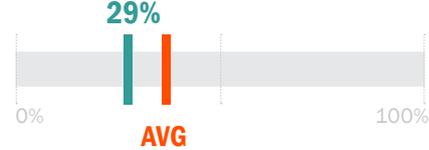
Desired


**ERGONOMICS**

Existing



Desired


**BIOPHILIA**

Existing



Desired


**\*COMMUNICATION**

Existing



Desired


**TEAM**

Existing



Desired


**\*ORGANIZATION**

Existing



Desired





## AGREEABLE USER

30% of those surveyed

**Traits:** Sympathetic, kind, and affectionate.

**Strengths in the Workplace:** Those with an Agreeable personality type are typically quite adaptable and kind, which allows them to develop and maintain strong relationships with their coworkers. These relationships encourage them to stay within their organization. These individuals also prefer working in teams.

**Obstacles:** Thermal comfort, visual privacy, and ability to modify personal work area.

### THERMAL COMFORT

### ERGONOMICS

### PRIVACY

### COLLABORATION



### Common Items



Personal Photos



Plants



Notebooks



Personal Water Bottle



Coasters

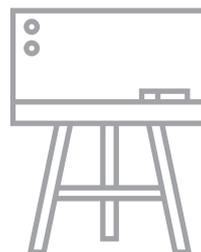
### Desired Items



Footrest



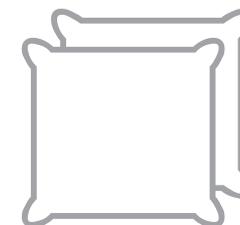
Standing-height Desk



Personal Whiteboard



Art



Chair Cushion

**CATEGORIES OF PERSONAL OBJECTS** (\*Denotes categories with existing/desired objects significantly higher than the average)

**TECHNOLOGY**



**COMFORT & CARE**



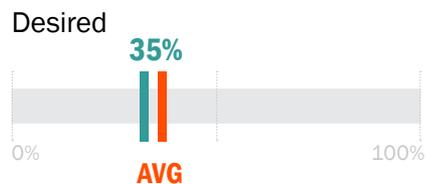
**PRIVACY**



**\*INDIVIDUALIZATION**



**ERGONOMICS**



**\*BIOPHILIA**



**COMMUNICATION**



**TEAM**



**\*ORGANIZATION**





## NEUROTIC USER

6% of those surveyed

**Traits:** Tense, moody, and anxious.

**Strengths in the Workplace:** These individuals typically benefit from high levels of intelligence, realistic expectations, greater self-awareness, lower risk-taking, greater creativity and imagination, and a strong need to provide for others.

**Obstacles:** Thermal comfort, physical distance between departments and team members, quantity of conference rooms, air/light quality, ability to modify most spaces, and quantity of informal spaces.

### THERMAL COMFORT

### ERGONOMICS

### PRIVACY

### COLLABORATION



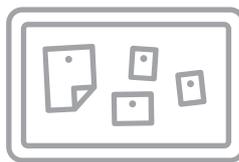
### Common Items



Ergonomic Mouse



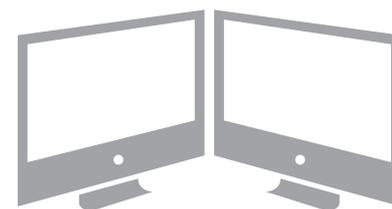
Ergonomic Keyboard



Tack Board



Personal Water Bottle



More than 2 Computer Monitors

### Desired Items



Footrest



Standing-height Desk



Plants



Exercise Ball

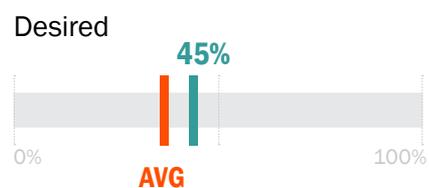
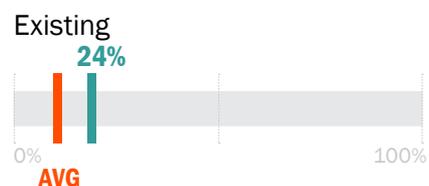
**CATEGORIES OF PERSONAL OBJECTS** (\*Denotes categories with existing/desired objects significantly higher than the average)

