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# THE WORKING LABS MODEL IN ACTION

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This design case describes the process by which a private office was renovated using the Working Labs model, which engages students, faculty, and staff in hands-on engagement from project conception through completion and beyond into ongoing evaluation of everyday use. The spaces that follow the Working Labs model are intended to provide students of a Southeastern University's nationally ranked interior design program with hands-on access to furnishings, fixtures, products, and materials from leading industry partners. The authors will describe the process by which the initiative was launched and how the first phase was brought to completion on time and at little cost to the University.

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# **INTRODUCTION**

In 2012, an internal audit of facilities use prompted faculty in a Southeastern University's interior design program to ask how they could better utilize existing spaces within an aging infrastructure. The question was answered through a public-private partnership that engaged multiple stakeholders and a multi-disciplinary research and design team in the development of what came to be known as the *Working Labs*. The labs were conceptualized, developed, and installed over the course of two years, debuting in 2014. From 2014 to present, the *Labs* have undergone periodic review and renovation to keep pace with current workplace design trends. This award-winning initiative, now in its fifth year, includes eleven functioning office spaces, five studios, and a lounge space.

This design case provides an in-depth description of the *Working Labs* model as it was applied to the design process for one of the eleven original *Working Labs*—a faculty office located in the basement of the building. The case is presented through the lens of two interior designers involved in the project—one a faculty member and the other working in University facilities.

# **EXISTING CONTEXT**

The *Working Labs* office in this design case is located on the ground (basement) floor of a 51,339 square foot, three-story structure—built in 1962—that sits on the east end of campus and houses faculty and administrative offices, conference rooms, a variety of classroom and lab spaces, and an auditorium. The exterior façade of the building is brick with vertical banding of concrete and glass, typical of the functional modern aesthetic of institutional buildings of its time.

The walls of the basement area are primarily painted concrete block throughout; the faculty office in this design case included one brick wall that adjoined an electrical closet and mechanical systems room for the building's HVAC and plumbing systems access. The office flooring was carpet over composite tile, and the office ceiling was 9" x9" acoustic tile. Lighting was provided by two suspended fluorescent fixtures that housed T-8 lamps.

The office, like most of the original offices in the building, included built-in millwork that provided 18 lineal feet of shelving and a coat closet with a single hook. The space had been furnished with a mid-century Steelcase metal tanker desk and two matching vertical files. More recently, the office had gained a "new" task chair and two guest chairs that had been salvaged from the garbage at a nearby building.

Figures 1 and 2 show the existing office prior to renovation. Note that the flooring in these two images is different; the basement of the building flooded the weekend after the photograph in Figure 1. The flooring was hastily replaced with remnants donated by an industry partner, as shown in Figure 2.

These images get to the heart of the problem faced by faculty in any academic unit: outdated facilities may not support contemporary workers, and further, they may even be a hazard. For faculty in design-related programs, concerns over productivity and safety are further confounded by the mismatch between the need to expose students to well-designed spaces and the reality that they may work every day in studios, labs, and offices that are poorly designed.

The 2012 audit of facilities confirmed the need to update the program's facilities. By implementing the key design decisions of the *Working Labs* model, though, the team achieved much more. Today this initiative serves as a learning resource for interior design students to gain first-hand experience, onsite, with the leading concepts in workspace design, including top-quality furnishings, fixtures, and materials.

# **KEY DESIGN DECISIONS**

Key design decisions that guided this innovative design project were to:

- Intentionally engage a wide range of stakeholders and types of disciplinary expertise throughout the design process
- Reduce or eliminate any costs to the College associated with the project
- Create a range of visually distinct and functionally differentiated spaces within the overall project scope

The participatory design process at the heart of the *Working Labs* model engaged stakeholders—undergraduate and graduate students, in addition to faculty and staff—in hands-on visioning, design, implementation, and evaluation of the renovation project from conception through completion and beyond into ongoing evaluation of everyday use. To bring the project to completion, the multi-disciplinary design team also included the University's in-house interior designer, representatives of the program's advisory board, the institution's Facilities Division, an electrical engineer, external product representatives, and other key industry partners.



FIGURE 1. View of faculty office from the door. Image by author.



FIGURE 2. Built-in millwork, desk, and task chair. Image by author.

# **UNCONVENTIONAL TEAM MEMBERS**

#### **Visioning with Students**

Under the *Working Labs* model, the visioning process heavily engaged undergraduate and graduate students—as well as their internship providers and employers—in identifying critical programmatic needs.

