2023 VISIONING & PROGRAMMING STUDY, COLLEGE OF BUILT ENVIRONMENTS

UNIVERSITY OF WASHINGTON SPACE PLANNING SERVICES

FINAL REPORT
May 31, 2023

KIERANTIMBERLAKE

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1. Introduction

Executive Summary

INTRODUCTION

The ***2023 Visioning and Programming Study, College of Built Environments,*** envisions the next 30 years for the *University of Washington's College of Built Environments* (CBE) through the lens of transformation and renewal. It provides a deep analysis of the CBE's buildings, spaces, and programs, considering the College's goals for *collaboration and impact, bold thought leadership, and equitable and just practices*. By examining the CBE's four buildings—Gould Hall, Architecture Hall, the Community Design Building (CDB), and the Center for Education and Research in Construction (CERC)—the College can identify the misalignments between near-term and future goals and the use, distribution, condition, management, and access of its spaces.

The College's deep commitment to climate action, managing equitable and just spaces, and future-proofing facilities underpinned all engagements with the CBE community. Through this study, students, faculty, and staff confronted disconnections between the strategic vision of the College (*CBE Strategic Framework, 2019*) and the state of the College's facilities. This work results in a path forward for the CBE proposed as six workstreams: *Student Life, Access & Welcome, Interdisciplinary Collaboration, Innovative Learning, Community Health,* and *Climate Action.* Each comprises interrelated projects of varying scale and complexity, outlining ways to begin, building upgrades, and transformative projects that revalue CBE facilities to meet the aspirations of this learning community.

PROCESS

The architecture, research, and planning firm KieranTimberlake (KT) organized and facilitated the space survey, engagement, and visioning process. KT worked closely with CBE Dean Renée Cheng, Assistant to the Dean Brittany Faulkner, Facilities Coordinator Meegan Amen, and student, faculty, and staff representatives who provided guidance and timely feedback on data availability, collection, interpretation, space assignment, and use.

The steps of the visioning and programming study included:

1. **Space survey and resource assessment**
   September – November 2022
2. **Community engagement**
   October 2022 – February 2023
3. **Analysis and workstream identification**
   December 2022 – March 2023

During stakeholder engagement, participants across CBE Departments were encouraged to talk openly about the barriers they were facing in their spaces and their ambition for the near and far future of learning, research, and collaboration. This study synthesizes and thematizes the ideas and insights of hundreds of CBE community members—students, faculty, staff, and department administrators—who offered their stories, aspirations, and experiences through workshops, listening sessions, college-wide user surveys, and an all-college design charette.

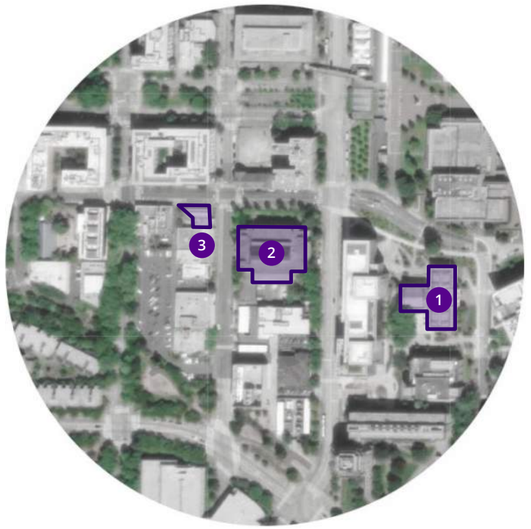
Throughout the study, decision-making was organized through the *Project Working Team* (PWT) model. This is a teaming approach essential to UW Facilities' *Integrated Design Build* (IDB) process that prioritizes flexible client-consultant teams based on the need for subject matter expertise and timely feedback. KT and the CBE's Office of the Dean convened four PWTs, including students, faculty, staff, and administrators who volunteered their insight, knowledge, and expertise through the *Project Advisory Committee, Schedule & Logistics PWT, Sustainability PWT, and Standards PWT*.

The CBE community's considerable work to examine its space use barriers, ambitions, and needs is a model for other UW Colleges and beyond, especially those prioritizing interdisciplinarity, renewal, climate action, and equity.

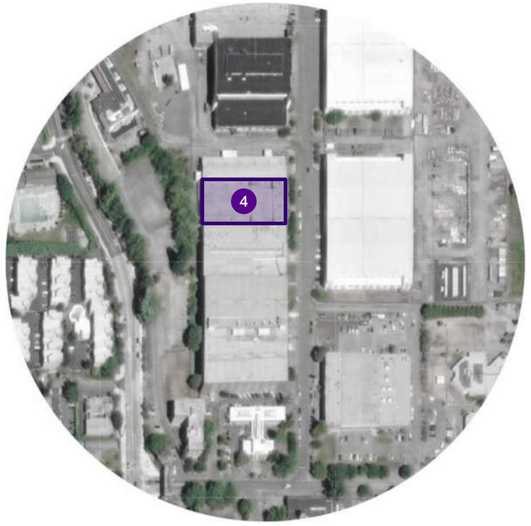
Workshop, October 2022

CBE FACILITIES

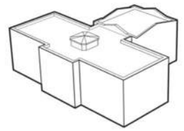
CBE facilities total 200,000 gross square feet (GSF) distributed across four buildings: Architecture Hall, Gould Hall, and the Community Design Building (CDB) on the UW Seattle Central Campus, and the Center for Education and Research in Construction (CERC) located 3 miles northeast at the Sand Point facility. Altogether, these facilities house the activities and functions of the five departments in the CBE: Architecture, Construction Management, Landscape Architecture, Real Estate, and Urban Design & Planning.



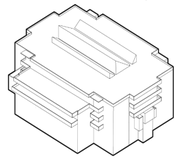
A. UW Seattle Central Campus



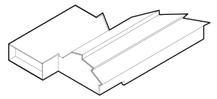
B. UW Seattle Sand Point Facility



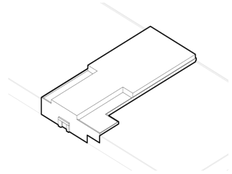
1. ARCHITECTURE HALL - 42,860 GSF
Offices, Studios, Classrooms



2. GOULD HALL - 124,446 GSF
Offices, Studios, Classrooms, Teaching Labs, Fabrication Lab, Community Space, Research Labs, Built Environments (BE) Library



3. COMMUNITY DESIGN BUILDING - 3,225 GSF
Offices, Studios, Exterior Yard
*W26 Development Site, UW 2019 Masterplan



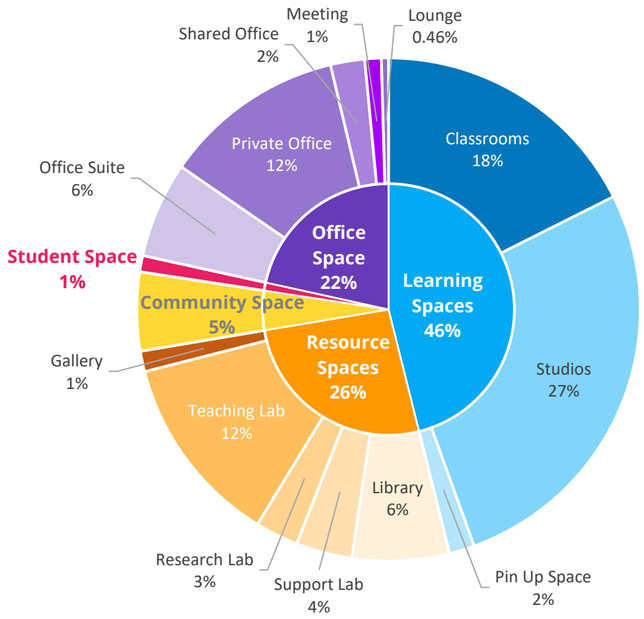
4. CENTER FOR EDUCATION & RESEARCH IN CONSTRUCTION - 28,700 GSF
Studios, Classrooms, Teaching Lab, Student Space, Offices

Credit for Map Aerials: *OpenStreetMap, openstreetmap.org/copyright*

KEY FINDINGS

The primary opportunities, issues, and needs uncovered during this visioning and programming study include:

- **Provide Space to Support Students:** Academic learning at the CBE has evolved to include greater collaboration among students. However, only 1% of the total square footage of the CBE buildings on the UW Seattle Campus is designated as student space to support studying, collaborating, socializing, and recharging. (See p. 26) In an online survey, most student respondents indicated the biggest limit to their use of *collaboration*, *study*, or *lounge* space at the CBE is the lack of available seats. Providing more designated space for students to connect and collaborate with one another will promote greater intra- and interdisciplinary learning and engagement.
- **Align Learning Spaces with Innovative Teaching Methods:** CBE's flexible, collaborative, and interdisciplinary teaching methods are not consistently supported in classrooms with outdated layouts and equipment. Eyes-front classroom arrangements, inflexible furniture, and classrooms incapable of supporting digital and virtual learning methods do not support this. The misalignment between CBE needs and available classroom types results in underutilized classrooms in CBE buildings, leading to courses being scheduled outside CBE facilities elsewhere on campus. Academic department chairs identified flexible, technology-enhanced classrooms as their most critical unmet space need for teaching and curriculum innovation (See p. 30)
- **Align Departmental Office Suite Space with Changing Needs:** Faculty and staff working, collaboration, research, and meeting needs are not supported by existing office suite layouts and types. On the UW Seattle Central Campus, 1% of CBE spaces are allocated as meeting spaces, and 12% are allocated as faculty and staff private offices. The feedback gathered from faculty, staff, and administrators indicates a need for additional small and large meeting and collaboration spaces. Faculty spend their time in a wide variety of space types – classrooms, studios, meeting rooms, research labs, communal spaces, as well as their offices. An online survey found that most faculty use their office for fewer than 25 hours a week, indicating the potential to apply new models of workspace allocation and organization. As the CBE Community desires spaces to support cross-departmental and interdisciplinary collaboration, there is an opportunity to rethink office space use and organization across all CBE departments.
- **Support CBE Community Wellbeing:** Spaces to support people's health and well-being are either absent in current CBE facilities, exist in an ad-hoc fashion, or are difficult to access. Needs include space for storing and preparing food, resting, storing belongings, showering, praying, meditation, and lactation, as well as habitable outdoor spaces. While there is a staff lounge with a kitchenette in Gould Hall, students cannot access a similar kitchenette or rest area. Instead, students, faculty, and staff are creating their own ad-hoc kitchenettes for food storage and prep in studios, research labs, and other work areas. A renewal of CBE facilities should consider the distribution, visibility, and access of these resources.



UW Central Seattle Campus

Architecture Hall, Gould Hall, Community Design Building

Note: Reference p. 26 for Sand Point facility program breakdown.

KEY FINDINGS (Continued)

- **Increase Students' Access to Spaces** During the space workshops, students identified barriers to knowing which spaces within CBE they are permitted to use, the hours of availability, and the method for reserving space for collaboration, meeting, and/or studying. Poor visibility of CBE resources, work, and research hinders the CBE's goals of interdisciplinary knowledge sharing (See pp. 54, 56.*)* CBE spaces that enhance student involvement and meet academic needs, such as research labs, fabrication spaces, meeting rooms, open classrooms, and associated equipment would be better accessed by all students through a comprehensive system for space management that is clear and easy to navigate.
- **Deferred Maintenance Impacts Equity** Spaces at the CBE are not inclusive to all groups, partly due to building maintenance and upgrades that have been deferred for years. In the *Student Voices on Building Inclusivity* workshop, over 80 space concerns were identified by student participants, 23% of which directly relate to building maintenance and repair. (See pp. 78-81.) Inequity in spaces impacts members of underrepresented groups and undermines the CBE's goals of inclusion and safety. Addressing issues like insufficient wayfinding, inaccessible spaces, and unusable outdoor spaces would improve the experience of all CBE members, serving the CBE's goal of equitable spaces.
- **Deferred Maintenance Impacts Well-being** UW has deferred building maintenance items including interior finishes and doors, mechanical systems, thermal controls, electrical systems, exterior and interior lighting systems, building exterior walls and roofs, elevators, drinking fountains, and bathrooms, which have contributed both to difficulty in using the buildings and to a lack of physical comfort and well-being. Elevator operation, wayfinding, and restrooms in Gould Hall were frequently identified as barriers by CBE community members throughout this study. Of the 83 barriers identified by CBE faculty, staff, and students during the Space Workshops, 33% relate directly to building maintenance and repair. (See pp. 78-81.*)* Additionally, the visible wear and tear in CBE spaces impact people's sense of dignity and their ability to learn and work effectively. *(*See pp. 70-73.*)* Addressing deferred maintenance items strategically would benefit the well-being of the CBE community and improve people's ability to do their best work.
- **Building Reuse and Renewal as Climate Action** The CBE's facilities do not meet UW's climate action goals as outlined in the *UW Sustainability Action Plan,* 2020, largely due to poorly maintained building systems. Outdated systems and the lack of adequate tracking of data and transparency about building performance directly conflict with the CBE's vision to act as an exemplar in addressing climate change. Maintaining and reusing existing CBE facilities is a top priority for the CBE community as renewal and reuse of existing facilities honor the embodied cultural significance of buildings like Gould Hall and Architecture Hall, as well as the embodied carbon. The CBE community embraces the notion of using their facilities as a Living Lab and leading as an exemplar for responsible and innovative building design, systems, and construction. (See pp. 46, 48)
- **Implement Universal Design Principles at the CBE** Given that the CBE community consists of a multitude of identities, backgrounds, and user types, and many spaces within the CBE are currently inaccessible or marginally accessible, the College would benefit from a comprehensive analysis of its existing spaces – both physical and virtual through the lens of Universal Design principles. The spaces necessary to, and in the enhancement of, learning and research should be usable, accessible, and inclusive to all members. Addressing these access issues and holistically approaching the renewal of CBE facilities through the lens of Universal Design will positively impact the CBE community and align the CBE spaces with CBE values.

Framing and Governance

VISIONING STUDY FRAMING

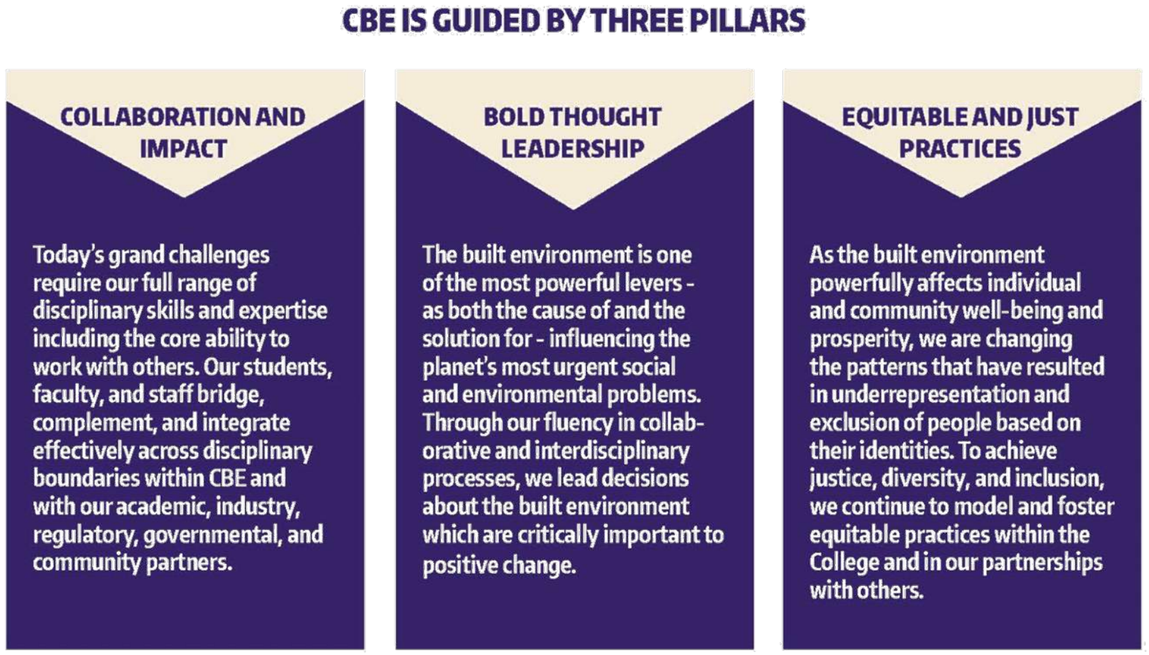
The *2023 Visioning and Programming Study, College of Built Environments,* builds on the *CBE Strategic Framework* completed by the Office of the Dean in 2019. Through support from the UW Office of the Provost, CBE Dean Renée Cheng initiated this study with the following framing questions:

- *How can space support or generate opportunities for more collaboration among faculty, staff, and students of diverse disciplines and backgrounds?*
- *Is there a different way of organizing operations (program administration, advising, research) for more interdisciplinary work?*
- *How can spaces communicate welcome to a diverse range of current and prospective students, faculty and staff?*
- *Can the diversity of instructional space types, like outdoor and semi-conditioned space be increased?*
- *With additional use of hybrid, remote, and in-person learning, do our space needs change?*
- *How can our values, like hands-on fabrication and testing for teaching and scholarship, be supported or reflected in our spaces?*

GOVERNANCE

At the project's outset, the Office of the Dean established the *Schedule & Logistics Project Working Team* (PWT), whose members were tasked with project oversight, weekly feedback, and implementation guidance. To communicate the study to internal stakeholders, this PWT drafted eight goals for the study's visioning process and outcomes, grounded in the CBE's 2019 Strategic Framework. (See p. 9.)

In addition to the *Schedule & Logistics PWT*, the Office of the Dean established a *Project Advisory Committee* (PAC), a *Standards Project Working Team, and Sustainability Project Working Team*. These groups provided subject-matter guidance and feedback throughout the process, representing various perspectives within the CBE community.



Excerpt from CBE Strategic Framework

Goals

The Project Advisory Committee affirmed these overarching study goals and a time horizon of 1 – 30 years.

REFLECTS INCLUSIVE ENGAGEMENT

Reflects the broad and inclusive participation of the whole CBE community

BUILDS ON IN-HOUSE KNOWLEDGE

Leverages the planning, design, and construction expertise, creativity, and experience of faculty, staff, and students

SUPPORTS DEEP COLLABORATION

Designs space for efficient use and deep collaboration amongst students, faculty, and staff of diverse disciplines and backgrounds

DIVERSIFIES INSTRUCTIONAL SPACES

Identifies opportunities to adapt and expand instructional space types, both physical and virtual, for hybrid working and learning at a range of scales from body to campus

CREATES WELCOMING AND SAFE SPACES

Recognizes the power structures, cultural differences, and shared values amongst stakeholders to design spaces that welcome people of diverse backgrounds and clearly communicate how space is navigated and activated

PROMOTES HEALTH AND WELLBEING

Promotes human health, comfort, and wellbeing through space planning and design (through healthy building materials, supply chain equity, and low carbon impact as well as lessons learned from the pandemic)

IDENTIFIES LEARNING OPPORTUNITIES

Creates potential for students and faculty to integrate learning into near-future and future plans for CBE facilities

ANTICIPATES THE FUTURE

Anticipates the future evolution of learning and working practices while also accommodating unexpected change

Process

The CBE 2023 Programming and Visioning Study prioritized surveying, community engagement, and road mapping.

Frame

PROJECT VALUE

+

8 GOALS

- WELCOMING
- ENGAGEMENT
- WELLNESS
- COLLABORATION
- FUTURE
- SPACE
- LEARNING
- KNOWLEDGE

+

CBE 2019 STRATEGIC FRAMEWORK
3 PILLARS

1. COLLABORATION & IMPACT
2. BOLD THOUGHT LEADERSHIP
3. EQUITABLE AND JUST PRACTICES

Engage

BUILDING SURVEY

+

IN-PERSON ENGAGEMENT

- WORKSHOPS
- LISTENING
- DISPLAY

+

VIRTUAL ENGAGEMENT

- WORKSHOPS
- LISTENING
- DISPLAY
- TOWN HALL

Envision

VISIONING REPORT

+

STRATEGIC PROJECTS ROADMAP

- FUTURE KEY INITIATIVES
- PROJECTED PHASING

+

SMALL-PROJECTS ROADMAP

- NEAR-TERM KEY INITIATIVES
- IMPLEMENTATION PLAN

2. A Path Forward for the CBE

A Path Forward for the CBE

OVERVIEW

A path forward for the CBE incorporates six workstreams composed of 25 projects. Together, they envision maximum benefit to the College, prioritize building reuse and care, seek to cultivate an inclusive CBE learning and research community, strategically consolidate and update existing spaces, and, in some cases, introduce new program types.