**\*TECHNOLOGY**

**\*COMFORT & CARE**

**PRIVACY**

**INDIVIDUALIZATION**

**\*ERGONOMICS**

**BIOPHILIA**

**COMMUNICATION**

**TEAM**

**ORGANIZATION**




JOHN  
SAM  
LISA

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# DESIGN IMPLICATIONS

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The survey found some personality types to be more content with their environment than others. Extroverts and Agreeable individuals, for example, generally responded positively to the survey. Neurotic individuals, on the other hand, were less satisfied with the diversity and flexibility of their tools and furnishings, both at the desk and away from the desk. While this may be attributed to some personalities being more accepting or less sensitive than others, it is possible that open plan work environments are more aligned with the preferences of Extroverted and Agreeable personality types.

The design implications presented in the following section are based on the analysis of data collected through observations, personalization inventories and survey responses. For each personality category, the dominant preferences related to the experience “at the desk” and “away from the desk” are categorized according to their purpose (e.g. privacy items, organization items). The tools and furnishings listed in each category provide insight into environmental adjustments that may improve the experience for different personality types in the workplace. For example, survey responses suggested that

Extroverts are particularly vulnerable to visual and acoustic distractions. For this reason, adjustable privacy screens and acoustic paneling are recommended for Extroverted users.

A number of environmental preferences were shown to be universal. Among all groups, for example, speech privacy and noise levels were significant concerns. Ergonomic support was also shown to be a high priority across all groups. Providing options for Ergonomic support, both at individual workstations and within meeting areas, will help to address these needs.

While different personality types have different preferences when it comes to their work setting, the findings of this study ultimately underscore the importance of individualization in the workplace. There is opportunity to provide greater user control within the work setting, both at the individual workstation and away from the desk. Visual and acoustic privacy, ergonomics, lighting, organization and thermal comfort may all be controlled—to varying degrees—by the user. Providing the greatest range of flexibility, variety and control within each of these categories will empower all users to create a uniquely optimized work setting.

## EXTROVERSION

### AT THE DESK

#### PRIVACY ITEMS

##### Tools:

- Noise-cancelling headphones

##### Furnishings:

- Adjustable visual privacy screens. Could be made with acoustic paneling to dampen surrounding noise
- If standing desks are adopted, ensure privacy screens are tall enough to block view when individuals are standing
- Acoustic paneling on desks to minimize noise from phone calls and informal meetings and socializing at desks
- Acoustic paneling on movable system that includes secure storage, shelving, coat rack, etc. This can double as an adjustable visual privacy screen.
- Acoustic wall and ceiling panels
- Sliding panels between desks to allow for collaboration and socializing with neighbors when they are open, but also privacy when they are closed as needed

#### ERGONOMICS

##### Tools:

- Ergonomic keyboard tray and mouse
- Footrest
- Chair cushion
- Adjustable monitors

##### Furnishings:

- If standing-height desks are adopted, ensure privacy screens are tall enough to block view when individuals are standing

#### ORGANIZATION ITEMS

##### Tools:

- Notebooks
- Bookshelves
- Pen/pencil holders
- Paper/file organizers

##### Furnishings:

- Portion of desk that is extendable if more space is temporarily needed

#### OPPORTUNITIES FOR INDIVIDUALIZATION

##### Tools:

- Pin-up boards to display photos, badges, tickets, college or sports memorabilia, etc.
- Cubicle add-ons that allow art, diplomas, licenses to be hung

##### Furnishings:

- Built-in cup holders for mug or water bottle
- Built-in wireless charging pad for phones at desk

##### Strategies:

- Opportunity for individuals to choose from a variety of colors, fabrics and materials to suit their preferences

## AWAY FROM THE DESK

### PHONE ROOMS/VIRTUAL MEETING ROOMS

#### Tools:

- Proper cording to allow users to connect their personal laptops or phones to the screen and sound system
- Laptop prop or stand for personal laptop
- Ergonomic mouse and keyboard
- Lamps/task lighting
- Personal fan and space heater

#### Furnishings:

- Soundproofing
- Built-in speakers
- Adjustable-height desk or table
- Adjustable ergonomic chair
- Electrical plug-ins, USB and typical
- Wireless charging surfaces for phones

