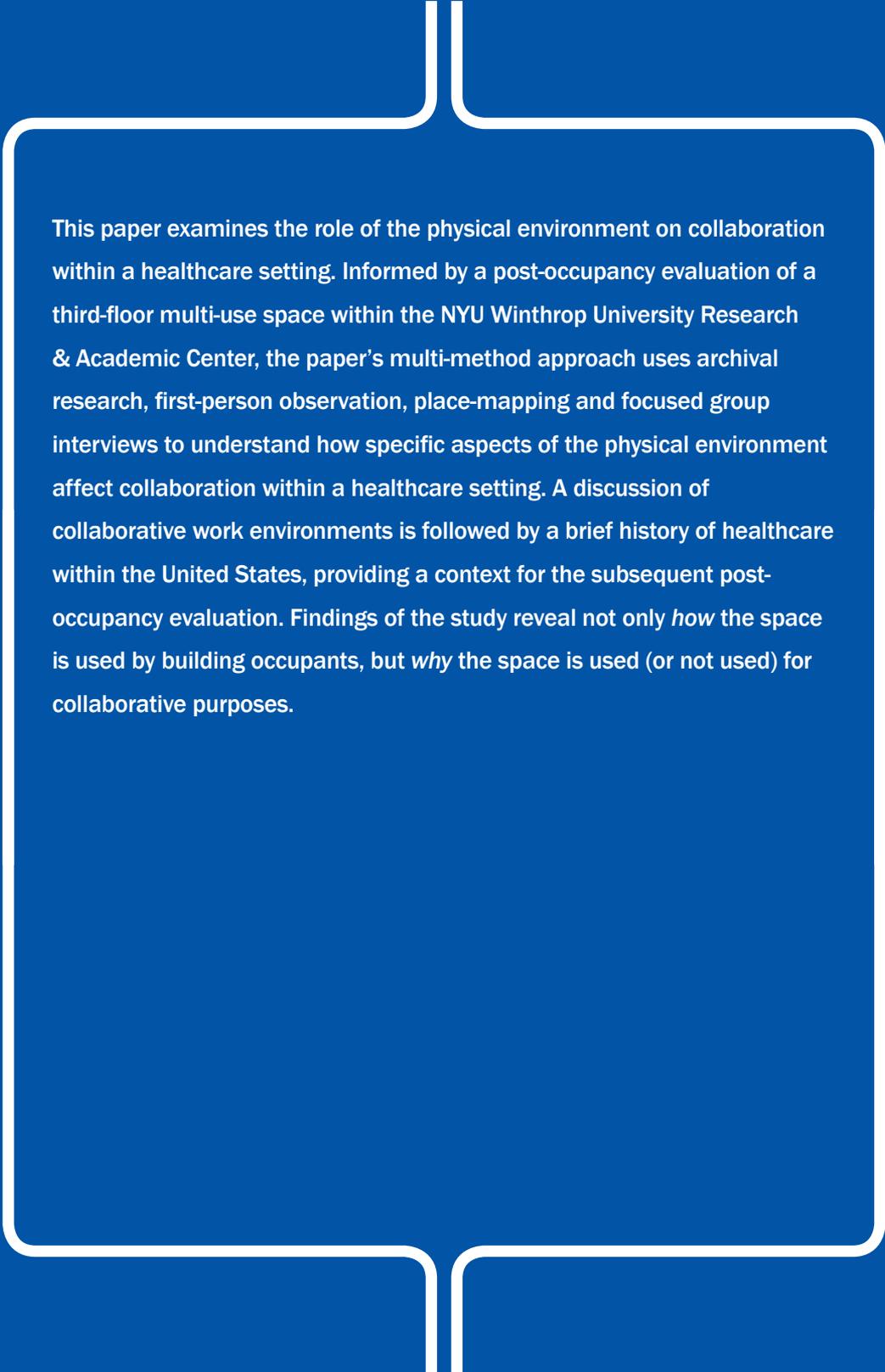


THE EFFECTIVENESS OF COLLABORATIVE SPACES IN HEALTHCARE AND RESEARCH ENVIRONMENTS

NYU Winthrop
Hospital™

**PERKINS —
EASTMAN**





This paper examines the role of the physical environment on collaboration within a healthcare setting. Informed by a post-occupancy evaluation of a third-floor multi-use space within the NYU Winthrop University Research & Academic Center, the paper's multi-method approach uses archival research, first-person observation, place-mapping and focused group interviews to understand how specific aspects of the physical environment affect collaboration within a healthcare setting. A discussion of collaborative work environments is followed by a brief history of healthcare within the United States, providing a context for the subsequent post-occupancy evaluation. Findings of the study reveal not only *how* the space is used by building occupants, but *why* the space is used (or not used) for collaborative purposes.

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INTRODUCTION

The importance of collaboration in the workplace has been well-documented in recent years. It has been shown to increase employee satisfaction, lead to more effective problem solving, improve self-awareness, and contribute to a culture of ongoing learning within an organization (Nixon, 2014). Particularly in today's knowledge-based economy, collaboration has taken center stage as a necessary element of working and learning environments. The nature of work has drastically changed since the industrial revolution, and is more dependent than ever on social skills and teamwork. Increasing globalization, the dominance of technology, and an intense focus on creativity, innovation, and speed have shifted the dynamic and necessitated a new approach. With the growing need to quickly retrieve, analyze and distribute complex information, the implementation of collaborative practices has become important than ever. With successful results, many

companies within a range of disciplines have redesigned their office environments in order to improve collaboration and communication among employees. Emphasis is shifting away from assigned workstations to a greater focus on community and shared spaces. Informal lounges, flexible furnishings, and variously-sized breakout areas are becoming commonplace. Likewise, a number of educational institutions have begun to incorporate collaborative spaces in the design of their facilities. The classroom itself is evolving to support more interactive pedagogies, and it is now typical to find a number of space types provided outside the classroom for both informal and formal group activities. In both work and educational settings, collaboration is widely recognized today as an important—and even integral—tool for success.