To begin, the project team led a visioning process along with student representatives to align the project's outcomes with student needs and targeted learning experiences. Students desired a broader sample of work environment types than what is typically found in academic offices. As a result of student involvement, the renovation engaged unexpected concepts based on words like "lounge", "funky", and "chill zone" alongside comparably average faculty requests for integrated storage space, adjustable height worktables, tackable surfaces, and whiteboards. One of the top issues identified through this process was the overall need for better familiarity with commercial furnishings, fixtures, products, and materials.

An Interior Designer with the University's Facilities Division, who was also an alumnus of the Interior Design program, knew first-hand the deficits students faced with having outdated facilities and limited access to showrooms of the major office furniture suppliers. She volunteered to serve as the design team leader for the renovation, working together with the faculty user for each office space on an almost daily basis throughout the project. She helped to identify and communicate the faculty member's working style, furnishing and aesthetic preferences, and specific needs to industry partners.

# **Engaging Ambassadors**

In the *Working Labs* model, the design team seeks out Ambassadors who are charged to engage industry in providing in-kind donated products that are both on-trend and in new condition. In this case, the office was to have all new finishes, lighting, and furnishings: desking, seating, storage, and accessories. In cases where multiple offices or spaces are to be renovated, the model's intent as a resource to students suggests that each space should be furnished in a unique plan to reflect different market levels and learning/ work environment concepts, e.g., adjustable height desking, sustainable solutions, collaboration, solid wood vs. veneer, contemporary vs. traditional.

The project was presented as a challenge to the Interior Design Advisory Board (The Board) at their Strategic Planning Retreat. The concept, as presented, was to identify industry partners who would provide office furnishings at no or significantly reduced cost to refurbish the Interior Design faculty offices—which were still furnished in mid-century office furnishings from the time of the building's original construction. Two primary outcomes were projected for such refurbishing: 1) creation of a learning resource for the interior design students, and 2) creation of a physical environment that reflects the quality of the nationally-ranked, CIDAaccredited interior design program.

The Board Chair, Vice-Chair, and key board members readily adopted the vision and, working with the College Development Officer, energized the Board members to act. The faculty developed a concept paper outlining the project goals, including a typical floor plan and needs/wants list that the Board members could take to the principals of their respective firms and other industry partners.

#### **Identifying Partners**

Under the Working Labs model, the team's ambassadors strategically target industry partners: Which alums represent industry-leading products and solutions? Who has done, or wants to do, business with the institution? Who is the top contact that can be made in each company? In this model, project management responsibilities should be shared by more than one key stakeholder.

In this case, The Board took responsibility for recruiting top-level contacts with Industry Partners. The partners' designated representatives (e.g., the regional representative for the task lighting company) then met—or worked via email—with the project team and faculty user to identify which specific products would be donated for the renovation.

To facilitate shared project management duties, the College Development Officer and University interior designer worked together to track and document in-kind donations. This interior designer was often able to help identify suppliers/Industry Partners that would fill a gap in the range of solutions to be displayed and to provide a specific type of furnishing needed for a specific office. She then coordinated the specification and order of the respective items for each office and the target delivery date.

#### **Re-Engaging Students**

Once partnerships had been confirmed, students worked under faculty supervision to measure the office so that the team could send detailed drawings to the partners. These as-built drawings, along with the University's architectural records and photographs from the interior designer's onsite inspections, provided the framework outlining the inherent limitations and opportunities of the space.

Much of the collaborative design process was completed at a distance, via phone and email. In fact, many of the Industry Partners never visited the site until installation was complete, so careful communication and documentation were key to the success of this project. Students were engaged to help facilitate communication through follow up phone calls and emails to keep the project on track.

Students were involved in as much of the installation process as possible; although no single student was able to be fully involved in the whole process, the site was frequented by students who engaged the project team and installers with questions about the products, specifications, and installation methods.

Faculty worked alongside students and industry partners to develop solutions that meet the needs of all stakeholders within the context of practical and budgetary restraints. This real-world collaboration in and

of itself became a model that has led to the development of grounded assignments in multiple courses throughout the program. Further, by involving students in every step of the process—including contract administration and product installation—the faculty have reported an improved level of student awareness and understanding regarding these aspects of an interior designer's professional responsibilities.

# **THE DESIGN PROCESS**

# **Establishing Goals**

#### User Needs

This office was designed for use by a junior faculty member who had been with the University for three years. She taught a range of undergraduate and graduate course topics, and regularly met with students and colleagues in her office space.

The faculty member described her desired workspace as something that would innovate her workflow, "functional and funky ... open to creative interpretation of what an academic office could be". Her work style is fluid and collaborative—seeking outside input and opportunities to talk through or draw out ideas. The faculty regularly meets with students, one-on-one, and in small groups.