These workstreams, and the full complement of projects they represent, are deeply informed by the analysis of feedback from students, faculty, staff and administrators who participated in college-wide user surveys and workshops. They are further informed by the detailed building survey of all CBE spaces and resources; and analysis of space utilization rates in CBE-designated buildings and non-CBE buildings.

WORKSTREAMS

Student Life
Student Space, Student Engagement

Access & Welcome
Accessibility and Equity, Wayfinding and Identity

Interdisciplinary Collaboration
Broadcast Work and Ideas, Collaboration & Meeting

Innovative Learning
Supportive Learning Spaces, Technology Upgrades

Community Health
CBE Community Wellness, Connected Exterior Space

Climate Action
Building Systems, Environmental Stewardship

All workstreams and proposed projects seek to put key findings into action and demonstrate a way forward for the CBE to address its current, pressing needs and barriers, as well as its aspirations for future growth, research and collaboration.

PHASES FOR WORKSTREAMS

1. ***Ways to Begin*** **-** High-priority projects that have a significant impact with less intervention and cost. The CBE Community can implement these projects within current CBE spaces. The CBE's current annual budget may accommodate some of these.

2. ***Upgrades and Medium Projects*** – Priority projects that require more planning time and have higher costs. They may require fundraising efforts and the incorporation of professionals outside the CBE to assist in implementation.

3. ***Transformational Projects*** - These projects are aspirational and would have a significant positive impact on the CBE community. They consist of substantial interventions with longer planning times associated and higher costs that require capital appropriations and fundraising, in addition to consultant services.

THE IMPORTANCE OF PROJECT WORKING TEAMS & IN-HOUSE KNOWLEDGE

The workstreams are structured to connect the design, planning, and sustainability expertise of CBE community members to education and research opportunities for students, faculty, staff and administrators. Two of the PWTs formed during the study are now associated with specific workstreams.

The *Standards PWT* will be integral to the *Innovative Learning Workstream* as its members help to inform consistent technology upgrades in learning spaces. The *Sustainability PWT* will focus on the *Climate Action Workstream* and implement projects for building systems and stewardship. Ideally, these PWTs will interact with all workstreams in some capacity. Moving forward, the CBE should consider adding these two additional PWTs to be associated with proposed workstreams:

Research, Outreach, and Connection (ROC PWT): The *ROC PWT* integrates with the *Interdisciplinary Collaboration Workstream* to lead conversations on interdisciplinary research and collaboration, thereby attracting new scholars, researchers, and funding streams.

Equity and Access PWT (EA PWT): The *EA PWT* integrates with the *Access & Welcome Workstream* and will consist of CBE faculty, staff, and students who address themes of access, representation, resources, and values.

Workstreams: Goals and Considerations

STUDENT LIFE

Designate a network of space within CBE facilities where students have agency and governance. These spaces should accommodate needs for studying, collaboration, storage, and resting. Provide a space within this network where student organizations can meet regularly.

ACCESS & WELCOME

Create a welcoming environment in CBE facilities that is easy to navigate and accommodates the needs of all users.

INTERDISCIPLINARY COLLABORATION

Create spaces within the CBE that facilitate diverse meeting types and work styles for faculty, staff, and students. These spaces should support collaboration, research, and innovation.

INNOVATIVE LEARNING

Redesign CBE classroom and studio spaces to accommodate diverse teaching and learning formats. Integrate technology that supports in-person and hybrid meeting. Future-proof technology needs by updating periodically.

COMMUNITY HEALTH

Spaces should accommodate and welcome all identities. Spaces should support individuals' physical and mental well-being and facilitate strong community-building. Designate space within the CBE for its community members to relax, recharge and socialize, both in and outdoors.

CLIMATE ACTION

Develop the CBE into a model for sustainability by retrofitting existing buildings. Promote low-carbon design, efficient building systems, and the selection of healthy materials. Integrate building awareness and stewardship into the CBE curriculum.

WORKSTREAM DIAGRAM KEY

CONDITIONS OF SUCCESS
Each workstream includes conditions of success, or requirements that must be met for the workstream to be deemed successful. These are intended to guide the decisions that shape each project as it moves forward.

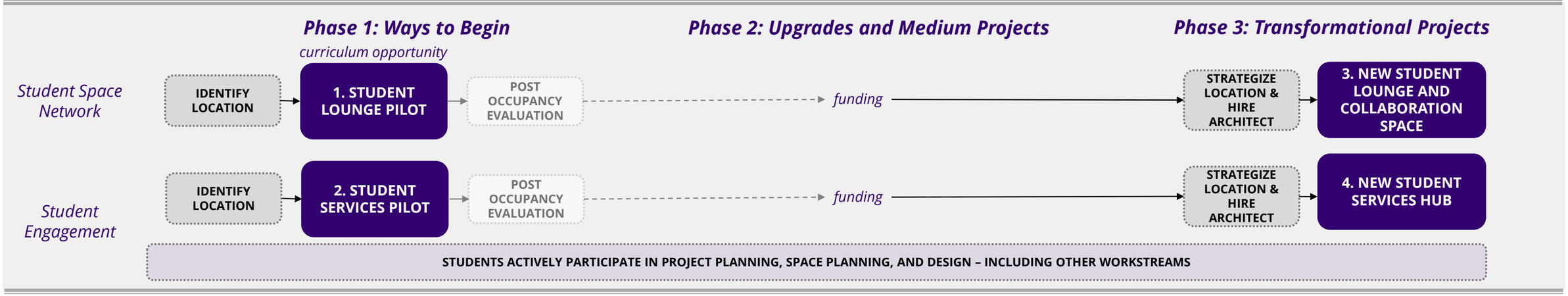
CURRICULUM OPPORTUNITY
Many projects consist of scopes that could be incorporated directly into the CBE curriculum and provide opportunities to leverage the expertise of those associated with the College. "Curriculum Opportunities" could take the form of an elective course, a student-led design-build effort, or research initiative lead by CBE faculty.

CONSIDERATIONS IN PLANNING
Considerations in planning are identified in each workstream to provide additional recommendations or considerations that are relevant to the projects. They highlight important findings from the study, elaborate on the project components, and/or contain specific recommendations from KT.

ADDITIONAL PROJECTS TO CONSIDER
Each workstream outlines key projects in a phasing sequence. In addition to these projects, some additional projects have been listed and described for consideration. As the CBE moves forward with initiatives, they may reorganize or shuffle the sequences of projects - and they may choose to include the additional projects outlined within each workstream.

Workstream: **Student Life**

GOAL: *Designate a network of space within CBE facilities where students have agency and governance. These spaces should accommodate needs for studying, collaboration, storage, and resting. Provide a space within this network where student organizations can meet regularly.*



PROJECTS

1. Designate a **pilot student lounge** in a current CBE Building. Space must accommodate socializing, de-stressing, studying, and food prep. The CBE may wish to include students in the design and/or build portion of this pilot. This pilot program should inform the later implementation of a larger and more permanent Student Space. Consider proposing the project as part of a UW-wide student lounge network.
2. Designate a pilot student services center within the CBE, that can serve as a 'one stop shop' location for student advising, tutoring, organization information hub, and other needs for students. This space should provide students with easy access to, and understanding of resources available to them, in a safe, and comfortable environment.
3. Incorporate a **new student lounge** and meeting space in the CBE informed by the pilot program. Project should accommodate socializing, de-stressing, studying, food prep, storage, and a highly visible collaboration space. Consider proposing the project as part of a UW-wide student lounge network.
4. Incorporate a new **student services center hub** within the CBE that is informed by the pilot program.

ADDITIONAL PROJECT TO CONSIDER

- *Student Artwork Project Working Team (PWT):* A student-led group could organize artwork showings and displays on rotation in the Gould Gallery. Additionally, this group could incorporate artwork in CBE Buildings with guidance from affinity groups.

CONDITIONS OF SUCCESS

- ❑ Students have space within the CBE where they have agency and feel safe.
- ❑ Commuter students have adequate storage for their belongings.
- ❑ All students have places to rest and recharge between classes.
- ❑ Spaces that accommodate the needs for academic success such as study areas, collaboration areas, and wellness are easily accessible.
- ❑ Students have a greater sense of wellbeing at the CBE due to added space dedicated to their usage.

CONSIDERATIONS IN PLANNING

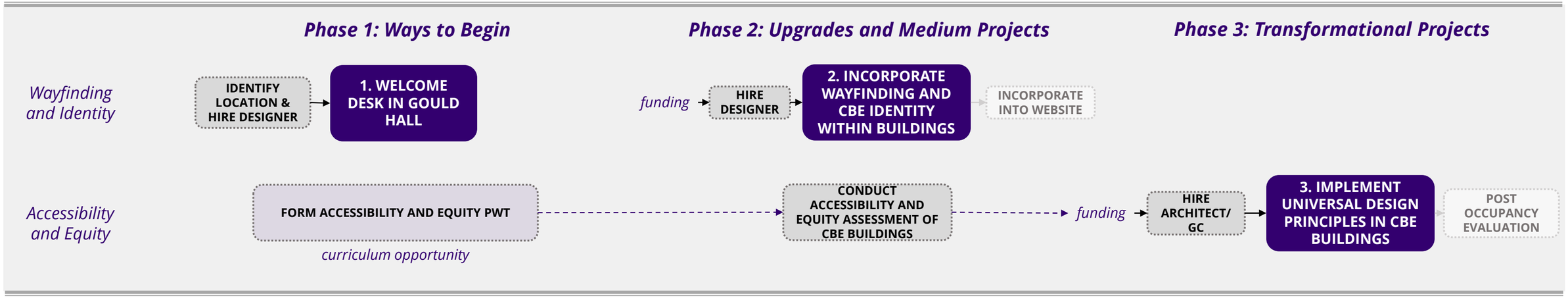
Student Lounge Pilot: In determining a location for a student lounge, consider underutilized or unassigned space within CBE buildings. A lounge could be implemented in current buildings with minor furniture, fixtures, and equipment upgrades and ultimately inform later work. A thorough evaluation on the pilot space's use and effect on student's overall wellbeing should be conducted to inform decision-making in Phase 3.

New Student Lounge and Collaboration Space: In determining a location, consider any gained efficiency due to other initiatives such as consolidation of Faculty/Staff Offices outlined in the 'Interdisciplinary Collaboration' Workstream.

Student Services Hub: Consider incorporating resources for students such as tutoring, a writing center, career services, and other needs.

Workstream: **Access & Welcome**

GOAL: *Create a welcoming environment in CBE facilities that is easy to navigate and accommodates the needs of all users.*



PROJECTS

1. Incorporate a **welcome desk** in Gould Hall to assist in wayfinding and directions. Location TBD.
2. Incorporate a **wayfinding and CBE identity** within the CBE's facilities and its website. Emphasis should be placed on Gould Hall wayfinding, as this was found to be a specific barrier to new visitors. Branding of the CBE should be visible and present in all facilities.
3. Embark on a holistic **accessibility upgrade to CBE facilities via the lens of Universal Design principles**. All spaces in CBE buildings should be made to be accessible to all community members. When designing the restroom upgrades, consider gender-neutral restrooms.

***ADDITIONAL* PROJECTS TO CONSIDER**

- Install a shuttle service between CERC and the main campus to better connect this facility to centrally-located buildings.
- Increase awareness of CBE resource space for students. Include information about access, regulations, and reservation systems in one cohesive place for easy reference. Additionally, consider increasing access hours to resource spaces such as the BE Library, Fabrication Lab, and Archnet by providing secure entry with keycards.
- Re-visit mass communication and methods of sharing information to the CBE Community.

CONDITIONS OF SUCCESS

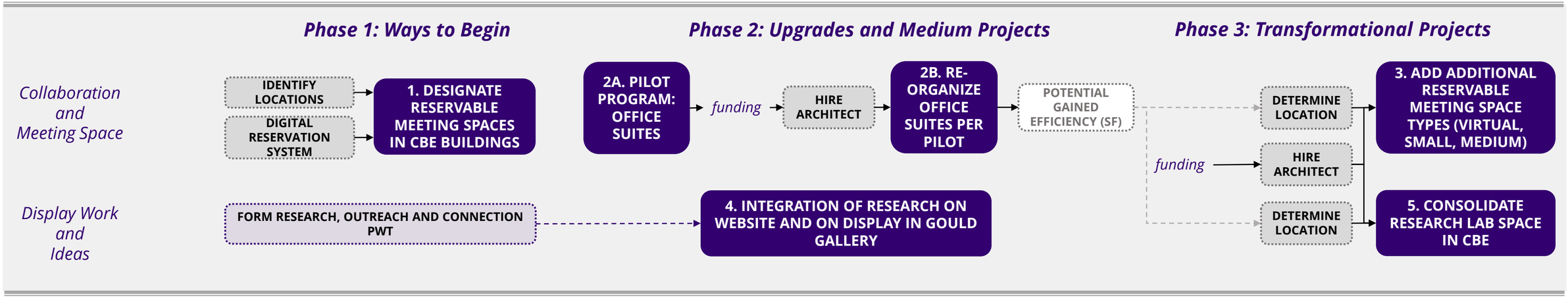
- ❑ CBE identity and programs are visible and legible to visitors and community members.
- ❑ Space is more equitable and accessible for all identities and populations within CBE.
- ❑ Entry sequences to CBE buildings are clear and users are well-informed and can navigate easily to their destinations.
- ❑ CBE community members are aware of and have access to CBE resources that support their academic success and wellbeing.

CONSIDERATIONS IN PLANNING

Accessibility and Equity PWT: Consider including students, staff, and faculty in the PWT. Universal Design strategies should be implemented around building access, safety, and inclusion. A special elective course would allow students to deeply integrate themselves in the assessment and overall recommendation to the PWT.

Workstream: **Interdisciplinary Collaboration**

GOAL: *Create spaces within the CBE that facilitate diverse meeting types and work styles for faculty, staff, and students. These spaces should support collaboration, research, and innovation.*



PROJECTS

1. Enhance the existing room reservation system to allow students, faculty, and staff to reserve meeting spaces using currently dedicated meeting spaces and underutilized rooms.
2. Designate a **pilot program** to testbed new academic workspace strategies. Re-organize all office suite spaces per pilot project findings. Spaces should accommodate diverse meeting and work types, technology for hybrid meetings, and biophilic design concepts.
3. Add additional **reservable meeting space** types including small pods that accommodate 1-2 people (and attending virtual meetings), small meetings of 3-5 people, and medium meetings of 5-12 people. Proper acoustical design should be considered in implementation.
4. **Showcase research initiatives** online and in the Gould Gallery forum—this can help attract new researchers and scholars to contribute to CBE.
5. Create a **centralized research lab** space in the CBE to foster interdisciplinary collaboration, visibility of work, and innovation.

CONDITIONS OF SUCCESS

- ❑ Faculty and Staff have a calm and beautiful space to do work, collaborate with one another, and meet with students.
- ❑ Collaboration and hybrid meeting needs are met for all CBE community members.
- ❑ Research work is made transparent to the community—enhancing ability to attract new scholars and researchers as well as funding streams.
- ❑ Research initiatives build on one another and collaboration is more likely via consolidation of space.

CONSIDERATIONS IN PLANNING

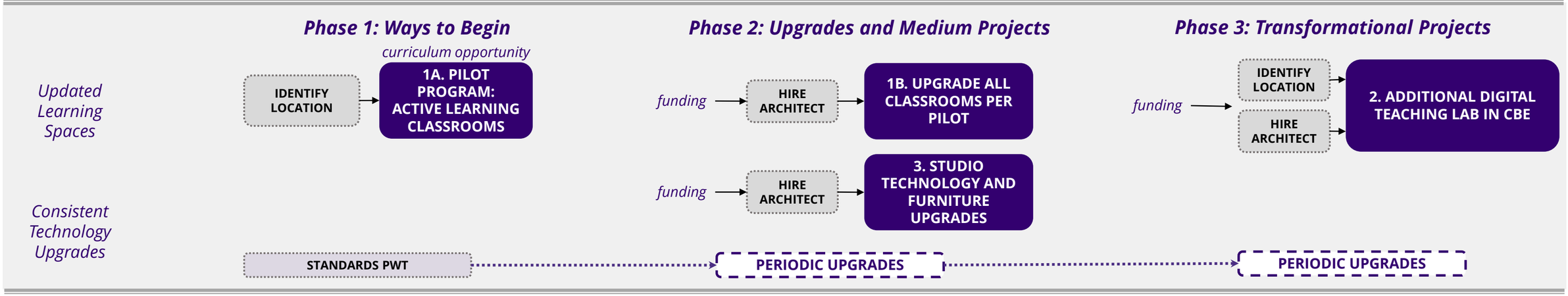
Reservable Meeting Space: Several meeting spaces already exist but their availability is unknown to many community members. Use existing meeting space and make it available to students, faculty, and staff.

Office Suite Re-organization: An emphasis on diverse working styles and meeting types should be accommodated—possible gain of square foot efficiency to be allocated to other needed program types such as Student Services Center, Meeting Space, a Student Lounge, and/or Community Lounge.

Research, Outreach, and Connection PWT: Lead conversations surrounding interdisciplinary research and collaboration, as well as attracting new scholars, researchers, and funding streams. Consider including members from the Advancement Office.

Workstream: **Innovative Learning**

GOAL: *Redesign CBE classroom and studio spaces to accommodate diverse teaching and learning formats. Integrate technology that supports in-person and hybrid meeting. Future-proof technology needs by updating periodically.*



PROJECTS

1. Designate a **pilot** program to implement 1-2 active learning classrooms in CBE Buildings. Verify needs during pilot and implement upgrades to additional classrooms for hybrid-flexible and active learning needs.
2. Upgrade **CBE studio space** for hybrid-flexible pin-up and current student needs. Consider whether students should have assigned desks or operate on a 'hot desk' capacity. Intentional furniture and space planning is crucial for either pedagogical strategy.
3. Add an additional **digital teaching lab** in CBE that accommodates computer stations for all students.

ADDITIONAL PROJECTS TO CONSIDER

1. Periodic upgrades to Fabrication Lab and Digital Commons as needed. (*Standards PWT* to initiate)
2. Strategizing how pin-up space is reserved and used (digital and physical).
3. Implement a pilot program for alternate studio layout strategy. Students may participate in decision-making.

CONDITIONS OF SUCCESS

- ❑ Classrooms reflect changing needs in teaching styles and hybrid learning environments.
- ❑ CBE has a system of active learning / hybrid-flexible classrooms available for instruction.
- ❑ Student needs for studio space are met, and furniture, technology, and space corresponds with current learning and teaching methods.
- ❑ Technology needs are addressed on a regular basis throughout CBE.

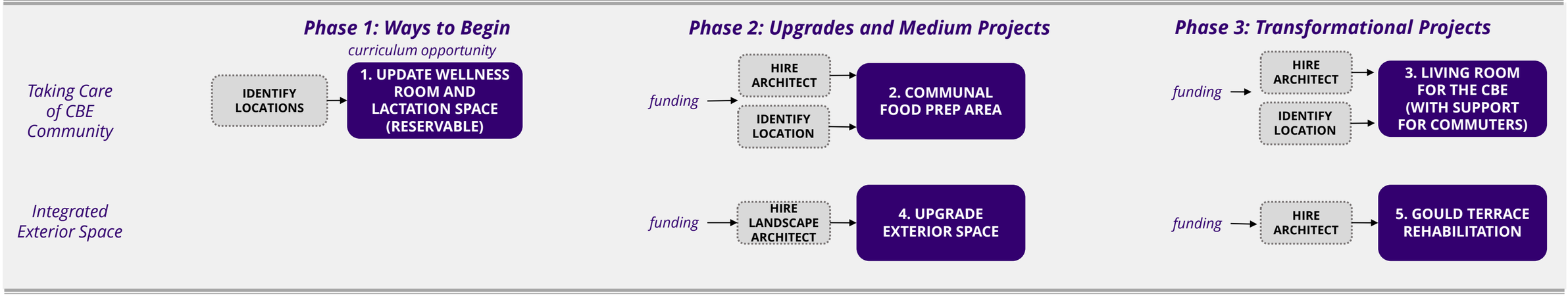
CONSIDERATIONS IN PLANNING

Standards Project Working Team (PWT): Consider implementing a database for all CBE community members to better understand technology resources at their disposal.