In spite of significant changes in the workplace and educational institutions, the medical field is one area in which efforts to instill a culture of collaboration are sometimes met with

resistance. Historically, it can be said that the medical field has not fostered a collaborative working environment; departments are often isolated from each other and not encouraged to communicate, and there remains a strong sense of hierarchical division. This is slowly beginning to change as the benefits of teamwork in medicine gain wider recognition. According to HRH Global Resources, collaboration within a healthcare setting has been shown to reduce medical errors and improve patient outcomes, as well as prevent burnout among health workers (“Why is Teamwork in Health Care Important?” n.d.). It has also been shown to drive innovation and improve research outcomes. With the increasing complexity of healthcare—from clinical research to patient care—interdisciplinary collaboration and communication are becoming more important than ever. It was with this in mind that Perkins Eastman designed the NYU Winthrop University Hospital Research & Academic Center, a medical facility located in Mineola, Long Island. The project was undertaken with a primary goal of incorporating the

collaborative aspects found in office and educational buildings, aiming to bring together the diverse user groups that would occupy the building. A year after the project’s completion, Perkins Eastman Research set out to determine how the spaces are performing through a post-occupancy evaluation of the facility. Along with the objective of gaining project-specific insight, this investigation seeks to understand how various aspects of the physical environment can support—or inhibit—collaboration within a medical setting. The multi-method approach consists of archival research, observation, place-mapping and focused group interviews related to the post-occupancy evaluation of the NYU Winthrop University Hospital Research & Academic Center.





DESIGN OF THE BUILDING

The NYU Winthrop University Hospital Research & Academic Center was constructed as an addition to the NYU Winthrop University Hospital's Medical Campus. The 95,000 square foot facility houses an Adult and Pediatric Endocrinology Faculty Practice Suite, an expanded Simulation Lab, multiple classrooms, a Clinical Trials Center, a vivarium and a bench lab research area, bringing together a number of groups that had not previously been collocated.

Perkins Eastman approached the design of the building with the intent of creating a collaborative environment that would facilitate cross-disciplinary creative exchanges, stimulating research, interaction and new ideas while bringing together

a mix of patient care, research, education and community outreach groups. Looking to successful collaborative research facilities of the past, Perkins Eastman considered the Bell Labs headquarters of the mid-twentieth century. Located in Murray Hill, NJ, this legendary facility is the birthplace of numerous innovations that have shaped today's world, including the transistor, communications satellites, the laser, and cellular phones, to name a few.

In the beginning, Bell Labs was considered an outlier for its unconventional approach to research. Contrary to tradition, which was generally to keep scientific disciplines separate and insulated, the policy at Bell Labs was to encourage and even demand cross-disciplinary collaboration. A culture of collaboration was supported not only by the company's

policies—such as the order to keep doors open at all times—but also by the architectural features of the facility. One of the driving design concepts was that of physical proximity, based on the belief that locating different groups in close proximity to one another would naturally increase the number of day-to-day interactions, therefore leading to more research and academic collaboration—and, hopefully, more innovations. Lo and behold, the plan was a stunning success; for a significant portion of the 20th century, Bell Labs dominated the market as one of the world’s most innovative and productive scientific research institutions (Gertner, 2012).

The legendary Murray Hill facility is still used by Bell Labs today. Physically, it is defined by strikingly long corridors which are intended to serve as a physical connector between different parts of the building, acting as a common area for the building’s many different users. The famous hallways at Bell Labs have been credited with bringing together some of the greatest “thinkers and doers” in recent history, fostering spontaneous exchanges between physicists, mathematicians, chemists, engineers and others that have led to some of the most significant innovations of the modern world.

Taking a cue from Bell Labs, Perkins Eastman considered the roles of proximity and connectivity in the design of the NYU Winthrop University Hospital Research & Academic Center. Opportunities for spontaneous collaboration were integrated throughout the building, including a number of space types to accommodate different kinds of collaboration. Echoing the connecting corridors of Bell Labs, an open stair provides a

vertical connection between departments, designed not only for the utility of floor-to-floor movement but also to encourage impromptu conversations and interactions among employees.

While the building as a whole was designed to support and encourage collaboration, one area in particular, a multi-use space located on the third floor, can be seen as a microcosm for this intent. It is comprised of a series of spaces that flow into one another and provide transparency from one area to the next—with the exception of a conference room, which is the only space with a closed door. The programmatic elements include:

- Pantry with a small cook/prep area and two vending machines
- Café Dining Space with chairs and tables
- Break Area containing soft seating, a low four-person conference table and a sit-up bar
- Work Room with a TV, tablet chairs and a writeable magnetic wall
- Translational Research Area with a large writable wall, light ottomans, and high-top tables with chairs and writable table tops
- Conference Room with a large executive meeting table, digital projection capabilities, wet bar and seating banquette

As a small-scale embodiment of the building’s design concept, the third floor multi-use space at the NYU Winthrop University Hospital Research & Academic Center served as the focus of our post-occupancy evaluation study.





COLLABORATIVE ENVIRONMENTS

Collaboration, by definition, is “to work with another person or group in order to achieve or do something; to work jointly with others or together especially in an intellectual endeavor; to cooperate with an agency or instrumentally with which one is not immediately connected” (Merriam-Webster, 2003). Collaboration enables information to be shared and communicated, and through that process fosters the creation of new ideas and solutions. Research has found that flexible and diversified design that fosters interdisciplinary collaboration proves to drive innovation (Lee, 2014). As teamwork has been shown to be the key ingredient to any success in today’s economy, it is imperative that all companies and institutions design and plan for collaboration.

With the evolving nature of work, institutions of higher education are experiencing a similar transformation. Striving to prepare students for active roles in a knowledge-based

economy, colleges and universities are realizing that passive learning is no longer effective. Instead, the concept of active learning, with a focus on student participation and collaboration, is becoming the standard approach. Lecture-based instruction and teaching methods that emphasize rote memorization are giving way to interactive, student-centered pedagogies. It is through proactive, engaged, and collaborative learning that students are able to acquire the critical thinking and problem solving skills that are so highly in demand.