The faculty identified the following key design components common to all *Labs*: a primary sit/stand work surface geared toward computer work, with computer screen not visible from the door; secondary work surface for grading drawings up to 18"x24"; lots of bookshelves as well as space for large scale (up to 36" or 48" long) rolled drawings. She stated that she prefers for bookshelves to be mostly open so she can see and retrieve what she needs easily. A small amount of closed, lockable cabinetry and file drawers was also desired for grades and research data, in compliance with institutional guidelines for FERPA and data management.



**FIGURE 3.** Inspirational image for office. Image provided by Haworth, used with permission.

The faculty user and project team also sought input from students on how to make the space more welcoming to visitors and more functional for team collaboration. Students envisioned an informal ideation space for small meetings of up to four guests. They requested a whiteboard or pinup space, rolling stools, and space for a microwave and coffee maker.

Figure 3 shows an inspirational image used in conceptual design discussions.

# **Design Concept**

The final design for this office was selected from four options presented by the industry partner. Each option included: lots of open shelves and a long run of work surface; tack boards and whiteboard; height-adjustable main work surface with monitor arm; integral CPU storage; and a variety of seating solutions on casters.

# **Design Development**

Figure 5 shows the stark contrast between the original floorplan (left) and the revised floorplan (right), which was selected by the faculty member and student representatives as the most suitable solution. This option included a lot of open shelving as well as a two-drawer lateral file to the left rear of the task chair. Immediately to the left of the task chair would be an adjustable shelf that could be removed to create a double volume area for housing the faculty member's computer tower.

The drawings showed a dual monitor arm, but ultimately the faculty member requested this be changed, as will be discussed next. Power was provided via three grounded receptacles mounted above the work surface, near where the computer would be housed. The faculty member worked with students and the in-house interior designer to redline the drawings for further revision.



FIGURE 4. Four different designs showcasing product flexibility. Image provided by Haworth, used with permission.

During the revision process, the team added a tool rail by the desk chair, allowing the tack board to extend the rest of the way down the wall so that it could be used for the collaboration space. They added a keyboard tray and moved the monitor arm—made it a single mount for a larger monitor. A back was added to one of the mobile stools as an example of how students could specify the same product in a variety of ways within the same space. A task light was added below the overhead storage by the primary work surface, and an adjustable desk lamp was positioned in the collaborative area. The area on the far right in Figure 7 was designated for the microwave oven and coffee maker, to be supplied by the user. Ultimately, one mobile stool was removed to keep the project within the industry partner's stated budget.

#### **Specification and Installation**

The resulting design successfully accommodated many of the faculty requests in a compact and functional solution.

#### Paint

Early on, a major paint company volunteered to furnish the paint for all the Working Labs. The M&O team from University Facilities volunteered to paint all the offices, donating their services to the project. The faculty, with input from student representatives, chose paint options that provided a much more colorful, design-oriented aesthetic than is typically found in institutional buildings. The M&O team commented several times how much they enjoyed working as part of the project team—a comment not often heard in renovation/ refurbishing projects.

# Flooring

Once a carpet manufacturer or distributor was identified as an industry partner, the interior designer worked with the faculty to review the range of carpet tiles and rollgoods available, and then to select the color and style. Students assisted in ordering the samples needed to confirm the final selection. These samples then became part of the inventory that the Facilities team could share with other campus clients. The M&O team had never installed that type of carpet before so the interior designer, student representatives, and the M&O team worked together to figure out the proper way to install the product. This skill-building process meant that the whole team developed new knowledge and skills that could be shared with other students as well as other University clients.

# Lighting

Through a collaborative effort by the Advisory Board, University facilities electrical engineering staff, and a major



FIGURE 5. The design solution chosen for the office—image provided by Haworth, used with permission.



**FIGURE 6.** Example from redlining stage. Image provided by Haworth, used with permission.

lighting manufacturer, the interior design program received the lights and controls for all the upgraded lighting and ceiling solutions at no cost. An internal grant provided matching funds to the College for the electrical and other renovation efforts associated with the lighting upgrade. This upgrade provided not only much more sustainable, energy-efficient lighting but also better-quality lighting that provides increased visibility for display of student work, with less eyestrain than was previously reported by the students and faculty.

#### Installation Coordination

Installation took place over the Summer semester, when fewer courses were offered, to allow the faculty member to vacate her office so that the M&O team from the University Facilities Division could remove existing furnishings and carpet tiles, clean, paint, and re-carpet the office.

