

Just Because You Build It Doesn't Mean They Will Come

Planning for Effective Workplace Interaction and Collaboration

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In a 1928 American silent film called *The Crowd*, a classic shot satirizes the dehumanizing aspects of working at an everyday job in a large organization. It is a high-angle view of a huge room in which dozens of identical workers are occupying identical desks arranged in a perfect grid, all facing the same direction.



Movie still from the silent film, *The Crowd*.

This image has become iconic in American cinema. You can see it reprised in *The Apartment* (1960) and two films set in the 1950s: *The Hudsucker Proxy* (1994) and *Revolutionary Road* (2008). With its views of “drone-like” people stationed at typewriters and adding machines, the image is associated with a mid-century, utilitarian view of work.

At the time, these rigid and regular workplaces were paragons of standardization and real-estate efficiency. Because the workers were viewed as little more than extensions of their typewriters and adding machines, the fact that each appeared to be isolated among hundreds of other drones was perfectly acceptable. Today, it's not. As Judith Heerwagen, environmental psychologist, points out, “Knowledge work in the second decade of the 21st century is much more collaborative, cognitively complex, and dynamic, requiring workers to possess both social skills and technological competence.”

And while it wasn't long ago that huddling around the water cooler was viewed as unproductive, today organizations are designing the workplace to encourage this kind of behavior, having realized that social interactions support behaviors, attitudes, and goals that lead to trust, collaboration and, in turn, innovation. Projects often move faster toward successful completion when people can share knowledge and experience, get instant feedback, build trust and camaraderie, and profit from diverse ideas and points of view.

Whether it's brainstorming an idea or developing a plan for a new product launch, the average knowledge worker spends about half of his or her time working with others. The challenge for organizations is to provide their people with environments that give them the team space, technology, and the work protocols they need to collaborate along with private space as needed. All too often, however, organizations provide dysfunctional worksettings that do not support the work being done, especially when it comes to collaborative space. In many cases, the physical plan is a reflection of benchmarking and number-crunching rather than a study of how work actually happens. More often than not, collaborative space is the first to get value engineered out during the planning process, at the cost of business effectiveness.

The Difference Between Interaction and Collaboration

Though the words “interaction” and “collaboration” are sometimes used interchangeably, they don't have the same meaning. Understanding the differences between the two and defining the types of interaction and collaboration organizations need can help planners support desired behaviors.

Interaction is a broad term that encompasses casual collisions and socializing that leads to building relationships, trust, and other factors critical to the social fabric of a group or organization. While these expanding social contacts are extremely valuable (albeit underappreciated in many organizations), not all interactions rise to the level of collaboration.

Collaboration, by comparison, involves much more than casual encounters at the company café, or even catching up on the status of a shared project. To collaborate, individuals or organizations must share knowledge and work together in pursuit of a common goal.



Creating the Right Setting for Effective Collaboration

The “if we build it they will come” model of providing collaboration spaces for employees rarely works. Workplace experts will tell you that too many areas – perhaps millions of square feet – provided for collaborative work are empty much of the time. That’s millions of square feet costing organizations a small fortune to maintain, sitting empty and not meeting their desired goal of supporting the business. This disappointing utilization of space can have several causes including lack of management support for collaborative areas, the mismatching of available spaces and those looking for a place to do group work, not providing the right type of space for the right collaborative activities, or simply not performing the type of work that requires collaboration.

So how do we get the space formula right in order to make the best use of a real-estate investment?

Savvy workplace planners follow a strict methodology for creating environments that provide the right types of spaces in the best locations that truly support the range of activities and desired behaviors of an organization. This methodology takes into account several factors:

- **Context is critical.** Workplace plans and designs must be informed by the organization’s industry, size, focus, strategy, culture, worker types, and regional considerations. Every organization has unique characteristics and a distinct approach to work. Planners need to help them differentiate between general workplace characteristics and those that are specific to their situations.

- **Planners need to thoroughly understand the work processes being supported.** As stated previously, many spaces dedicated to collaborative work go unused because the spaces often do not reflect the type of work being done or the type and amount of collaboration employees need to accomplish the activity. Three general types of work – creative, problem-solving, and knowledge transfer – can require somewhat different types of collaborative spaces.