In Ying Hua’s (2010) article “Workplace Collaborative Space Layout Typology and Occupant Perception of Collaboration Environment,” it is noted that “a collaborative work environment features highly diverse places that recognize[d] and celebrate[d] the value of giving people lots of choice in where and when and how they worked.” Collaborative spaces are not limited to those which are explicitly identified or designed for collaborative work, but include any space that may potentially be used for spontaneous interactions that

spark the generation of new ideas (Hua, Ying et.al, 2010). In fact, many different categories of amenity-related spaces have advantages in facilitating various types of work; the proximity of these spaces to designated work areas and each other is also of critical importance. For instance, a significant amount of social networking occurs in shared service areas—think of the proverbial “water cooler” chat, or striking up a conversation at the copy machine while waiting for your copies to print. Meeting rooms are typically used for scheduled gatherings and training sessions, but rarely inspire those invaluable, impromptu discussions that spark fresh ideas or lead to interdisciplinary collaborations. So what is it about pantries and copy areas—or even stairwells and hallways—that gives them an edge over traditional meeting rooms? Hua would argue that the unique layout of these spaces tends to impact the possibility, frequency and duration of the aforementioned collaborative behaviors (Hua, Ying et.al, 2010). While the majority of collaboration in work environments has traditionally occurred as a result of formally scheduled meetings, studies have shown that the most prized and successful exchanges of ideas are often informal and spontaneous (O’Neill, 2013). To encourage these types of interactions, the design characteristics of a space must be able to support flexibility and impromptu social and group work interactions (O’Neill, 2013).

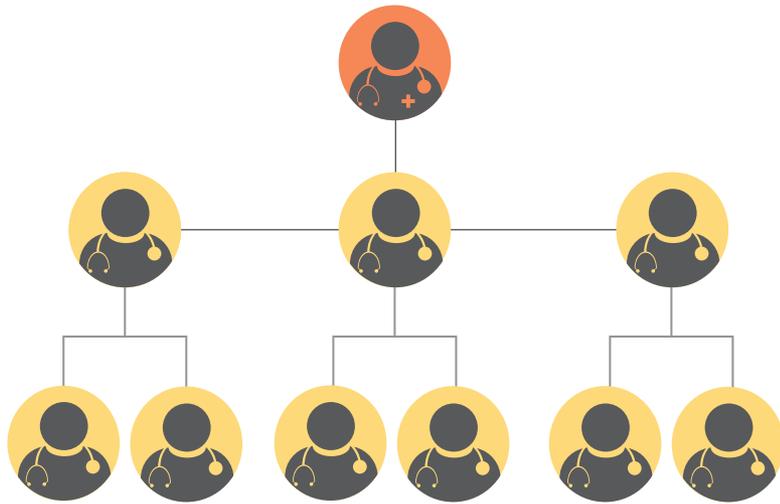
A large collection of literature from various disciplines illuminates the impact that a workplace’s physical characteristics have on the well-being, behavior and performance of its users. Although the physical environment cannot fully dictate behavior, spatial arrangements may

facilitate or inhibit certain behaviors. Many organizations now recognize the extent to which the physical work environment influences employee performance, and some have begun to redesign their offices with the goal of increasing collaboration and transparency (Morgan, 2008). One of the most successful examples is Google, which not only holds rank as one of the most valuable brands in the world (second only to Apple) but was also recognized by Fortune as the best company to work for in 2016.

Google’s National Headquarters, known as Googleplex, located in Mountain View, California, offers a prime example of a collaborative work environment. The sprawling campus, which boasts 2,000,000 square feet of office space, was designed around the concept of “activity-based working” (Largorio-Chafkin, 2014). Googleplex’s architect, Clive Wilkinson, defines “activity-based working” as “the theory that employees no longer need personal workstations so much as they need many different settings in which to meet, collaborate, or focus, depending on which tasks they’re working on” (Largorio-Chafkin, 2014). In line with this concept, the Google campus is organized into neighborhoods with no real permanent offices or desks. This is meant to support different kinds of activities and preferences and make way for spontaneous innovation (Largorio-Chafkin, 2014).

Within Google’s Mountain View campus a staggering variety of settings are provided for employees to use throughout the day, including recreational (swimming pools, sand volleyball courts, batting cages and a bowling alley, to name a few),

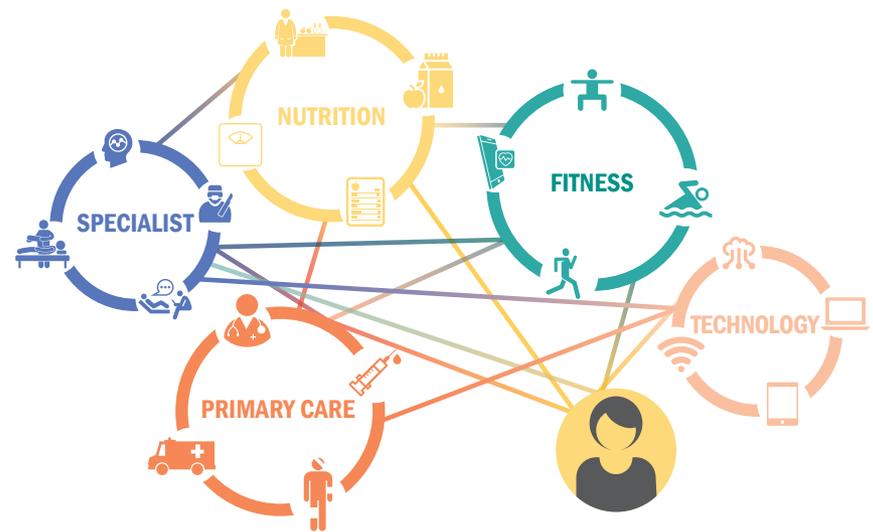
TRADITIONAL MEDICAL WORKSTYLE



Siloed flow/hierarchical structure

dining (gourmet restaurants and coffee shops), and lounge areas (furnished with hammocks, balance balls and sleep pods). While these amenities support many modes of work and activities, Google's employees are also supported by a strong culture of collaboration. The company's guiding principle to "share everything you can" drives efforts to create transparency and support communication throughout all levels of the organization. One such effort is the company-wide "TGIF" meeting, held every week, in which the company's general state of affairs is presented and discussed. Top-level executives discuss industry changes and upcoming products, and design groups present new ideas. Employees are encouraged to participate through "Google Monitor," a technology tool (designed by Google employees) that allows users to submit questions to a pool and then vote on which questions they would like to see answered. Other policies—from providing unlimited food and snacks to allowing flexible working hours and locations—enable employees from different

CROSS-DISCIPLINARY MEDICAL WORKSTYLE



Complex flow/networked structure

areas to interact on a more casual level. The company's 80/20 policy, which allows employees to spend 20 percent of their time on a "passion project" unrelated to their primary work, ensures that they have the time to step outside of their routine and interact with colleagues. While Google was one of the first companies that strove to understand and address collaboration in the workplace, other giants such as Pixar, GE, Zappos and Starbucks, to name a few, have also reoriented their facilities and policies to support collaboration.