The interior designer coordinated the delivery schedules among all industry partners, with all products being



FIGURE 7. Rendering of final office concept. Image provided by Haworth, used with permission.

delivered to Facilities. When all components had arrived at the Facilities storage location, installation was scheduled. This delivery/installation coordination was much more extensive than would typically be needed for a single office because the solution used a larger-than-average number of suppliers, each with different delivery schedules. Clear communication with all the respective players was an ongoing necessity throughout planning and installation. The interior designer, faculty, and student representatives worked together to maintain a near-constant, consistent onsite presence for supervision of the installation process.

#### **Funding Sources**

The value of in-kind donations for furnishings used in the original eleven *Working Labs* offices is estimated to be over 400,000 USD (list price), which is an average of 36,000 USD per office. The total in-kind value of the Working Labs initiative from 2013-2017 is just under 1.4 million USD, with approximately 60% of that budget coming from internal grants and University funds for deferred maintenance (also known as "repair and renovation" funds) and the remaining 40% from private donors and in-kind donations (e.g., furnishings and materials) from industry partners.

# **ANALYSIS & DISCUSSION**

Adoption of the Working Labs model for renovation projects has led to some critical lessons learned and challenges overcome.

# **Design Challenges**

The *Working Labs* process was not always smooth or easy. Challenges and failures experienced in this new model resulted in changes to the design outcomes, and to project deadlines.

The biggest challenge in this particular office was one that occurred in the late planning stages of the project, where the team learned that "yes, we'll donate an office" was an incomplete representation of actual financial commitment. This challenge arose when the furniture plan that had been developed with the industry partner was sent to that industry partner for the final review. The partner's response to the request for final approval was to state that there was a—previously undisclosed—cap of 4,000 USD for the furnishings, less than half the value (list price) of the original furniture plan provided by the industry partner. Based on this new information, the University interior designer had to quickly convene another project team meeting to re-design the office. It was at this point that the industry partner presented four new options, shown in Figure 4.

The failure to discuss potential budget restrictions early in the project caused significant design changes, and the requisite delays to the project schedule resulted in occupancy of the office being delayed until well into the semester. This last-minute budget-cap-reveal taught the team to ask industry partners how much they were willing to donate at the first meeting, and to ask for their answer in terms of a concrete monetary sum.

Another design failure arose because of gaps in the list of requirements faculty provided for each office. Specifically, this list did not address window coverings nor natural light control. As a result, each newly renovated *Working Labs* office retained the original 1962 blinds, which detracted from the overall intent of the design to showcase current innovations. Several *Working Labs* users, including the user in this design



FIGURE 8. The office design solution in use. Image by Gregory Curry, used with permission.

case, brought in their own solutions. Figure 8 shows a panel of fabric that had previously hung in a showroom being used to reduce glare on electronics.

# **Post-Occupancy Evaluation**

The work environment has since had many visitors—students, as well as faculty and staff—who have expressed appreciation for the function and aesthetic of this Working Lab model office. A formal post-occupancy evaluation (POE) was performed at 12 months.

#### The Renovated Office Space

When measured at 12 months post-occupancy, the faculty member commented that she appreciated the open shelving because "I can see everything now, and any time I need something, I just grab it." She also commented that there were some downsides to her choices. "I didn't realize that these open shelves would look so messy if I don't put things back in their proper place. But now that I do have to keep things organized, it's really calming to come into a clean office every day." Meetings with students have made use of the ample counter space, tackable surfaces, and whiteboard. A problem was identified—the specified monitor arm was not strong enough to support the existing computer monitor. The department paid to have the monitor arm replaced with a more appropriate solution from the same vendor and reallocated the existing monitor arm to another faculty office.

The faculty user indicated at this point that she was completely satisfied with the design solution and enjoyed showing students around when they visit the new space. "I encourage them to explore, critique, and try things out adjust all the settings on the chairs, desk, keyboard tray, and monitor. They are always surprised by how uncomfortable the settings are until they make the right adjustments for their own body."

A criticism offered by the faculty member was the loss of privacy and personal space that she had with her old office. For example, she had recently given birth but found that a locked door was no longer enough to keep out visitors during her scheduled pumping breaks. Administrators with key access—both within the department and from Facilities—frequently led tours of the new office space. She indicated a desire for a better policy or procedure for conducting tours, and the ability to block out times when the office would be unavailable for scheduled breaks or focused work. While this is not a criticism of the design features themselves, it is relevant to the use of the Working Labs model across all eleven office spaces and has since been addressed.

## Broader Impact of Adopting the Working Labs model

One of the goals of the project was to help create a work environment that is reflective of the top-ranked interior design program.