Digital Commons: Consider how the digital commons can better serve the CBE community with study pods, updated technology, or better lighting.

Workstream: **Community Health**

GOAL: *Spaces should accommodate and welcome all identities. Spaces should support individuals' physical and mental wellbeing and facilitate strong community-building. Designate space within the CBE for its community members to relax, recharge and socialize, both in and outdoors.*



PROJECTS

1. Designate an updated **wellness room** (Reservable) available for meditation, prayer and recharge. A separate space should be available and reservable specifically for lactation needs.
2. Integrate a **communal food preparation a**rea and lounge for the CBE Community in one of the centrally located buildings - Gould, CDB, or Architecture Hall. This space can potentially be absorbed if/when item 3 is implemented.
3. Install a **new living room** for the CBE Community with food preparation, commuter student support, and social space.
4. Upgrade **exterior space** to integrate with interior programming, and to accommodate socializing, classroom learning, collaboration, and studying. Exterior spaces, including landscaping, should be regularly maintained.
5. Rehabilitate the **Gould Terraces** which are currently uninhabitable.

CONDITIONS OF SUCCESS

- ❑ CBE community has access to calm, quiet, and relaxing space for meditation, prayer, or recharge.
- ❑ CBE community has access to healthy food and food preparation areas.
- ❑ CBE Community has a space designated for lactation support.
- ❑ CBE community has space to recharge and socialize outdoors.
- ❑ All exterior spaces are used to their full potential.

CONSIDERATIONS IN PLANNING

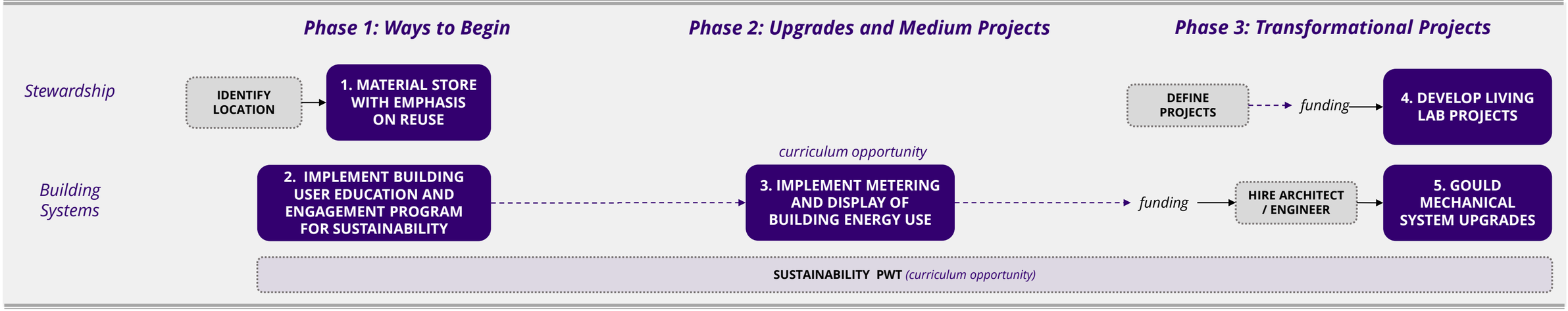
Wellness Room: Consider redesigning the current wellness room in the basement of Gould Hall. Efforts should be made to make this space more habitable. Alternatively, relocate this space to somewhere with natural light.

Communal Food Prep: While the CBE does have some existing kitchenettes, they are usually only available to faculty and staff. These existing kitchenettes could be replaced with a centralized kitchen that brings people together in a communal setting. This would allow the previous kitchenettes to be repurposed for other uses.

Exterior Space: Many CBE community members expressed the need to recharge, meet in groups, eat lunch, or study outdoors. Faculty requested outdoor spaces for teaching. Furniture upgrades could provide this opportunity. Stormwater management via landscape design should be implemented for maximum efficiency.

Workstream: **Climate Action**

GOAL: *Develop the CBE into a model for sustainability by retrofitting existing buildings. Promote low-carbon design, efficient building systems, and the selection of healthy materials. Integrate building awareness and stewardship into the CBE curriculum.*



PROJECTS

1. Create a **Material Store** within the CBE that provides students with easy access to sustainable materials needed for project work; adequate storage for material reuse should be incorporated to facilitate less waste. Students may have access to material 'scraps' for a lower cost, which helps reduce overall waste from the College.
2. Create a **Building User Education and Engagement** program to spread awareness of the environmental impact of user actions. Identify strategies for living/working more sustainably and engage the community in ongoing sustainability efforts at the CBE.
3. Implement **metering and display building energy uses** on the CBE website for educational purposes and to inform future upgrades and strategies.
4. Engage the **Sustainability PWT** to identify scopes for the CBE to perform as a **Living Lab**.
5. Perform a complete **upgrade to Gould's mechanical systems**, implementing metering and greater user controls.

CONDITIONS OF SUCCESS

- ❑ CBE students, faculty, and staff knows and understands how their buildings operate and at what carbon cost.
- ❑ Stewardship: the CBE can identify, advocate for, and implement sustainable solutions to deferred maintenance issues.
- ❑ Gould Hall has prioritized optimization of its mechanical systems.
- ❑ Healthy materials are incorporated in all new purchasing and initiatives at the CBE.
- ❑ CBE buildings serve as a model for sustainability for the rest of UW and the wider community.

CONSIDERATIONS IN PLANNING

Sustainability Project Working Team (PWT): The PWT should undertake defining what it means for CBE to be a Living Lab, confirm and achieve sustainability goals across projects, and work with UW to improve building systems. This PWT can provide guidance for sustainable and healthy material procurement through all other workstreams. The Sustainability PWT should work closely with all other College initiatives to bundle important deferred maintenance items with any other potential upgrades and projects. Creative solutions should be explored to offer a model for other UW Colleges and beyond.

Matrix of Workstreams: **Phasing and Key Projects**

	STUDENT LIFE	ACCESS & WELCOME	INTERDISCIPLINARY COLLABORATION	INNOVATIVE LEARNING	COMMUNITY HEALTH	CLIMATE ACTION
GOAL	*Designate a network of space within CBE facilities where students have agency and governance. These spaces should accommodate needs for studying, collaboration, storage, and resting. Provide a space within this network where student organizations can meet regularly.*	*Create a welcoming environment in CBE facilities that is easy to navigate and accommodates the needs of all users.*	*Create spaces within the CBE that facilitate diverse meeting types and work styles for faculty, staff, and students. These spaces should support collaboration, research, and innovation.*	*Redesign CBE classroom and studio spaces to accommodate diverse teaching and learning formats. Integrate technology that supports in-person and hybrid meeting. Future-proof technology needs by updating periodically.*	*Spaces should accommodate and welcome all identities. Spaces should support individuals' physical and mental wellbeing and facilitate strong community-building. Designate space within the CBE for its community members to relax, recharge and socialize.*	*Develop the CBE into a model for sustainability by retrofitting existing buildings. Promote low-carbon design, efficient building systems, and the selection of healthy materials. Integrate building awareness and stewardship into the CBE curriculum.*
PHASE 1	• Student Services Pilot Program • Student Lounge Pilot Program	• Welcome Desk in Gould Hall • Form Accessibility and Equity PWT	• Designate Reservable Meeting Spaces in CBE Buildings • From Research Outreach and Connection PWT	• Pilot Program: Active Learning Classrooms • Standards PWT Continues Meeting	• Update Wellness Room and Lactation Space	• Material Store, with emphasis on reuse • Implement Building User Education and Engagement Program for Sustainability
PHASE 2	• Fundraising Phase: use pilot program outcomes to help facilitate Phase 3 projects.	• Incorporate Wayfinding and CBE Identity within Buildings • Conduct Accessibility and Equity Assessment of CBE Buildings	• Pilot Program: Office Suites • Re-Organize Office Suites Per Pilot • Integration of Research on Website and on Display in Gould Gallery	• Upgrade all Classrooms per Pilot in Phase 1 • Studio Technology and Furniture Upgrades	• Add Communal Food Prep Area • Upgrade Exterior Space, Integrate with interior programming	• Implement Metering and Display of Building Energy Use
PHASE 3	• New Student Lounge and Collaboration Space • New Student Services Hub	• Implement Universal Design Principles in CBE Buildings	• Add Additional Reservable Meeting Space Types (Virtual, Small, Medium) • Consolidate Research Lab Space in CBE	• Additional Digital Teaching Lab in CBE	• Living Room for the CBE (With Support for Commuters) • Gould Terrace Rehabilitation	• Develop Living Lab Projects • Gould Mechanical System Upgrades
CONDITIONS OF SUCCESS	❑ Students have space within the CBE where they have agency and feel safe. ❑ Commuter students have adequate storage for their belongings. ❑ All students have places to rest and recharge between classes. ❑ Spaces that accommodate the needs for academic success such as study areas, collaboration areas, and wellness are easily accessible. ❑ Students have a greater sense of wellbeing at the CBE due to added space dedicated to their usage.	❑ CBE identity and programs are visible and legible to visitors and community members. ❑ Space is more equitable and accessible for all identities and populations within CBE. ❑ Entry sequences to CBE buildings are clear and users are well-informed and can navigate easily to their destinations. ❑ CBE community members are aware of and have access to CBE resources that support their academic success and wellbeing.	❑ Faculty and Staff have a calm and beautiful space to do work, collaborate with one another, and meet with students. ❑ Collaboration and hybrid meeting needs are met for all CBE community members. ❑ Research work is made transparent to the community—enhancing ability to attract new scholars and researchers as well as funding streams. ❑ Research initiatives build on one another and collaboration is more likely via consolidation of space.	❑ Classrooms reflect changing needs in teaching styles and hybrid learning environments. ❑ CBE has a system of active learning / hybrid-flexible classrooms available for instruction. ❑ Student needs for studio space are met, and furniture, technology, and space corresponds with current learning and teaching methods. ❑ Technology needs are addressed on a regular basis throughout CBE.	❑ CBE community has access to calm, quiet, and relaxing space for meditation, prayer, or recharge. ❑ CBE community has access to healthy food and food preparation areas. ❑ CBE Community has a space designated for lactation support. ❑ CBE community has space to recharge and socialize outdoors. ❑ All exterior spaces are used to their full potential.	❑ CBE students, faculty, and staff knows and understands how their buildings operate and at what carbon cost. ❑ Stewardship: the CBE can identify, advocate for, and implement sustainable solutions to deferred maintenance issues. ❑ Gould Hall has prioritized optimization of its mechanical systems. ❑ Healthy materials are incorporated in all new purchasing and initiatives at the CBE. ❑ CBE buildings serve as a model for sustainability for the rest of UW and the wider community.

3. Space Use, Needs, and Goals

3. Space Use, Needs, and Goals

The following sections include the detailed findings informing *A Path Forward for the CBE* (Section 2), summarized according to each component of the CBE engagement framework.

3.1 Space Assessment Summary

On-site Space Survey
Space Types and Distribution
Space Distribution Across the CBE Campus and Buildings
Learning Spaces Utilization

3.2 User Survey Findings on Space Use and Priorities

Department Chairs Questionnaire
Faculty & Staff User Survey
Student User Survey

3.3 Space Workshop Analysis: Aspirations, Barriers, Needs, Equity & Care

Conflict & Consensus: Essential and Non-Essential Spaces (Workshop 1)
Conflict & Consensus: Themes on Aspirations (Workshop 1)
Control, Influence, Accept: Themes on Space Use Barriers (Workshop 2)
Student Voices on Building Inclusivity, Listening Session (Workshop 3)
A Care-Based Synthesis

3.4 Deferred Maintenance Analysis and Impacts

3.5 Space Goals and Strategies

All College Charrette: *Future Roadmaps* and *Key Initiatives*
Sustainability Workshops and Goals
Space Standards Goals

3.1 Space Assessment Summary

On-site Space Survey
Space Types and Distribution
Space Distribution Across the CBE Campus and Buildings
Learning Spaces Utilization

On-site Space Survey

SITE SURVEY AND DOCUMENTATION

Before the start of classes in September 2022, KT conducted a survey of the CBE's four buildings. This involved visiting the spaces, checking sizes and usage, and gathering information about furniture, lighting, equipment, and views. In October 2022, KT visited the same spaces while classes were in session to observe how the CBE community used the facilities during a typical term.

CDB Yard

OVERALL SITE OBSERVATIONS

- **Campus:** The College has two distinct locations within the Seattle campus – on the central campus, Architecture Hall, Gould Hall, and the CDB are clustered closely together; and at the Sandpoint facility, located 3 miles north, which includes CERC.
- **Spatial Identity:** Wayfinding and branding within the CBE facilities are inconsistent and generally lack clarity.
- **Private Offices:** Architecture Hall and Gould Hall contain faculty and staff offices—many private offices seem to be dominated by clutter and are being used primarily as storage.
- **Research Transparency:** The research labs within the CBE are not branded, nor are they very well connected to the rest of the community or one another. It is difficult to determine how many people use the spaces regularly due to a lack of centralized information.
- **Student Space:** The CBE lacks community and student spaces, or spaces dedicated for students to socialize, rest, study, eat, or collaborate. The only student spaces in the CBE on the main campus consist of small kitchenettes within the studios of Architecture and Gould Halls, PhD Lounges, circulation spaces with furniture, and a mezzanine in the Digital Commons of Gould Hall.
- **Building Appearance:** A lack of building stewardship and maintenance is apparent in Gould Hall and the CDB building.

SITE OBSERVATIONS PER BUILDING

Architecture Hall contains architecture studios, classrooms, a gallery, and offices, including most construction management and architecture department offices. It also includes one large classroom and one large lecture hall, each controlled by the Office of the Provost and primarily used for non-CBE university classes.

Gould Hall is the front door of the CBE, incorporating the Dean’s Office, most of the offices of the Architecture, Landscape Architecture, Urban Design & Planning, and Real Estate departments, and provides a hub of community spaces. Gould Court contains many functions, including a café, informal socializing space, pin-up space, and highly visible circulation. CBE’s resource spaces in Gould Hall include the BE Library, the Fabrication Lab, the Gould Gallery, and research labs.

The Community Design Building (CDB) has a small footprint, but its visibility makes it a unique asset to the College. Its location and glass envelope along University Way creates an opportunity to showcase work and activity within. The exterior courtyard is often used for design-build studios.

Center for Education and Research in Construction (CERC) is the hub for the Construction Management (CM) department; most CM classes take place here and many departmental offices, particularly that of the dean, are located here. The Methods and Materials Lab is utilized for construction methods courses.

Space Types and Observations

SPACE TYPES OVERVIEW

Six primary space types were defined as a result of the assessment of the CBE facilities. The Schedule & Logistics PWT and Project Advisory Committee reviewed the space type names, definitions, and classifications.

The following definitions of space and their associated color-coding will serve as context throughout the rest of the study:

LEARNING SPACES are assigned to or reserved by faculty to conduct scheduled classes, studios, and labs. Learning spaces support a range of learning and teaching styles and student-to-student, student-to-faculty interactions. *Learning spaces include classrooms, studios, and pin-up spaces.*

RESOURCE SPACES offer access to special equipment, designated research efforts, and knowledge advancement. *Resource spaces include gallery space, the BE Library, teaching such as Gould 007, research labs such as The Green Futures Lab, and support labs such as the photo lab in Gould's basement.*

COMMUNITY SPACES are flexible and open for use by everyone. Available for formal and informal gatherings and activities related to classwork or otherwise. This can include large-scale circulation areas.

OFFICE SPACE is designated for faculty and staff work areas, associated storage, and resources.

STUDENT SPACE is designated for students to gather for collaboration, studying, socializing, rest, or other activities

EXTERIOR SPACE Outdoor spaces at CBE buildings provide amenities for working, gathering, and socializing.

SPACE TYPE OBSERVATIONS PER BUILDING

Architecture Hall

- **Unassigned Space:** The second-floor foyer of Architecture Hall serves as a heavy traffic circulation space, however, it is currently under-programmed. This space was the former location of the Architecture Hall Café. Additionally, Several "unassigned spaces" in Architecture Hall's ground floor could be better utilized.
- **Student Space:** Architecture Hall lacks student space and relies on studio space to serve this function. However, not all students have access to studio space. The building has limited, dedicated spaces for studying, collaborating, or socializing.

Gould Hall

- **Circulation Space – Dual-Purpose:** Gould Hall has roughly 18% of available space dedicated to circulation. However, much of this space has dual purposes, including pin-up space, social space, and lounge.
- **Office Space:** Much of the perimeter spaces are allocated to office use, which limits access to daylight and views to a very small portion of the community.
- **Resource Space:** Gould provides much of the College's resource space. The Digital Commons, as a resource, is an important amenity. It would benefit from improved lighting and additional seating for group work.
- **Student Space:** The building lacks dedicated student space for studying, collaborating, and socializing despite being the hub for the CBE.
- **Community Space:** Gould Court is an important gathering space for the CBE. It serves many functions, including events, café seating, casual encounters, and pin-up. While Gould Court is an important community space, it lacks acoustical and visual privacy.

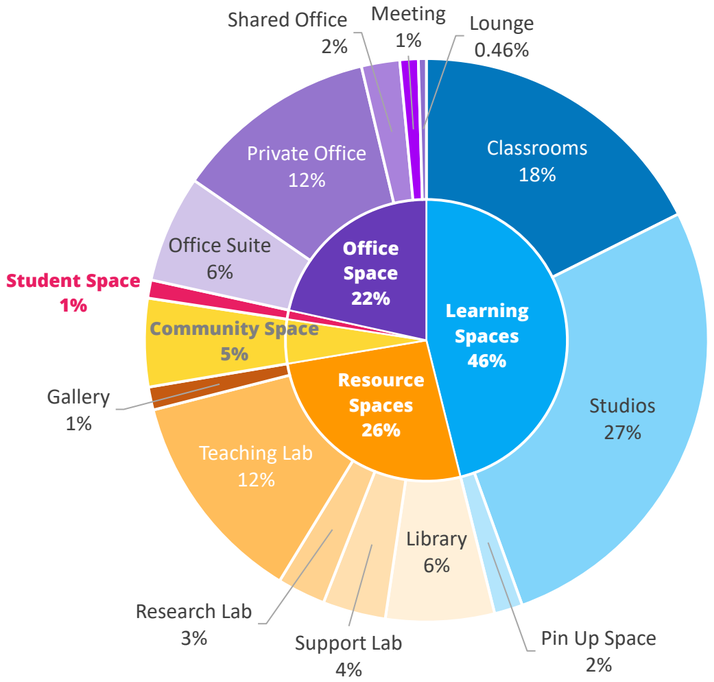
Community Design Building

- **Unassigned Space:** This building has a large percentage of unprogrammed space – roughly 13% of available square footage.
- **Learning Space:** The building is primarily a single studio, with a few offices and an exterior yard.

CERC

- **Balanced Program:** Space allocation in the CERC facility is balanced with equal space for students, community, and office use.
- **Community Space:** CERC has a shared kitchenette for faculty, staff, and students on the second-floor foyer.
- **Student Space**: CERC has the highest percentage of student space out of the four buildings.

Space Distribution Across the CBE Campus

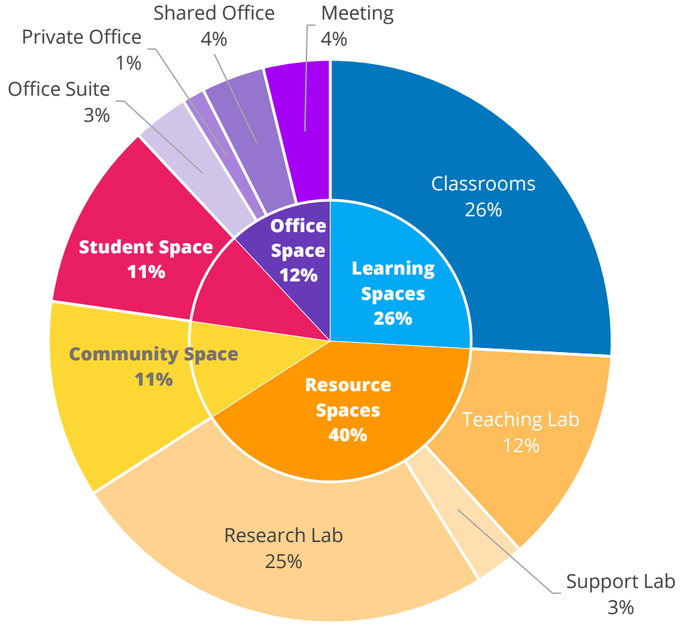


UW Seattle Central Campus

Architecture Hall

Community Design Building

Gould Hall



UW Seattle Sand Point Facility

CERC

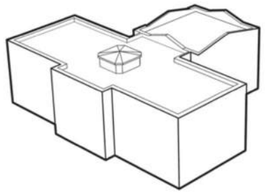
CBE at UW CENTRAL CAMPUS

- The main campus holds a very small amount of dedicated student space, most of which is exclusively dedicated to PhDs.
- 12% of the main campus is dedicated to private office space, while just 2% consists of shared office space.