The trend of designing for collaboration is not limited to the workplace. Many institutions of higher education are also beginning to focus their facilities toward a more collaborative approach, recognizing the value not only for teaching and learning but also for research and improved organizational functioning. According to an article by Adrianna Kezar in the *Journal of Higher Education*, a number of studies conducted within educational environments have shown that collaboration



positively impacts student performance, from better grades to improved analytical and social skills (Kezar, 2006). In many ways, the planning approach for creating a collaborative environment is similar in both the contexts of education and business. However, in the workplace it can be argued that only makeable ideas will survive, whereas in an educational setting any idea is open to exploration.

According to researchers Heron and Heward, it is as essential that the educational environment supports collaborative learning as it is to balance key environmental qualities such as sound, temperature and air quality (Lippman, 2013). The physical environment must be planned early in the design

process, to include a variety of different kinds of areas to support one-to-one, individual, small group and large groupings. Collaborative spaces in education are where learners have access to peers, exchanges are possible between students and teachers, self and group exploration is permitted, and where students are given a considerable amount of freedom. Collaboration is essential in educational architecture because it is inherent in the nature of how work is carried out in our society today. It has been shown that the most significant and innovative work is accomplished in teams, so it is essential that all environments support this.



The evolving nature of work and education demands a change in the facilities and systems that support it. Aspects of the built environment undoubtedly influence the quality and quantity of collaboration that occurs, but an organization's culture, attitudes and policies play a critical role as well. In developing a collaborative environment, whether in an office or a school, the importance of an organization's leadership cannot be overstated. Even the most thoughtfully designed space will not be able to produce meaningful change if it is unsupported by policies and attitudes that foster collaboration. According to a study in the Harvard Business Review, sustaining a culture of collaboration requires four key actions on behalf of leadership: building a shared purpose; cultivating an ethic of contributing;

developing processes that enable people to work together; and providing a framework for rewarding collaboration (Adler, Hecksher & Prusak, 2011). An organization's culture is shaped by the attitudes and practices exhibited by its leadership; when working together is encouraged and rewarded from the top—and supported by architecture that inspires communication and teamwork—a culture of collaboration may flourish. Both a supportive physical environment and a culture that encourages teamwork and sharing are essential elements of collaboration. While there have been great advances in creating architecture that supports collaboration in the education and commercial realms—and the benefits are clearly understood—the healthcare profession has been slow to adopt these practices.



HEALTHCARE ENVIRONMENTS

The healthcare profession has evolved tremendously in the past century, particularly in terms of patient care and new technologies. Prior to 1900, most Americans received medical treatment at home or in the doctor's office; although hospitals had been around for some time, they were widely associated with the poor and death. Several decades later, with the spread of technologies that would greatly improve patients' chances of survival from surgery, childbirth and other procedures, the general attitude toward hospitals began to change. Advancements such as sterilization, the first diagnostic X-ray, and safer methods of anesthesia allowed medical staff to understand and treat disease more effectively. The expansion of surgical procedures, along with better conditions and overall care, enticed a larger portion of the general population to come to the hospital for their medical needs.

By the 1970s, hospitals began to focus on a positive patient experience for the entire hospital population. Where medical buildings of the past were seen as places of confinement and isolation, the new hospital model provided sophisticated services while attempting to provide a higher level of comfort and sense of welcoming for all patients (Sloane, 1994). In the decades since, a great deal of research has explored the impact of healthcare environments on patient care and recovery. Most healthcare facilities today are primarily geared towards improving the patient experience, which is obviously extremely important; however, the importance of designing for the well-being and productivity of healthcare workers must not be overlooked. As in other work environments, healthcare employees need to be able to actively communicate and work together in a meaningful way.

In today's healthcare system, delivery processes often require interdepartmental exchanges among multiple practitioners, from physicians and nurses to technicians and medical

assistants. In order for clinical practice to be effective, critical information must be effectively communicated among all parties involved. In Ronda Hughes' book *Patient Safety and Quality: An Evidence Based Handbook for Nurses*, Michelle O'Daniel and Alan Rosenstein assert that "when healthcare professionals are not communicating effectively, patient safety is at risk for several reasons: lack of critical information, unclear orders over the telephone, and overlooked in status" (O'Daniel, 2008). Communication errors have been reported as the leading cause for medication errors, surgical errors and delays in treatment, supporting the argument that improving the patient experience begins with improving employee engagement and hospital culture (Spigelman, 2013). In addition to having a negative impact on patient care, lack of interdepartmental exchanges may also inhibit innovation in research.

If collaboration is so important in the health profession, what is stopping it from happening? According to authors C.A. Orchard, V. Curran and S. Kabene, the barriers to collaboration are rooted in the culture of the health system. They include "ignorance to the conceptual basis for practice of other disciplines; poor communication among members of different disciplines; chauvinistic attitudes; distrust; and lack of confidence in other disciplines" (Orchard, Curran, & Kabene, 2005). In their investigation of collaboration in healthcare, Orchard, Curran and Kabene postulate that the highly specialized training of medical professionals may be a cause of the silo mentality that exists in the profession today. If practitioners are uninformed about the work of their

counterparts in other disciplines, they may be less likely to respect their skills and expertise—and therefore less likely to see the benefits of interdisciplinary collaboration (Orchard, Curran, & Kabene, 2005).

The benefits of collaboration in the health profession—as well as the considerable drawbacks of not collaborating—have been documented in numerous studies and articles. As in business and educational settings, both physical space and organizational culture have a major influence on the success (or failure) of creating a collaborative healthcare environment.