Highly creative teams likely rely on artifacts or visual materials and can benefit from the “over-the-life-of-the-project” display of these items. The proximity of these spaces to the team’s individual work areas also can be slightly less important than for other types of workers, since the creative process can sometimes benefit from removing oneself from distractions of the phone or the work on one’s desk. On the other hand, teams working 24/7 on brand-new technologies might be most comfortable in a space that merges individual areas with collaborative areas and supports a high degree of chaos and instant reconfiguration.

Problem-solving, process-oriented teams may have relatively less need for visual display, but proximity may be more critical, as these teams will grab another team member to quickly tackle a problem as soon as it arises. In the case of software engineers working out the bugs on an upgrade to an existing application, they may need to sit side-by-side in a team member’s workstation so they can both see the monitor to check a line of code.

Knowledge-transfer activities may be well-supported by more traditional meeting spaces, such as conference rooms or training areas, where the ability to easily use technology is the most critical factor.

- **The average worker still spends half of his or her time performing activities that require concentration.** Planners need to strike a balance between providing spaces for collaboration and heads-down concentration.

- **Actual space utilization** can help to determine whether the mix, quality, and characteristics of spaces are matching the users’ needs.

These ideas for creating successful collaboration spaces seem like common sense. Yet frequently they are not addressed, often because clients and their workplace planners don’t study the organization’s work practices in sufficient depth.



HOK's Advanced Collaboration Room including Thunder and Telepresence technology.

Case Study

One financial institution had been struggling with complaints from its employees all across campus, specifically with the need for more collaboration space. The real-estate and facilities groups were constantly hearing that no conference rooms were available when needed. By observing current meeting spaces carefully, however, the company discovered that the total percentage of space dedicated to collaborative space was not that far off. Rather, the floors had the wrong mix of "scheduled and unscheduled" spaces, and conference spaces were the wrong sizes. The average size of collaborative areas was seven people, whereas the size of a typical meeting was only three people. In general, they needed more, smaller, impromptu meeting spaces to do their work.

Typical Floor	Measure
Total Floor Area (sq. ft.)	39,096
Collaboration Area % of Total Area	17%
Total Collaboration Area (sq. ft.)	6,373
Total Conference Room Seats	257
Average Meeting Room Capacity (people)	7.14
Actual Meeting Size (people)	2.78
Collaboration Room Size per Person (sq. ft.)	24.8
Ratio Collaboration Seat per Person	1 : 1.11

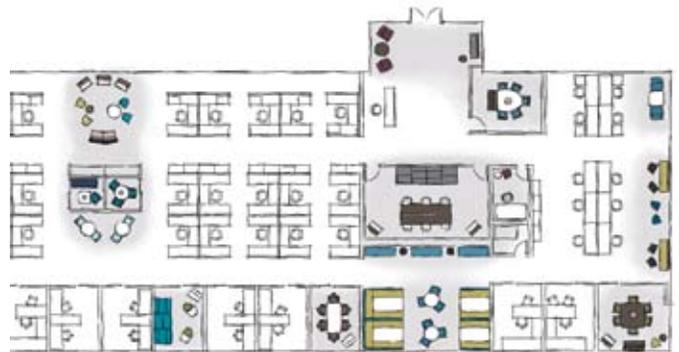
An overview of the financial institution's collaborative area density.

To help planners avoid these and other pitfalls, and to provide the best solutions, here is a simple checklist for asking the right questions and right-sizing collaborative space. Considerations fall into three categories: Planning, Provisioning, and Use.

Planning Considerations

Planning considerations involve how the space relates to its context. As you prepare to make decisions about what to build, how big the space should be, and where to put it, consider:

- **Location.** Is the space intended to draw people to it, like a café or training room? Can you take advantage of its proximity to other destinations, such as locating a break area near the restrooms? Or would it be more appropriate if the space were not on a main circulation path, but instead embedded in a team's own neighborhood? Could the space act as a buffer between other functions?



Collaborative spaces are centrally located toward the core of the building and are distributed throughout neighborhoods.