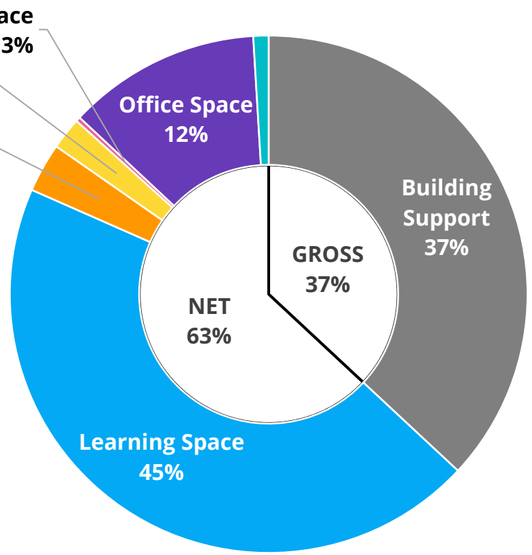
CBE at SAND POINT

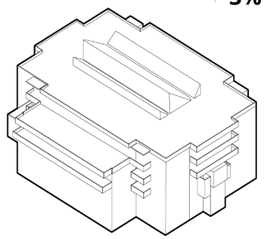
- The CERC facility has roughly equal space dedicated to Students, Faculty/Staff, and Community Space; approximately 11% of total available space for each type.
- The CERC facility has 25% of it's available space dedicated to courses taught in the Methods and Materials Lab.

Space Distribution Across the CBE Buildings

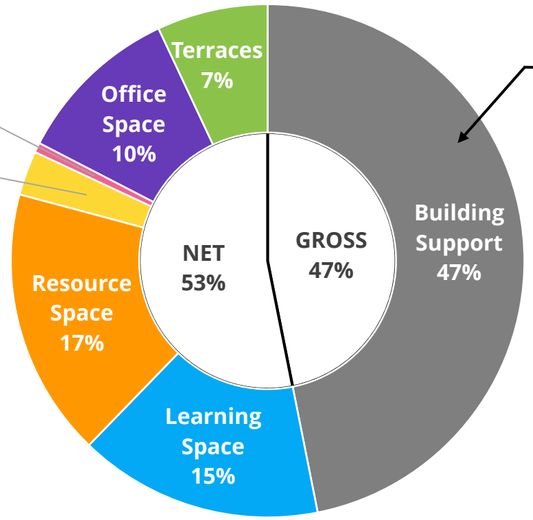


Architecture Hall

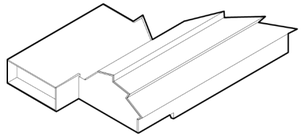




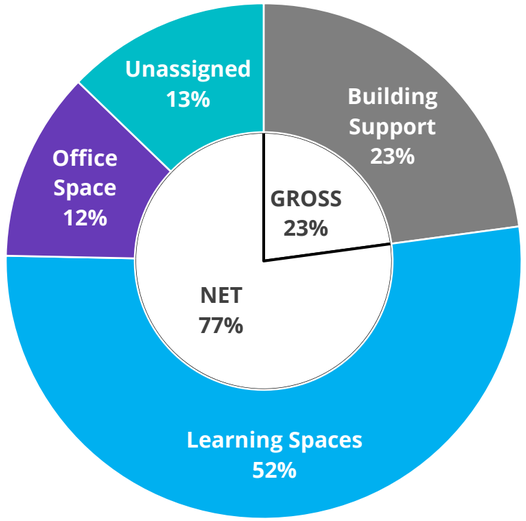
Gould Hall

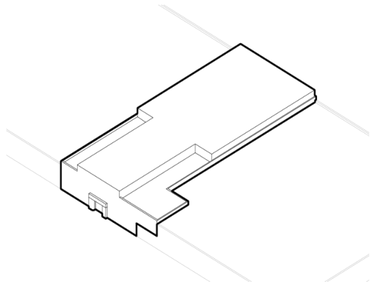


While Gould Hall has a high percentage of space devoted to 'building support," much of Gould's circulation space has a dual purpose.

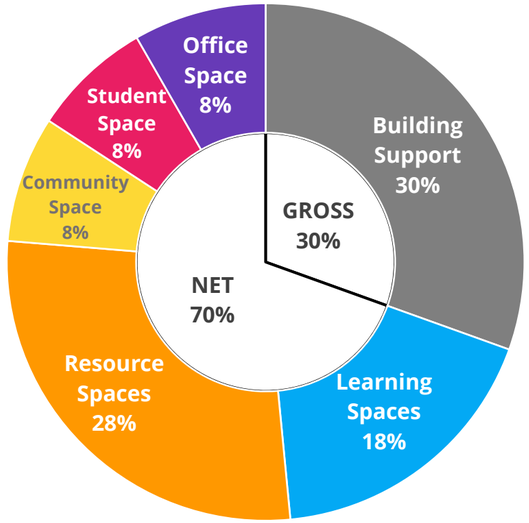


Community Design Building





CERC



Learning Spaces Utilization

LEARNING SPACE UTILIZATION OVERVIEW

To understand how the CBE utilizes CBE facility classrooms and non-CBE classrooms, an analysis of course schedule data was conducted. The process of course scheduling is complex; there are two systems, one for CBE-controlled classrooms, and another for Office of the Provost-controlled classrooms. Several highly desired classrooms within the CBE facilities are controlled through the university scheduling system are available to all UW departments and are primarily utilized for courses outside of the CBE.

The analysis of learning space utilization examined on a Time Schedule export of course sections from 2018 through 2022.

Relevant fields from this dataset include:

- Term & Meeting Time(s)
- Department(s)
- Building & Room Number
- Room Capacity
- Course Enrollment (Actual)

This historical data on course scheduling was utilized to ask the following questions:

What is the utilization over time of CBE class classrooms by location? Compare CBE Buildings, Non-CBE Buildings, and Virtual Classes.

Where on campus are CBE courses being scheduled outside of CBE facilities? Does this vary by department?

What learning room size is most in demand by the CBE community?

GOULD 007F

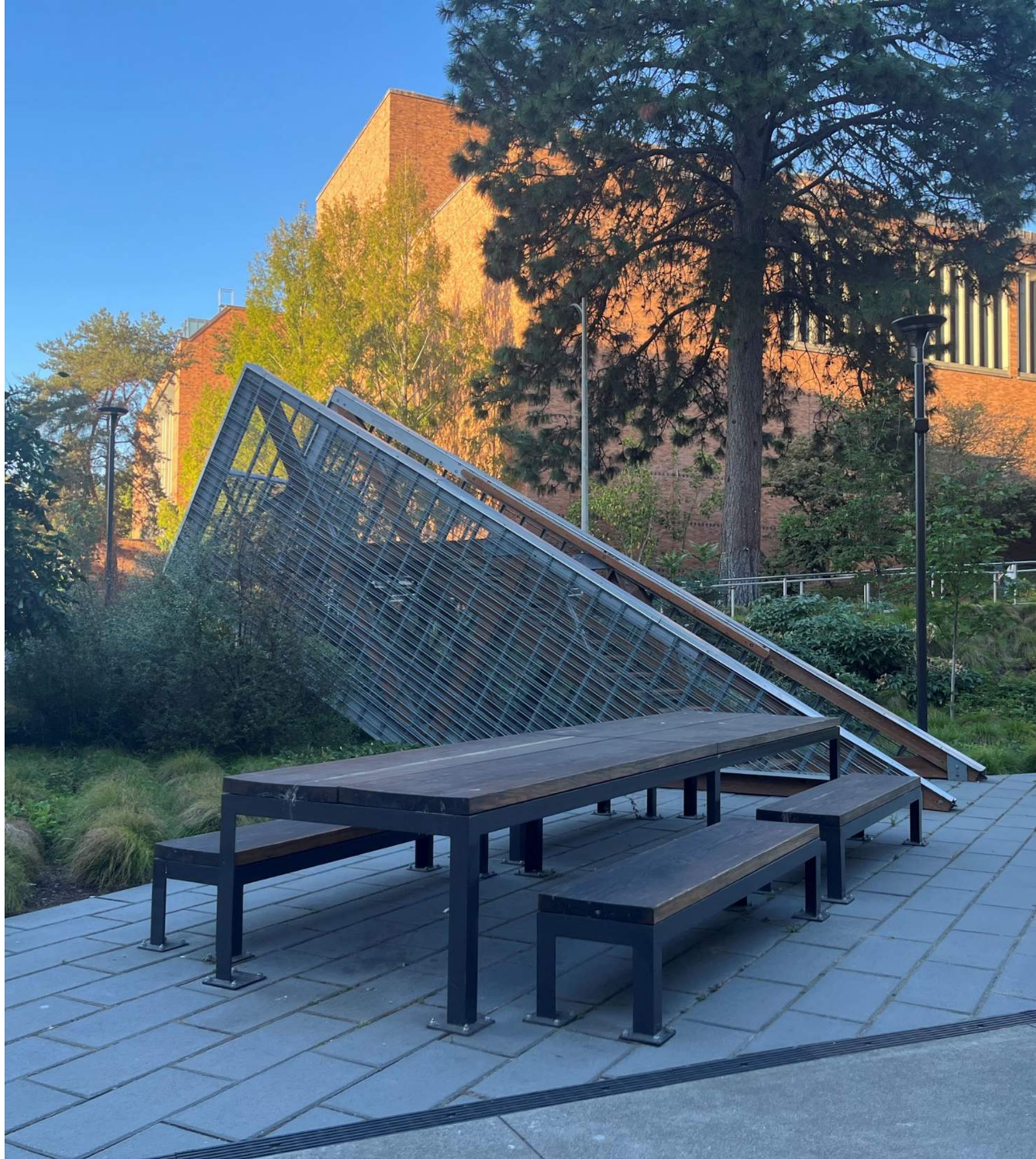
GOULD 208J

LEARNING SPACE UTILIZATION FINDINGS

- Many CBE courses take place outside of CBE buildings: courses that require medium classrooms (capacity 40-49) and larger classrooms (capacity 70+) are typically assigned to spaces in non-CBE buildings.
- In general, small classrooms have a low utilization rate and CBE classes which require a capacity of less than 20 are well accommodated. Small rooms designated as classrooms, such as Gould 442, may be better suited for use as meeting space or collaboration space.
- There is a high demand for the computer teaching lab in Gould (007F). Demand exceeds capacity for seats in the computer teaching lab even operating at its maximum capacity. Enrollment in required classes is limited based on room size which constrains the number of students in degree programs.
- The Real Estate and Architecture Departments classes are frequently assigned to convene in non-CBE buildings.
- Post-Pandemic, Only a small portion of CBE courses are 100% virtual. Those that are virtual tend to take place in the evenings, between 6:00 and 9:00 PM. Construction Management and Real Estate Departments tend to rely the most heavily on a virtual platform.

3.2 User Survey Findings on Space Use and Priorities

Department Chairs Questionnaire
Faculty & Staff User Survey
Student User Survey



Department Chair Questionnaire Response Findings

The Department Chairs Survey was issued to each of the five chairpersons of the academic departments of the CBE to understand each department's highest priorities around unmet space needs.

STUDENT NEEDS

For student needs, department chairs identified:

...space for meeting and collaboration as the highest priority for students across all departments. This space should be reservable, available 24 hours, available for small and medium sized groups, and should include dedicated space for student organizations.

...spaces that support student well-being, space for eating, relaxing, storing belongings, interacting informally, and participating in virtual meetings as high priority.

...designated study space especially for students who do not currently have a dedicated space (e.g., studio).

...the importance of integrating CERC into the rest of the CBE.

TEACHING AND LEARNING

For teaching and learning, department chairs identified needing:

...more computer lab space for technology-based instruction.

...full access to the Fabrication Lab, especially for Landscape Architecture students.

...technology-enhanced classrooms, studios, and breakout/collaboration spaces. Ongoing support for this technology is also a priority.

Improved low-tech resources, including pin-up space, whiteboards, good lighting, furniture, and access to power.

COLLABORATION AND RESEARCH

For collaboration and research, department chairs identified needing:

...dedicated flexible teaching and research space, where students and faculty can work together.

CURRICULUM INNOVATION

For curriculum innovation, department chairs identified needing:

...classrooms that accommodate hybrid/flexible teaching

...classrooms that allow breakout sessions.

...appropriately-sized classrooms. Faculty needs space for 30-60 people, 20-25 people, and another large lecture space for 250.

ASPIRATIONS

Department chairs aspire to:

...get more interdisciplinary teaching and research.

...have more opportunities for hybrid/flexible teaching.

...teach emerging technologies, such as drone surveying

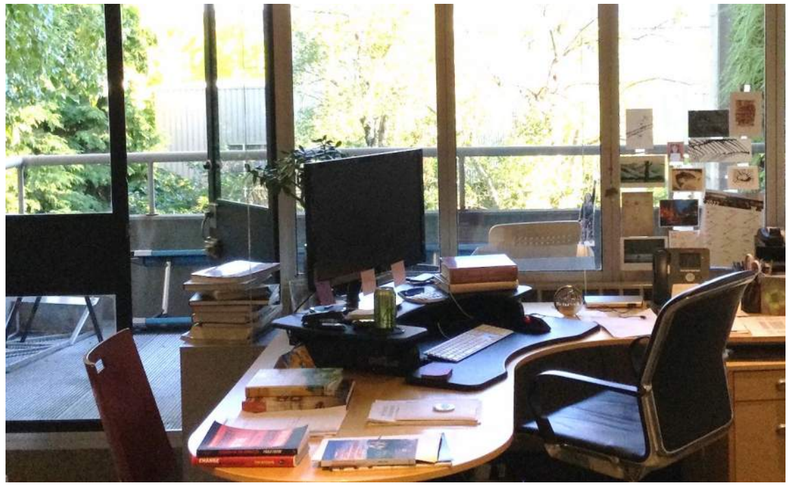
...get large, acoustically private offices

...get spaces for lactation and prayer

...have better event spaces

...have a more visible professional presence (Real Estate)

...have an ADA compliant building, better signage, and safer bike racks



Gould Hall, Office

CBE Facilities Use Survey, Students: Findings

A facilities survey was delivered to the University of Washington College of Built Environments' student listservs as a voluntary survey on October 21, 2022, and was answered by 212 students. The survey asked 35 questions across 8 topics. KT subsequently conducted an analysis of the survey responses, of which the key findings are listed below:

ACCESS

1. Gould Court is the most popular space for students to use because it is always available. Because of this, it has the largest variety of uses, some of which are not well-suited to the known acoustical and privacy challenges of the space. It is used for studying, meeting, and collaborating because students do not have access to other, more appropriate space types.
2. Although the BE Library meets many of the unmet needs of the students using Gould Court for studying, meeting, and collaborating, only 22% of student respondents report using the BE Library most often, while 47% report that they are most likely to use libraries in general, indicating a mismatch between student needs (private study rooms, better furniture and furniture layout, and longer open hours) with what is being offered at the BE Library.
3. Students reported issues of access, such as availability of a seat, insufficient hours of operation, and access to equipment as the most common barriers to using any space for any need.

COMFORT

4. After issues of access, acoustical comfort was ranked as the next most common barrier to using spaces for collaboration or studying. This is likely caused by the use of Gould Court for these activities.
5. The next most common comfort-related barrier for students using collaboration or study spaces was thermal comfort (30% and 34% respectively). Students, faculty, and staff frequently reported thermal discomfort primarily in Gould Hall throughout this study, citing a lack of thermal controls as the main cause.
6. 76% of student respondents reported seeking space for de-stressing, but less than 1% of Gould Hall and 1% of Architecture Hall are designated for this need.

UNDER-UTILIZED SPACES

7. Although CERC is the only CBE facility with dedicated student space, those spaces are under-utilized. 44% of Construction Management student respondents spend time in CERC for scheduled classes but are 68% more likely to report using Gould Court over CERC for studying, collaborating, and socializing. CERC's student spaces are likely not being used because they do not meet student needs for comfort and access due to their distance from the rest of the UW campus.

COLLABORATION

8. Students need a reason to collaborate with other disciplines before they need a space to do so. While spatial conditions are a significant contributing factor, management of classes and schedules are the most common types of barriers to prevent collaboration between student respondents for all majors except Built Environment, which notably has interdisciplinary collaboration integrated into its curriculum.

EQUITY

9. Underrepresented students experience more barriers to using CBE facilities than the general student population. Students that identified as LGBTQIA2+, Black, an ethnic minority, or a person of color reporting "feeling like they don't belong" more often than the general student respondents. Disabled and neurodivergent identified students reported the most barriers of any group in issues of access and comfort.

For the CBE Facilities User Survey Methodology see pp. 108 – 109.
For student response rates, per level, per department see p. 110.

CBE Facilities Use Survey, Faculty and Staff: Findings

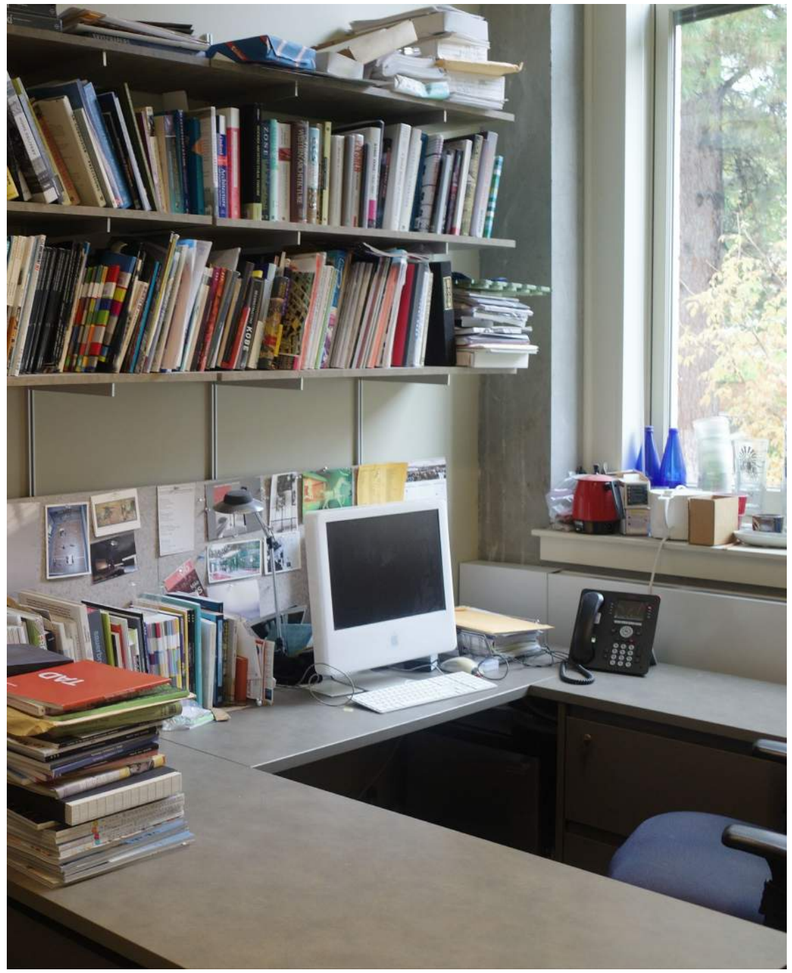
A facilities survey was delivered to the University of Washington College of Built Environments' faculty and staff listservs as a voluntary survey on November 30, 2022, and was answered by 32 faculty and 27 staff. The survey asked 36 questions across 12 topics. KT subsequently conducted an analysis of the survey responses, of which the key findings are listed below:

MISSING SPACES

1. 36% of faculty and staff respondents reported not using lounge spaces because they feel they don't belong there, and they were 13% less likely than students to report using Gould Court for socializing. This difference could be due to a lack of a sense of belonging in spaces that are predominantly used by students.
2. Faculty and staff are seeking somewhere to eat and can't find it. 37% of faculty and staff respondents reported using their offices for eating. 59% of faculty reported availability of food as one of the most important qualities of spaces, and 48% of staff reported the same. 13% of Faculty respondents reported wanting the Architecture Hall café to return.
3. When students, faculty, and staff have access to private spaces, they are much less likely to use Gould Court for working or meeting. Although Gould Court is the most used space for faculty and staff in general, because they have more access to meeting rooms, classrooms, and offices than students, they do not have to use Gould Court as much for meeting, working, and collaborating.