TIMELINE: FOCUS ON PATIENT CARE & TECHNOLOGY MILESTONES & STAFF CARE



- Most Americans receive treatment at home/Doctor's office
- Hospitals widely associated with the poor and death



- American hospitals are now modern scientific institutions, valuing antiseptics and cleanliness, and using medications for the relief of pain.
- Progressive reformers argue for health insurance, seems to be gaining support.



- Blue Cross begins offering private coverage for hospital care in dozens of states
- Bernard Fantus starts first blood bank at Cook County Hospital in Chicago

- Attention turns to Korea and away from health reform; America will have a system of private insurance for those who can afford it and welfare services for the poor.
- Many more medications are available now to treat a range of diseases, including infections, glaucoma, and arthritis, and new vaccines become available that prevent dreaded childhood diseases, including polio. The first successful organ transplant is performed.

Prior to 1900

1900

1910

1920

1930

1940

1950

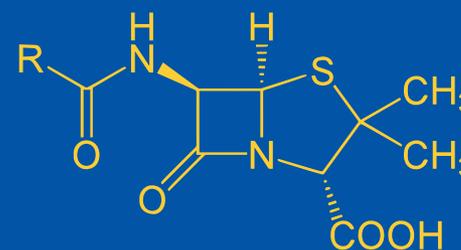
- Surgery is now common, especially for removing tumors, infected tonsils, appendectomies, and gynecological operations.



- Growing cultural influence of the medical profession - physicians' incomes are higher and prestige is established.
- Penicillin is discovered, but it will be twenty years before it is used to combat infection and disease.



- During the 2nd World War, wage and price controls are placed on American employers. To compete for workers, companies begin to offer health benefits, giving rise to the employer-based system in place today.
- Penicillin comes into use.





- Hospitals began to focus on a positive patient experience for the entire hospital population. Where medical buildings of the past were seen as places of confinement and isolation, the new hospital model provided sophisticated services while attempting to provide a higher level of comfort and sense of welcoming for all patients (Sloane, 1994)



- By the end of the decade there are 44 million Americans, 16 % of the nation, with no health insurance at all.



- American Care Act introduced
- Changes in attitude towards health leads to health lifestyle support by now wearable technology that truth biometrics
- Use of telemedicine increases
- Changing attitude to the workplace & staff benefits in other industries

1960

- Over 700 insurance companies selling health insurance.
- Concern about a "doctor shortage" and the need for more "health manpower" leads to federal measures to expand education in the health professions.
- President Lyndon Johnson signs Medicare and Medicaid into law.
- The number of doctors reporting themselves as full-time specialists grows from 55% in 1960 to 69%.



1970

- World Health Organization officially declares small pox eradicated.
- Corporations begin to integrate the hospital system (previously a decentralized structure), enter many other healthcare-related businesses, and consolidate control. Overall, there is a shift toward privatization and corporatization of healthcare.
- Dr. William DeVries implants the Jarvik-7 artificial heart into patient Barney Clark. Clark lives 112 days.



1990

- Medicare is viewed by some as unsustainable under the present structure and must be "rescued".
- Changing demographics of the workplace lead many to believe the employer-based system of insurance can't last.
- Human genome project identified all the more than 100,000 genes in human DNA



2000

2010



STANFORD LOBBY

STUDY OF NYU WINTHROP UNIVERSITY HOSPITAL RESEARCH & ACADEMIC CENTER

Considering the value of collaboration in healthcare, the design of the NYU Winthrop University Hospital Research & Academic Center was planned with the intention of increasing interactivity among the various departments that would inhabit the building. In order to assess how well the design meets this goal, Perkins Eastman Research conducted a post-occupancy study of the building's third floor multi-use space. Through a multi-method approach, Perkins Eastman Research synthesized various collections of data in order to gain a clear understanding of how the space is currently used and how people are interacting there, including

- casual observation
- place-centered maps
- semi-structured focused and group interviews

The following sections describe our investigation and analysis of the third floor multi-use space at the NYU Winthrop University Hospital Research & Academic Center.



OBSERVATION AND PLACE-MAPPING

Observation and place-mapping was conducted over a nine-hour period and recorded at four intervals throughout the day: 9am-10am, 12pm-1pm, 3pm-4pm and 5pm-6pm. Individuals' locations were observed and recorded, including the duration of time spent using a particular space and the type of activity performed there. Along with this information, it was also noted whether people were alone, in small groups (defined as two to four individuals) or groups of large assembly (four or more people).

The use patterns recorded during this exercise were eye-opening. While the third floor multi-use space is utilized throughout the day by members from various departments, very little interaction among users from different departments was observed. The times of highest utilization occurred earlier in the day, peaking over the lunch hour with the pantry and café seating area seeing the most activity. During this time a

number of individuals attended scheduled executive meetings in the conference room, but no spontaneous meetings of small or large groups were observed, and the amenities provided to support impromptu collaboration (magnetic boards, writable table tops) went unused. The majority of users spent their time in the space alone, either eating lunch or talking on the phone. A small number gathered in groups of two or four to eat lunch or use the pantry, but these individuals appeared to belong to the same department and entered the space together. When individuals did run into each other—say, using the vending machine or the microwave—they generally exchanged a brief greeting but did not engage in conversation. Indeed, our observation of the space seemed to indicate that it was not being used as intended—but why? What we learned from our user group interviews began to shed light on this question.



USER GROUP INTERVIEWS

Seventeen user group interviews were conducted with individuals representing various departments. Questions were geared toward learning how people are currently using the space, the reasons or activities that draw them to the space, their attitudes towards the space, and their level of familiarity to people in their departments as well as in other departments within the building.

What we learned is that users were generally fond of the third floor area; they found it beautiful and pleasant, and enjoyed the expansive views, natural light and openness of the space. But in spite of their fondness for the area, most did not use it very often other than to eat lunch or retrieve food from the vending machine. All of the people interviewed had attended a meeting in the conference room at one time or another, but very few had ever attended a meeting in any other area on the third floor. Everyone had come to the space for a party or social

gathering, but never for a formal presentation. None had ever used the space to work, primarily because much of the work they do requires computers and tools located at designated workstations within their office. In addition, most work would require focus and concentration, which could be difficult to attain in such an open setting. The user group interviews confirmed what we had observed: the third floor multi-use space, designed specifically to foster interdepartmental communication and informal collaboration, is not currently meeting its full potential.