#### Strategies:

- Reliable Wifi connection
- Dimmable lighting
- User-controlled HVAC

### INFORMAL SPACES (FOR WORK AND SOCIALIZING)

#### Tools:

- Small printer/scanner that easily connects to laptops
- Lamps/task lighting
- Coffee machines
- Small fridge with water, healthy snacks
- Removable cushions to support different body types
- Lap blankets

#### Furnishings:

- Lightweight furnishings and/or with casters
- Height-adjustable soft/upholstered seating
- Seating or tables could incorporate privacy screens
- Circular booths, “dens,” or “cocoon” that create a space for socializing but use acoustic dampening and high backs to prevent traveling sound
- Sliding and/or detachable acoustic panels to buffer sound and create “rooms” as needed
- Height-adjustable and width-adjustable tables of varying sizes
- Movable pin-up boards or magnetic whiteboards

#### Strategies:

- Art and/or plantings throughout these spaces
- Adjustable and dimmable lighting
- User-controlled thermal settings; local thermostat for smaller informal spaces, ceiling fans, operable windows
- Reliable Wifi connection

### WHITEBOARDS

#### Tools:

- Sufficient magnets, markers, and wipes at each whiteboard

#### Furnishings:

- Movable whiteboard on wheels with incorporated sound dampening materials
- Writable tabletops

#### Strategies:

- Fixed writable walls, acoustically buffered from workstations

## CONSCIENTIOUSNESS

### AT THE DESK

#### ORGANIZATION

##### Tools:

- Adjustable and multi-purpose add-ons for desks that include paper holders, pen/pencil holders, shelves for books or other items, etc.
- Drawer organizers that provide users with a more curated, clutter-free experience
- Whiteboard with permanent calendar or weekly schedule included
- Cable management ties, tubing, boxes, etc.

##### Furnishings:

- Movable unit separate from the desk that dampens noise with upholstery and provides a flexible visual screen. This could incorporate a place to hang coats or clothing, keep blankets or scarves, store files, manage office supplies, etc.

#### COMMUNICATION

##### Tools:

- Pin-up/tack boards
- Magnetic whiteboards
- Writable surfaces
- Post-it notes

##### Furnishings:

- Appropriate storage and/or displays for Communication items such as books and notebooks

### COMFORT & CARE

##### Tools:

- High-quality and aesthetically pleasing holders, dispensers or trays for items such as Kleenex, lotion, hand sanitizer, medication
- Built-in personal fan and space heater

##### Strategies:

- Office to provide hand sanitizer, fidget tools, stress balls, tissues, wet wipes, pressurized air to clean keyboards
- Office to provide medical cabinet that includes common medications such as Advil or Tylenol, Band-Aids, etc.

### LIGHTING QUALITY

##### Tools:

- Dimmable task lighting

##### Strategies:

- Maximize access to windows and natural light
- Use of full-spectrum lighting in office to simulate daylight

### PRIVACY ITEMS

[see Extroversion section]

## AWAY FROM THE DESK

### WELLNESS ROOMS

#### Strategies:

- Provide exercise room and ensure it is soundproofed
- Provide room for new mothers; mini-fridge and comfortable armchair should be provided
- Provide quiet space/nap room/meditation space

### QUANTITY OF CONFERENCE ROOMS

#### Strategies:

- Provide sufficient meeting rooms for demand and consider locating near Conscientious individuals so they feel that they have options

### PHONE ROOMS/VIRTUAL MEETING ROOMS

[see Extroversion section]

## OPENNESS

### AT THE DESK

#### HIGH LEVEL OF PERSONALIZATION

##### Tools:

- Add-ons that allow individuals to display and organize personal items, including shelves, pin-up boards, hanging supports, etc.