The goal of providing a resource for the students has been realized in that their exposure—on an everyday basis—to a wider variety of different types of office furnishings and work environment solutions seems to have given students a much more extensive knowledge upon which to base their product specifications both in their classes and upon graduation. This interpretation is based on student self-assessment and faculty assessment of student work.

Overall, faculty observations state that students have demonstrated that they are much more knowledgeable of the different furnishings companies and distributors represented in these offices than were previous cohorts. Furthermore, for those students who were engaged directly in the design process, the experience showed benefits similar to an internship experience.

Since the first project was completed, ten other faculty and administrative offices were renovated using the Working Labs model. In that time, the interior design program has hosted numerous visitors, potential students, families, alumni, industry guests, and university interior designers from around the United States, always showcasing the spaces that have been renovated using this participatory design model. Higher administration officials have repeatedly praised the collaboration and partnership that has developed, the great working relationships of everyone involved, and the dedication of the University and the industry partners.

Administrative representatives surveyed during the POE suggest that the University has benefitted using the Working Labs model as a showcase to illustrate the various types of offices/office furnishings available to other University clients considering office furnishing or refurbishing. The University facilities team has suggested that the ability to see actual products has led to fewer improper orders. The project benefits the industry partners as well because they get exposure of their products to potential clients both on and off-campus.

## **Maintaining Relationships with Partners**

The Working Labs model relies heavily—and critically—on developing and maintaining positive industry relationships. The partnership doesn't end once the products are installed.

In this design case, industry partners are all identified by a branded door skin featuring the partners' names and logos. This approach helps to identify the products associated with the respective sources as well as provides ongoing recognition for partners. In the program's commercial design studio, students can explore each of the Working Labs modeled spaces in a kind of onsite field trip in which they can try out, adjust, and fully explore all the features of each work environment. Students then follow up the tour by going online to review the product literature for these featured products and manufacturers.

Industry partners were also invited to what has now become an annual Product Fair, where interior design students meet the industry representatives and learn more about the product lines offered by each. Many partners also visit specific classes to elaborate on appropriate product selection; for example, how to evaluate and specify healthcare-appropriate flooring solutions or confirm performance specifications for materials that can cross the residential-commercial spectrum.

#### Navigating a New Sense of "Ownership"

The *Working Labs* initiative re-envisioned outdated, poorly functioning solutions with much improved, more desirable ones. The trade-off was that this outcome was made possible only by transforming resources used primarily as personal territory—faculty offices—into shared territory—student Working Labs—as part of a larger learning-community enhancement project. The challenges of this approach can be seen in how faculty offices are now made available on a regular basis not only to students but also to University leadership and guests. Faculty needs for privacy, focused work, and personal space have all been tested, and ultimate-ly resolved. The learning process in these matters is ongoing, and the proactive way issues have been brought forth and addressed speaks to a positive cultural change underway in the interior design program.

In addition to challenges faced by inhabitants, the administration of the Labs presents its own challenges. *Working Labs* have become a form of communal property in which the individual office inhabitant is not always the central figure in decisions made regarding the office's use. The design team is still working to answer these questions for themselves: Who is the key decision-maker for the Labs? What rights and responsibilities do the faculty, the University, and the industry partners have regarding upkeep and changes in the Working Labs? How will the Labs be managed in an ongoing iterative process that ensures that each office showcases the most current products and trends in workplace design for years to come?

# CONCLUSION

Since its inception in 2012, to its use today, the *Working Labs* model remains relevant to the interior design program's key design decisions to: engage relevant stakeholders and disciplinary perspectives, reduce costs to our institution, and provide a wide variety of spaces to use as teaching tools.

The renovation process created a new workflow by which the institution can improve facilities. In addition to the *Working Labs*, the program has since developed a series of *Learning Labs* that showcase a mix of active learning and open office concepts. The original offices have also been installed long enough that the earliest solutions are now being updated in response to the industry partners' latest product innovations.

This design case has provided an in-depth description of the process by which an institutional office was renovated using the *Working Labs* model, a participatory design process fueled by public-private partnerships, which allows interior design students to gain first-hand experience with the leading concepts in workspace design without leaving their campus. The authors have outlined how the model shaped the key decisions made, process used, and outcomes achieved in addition to discussing some of the lessons learned and challenges overcome in bringing the project to completion.

The *Working Labs* initiative was recognized with the 2015 President's Outstanding Collaborative Units Award from the University. Design outcomes were awarded 2nd Place for Excellence in Design in the 2014 annual national design competition of the Association of University Interior Designers.

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