Throughout the interview process, programming aspects emerged as a theme. For instance, many interviewees were unsure whether they were permitted to use the third floor spaces for meetings or presentations, and suggested that it would be helpful to have a point-person responsible for the scheduling of these rooms. Another issue was that interviewees were simply uninformed about the potential uses for the third floor space. None of the users interviewed

had used the writable walls provided in the work room or translational research area, nor were they aware that the table tops were writable surfaces. Additionally, no one knew that the writable wall in the work room was magnetic and intended to be used as a community message board. Some mentioned that they would like to use the TV monitor for presentations in the work room, but didn't know how to use it or who to contact for technical assistance.

Issues related to privacy and focus were also raised. Most of the interviewees indicated that they do not hold meetings in any of the open sub-areas of the third floor multi-use space because none of the spaces can be fully closed off, and many suggested that the option to close off the rooms for the purpose of meetings and presentations would encourage more use.

While the third floor multi-use zone is occasionally—though not often—used for scheduled meetings and presentations, it even less frequently serves its intended purpose as a hub for unplanned and informal collaboration. Interviewees noted that the space is not actively occupied and therefore offers little opportunity to meet and talk with others. Many expressed a wish for more programs to be planned on the third floor, such as educational presentations or focused clubs.







FINDINGS

It was clear from our interviews that most doctors, researchers, nurses and administrators in our user group would like to collaborate with each other more, and to increase communication with members from other departments. Virginia Peragallo-Dittko, the Executive Director of NYU Winthrop’s Diabetes and Obesity Institute, describes a strong culture of collaboration, but notes that the logical adjacencies of academic, research and clinical functions weren’t enough to promote the intended use of the third floor space. According to Peragallo-Dittko, collaboration within the Center has generally been limited to traditional meeting spaces such as classrooms, conference rooms and offices, so the faculty and staff needed to be shown how to use the third floor in order to promote its use as a collaborative space. The simple step of assembling a research meeting with the agenda written on the wall amid the high-top tables and chairs seemed to harness the pedagogical concept of “see one, do one, teach one” and allowed the staff to see the potential of the space. Additionally, says Peragallo-Dittko,

incorporating use of the third floor space as part of the Faculty Scholars program, whose graduates serve as educators and advisors, expanded the reach within a formal orientation. “Slowly,” she says, “the ‘got a minute?’ conversations have moved from offices to connecting spaces to the third floor space.”

The nature of academic work in general can present a unique challenge to creating a culture of collaboration. Research often requires quiet, focused study supported by specialized workstations (or in some cases, laboratory equipment), which inhibit mobility and therefore limit opportunities for spontaneous interactions. Within the healthcare profession specifically, privacy concerns present an additional barrier to collaboration.

As evidenced by the successful efforts of administrators to promote collaboration within the third floor space at the NYU Winthrop University Hospital Research & Academic Center,

simple measures can go a long way to improve collaboration and communication in a professional setting. Other steps could include:

- Creating a schedule of programs and presentations to take place in the third floor multi-use space
- Assigning an IT specialist to educate and assist users with technologies provided in the work room and conference room
- Posting informational signage with suggestions for how the spaces can be used (i.e., “please write on the table tops” or “feel free to move the furniture”)
- Hosting orientations to introduce users to the possibilities of the space
- Providing a greater variety of private and semi-private spaces, or the ability to close certain spaces for the purpose of private meetings and presentations

At this stage, these conclusions are merely speculative and have not been tested for this particular case study. In order to develop concrete theories about staff collaboration in medical facilities, further studies of open multi-use areas at other facilities will need to be examined.







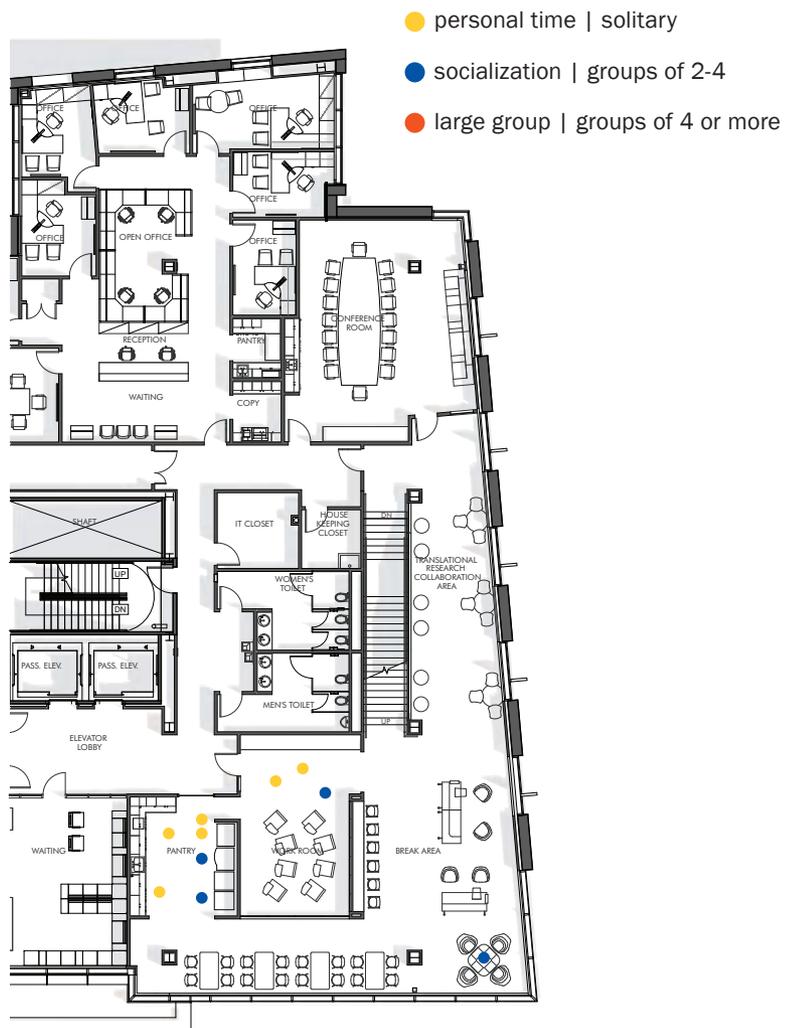
CONCLUSION

How can the design of a medical building support employee engagement and increase collaboration? The solution involves a shift within the medical profession to a more positive attitude towards collaboration, combined with the support of a thoughtfully designed built environment. It is unlikely that the implementation of one change will be wholly effective without the other. The physical environment may be optimally designed to support collaboration, but if it is not reinforced by programming—and if users are uninformed about the potential uses for the space—it is difficult for a culture of collaboration to thrive.