FACULTY AND STAFF USE PATTERNS

4. Faculty need more informal meeting spaces to collaborate spontaneously, and staff need more formal meeting spaces. Faculty respondents reported needing more accessible, easily booked informal meeting spaces, while staff reported needing more meeting spaces in general. Over half of both faculty and staff reported that a lack of collaboration space posed a barrier to interdisciplinary collaboration at least some of the time. This is likely caused by offices that are too small to use for meeting and a general lack of small to medium seminar or meeting spaces available for meeting spontaneously.
5. Offices are being used by faculty for meetings and other activities even though they are poorly-suited for them. For most faculty respondents in any department, meeting was one of the top uses for private offices, but because of the size and lack of acoustic privacy of most private offices at the CBE, faculty run into many limits when meeting there.
6. Staff use their offices more than faculty but are 55% more likely to be assigned an office without a window. Staff respondents were 32% more likely to use their offices for at least 20 hours a week but were 16% more likely to mention comfortable temperatures, and 12% more likely to mention access to daylight as the one thing they would change about the CBE.



Architecture Hall, Office

For the CBE Facilities User Survey Methodology see pp. 108 – 110.
For faculty, and staff response rates see p. 111.

3.3 Space Workshops Analysis: Aspirations, Barriers, Needs, Equity, and Care

Space Workshops Overview

A CBE COMMUNITY ENGAGEMENT FRAMEWORK

KT begins the community engagement process by identifying all stakeholders involved in a study. From there, KT works with community members to identify areas of agreement and disagreement, co-create value propositions for space and building renewal, and recognize the significance of continued improvement.

The *2023 CBE Visioning and Programming Study* began with Dean Renée Cheng's determination to reach as many CBE Community members as possible. To accomplish this, the CBE *Engagement Framework* was established to provide various opportunities for feedback, including surveys, listening sessions, and workshops. The *Project Advisory Committee,* and Dean Cheng, confirmed the engagement objectives to be:

1. Develop a shared understanding of the CBE mission
2. Develop transparency on the CBE visioning and programming process
3. Build a common understanding of the project's opportunities, constraints, and risks
4. Develop strategies for supporting the goals of all community members for space, equity, standards, and sustainability.
5. Identify who else we need to hear from about space types, equity, project requirements, and sustainability
6. Confirm the project goals and verify the target concepts for near-term and long-term projects

THE ROLE OF SPACE WORKSHOPS

Workshops were crucial in engaging CBE Community members, including undergraduate, graduate, and Ph.D. students, faculty, staff, and administrators. The CBE Space Workshops provided a platform for open discussion about CBE facilities and an opportunity for the community to share their experiences of working and learning in CBE spaces. Participants discussed the barriers they encounter daily, opportunities for improvement, and their aspirations for new learning and collaboration models.

KT carefully planned the CBE Space Workshops to encourage cross-departmental teamwork, insightful thinking, and collaboration in finding solutions. To ensure transparent communication, student sessions were held separately from faculty and staff sessions, which also acknowledged the intrinsic power dynamics within the community.

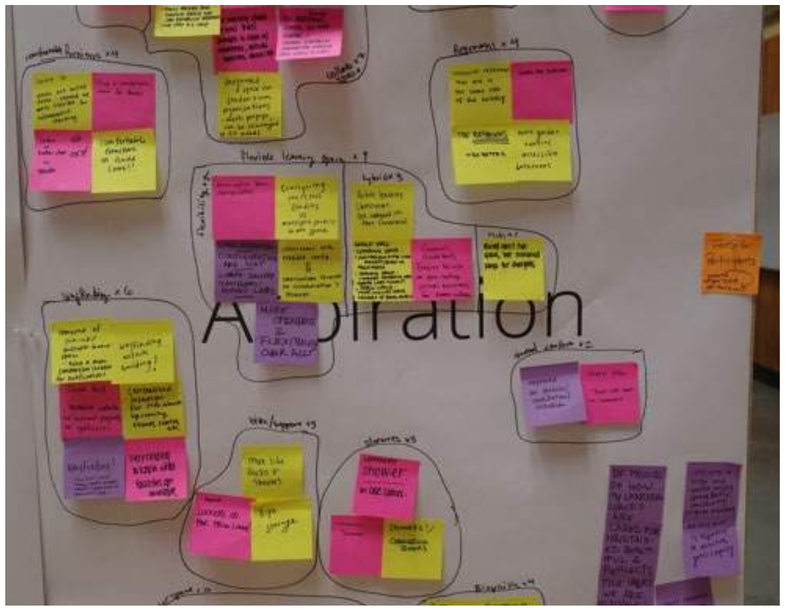
Below is a summary of each CBE Space Workshop Type:

CBE Space Workshop 1: Conflict and Consensus

People in every community acknowledge that certain space types hold greater significance than others, particularly when it comes to fulfilling the goals of a department or program. Nonetheless, even if they concur on a general level, there may be underlying agreement or disagreement on the relative importance of specific space types. The objective of this workshop is to delve deeper and bring these differences to light for discussion.

CBE participants utilized KT's "**essential versus non-essential spaces**" framework to evaluate and discuss the effectiveness of present space types. This helped CBE Community members understand each other's viewpoints, as they acknowledged that what may be essential to one person could be non-essential to another.

Finally, the participants were requested to express their **aspirations** for the future of working, learning, teaching, collaborating, and researching in CBE spaces. They were encouraged to share their perspective on what is important to them and to imagine new space types for the community.



Space Workshops Overview

CBE Space Workshop 2: Space Use Barriers - Control, Influence, or Accept?

Daily, individuals encounter **space-use obstacles**, which could be linked to a building's design, functionality, management, accessibility, and more. Significant space use barriers can impact job and learning efficacy, and equity, especially when building users have no pathway for addressing them.

In this workshop, the CBE Community named the barriers that limit, constrain, or frustrate their use of CBE spaces. They were encouraged to consider landscape-, building- and threshold-level concerns; and equipment, furniture, resources, messaging, equity, and sustainability-related concerns.

Using the CIA model (control, influence, and accept), the participants could assess the degrees of control over each space-use issue.* This approach enabled the CBE Community to question and confirm who has the authority over various conditions and began empowering the community.

The barriers that prevent effective use of space can be numerous and complex, leading to questions about the CBE's ability to address them. To help the CBE Community prioritize these barriers, the participants were encouraged to evaluate the importance and difficulty of solving each one. They formed small teams to examine selected barriers in detail and brainstorm solutions, fostering a greater understanding of the impact of barriers on CBE community members.

CBE Space Workshop 3: Student Voices on Building Inclusivity

Inequitable distribution of space and obstacles to access space, equipment, and resources, could disproportionately impact students from historically marginalized backgrounds and can cause a sense of disconnection and prevent communities from achieving the outcome of diversity (Perez 2020).

The third CBE Space Workshop, "Student Voices on Building Inclusivity," focused on the distribution, management, and types of spaces that affect a sense of belonging. Dr. Karen Thomas-Brown, Associate Dean of Diversity, Equity & Inclusion at UW College of Engineering, led a listening session with representatives from the CBE student community's identity and affinity groups. Dr. Thomas-Brown emphasized that user surveys may not accurately represent the perspectives of minoritized students in a learning community. Participants explored four questions using the theory of counternarratives to elevate the voices of underrepresented students in CBE during space assessments. After analyzing the students' feedback thematically, KT identified primary and secondary themes related to building equity.

THE IMPORTANCE OF THEMATIC ANALYSIS IN SPACE ASSESSMENT

In space assessment, thematic analysis involves analyzing the words written on sticky notes or narratives collected during listening sessions to identify common themes related to space use within a community. By gathering, reviewing, and categorizing feedback from the CBE Community, KT developed frameworks reflecting the community's aspirations, barriers and needs, and inclusivity.

WORKSHOP FINDINGS AND DOCUMENTATION

Workshop 1, Conflict and Consensus, provides a community-focused scan of the CBE's existing space types and identifies potential gaps. It identifies ***5 themes and 14 subthemes*** *related to* ***aspirations*** *(pp. 39-48).*

Workshop 2: Space Use Barriers provides detailed issues for further study and is a precursor to the All-College Charette and project roadmap. It identifies **6 themes and 22 subthemes** related to **barriers** *(pp. 49 – 59).* Barriers are also indexed to the CBE Deferred Maintenance Assessment in Section 3.4 of this report.

Workshop 3: Student Voices on Building Inclusivity, is a precursor to the All-College charette and road-mapping exercise. It thematizes **attributes of spaces impacting diversity, equity, and inclusivity into 4 themes and 16 subthemes** *(pp. 60 – 68).* Equity themes are also indexed to the CBE Deferred Maintenance Assessment in Section 3.4 of this report.

**N. Thompson and S. Thompson explain the CIA Framework in their book* The Critically Reflective Practitioner *(Palgrave Macmillian 2008, pp.100-102) for professionals in the "helping professions" to examine issues and questions of agency. KT adapted this method to the process of space assessment to convene conversations on existing spaces, issues of use and management and needs for renewal.*

Pérez, Amara Haydée, Ph.D. What Does CRT Have to do With a Roof?: Critical Race Spatial Praxis – an Equity Approach to Institutional Planning, College Design, and Campus Space. (2020)

3.3 Space Workshop Analysis

Conflict & Consensus: Essential and Non-Essential Spaces (Workshop 1)

Conflict & Consensus: **Essential vs. Non-essential Spaces**

ACTIVITY OVERVIEW

Essential vs. Non-Essential Spaces - Participants were asked to consider and collectively discuss the utility of the space types in the CBE. Subsequently, they came to understand the perspectives of their peers.

To start the process, each participant selected the 3-5 spaces they believed were crucial to the mission and vision of the CBE and wrote them on sticky notes. These selections were then discussed and organized through affinity mapping. The same process was repeated for the "*Non-Essential*" category, where each participant identified and discussed the top 3-5 spaces deemed non-essential to the CBE's mission and vision. Spaces were color-coded by CBE building, or as a general note.

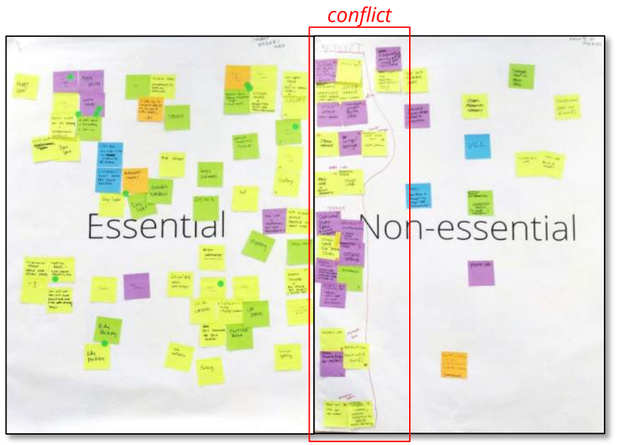
"What activities and programs are essential to the CBE?"

"What activities and programs are non-essential to the CBE?"

Finally, participants were asked to collocate at the seam between the "*Essential*" and "*Non-Essential*" space types identified in both categories. These were placed in a "*Conflict*" category and were up for debate by the CBE community. (Shown to the right in a red box.)

Faculty and Staff October 26, 2022

Faculty and Staff October 27, 2022



Students October 26, 2022

Students October 27, 2022

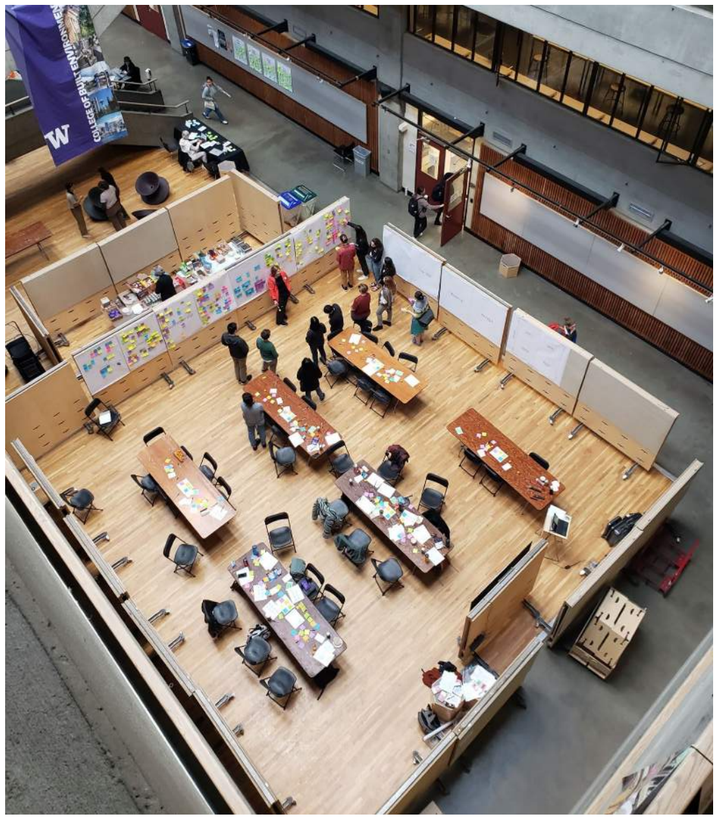
Sticky-Note Color Coding

- ARCH
- CDB
- CERC
- GOULD
- CBE

Conflict & Consensus: **Findings**

ESSENTIAL VS.NON ESSENTIAL SPACES

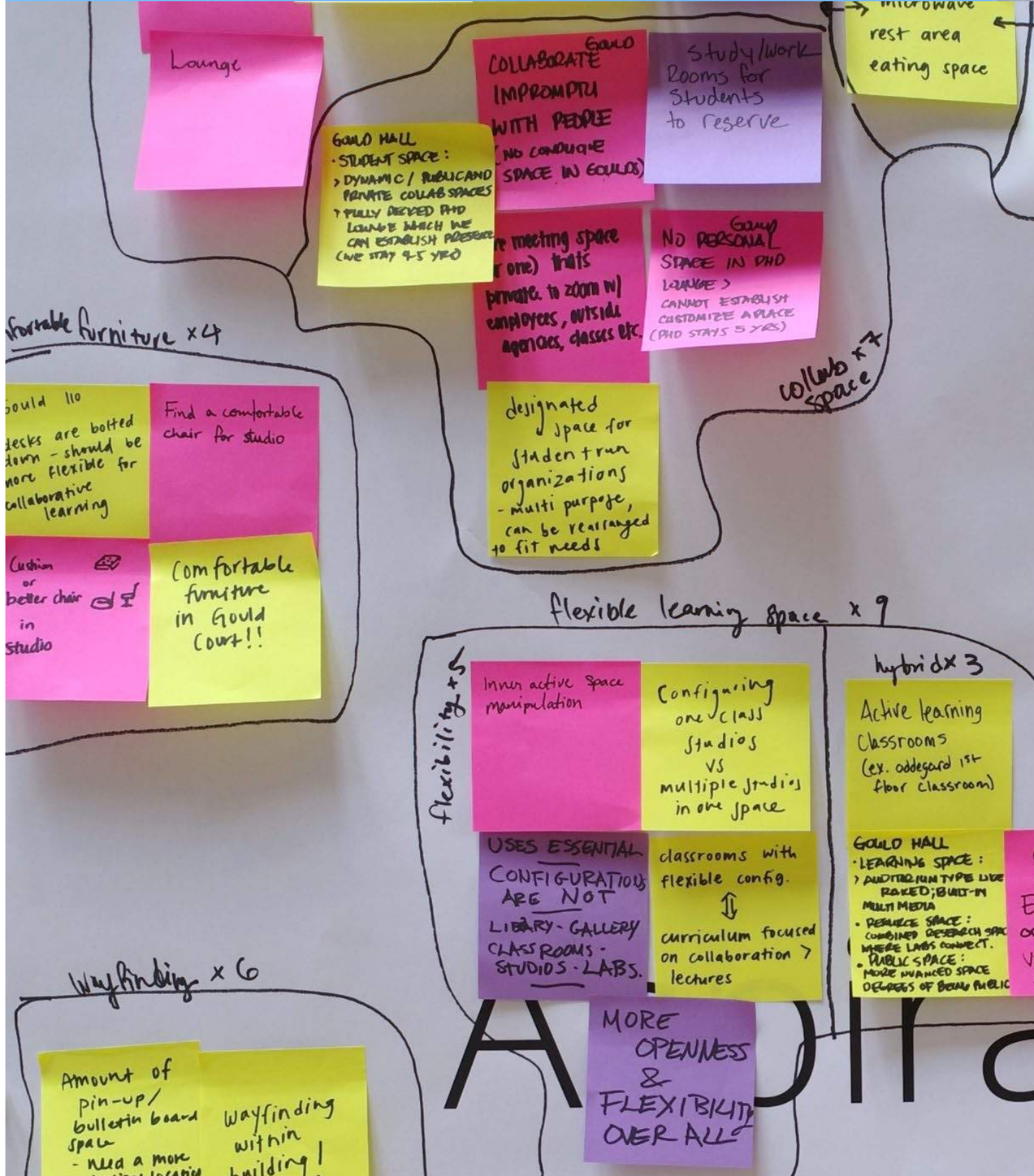
- **VISUAL RESOURCES LIBRARY (VRL) - CONSENSUS:** The faculty and staff groups listed the VRL as non-essential. It is notable that this space did not show up on the student lists, as many students do not know where it is located or its function.
- **GOULD COURT – CONSENSUS:** All groups listed Gould Court as an essential space multiple times. It serves many functions and is a heavily used community space for the CBE.
- **STUDENT SPACE - CONSENSUS:** The essential quality of student space was listed by faculty, staff, and students. This includes study space, meeting rooms, and a student lounge. The community has agreed on the essentiality of this space type, and yet a very small portion of the CBE square footage is devoted to it (1% in the main campus buildings).
- **STUDIO - UP FOR DEBATE:** The faculty and staff groups listed studio space as essential, however the same groups listed individual student desks as non-essential. This brings up questions about assigned desks vs. “hot desks” for students in studio and how studio space is managed generally. Historically, design students are assigned a desk for their use in a term– this is considered a pedagogical norm. The CBE currently has some studio desks assigned and some that operate at “hot desks.”
- **FACULTY/STAFF OFFICES - UP FOR DEBATE:** The faculty and staff debated the use of private offices vs. shared office space. Some participants specifically called out individual faculty offices as non-essential elements to the success of the CBE.
- **ARCH HALL CAFÉ - UP FOR DEBATE:** The faculty and staff groups had differing opinions around whether the defunct café on the second-floor should be reinstalled. This echoes many other parts of the study which emphasize the importance of community space as well as access to food.
- **EXTERIOR SPACE - UP FOR DEBATE:** While exterior space was listed as essential in four workshops, the rehabilitation of the Gould Terraces was also listed as a non-essential priority. During the group discussion, this was noted as something that some thought should not be prioritized. However, this conflicts with specific requests for outdoor space to teach, socialize, rest, and study.
- **RESOURCE SPACE - UP FOR DEBATE:** The students listed the BE Library, the Gould Gallery, and Fabrication Lab on both the essential and non-essential lists. This could be due to lack of access hours, lack of needed upgrades, or not needing it for their coursework. The students agreed that the Digital Commons was an essential space.
- **CDB & CERC - UP FOR DEBATE:** All four groups disagreed about the way that these two buildings serve the CBE’s needs. Many members considered these spaces non-essential. CERC was specifically called out as being too far away from the rest of the CBE buildings.



Space Workshops, Gould Court

3.3 Space Workshop Analysis

Conflict & Consensus: Themes on Aspirations for Learning, Teaching, Working, Collaborating, and Researching (Workshop 1)



Conflict & Consensus: **Aspirations**

ACTIVITY OVERVIEW

The CBE Community engaged *aspirations* for learning, teaching, collaborating, and researching in its spaces through the question:

"What do you want to do that you currently cannot?"