- **Occupancy/density.** How many people, on average, should a collaborative space accommodate? How much space will each person, including their equipment and materials, require?
- **Ratios.** Consider the number of people using the space on any given day, and what percentage of those users have assigned seats or are mobile. For example, organizations that have adopted alternative work strategies like work at home, telework, or desk-sharing may have more people in the office than individually assigned seats during peak periods, and collaborative space can help with this capacity need.

The chart that follows is from an organization that has a combination of mobile workers and workers assigned permanently to seats. They use this chart to determine the right mix of collaborative settings to support the population likely to be in the office at any given time.

Assigned Situation

1 person/1 workstation ratio
Less support space needs

Mobile Situation

Greater number of persons served
More support space needs



Assigned 100 workstations serving 100 persons	Best Practices	Mobile 100 workstations serving 250 persons
2	Team Collaboration 1 per 50 persons	5
3	Phone Booth 1 per 30 persons	8
3	Focus Room 1 per 30 persons	8
2	Huddle Room 1 per 40 persons	6
2	Project Room (small) 1 per 30 project-based persons	5
1	Project Room (large) 1 per 30 project-based persons	3
2	Conference Room (small/5-8 persons) 1 per 50 persons	5
1	Conference Room (large/12-15 persons) 1 per 100 persons	2
1	Department Library/Filing 1 per 100 persons	2

This table shows different recommendations for collaborative space based on whether employees are mobile (not assigned permanent worksettings) or assigned seats.

- **Proximity to users.** Based on the work processes of its users, how close to or distant from its users can a collaboration space be to remain effective? For example, users who do lots of spontaneous, mission-critical problem-solving will need the space to be nearby, while a training room could easily be farther away.
- **Sound levels.** Consider the impact of noise on users inside and outside the space. Conversations can be distracting to other workers in the area.
- **Transparency vs. visual privacy.** How important is it for users to see to the outside or for a passerby to see in? Transparency can be distracting or helpful. Visual privacy is sometimes a necessity.
- **Degree of architectural permanence.** Is the space a long-term space that will stick around, or is it something that is likely to be outdated in a couple of years? Will the investment be short term or built to last? How long is the company planning to stay in its space? Is it a short-term lease or an owned facility?

- **Infrastructure investment.** What is the infrastructure investment required for the space? Is it worth the cost and effort? Will its connections to building systems such as HVAC or power/data/voice make untethering expensive?

Provisioning Considerations

Provisioning considerations have to do with what needs to be in the space. As you think about how to outfit the space with furniture, technology, white boards, and other equipment, consider:

- **Range of postures.** Based on the nature or range of activities the space will support, which postures should be accommodated? This includes positions like standing, leaning, lengthy sitting at a computer, casual use of a computer, and lounging.



- **Writing/display support.** What types of vertical or horizontal writing surfaces are needed? How much? What size? Where do they belong in the space?
- **Technology equipment or support.** What kinds of technology, including power/data/voice distribution, are needed? What special considerations should be made, such as installing power sources in the middle of the table so loose cords don't create tripping hazards?
- **Type of information used in collaboration.** What type of information do users require as they collaborate? How portable is it? What tools are required to ensure information is easily accessible?
- **Intended duration of use.** How long will users be in that posture or using the space? Is quick "in-and-out" use the goal, or do work sessions typically last for several hours? Are users encouraged to get comfortable and linger?

Sound Levels

Most office users are no stranger to noisy offices, whether they occupy entirely enclosed individual offices or open-plan seating. The ABCs of acoustics help designers develop a set of methods to deal with sound in the workplace.

Absorb

- Design using materials that absorb sound rather than reflect it.
- Install sound absorbers with high noise-reduction coefficients.

Block

- Design using noise barriers that prevent noise transmission from one space to another.
- Use materials and designs that prevent noise transmission, like slab-to-slab walls instead of walls that merely go from floor to drop ceiling.

Cover

- Use sound-masking technology.

And, of course, there is the “P”: plan wisely to separate noisy functions from areas where heads-down concentrative work must occur.

Use Considerations

Use considerations address how the space will be managed over time.