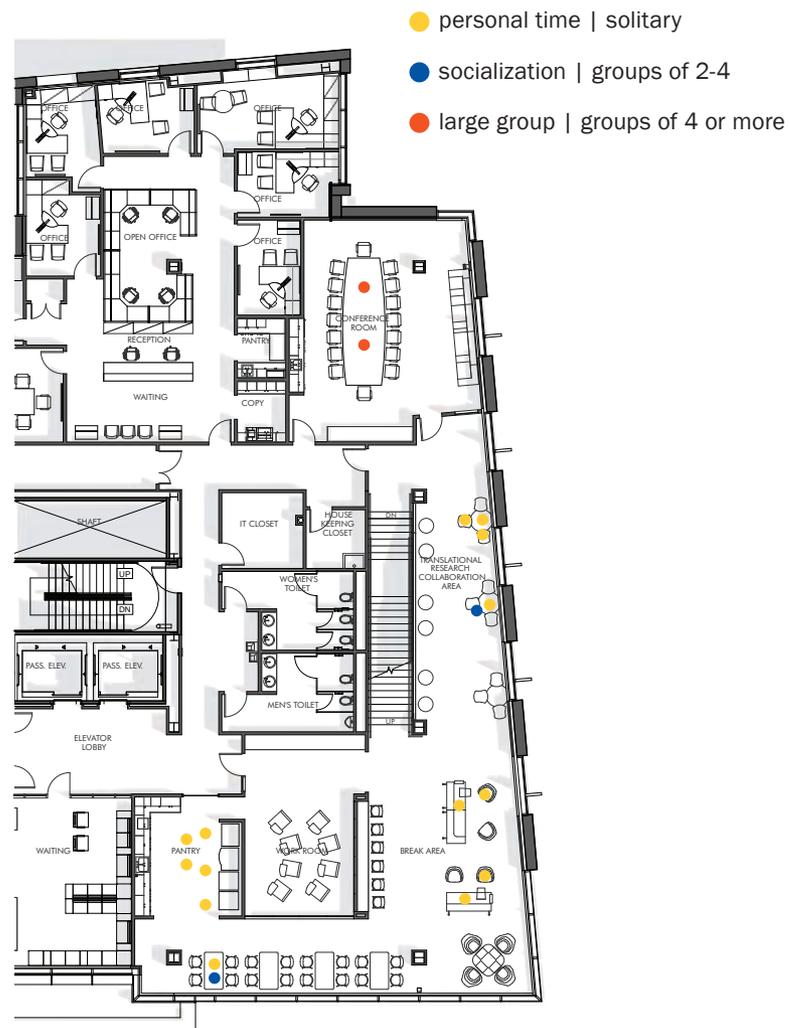
Transforming the ingrained culture of hierarchies and disciplinary silos may be the most significant hurdle to collaboration within the health profession. This is a subject that deserves serious consideration and will certainly become more relevant in the future of healthcare.

As for the built environment, planning for collaboration should be included in the early programming stages of design. Opportunities to encourage interaction and communication should be thoroughly integrated, with a variety of space types provided to support groups from small to large in activities ranging from informal chats to scheduled meetings. Staff work and break areas should be viewed as potential incubators for innovation and the exchange of ideas, and planned with as much care as the patient room (Thurston, 2012). Likewise, connecting spaces such as stairs and hallways should be treated as opportunities for interaction, designed to stimulate and inspire instances of spontaneous collaboration. Most importantly, the design process should be guided by active and continuous communication between the architect and client, ensuring that intentions for the space are well understood and reinforced by the appropriate organizational framework. A well-considered design that is strongly supported by a culture of collaboration has the best chance of reaching its full potential.

THIRD FLOOR MULTI-USE SPACE FLOOR PLAN BEHAVIORAL MAP 9AM-10PM



THIRD FLOOR MULTI-USE SPACE FLOOR PLAN BEHAVIORAL MAP 12PM-1PM



THIRD FLOOR MULTI-USE SPACE FLOOR PLAN BEHAVIORAL MAP 3PM-4PM



FOCUSED & GROUP INTERVIEW SCRIPT

1. What is your role or department?
 - d) Presentations
 - Daily
 - Several times a week
 - Once a week
 - About once a month
 - Less than once a month
2. What is your level of familiarity with people working in other departments?
 - e) Email/on the web
 - Daily
 - Several times a week
 - Once a week
 - About once a month
 - Less than once a month
3. How often do you use the third floor designated staff area?
 - f) Having 5-10 minute conversations? Having 10+ minute conversations?
 - Daily
 - Several times a week
 - Once a week
 - About once a month
 - Less than once a month
4. How often do you perform each of the following activities when you are in the third floor staff break area?
 - a) Eating Lunch
 - Daily
 - Several times a week
 - Once a week
 - About once a month
 - Less than once a month
 - b) Planned Meetings
 - Daily
 - Several times a week
 - Once a week
 - About once a month
 - Less than once a month
 - c) Working alone
 - Daily
 - Several times a week
 - Once a week
 - About once a month
 - Less than once a month
5. Do you think that the third floor staff break area supports collaboration between co-workers?
6. Do you think that the third floor staff break area impromptu meetings and collaborations? Planned meetings? Solo work?
7. Do you ever move around the furniture or write on the boards? And if so how often?
8. What is your overall opinion of the third floor designated staff area?
9. Do you have any suggestions for improving the third floor staff break area's features or amenities?