After an in-depth review of CBE space types using the "essential vs. non-essential" framework, an open discussion was held. Participants were asked to write down 3-5 aspirations on sticky notes and share their perspectives on what they value and what new space types they could imagine. The collected aspirations were analyzed and organized into themes and subthemes by KT to create an Aspirations Framework.

Faculty & Staff October 26, 2022

Faculty & Staff October 27, 2022

Students October 27, 2022

Students October 26, 2022

Aspirations: **Thematic Analysis**

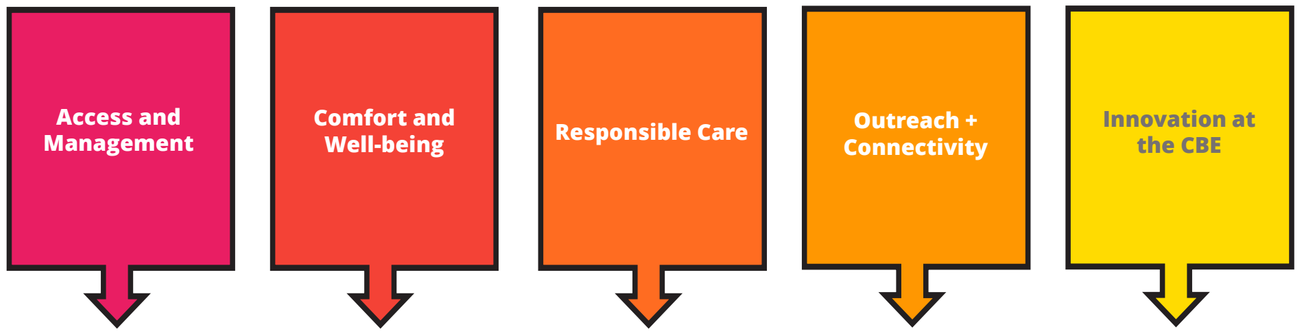
WORKSHOP FINDINGS

Sticky Notes from the Aspirations portion of *Space Workshop 1* were transcribed by KT and analyzed using thematic analysis as a framework for defining themes.

The responses from students and faculty & staff workshops were combined, and five distinct Aspirational Themes were identified from the data:

1. **Access and Management:** Transforming the CBE's access and management practices would provide individuals with the support they need to pursue their aspirations. Individuals could focus on their aspirations with improved wayfinding, management systems, and office spaces.
2. **Comfort and Well-Being:** Transforming building amenities to improve comfort and well-being for the CBE community would allow individuals to focus on pursuing their goals and ambitions instead of improving their immediate physical conditions.
3. **Responsible Care:** Individuals aspire for the CBE facilities to be sustainable, accessible, well-maintained, and beautiful. Any renovations should be done sustainably and responsibly - reusing existing spaces rather than constructing new ones where possible.
4. **Outreach & Connectivity**: Transforming the CBE's outreach and community would provide individuals with the platform to reach their aspirations. Individuals are empowered by an increase in connection with the larger community outside the CBE and with the community within the CBE.
5. **Innovation at the CBE:** Transforming the CBE's research, learning, and resource spaces would provide individuals with greater opportunities to conduct innovative work and research. Individuals would be empowered by greater access to resources, research and lab spaces, technologically advanced classrooms, and additional building space.

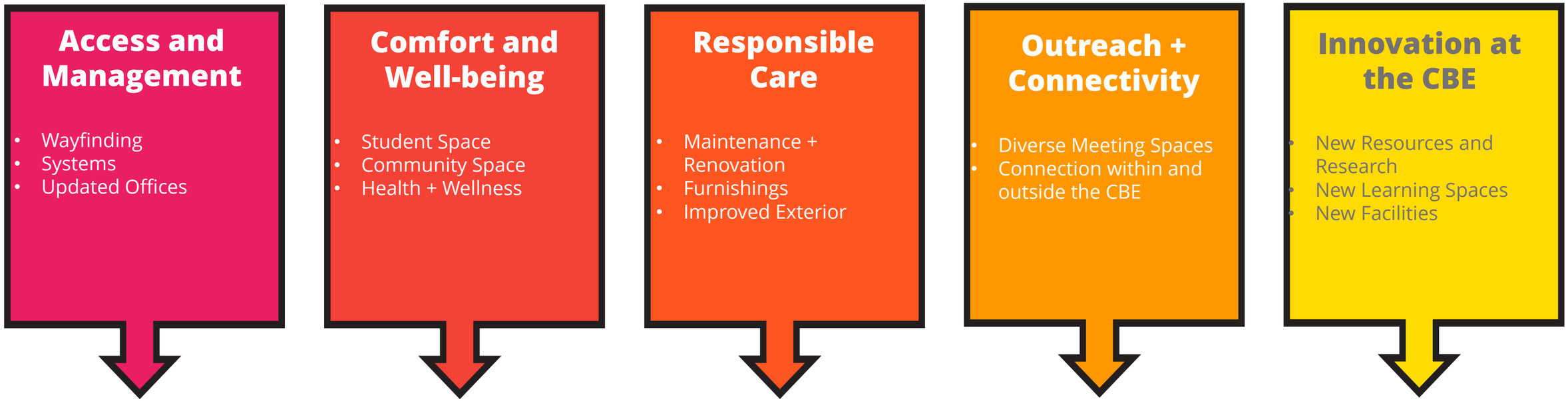
What pathways for transforming the CBE Facilities amplify our purpose and mission?



Translates to decisions that revalue building program, equipment, operations, and atmosphere

Aspirations: **Thematic Analysis**

What pathways for transforming the CBE Facilities amplify our purpose and mission?



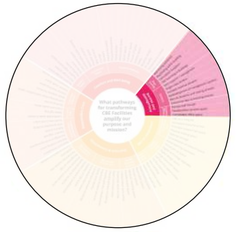
Translates to decisions that revalue building program, equipment, operations, and atmosphere

Aspirations: **Thematic Analysis**

THEMATIC ANALYSIS FINDINGS

The five larger themes around Aspirations are illustrated in a wheel with sub-categories shown in an additional ring. The outmost ring contains specific aspirations identified by participants, and found in the data.

Access and Management



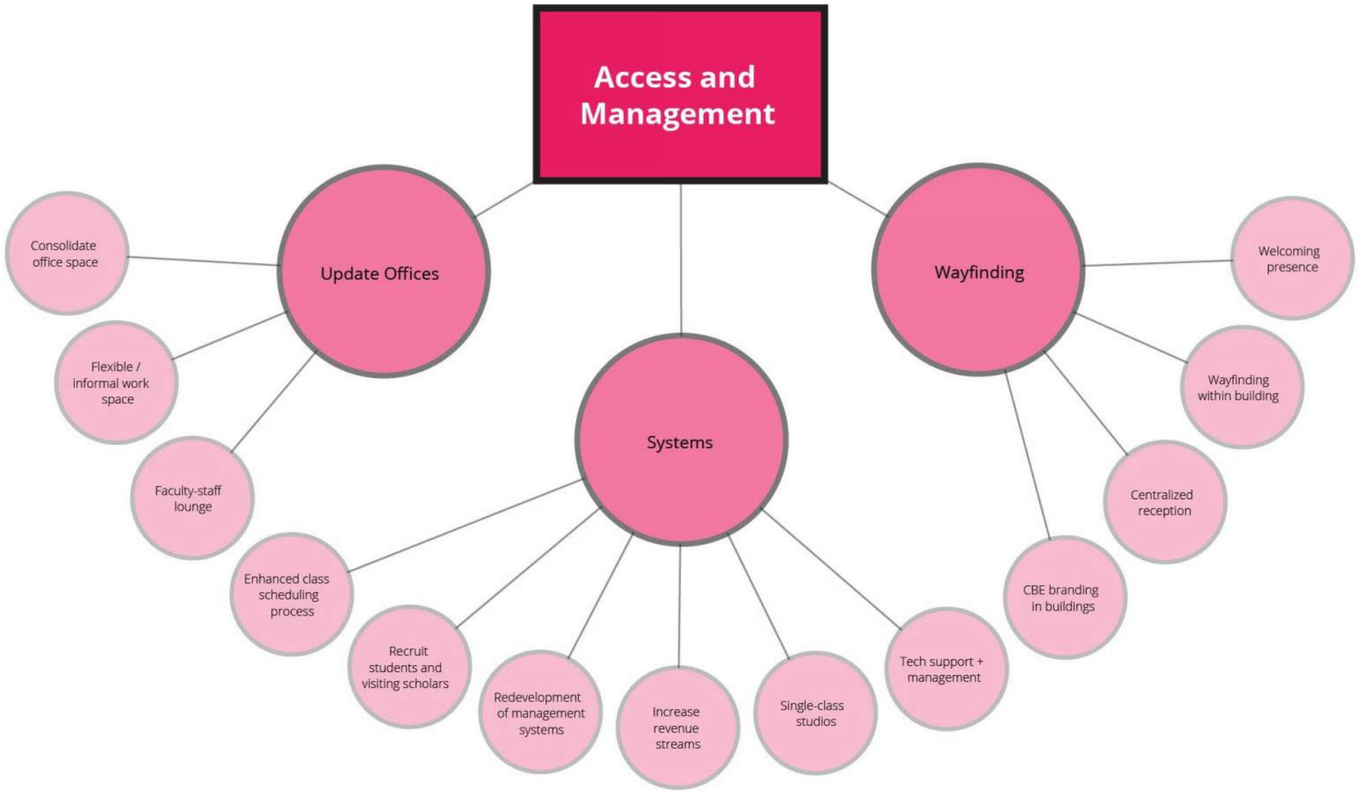
Transforming the CBE's access and management practices would provide individuals with the support they need to pursue their aspirations. Individuals could focus on their aspirations with improved wayfinding, management systems, and office spaces.

SUBTHEMES

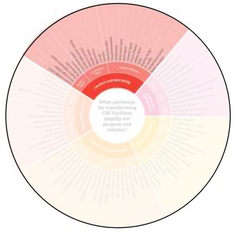
1. Wayfinding - Individuals desire a more welcoming building that properly situates visitors within the building.
2. Updated systems - Individuals desire up-to-date systems for management, IT support, and class scheduling.
3. Updated office spaces – Individuals desire improved and updated office spaces that are more flexible, to be consolidated, and to include lounge spaces for faculty and staff

CBE TASKS AND DECISIONS

1. Add a welcome desk to Gould Hall for general questions.
2. Implement a cohesive wayfinding and branding system throughout the CBE buildings with an emphasis on Gould Hall.
3. Provide more access to IT support.
4. Create systems to showcase research and student work online and in the Gould Gallery.
5. Re-consider how studio space is assigned and used – a pilot program can help with longer term decision making.
6. Create open work areas for faculty, staff, and students to work on laptops.
7. Consider a pilot program for reorganizing office suite space in the CBE Facilities
8. Implement an audit of overall management systems at the CBE including how classes and studios are scheduled, how information is shared to community members, and database of available resources.



Comfort and Well-being



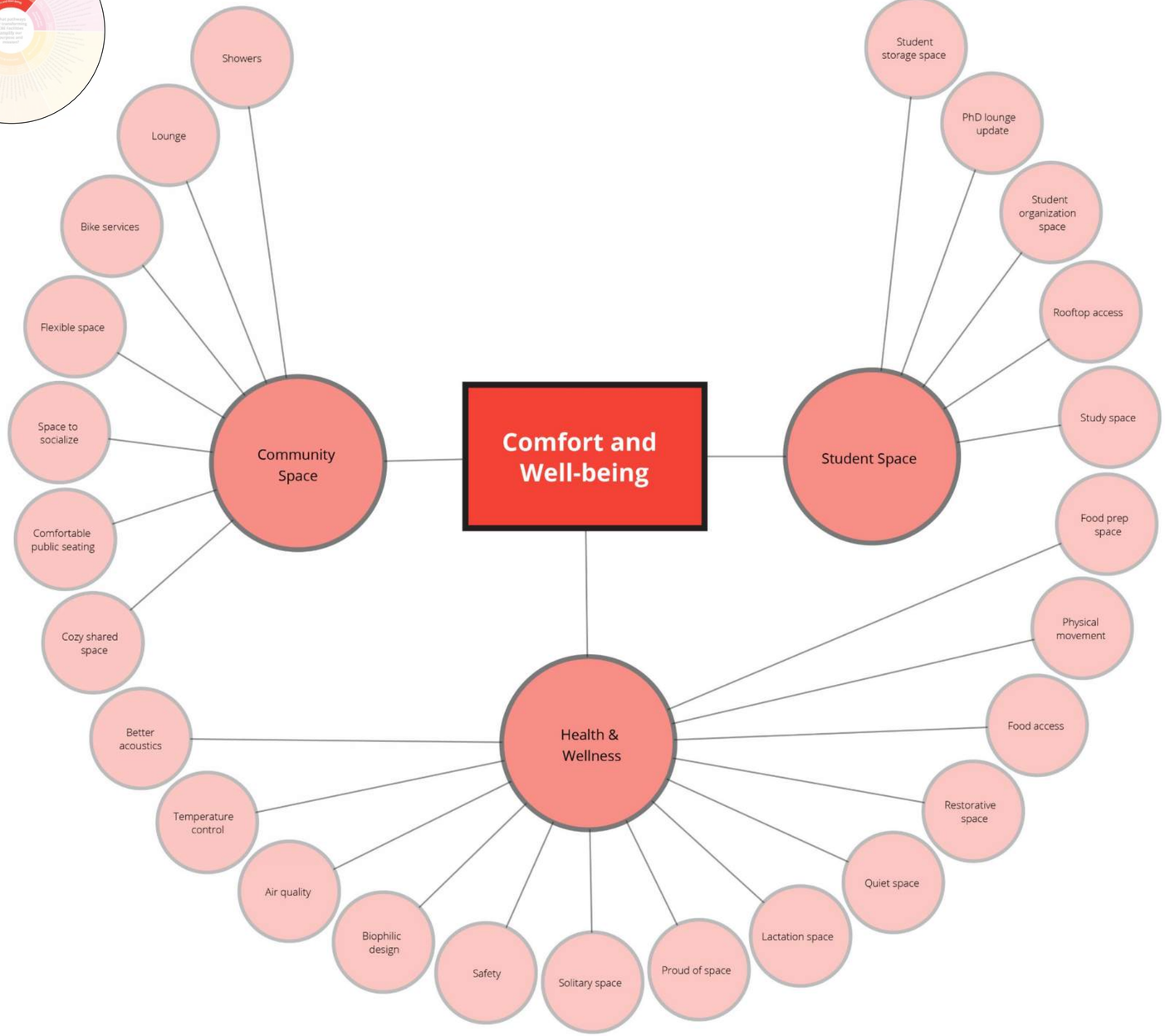
Transforming building amenities to improve comfort and well-being for the CBE community would allow individuals to focus on pursuing their goals and ambitions instead of on improving their immediate physical conditions.

SUBTHEMES

1. Health and wellness - Individuals desire spaces for eating, lactation, and prayer. Individuals desire opportunities to keep their bodies healthy with physical movement and peaceful spaces for restoration.
2. Student space - Individuals desire designated spaces for students to relax, study, and be outside.
3. Community space - Individuals desire community resources for bicycles, including storage and shower spaces, shared lounges, and spaces for socializing.

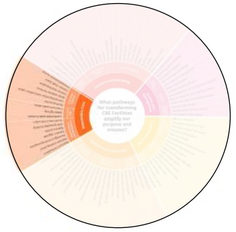
CBE TASKS AND DECISIONS

1. Add a food prep space in at least one of the main campus buildings belonging to the CBE.
2. Add more healthy and affordable meal options to the Buzz Café.
3. Create small study pods with acoustic separation for use by individuals or small groups for private conversations and/or focus work.
4. Create a student lounge space for students to rest and recharge in between classes that includes comfortable furniture.
5. Provide secure storage for students to lock their belongings.
6. Provide access to rooms with windows to all CBE members rather than prioritizing for office space only.
7. Provide better lighting including task lighting and overall light adjustments.
8. Provide space for student organization groups to meet either through reservation of shared meeting rooms or designated space
9. Upgrade the wellness room of Gould Hall to have more biophilic qualities.
10. Provide opportunities for occupants to open windows and control the temperature levels of their space.
11. Consider upgraded stools for studios to increase quality of ergonomics.



SPACE WORKSHOP 1: ASPIRATIONS

Responsible Care



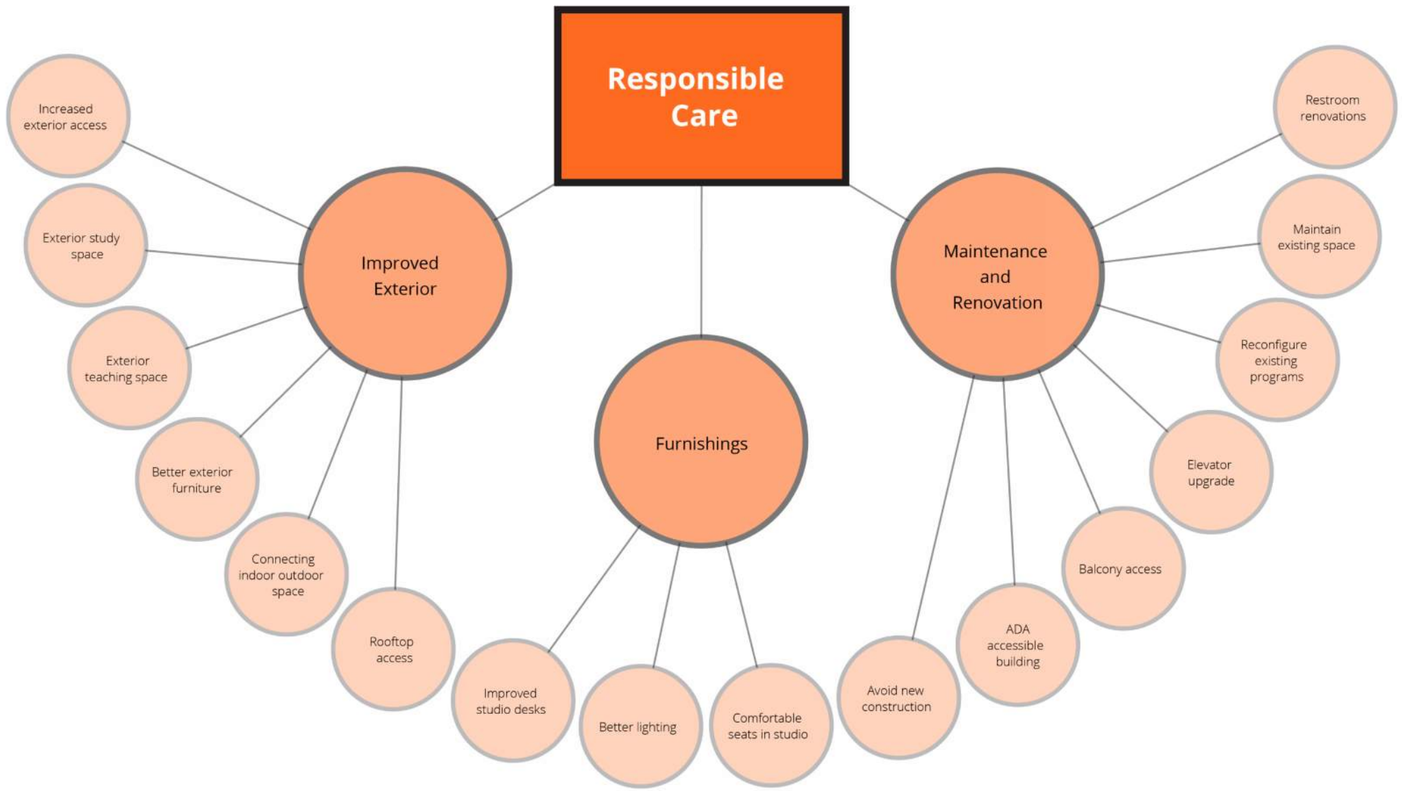
Individuals aspire for the CBE facilities to be sustainable, accessible, well-maintained, and beautiful. Any renovations should be done sustainably and responsibly by reusing existing spaces rather than constructing new ones.

SUBTHEMES

1. Maintenance and renovation - Individuals desire spaces that are well-maintained and updated. Spaces that are in disrepair or are outdated erode individuals' sense of respect from the CBE.
2. Furnishings - Individuals desire furnishings that are updated, comfortable, clean, and represent their identity.
3. Improved exterior - Individuals desire exterior spaces that are beautiful, furnished, and well-maintained.