- **Adaptability to other users/uses.** Is there a need for the space to be used in different ways? How frequently will it need to be reconfigured? How will reconfigurations influence technology placement and other features?
- **Technology changes.** How quickly is technology changing? What are the risks of obsolescence? How much investment is required to avoid obsolescence? How much time is required to manage the technology aspects of the space?
- **Work process changes.** How flexible/malleable is the organization? How likely is it that users will change the way they work? How likely is it that users with different work-styles and processes will move into the space?
- **Ownership.** Is the space used only by a specific team or department, or is it considered a common space available to all?

- **Schedulable.** Given the type of uses the space will support, should reservations be available? If so, how will others know whether the space is available at a specific time?

Work continues to change from primarily repetitive tasks to a mixture of creative work and complex problem-solving, requiring a broad range of different spaces that accommodate specific collaborative activities and support change hour-by-hour or day-by-day. Collaborative spaces must be both flexible and evolutionary in order to optimize space and support these evolving work patterns.

Collaborative spaces are already a large part of our spatial vocabulary and are becoming even more so, making it increasingly important to “get it right” by matching the space and its attributes to the work and activities it needs to support. Different kinds of work mean different requirements for privacy, ownership, spontaneity, technology, and the “persistence” of visual display.

Collaboration in the Future

Experts all agree that our world is only getting more complex and the need to put our heads together to solve difficult problems will become more and more pronounced. The disagreement comes in what forms collaboration will take.

Those who embrace technology believe that the workplace of the future will include a mélange of enhanced social networks, holograms, and virtual-reality simulation. The result is that our real world and virtual worlds will collide, driving the need for highly advanced “theater-like” immersion rooms and a reduction in the number of face-to-face meeting spaces.

Others believe that the need for palm-rubbing and face-to-face interaction is on the rise and that our collaborative spaces need to become more like our living room – relaxed, comfortable settings for developing trust and a deeper understanding of culture differences and building the possibility for common ground.

Either way, work will continue to evolve, the workforce will continue to become even more diverse, and technology will continue to advance, enabling new ways of working. How all of these factors will shape the workplace has yet to be revealed. In the meantime, studying how, when, where, and why people collaborate is the best method for right-sizing the workspace and building a platform for effective communication at all levels.

A Tour of Potential Collaborative Spaces

Though not an exhaustive list of possible collaborative spaces, these examples demonstrate how different spaces can support various situations.

Commons Areas. The community area, cafeteria, or “commons” area for many companies can be the central gathering place of the organization and often can promote informal and spontaneous communications. In addition, there always seems to be an open spot in these areas to meet, so employees don’t have to worry about reserving a space in advance, thus saving time, preserving the spontaneity of many interactions, and addressing the frequent complaint of difficulty in finding or reserving an available room.

The openness of these areas could cause someone to think that privacy is a major issue. In reality, it often is not an issue because workers have “aural” privacy – that is they can sense who is around them and moderate discussion topics and voice levels accordingly.

The areas can be furnished with everything from lounge furniture to cafeteria-style tables and chairs, depending on workers’ needs. The coffee-shop-like feeling provided by some of these areas can also be appealing for many workers. Obviously, the presence of food can determine the need for tables, while the need to write or type on a laptop can require the need for tables, tablet arms, or power/voice/data capabilities.

Project Rooms. Dedicated project or “war” rooms often are ideal for teams engaged in semi-permanent missions or long-term projects. They give the team not only a place to gather, but also a place to store artifacts and records, chart progress, communicate messages, and display information. A project room benefits groups working under deadlines and those whose work is highly interdependent. It also is popular with groups engaged in new-product development and prototyping. New members learn faster by modeling behavior including picking up the tribal knowledge they gain from interactions with teammates. In addition, questions can be addressed immediately rather than waiting on formal meetings or processes.

Project rooms should provide for visual display of information and artifacts, timelines, to-do lists, shared goals, inspiration, progress, and knowledge. There should be mobile marker boards and tackable boards for writing and hanging that are important in the creative process.

They also may have images, colors, and mottos that stimulate creativity and *esprit de corps*.