USER MANUAL



Unite

Teamwork within an internal community means establishing a practice of interaction among co-workers. This interaction is meant to encourage social learning and combined understanding.



Exchange

When sharing your thoughts with co-workers, contacts and managers, you challenge yourself to communicate your ideas. Brainstorming allows for groups to come together to problem solve and generate new concepts.



Create

By offering diverse channels of communications via a vis digital presentations, white-boards and flexible seating arrangements, people are better equipped to share their thought processes and come up with new perspectives.



Grow

Building connections between people is an important ingredient in inspiring new perspectives and driving innovation. It is important to have areas within your workplace for casual interactions and impromptu project team work.



Learn

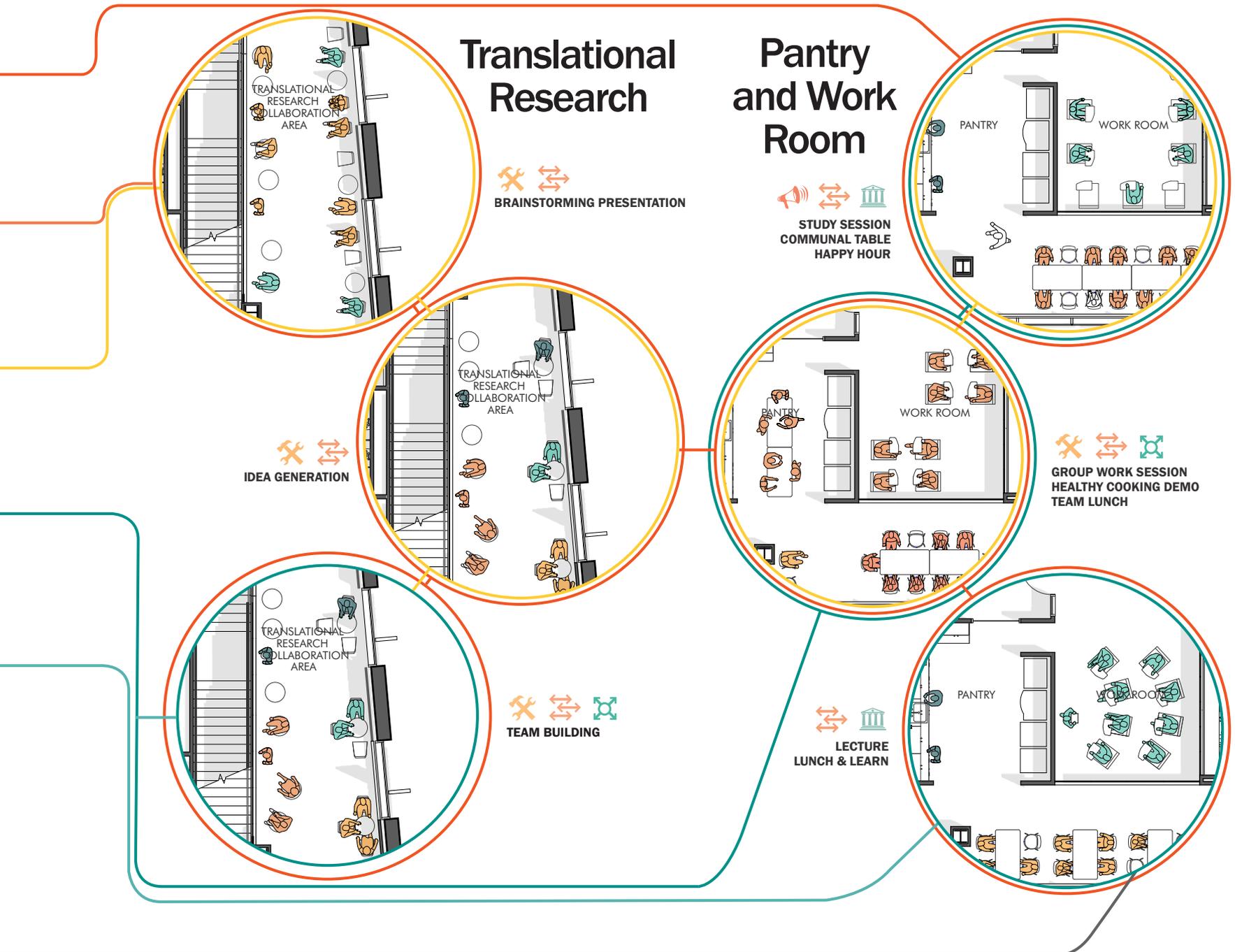
It is important to create workplace settings where learning can thrive. Effective learning environments should include abundant opportunities to practice new skills and communicate effectively with others.



Insight

Introspection is essential for innovation and adaptation. Insights allow us to see things in novel ways and provide necessary moments of reflection throughout the day.





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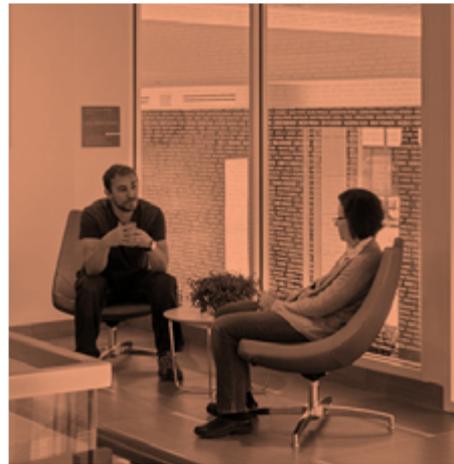
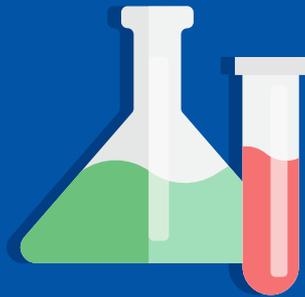
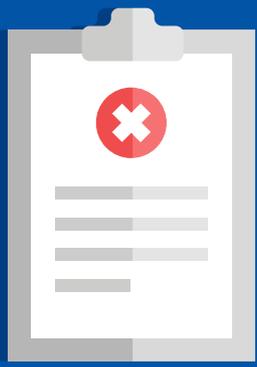
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