CBE TASKS AND DECISIONS

1. Address long-standing deferred maintenance items potentially by coupling certain space planning projects with other repairs and upgrades.
2. Upgrade elevator in Gould Hall.
3. Implement universal design principals in the esp. CBE's facilities.
4. Provide better lighting including task lighting and overall light adjustments.
5. Renovation of Gould Terraces and increased consideration of exterior space use and design.
6. Install gender neutral restrooms.
7. Replace studio desks and stools with ones that are more ergonomic for computer-focused work.
8. Prioritize maintenance of exterior plantings, landscaping, and furnishings.



Outreach and Connectivity

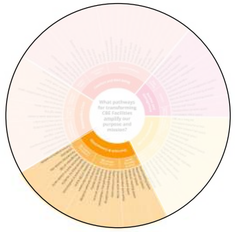
Transforming the CBE's outreach and connectivity would provide individuals with the platform to reach their aspirations. Individuals are empowered by an increase in connection with the larger community outside the CBE and within the CBE.

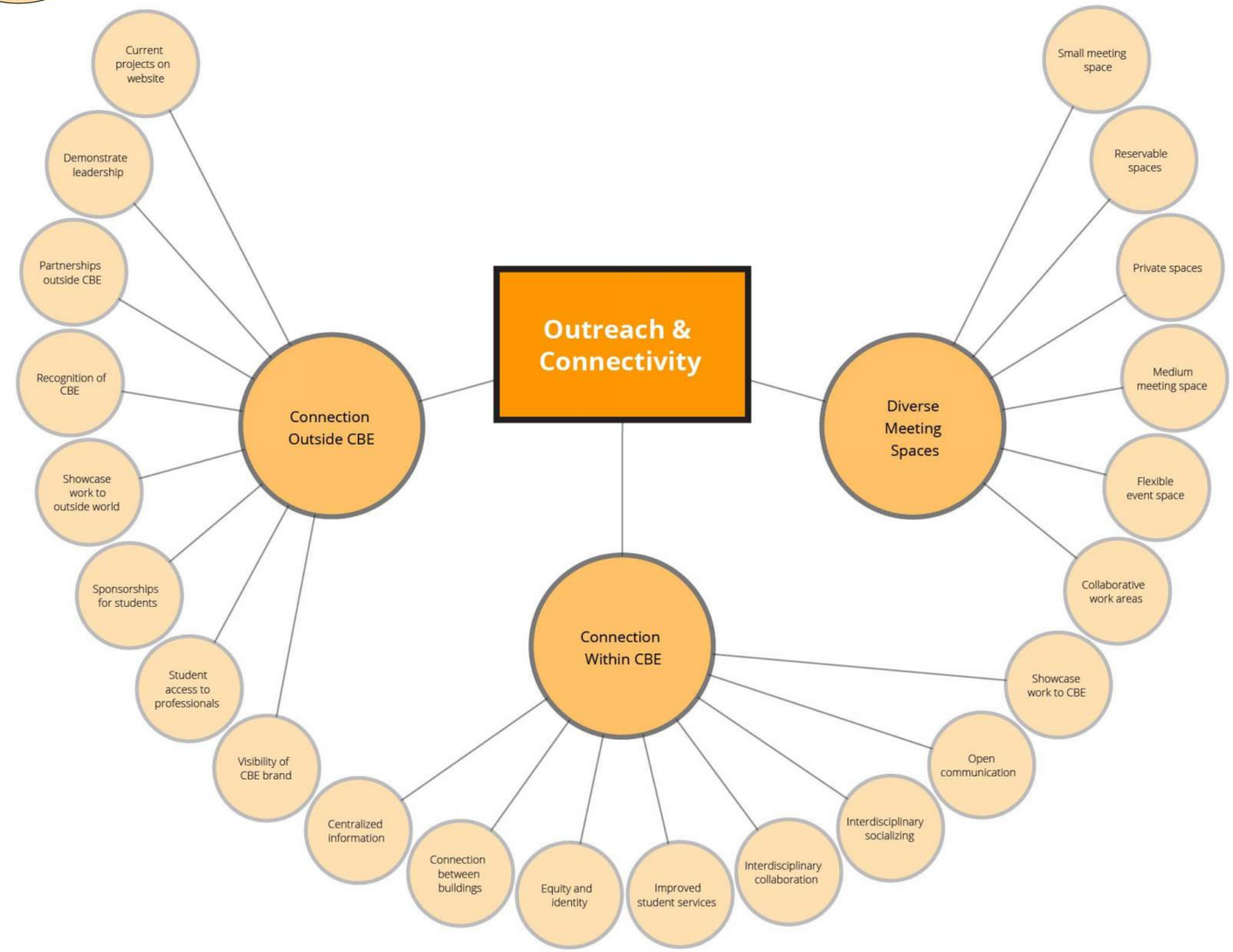
SUBTHEMES

1. Diverse meeting spaces - Individuals desire better and more diverse meeting spaces that would facilitate collaboration
2. Connection within the CBE - Individuals desire opportunities to see, collaborate, and socialize with other departments within the CBE.
3. Connection outside the CBE - Individuals desire opportunities to showcase their work to the outside community, to collaborate with external organizations, and to be recognized externally.

CBE TASKS AND DECISIONS

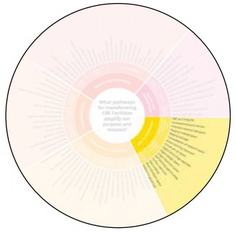
1. Create meeting spaces of diverse sizes that are reservable and available to all members at the CBE– spaces should accommodate collaborative and individual work. Small meeting rooms should provide space for private conversations, video calls, and deep focused work.
2. Create a consolidated research hub with adequate work and storage space.
3. Create open work areas for faculty, staff, and students to work on laptops in a casual capacity.
4. Create systems to showcase research and student work online and in the Gould Gallery.
5. Create a stronger identity for student services within the CBE.
6. Add acoustic upgrades to Gould court to better host events within it.
7. Implement universal design principals throughout the CBE.
8. Create a strong connection between CERC and the main campus for CM students.
9. Reconsider mass communication techniques for all of the CBE's community via website portal or otherwise.
10. Foster the image and identity of the CBE as a leader in sustainable design by showcasing work on the website.
11. Host events for professionals outside of the CBE.





SPACE WORKSHOP 1: ASPIRATIONS

Innovation at the CBE



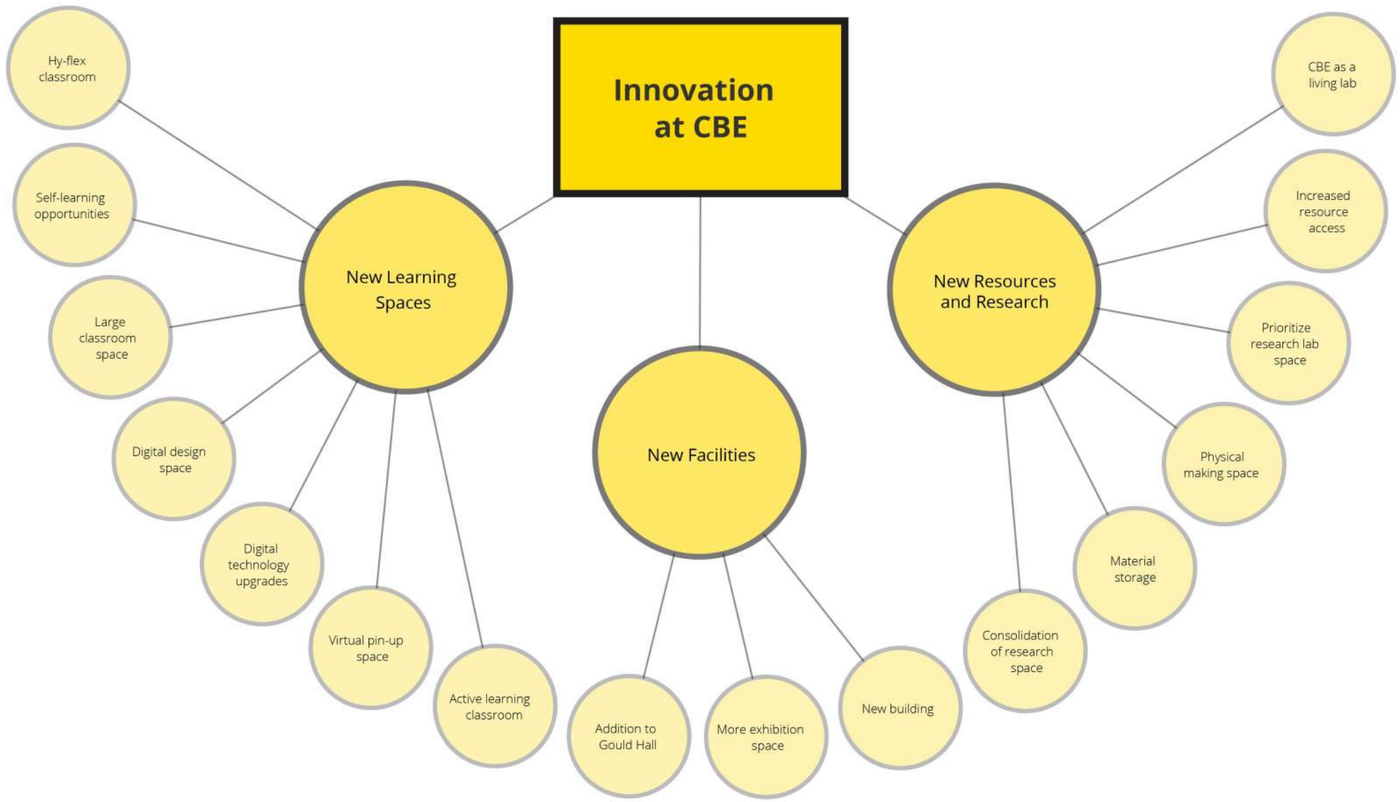
Transforming the CBE's research, learning, and resource spaces would provide individuals with greater opportunities to conduct innovative work and research. Individuals would be empowered by greater access to resources, research and lab spaces, technologically advanced classrooms, and additional building space.

SUBTHEMES

1. New resources and research - Individuals desire new spaces for prototyping and research, and greater access to these spaces.
2. New learning spaces - Individuals desire new and updated learning spaces that meet current and future needs.
3. New facilities - Individuals desire updated space, a renewed building, and potentially an addition.

CBE TASKS AND DECISIONS

1. Facilitate more integration of the CBE facilities as a Living Lab. Buildings can operate as learning hubs and support various forms of research.
2. Create a consolidated research hub with adequate work and storage space.
3. Implement regular technology upgrades via an IT task team or advocacy group.
4. Prioritize upgrades of flexible furniture in classrooms for different teaching styles and technology needs for hybrid learning.
5. Designate an additional Digital Teaching Lab in the CBE (similar to Digital Commons 007)
6. Implement a series of active learning classrooms in the CBE's facilities – consider a pilot program to determine needs.
7. Create systems to showcase research and student work online and in the Gould Gallery.
8. Provide more space for pin up (physical and virtual).
9. Re-organize the Fabrication Lab to provide more space for prototype work.
10. Add acoustic upgrades to Gould court to better host events within it.



3.3 Space Workshop Analysis

Control, Influence, Accept: Themes on Space Use Barriers (Workshop 2)

Control, Influence, Accept: **Barriers**

ACTIVITY OVERVIEW

The CBE Community identified and openly discussed space-use obstacles through the following question :

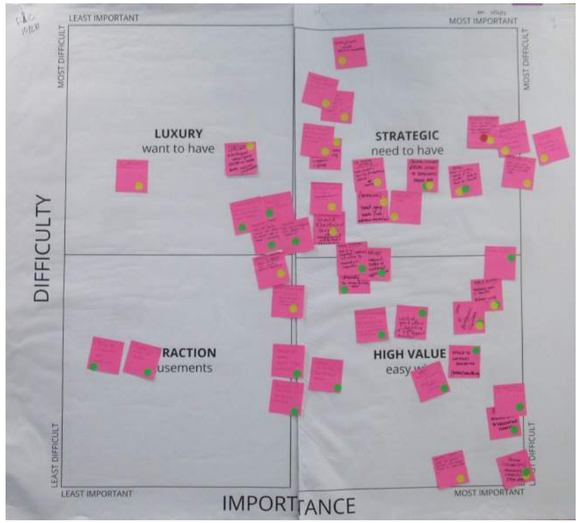
"What problems are you facing in CBE facilities?"

Prompted by the categories below, each participant identified and wrote 3 - 5 barriers to space use on sticky notes.

Buildings and Spaces	*Campus and Landscape*	*Teaching and Learning*	*Working*
Sustainability	*Building Equity*	*CBE Community Wellbeing*	*Modes of Messaging*

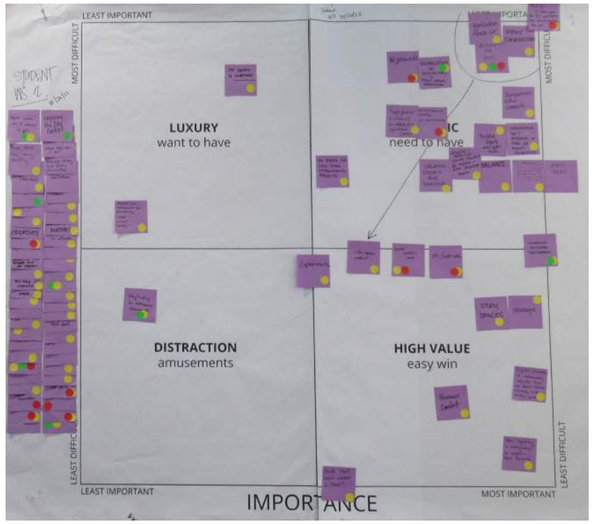
Afterward, all the individuals gathered to categorize the obstacles based on their level of control over them utilizing the "control, influence, accept" (CIA) system. They prioritized the barriers that require resolution or attention by employing a difficulty-importance (D-I) matrix. Following that, groups of 2-3 individuals chose the issues they would like to examine and brainstormed together further for potential solutions.

A summary of the role of space workshops is found on pp. 34 - 35

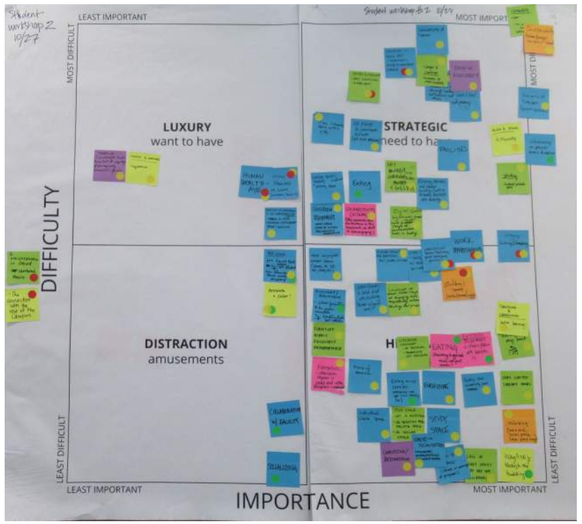


Faculty & Staff October 26, 2022

Faculty & Staff October 27, 2022



Student October 26, 2022



Student October 27, 2022

Barriers: **Thematic Analysis**

WORKSHOP FINDINGS

Sticky Notes from the Barriers portion of Workshop 2 were transcribed by the KT team and analyzed using thematic analysis. (See p. 107.)

The responses from all four workshops were combined and six distinct Barrier Themes were concluded from the data:

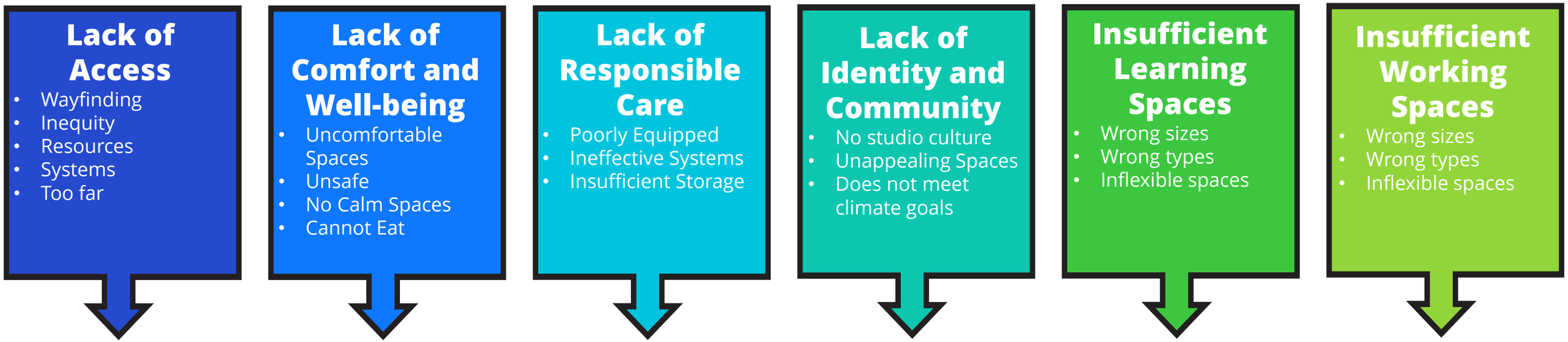
1. **Lack of Access:** Prevents individuals from accessing the resources they need, ranging from bathrooms, to printers, and to the building itself. Individuals cannot access these resources because they cannot find them, they cannot physically get to them, they do not exist, or the systems that manage them do not work.
2. **Lack of Comfort and Wellbeing:** Prevents individuals from feeling physically comfortable in the CBE facilities. Individuals feel uncomfortable because the facilities lack sufficient environmental control systems, including acoustics, ventilation, lighting, and comfortable furniture. Individuals also feel uncomfortable because they lack spaces to relax, study or collaborate in a quiet setting, do not have access to healthy food, and do not feel safe.
3. **Lack of Responsible Care:** A lack of support and maintenance prevents students, faculty, and staff from effectively completing their work or studies. Individuals work is not supported because their spaces are poorly equipped, the systems for accessing support do not work, or they do not have spaces for storing their work.
4. **Lack of Identity and Community:** Prevents individuals from feeling ownership, belonging, or pride for their facilities and community. Individuals lack feelings of community and do not feel like their identity is represented because their facilities are unappealing, there's no studio culture, and their facilities do not represent the college's deep commitment to climate action.
5. **Insufficient Learning Spaces:** Prevents students and faculty from learning and teaching effectively. Individuals feel their learning spaces are inadequate because they are the wrong sizes, they are the wrong types, or they are not flexible.
6. **Insufficient Working Spaces**: Prevents faculty and staff from working effectively. Individuals feel their working spaces are inadequate because they are the wrong sizes, they are the wrong types, or they are not flexible.

What attributes of the CBE's facilities undermine our purpose and mission?

Translates to decisions that revalue building program, equipment, operations, and atmosphere

Barriers: **Thematic Analysis**

What attributes of the CBE's facilities undermine our purpose and mission?



Translates to decisions that revalue building program, equipment, operations, and atmosphere

Barriers: **Thematic Analysis**

THEMATIC ANALYSIS FINDINGS

The six larger themes around Barriers are illustrated in a wheel with sub-categories shown in an additional ring. The outmost ring contains specific concerns identified by participants and found in the data.

Lack of Access

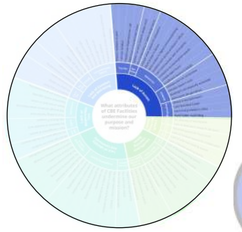
A lack of or limited access prevents individuals from using a range of resources from bathrooms to printers, and to the building itself. Individuals cannot access these resources because they cannot find them, they cannot physically get to them, they do not exist, or the systems that manage them do not work.