Because they are semi-permanent and dedicated, people don’t have to waste time setting up and taking down or bother with scheduling. These spaces always are available for impromptu gatherings for the team, and confidential information can be safely stored if these rooms can be locked so that people outside the team can’t steal secrets or walk off with furniture, tools, or artifacts. Walls can be semi-opaque to provide visual privacy of the group work, especially when clients or vendors are frequenting the area. Often, it is beneficial to locate the project room, unlike many other collaborative spaces, in an out-of-the-way, off-to-the-side area. It may be a true enclosed room, or walled off using screens or partitions.

To furnish a project room, use furniture that is moveable, but not necessarily mobile. People should be able to rearrange the furniture easily, but not walk off with it. It should be equipped with the display tools and technology needed, as well as a system for storing and securing the group’s materials. Think in terms of marker boards, tackable boards, lounge furniture, and multiple tables and chairs that can be moved apart or pushed together. The need for power, data, audio/visual, and telecom can vary from team to team. If there is a big central table, and the only power and data connections are in the walls, you may experience wire management issues.

Pods/Bullpens. In their classic study, *Offices that Work*, Frank Becker and William Sims from Cornell University discuss the many benefits of the “pod” concept, commonly defined as individual workstations or offices that surround a group or commons area. The group area frequently has small meeting tables and storage furnishings. These are especially popular for work that requires both heads-down activities and frequent spontaneous interaction, as well as a sense of trust between team members, such as the work of software engineers or research scientists.

An advantage of this pod concept is that people can go easily and quickly from their individual areas to the central collaborative area. Interestingly, “good” distractions happen when people can overhear discussions and quickly help with problems others are having. This saves time because people are using collective knowledge and

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are not recreating an existing solution. Another timesaver is that the occupants don't need to schedule the space because the team owns it. Finally, pods help foster a sense of community and camaraderie. Because individual workstations and offices are open to the commons area and serve as the perimeter, one trade-off of pods is they don't accommodate a lot of vertical display, like a war room can, unless portable visual display tools are provided.

As with the project room, the central area will need power outlets and phones to be centrally located. And you'll want to choose furniture that is relatively mobile so the group can configure according to its needs and adapt to change.

People in pods tend to develop social rules and a sense of community. An example might be that it's permissible for someone inside the group to interrupt, but not an outsider. People want to be free from visual and vocal distractions from outside. However, within the group it can be welcomed, or at least much easier to tolerate. So walls around the perimeter serve a privacy function as well as a delineation of the team's turf. It's not unusual for teams working in pods to put up their own boundaries using partitions or file cabinets to form a sense of privacy.

Individual Workstations/Offices. Individual workstations can be important collaborative spaces, even though they are designed as a home base for individual workers. The workstation often does double-duty as a place for both heads-down and collaborative work and frequently is the

primary place for one-on-one collaboration (or for small groups in the case of many private offices).

Workstations can invite collaboration with guest seating, with worksurfaces shaped to provide a place for guests to put a notebook, coffee cup, and other accessories, or through the nesting of a table and a pull-out, cushion-topped mobile pedestal under the worksurface to quickly turn the workstation into a one-on-one collaborative area. The area may need to be configured so that displays, such as the computer screen, can be seen by all parties. In addition, lower panel heights (42 to 54 inches) or glass stackers provide line of sight, which is an important catalyst to collaborative encounters. Having tables that quickly can be turned from an individual worksurface to a collaborative meeting table also can support one-on-one meetings. One disclaimer is to be sensitive to the noise this can generate for neighbors.

Informal Meeting Areas. Informal meeting areas can have the most variability of usage. As we know, their placement and the degree to which people feel free to use them can have a dramatic impact on the frequency of use. Placing these drop-in areas at strategic locations, such as near the watering hole, the top of the stairs, entrances to team areas, etc., invites people to spontaneously interact. It is helpful, however, not to have people feel like they are on display.

Informal meeting areas can range from stools with standing-height tables to lounge furniture to very casual beanbags. Considerations for these areas include the presence of worksurfaces for writing, mobility of the furniture, and the availability of mobile screens for visual privacy.

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