#### CO-LOCATION

##### Strategies:

- Co-location is especially important to this personality type. Locating them centrally rather than at the edges of the office may help them feel more connected

#### OPPORTUNITIES FOR INDIVIDUALIZATION

[see Extroversion section]

#### COMMUNICATION

[see Conscientious section]

### AWAY FROM THE DESK

#### CONFERENCE/MEETING ROOMS

##### Tools:

- Dimmable lights
- Ergonomic keyboard and mouse
- Cables to connect laptop as desired

##### Furnishings:

- Lightweight furnishings and/or with casters
- Movable pin-up boards or magnetic whiteboard
- Ergonomic chairs that are height adjustable
- Variety of chairs
- Height-adjustable and width-adjustable table
- Soundproofing
- Plug-ins, both USB and typical
- Wireless charging pads
- Built-in speakers

##### Strategies:

- Adjustable dimmable lighting
- User controlled thermal settings; local thermostat for smaller informal spaces, ceiling fans, operable windows
- Reliable Wifi connection
- Adjustable walls/screens to make the space larger or smaller as needed

#### PHONE ROOMS/VIRTUAL MEETING ROOMS

[see Extroversion section]

#### WELLNESS ROOMS

[see Conscientious section]

## AGREEABLENESS

### AT THE DESK

#### BIOPHILIA

##### Tools:

- Hanging planters

##### Furnishings:

- Built-in planters

##### Strategies:

- Motifs of nature or imagery of the outdoors
- Dappled lighting effects
- Access to windows and views of the outdoors

#### PRIVACY ITEMS; ERGONOMICS; INDIVIDUALIZATION

[see Extroversion section]

#### ORGANIZATION ITEMS

[see Conscientious section]

#### HIGH LEVEL OF PERSONALIZATION

[see Openness section]

### AWAY FROM THE DESK

#### CONFERENCE/MEETING ROOMS

[see Openness section]

#### PHONE ROOMS/VIRTUAL MEETING ROOMS

[see Extroversion section]

#### WELLNESS ROOMS

[see Conscientious section]

## NEUROTICISM

### AT THE DESK

#### ACOUSTIC CONCERNS

##### Strategies:

- Locate desks away from informal/open spaces
- Hanging/sliding acoustic panels

#### PRIVACY ITEMS; ERGONOMICS; INDIVIDUALIZATION

[see Extroversion section]

#### ORGANIZATION ITEMS; COMFORT & CARE

[see Conscientious section]

#### CO-LOCATION

[see Openness section]

### AWAY FROM THE DESK

#### CONFERENCE/MEETING ROOMS

[see Openness section]

#### INFORMAL SPACES

[see Extroversion section]

#### WELLNESS ROOMS

[see Conscientious section]

# REFERENCES

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Educational Testing Service. (2012). Relationship between Big Five and Academic and Workforce Outcomes. Retrieved October 2018 from: [https://www.ets.org/s/workforce\\_readiness/pdf/21334\\_big\\_5.pdf](https://www.ets.org/s/workforce_readiness/pdf/21334_big_5.pdf)

Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A Very Brief Measure of the Big Five Personality Domains. *Journal of Research in Personality*, 37, 504-528.

Grant, A. (2013). Goodbye to MBTI, the Fad That Won't Die. *Psychology Today*. Retrieved October 2018 from: <https://www.psychologytoday.com/us/blog/give-and-take/201309/goodbye-mbti-the-fad-won-t-die>

Srivastava, S. (2018). Measuring the Big Five Personality Factors. Retrieved October 2018 from: <http://psdlab.uoregon.edu/bigfive.html>.

# CREDITS

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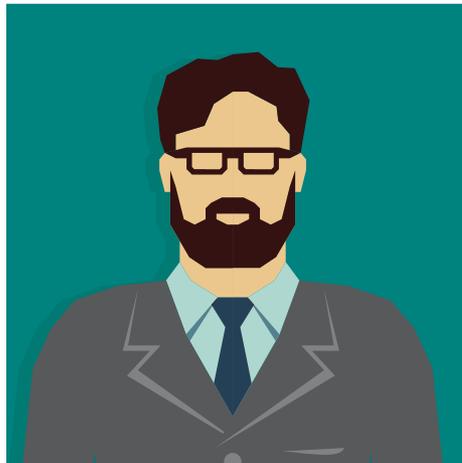
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# THE EFFECT OF INDIVIDUALIZED WORK SETTINGS ON PRODUCTIVITY AND WELL-BEING | PHASE 2

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EASTMAN