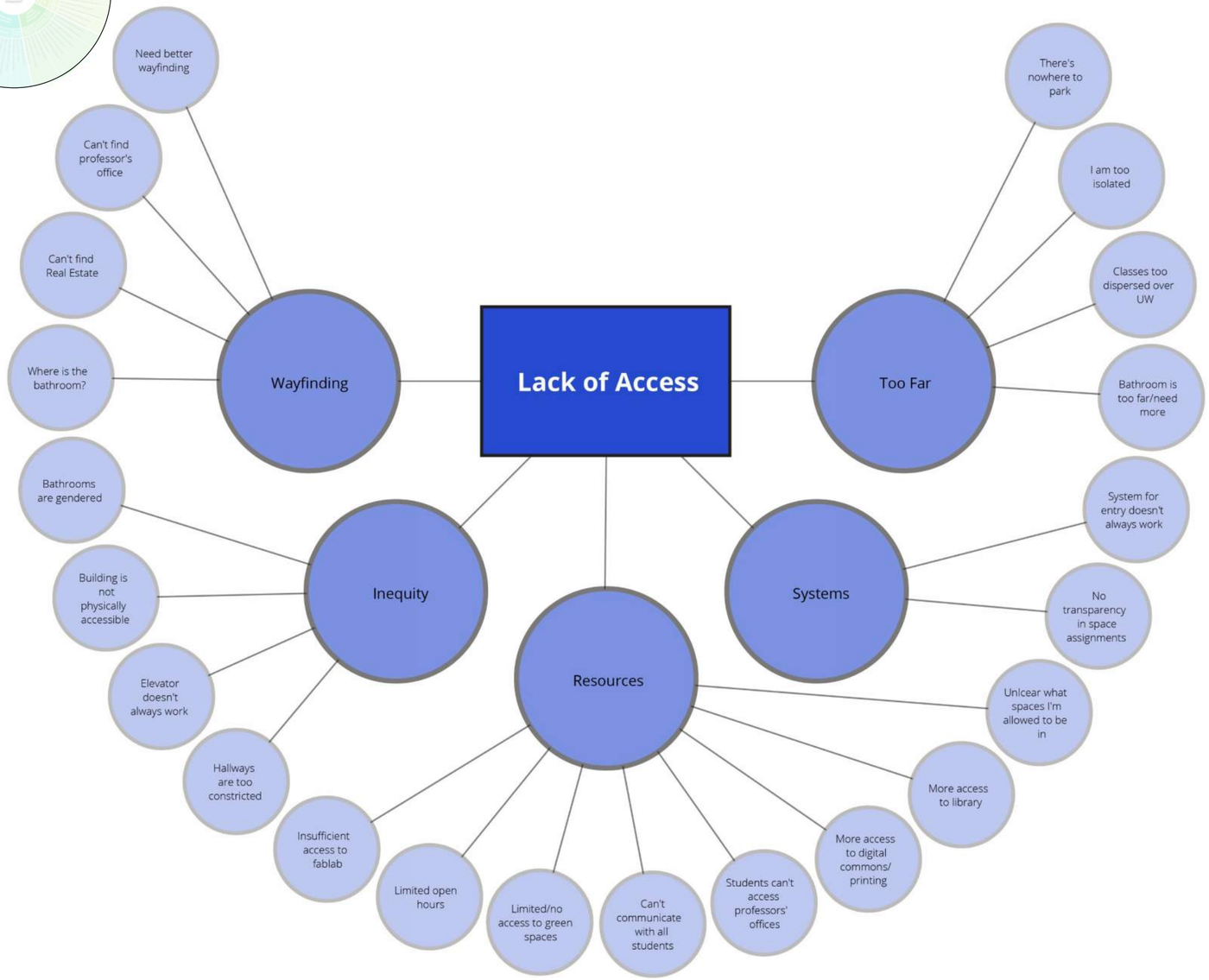
SUBTHEMES

1. No Wayfinding - Because there is no wayfinding, individuals have a hard time finding and accessing the bathrooms, their professors, and their own departments.
2. Inequity - Because the building is not physically accessible to individuals with disabilities, those individuals cannot easily access certain spaces, including most of the building entrances and some of the interior rooms. Additionally, individuals are not able to use nearby bathrooms because they are unnecessarily gendered.
3. No resources - Individuals are not able to access resources due to limited hours of operation for resource spaces like the Fabrication Lab and the BE Library.
4. Ineffective systems - The systems that exist for access often do not work and inadvertently prevent access when it should be granted.
5. Poor access to Facilities - Individuals feel isolated or like they cannot access the things they need because they are too far away from them, and/or there is insufficient transit to get to them.

CBE TASKS AND DECISIONS

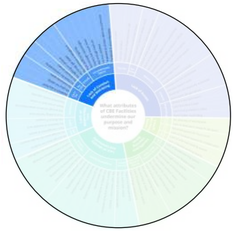
1. Add a welcome desk to Gould Hall for general questions.
2. Implement a cohesive wayfinding and branding system throughout the CBE's buildings, with an emphasis on Gould Hall.
3. Install gender neutral restrooms in the CBE facilities.
4. Increase access hours of large resources such as the BE library, Digital Commons, and Fabrication Lab.
5. Reconsider mass communication techniques for all of the CBE community via website portal or otherwise.
6. Renovation of Gould Terraces and increased consideration of exterior space use and design.
7. Create an easier connection for students between CERC and the main campus.
8. Implement an updated and transparent system for scheduling classes and meeting spaces.
9. Improve access to safe transit
10. Implement universal design principles in the CBE's facilities.
11. Repair elevator in Gould Hall; consider adding a second elevator.





Lack of Comfort and Well-being

Individuals feel physically uncomfortable because the CBE facilities lack sufficient environmental control systems, including acoustics, ventilation, lighting, and comfortable furniture. Individuals also feel uncomfortable because they lack spaces to relax, study or collaborate in a quiet setting, do not have access to healthy foods, and do not feel safe.

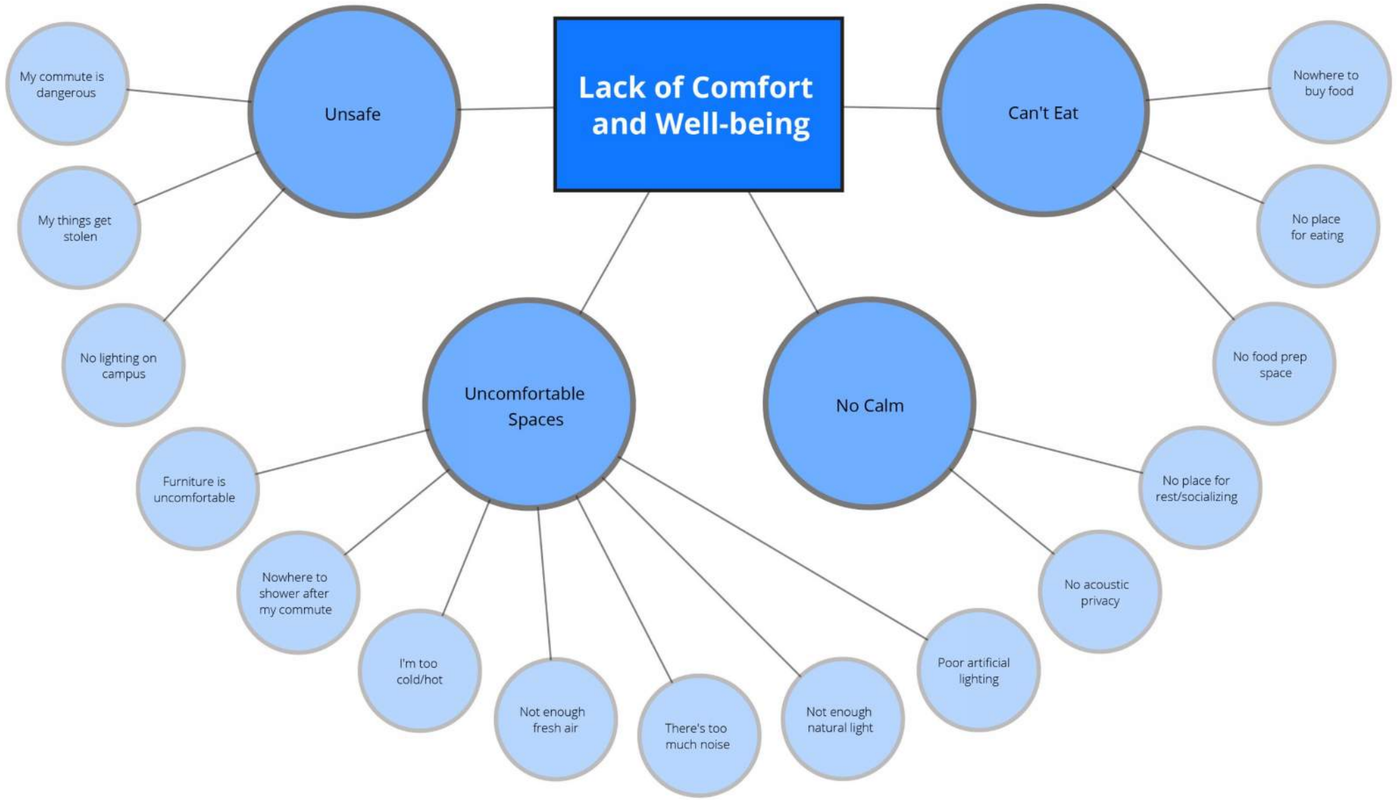


SUBTHEMES

1. Uncomfortable - Feelings of discomfort are due to poor building environment and environmental controls. Includes thermal discomfort, acoustic discomfort, uncomfortable lighting, and uncomfortable furniture.
2. Unsafe - Individuals do not feel safe on campus or getting to campus, and their belongings (primarily bicycles) aren't secure.
3. No calm places - There is no designated space for resting, relaxing, or socializing that is quiet or acoustically private.
4. Cannot eat - Individuals do not have easy access to healthy food, places to prepare their food, or places to eat their food (that is not their desk)

CBE TASKS AND DECISIONS

1. Add a food prep space in at least one of the CBE's main campus buildings.
2. Add more healthy and affordable meal options to the Buzz Café.
3. Create small study pods with acoustic separation for use by individuals or small groups for private conversations and/or focus work.
4. Create a shared lounge space for students to rest and recharge in between classes that includes comfortable furniture.
5. Address issues around safety on campus for student commuters.
6. Provide secure storage for students to lock their belongings.
7. Provide access to rooms with windows to all the CBE members rather than prioritizing for office space only.
8. Provide better lighting including task lighting and overall light adjustments.
9. Consider acoustical measures in Gould court to better host events in the atrium space.
10. Consider upgraded stools for studios to increase quality of ergonomics.



Lack of Responsible Care

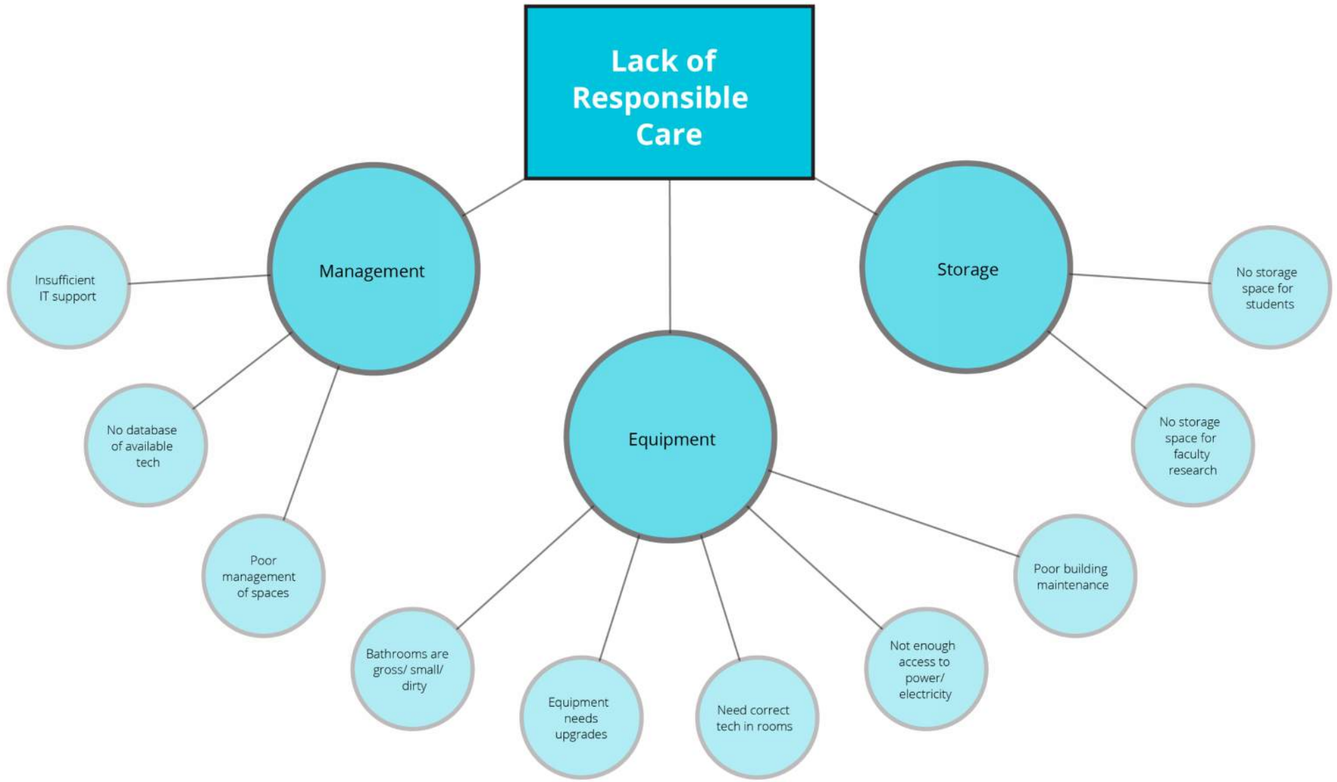
A lack of support and maintenance prevents students, faculty, and staff from effectively completing their work or studies. Individuals cannot have their work supported because their spaces are poorly equipped, the systems for accessing support do not work, or they do not have spaces for storing their work.

SUBTHEMES

1. Poorly equipped - Spaces are equipped with the wrong equipment, old equipment, or they are not maintained. Spaces also do not have enough access to power.
2. Ineffective systems - Individuals cannot access technology and resources because there is no database of available technology, there is insufficient IT support, and spaces are poorly managed.
3. Insufficient storage – Construction Management students and researchers do not have places to store their materials.

CBE TASKS AND DECISIONS

1. Create a consolidated and updated research hub.
2. Add secure storage space for faculty, staff, and students at the CERC facility.
3. Implement regular technology upgrades via an IT task team or advocacy group.
4. Add additional electrical outlets throughout Gould Court and all the CBE's classrooms.
5. Address long-standing deferred maintenance items potentially by coupling certain space planning projects with other repairs and upgrades.
6. Provide more access to IT support.
7. Implement an updated and transparent system for scheduling classes and meeting spaces.
8. Provide clear information on the CBE website about available technology resources for the CBE community.



Lack of Identity and Community

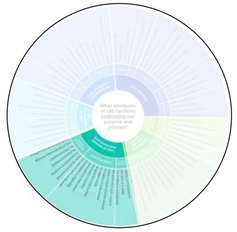
Prevents individuals from feeling ownership, belonging, or pride for their facilities and community. Individuals lack feelings of community and do not feel like their identity is represented because their facilities are unappealing, there's no studio culture, and their facilities do not represent the college's deep commitment to climate action.

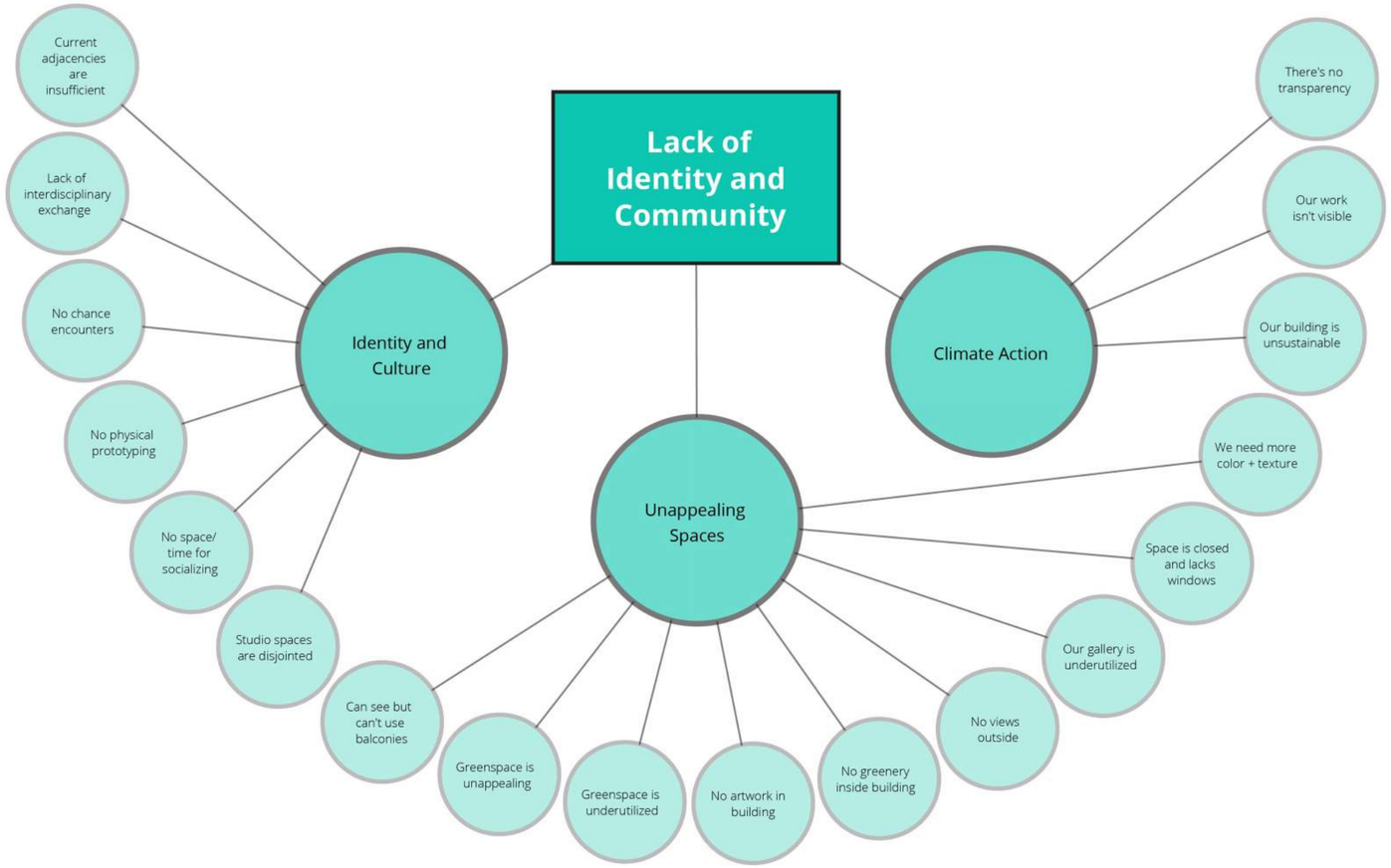
SUBTHEMES

1. No studio culture - Because students feel isolated and cannot see or interact with the work of their peers, especially in other majors, they lack a feeling of community.
2. Unappealing spaces - Individuals find their building unappealing because spaces are poorly maintained or underutilized, they lack green space or biophilia, and there is no artwork.
3. Does not meet climate action goals - Individuals feel like their building does not represent them because it is unsustainable and inequitable.

CBE TASKS AND DECISIONS

1. Create systems to showcase research and student work online and in the Gould Gallery.
2. Implement universal design principals throughout the CBE's facilities.
3. Add a cohesive dashboard on the CBE's website that illustrates building usage and energy consumption.
4. Rehabilitate Gould terraces and provide access to them.
5. Prioritize maintenance of exterior space plantings and furnishings.
6. Provide greater access to perimeter rooms in the CBE's buildings rather than prioritizing them for office space; allow access for the general CBE community.
7. Address long-standing deferred maintenance issues – consider implementing into curriculum.
8. Provide opportunity for student groups to install artwork on a rotating basis.
9. Implement biophilic design principals into the CBE's facilities such as indoor plants, organic materials, and access to daylight.
10. Re-consider how studio space is assigned and used – a pilot program can help with longer term decision making.





Insufficient Learning Spaces

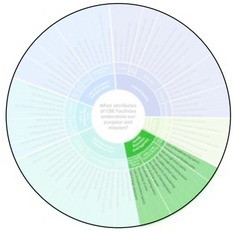
Prevents students and faculty from learning and teaching effectively. Individuals feel their learning spaces are inadequate because they are the wrong sizes, they are the wrong types, or they cannot be adjusted.

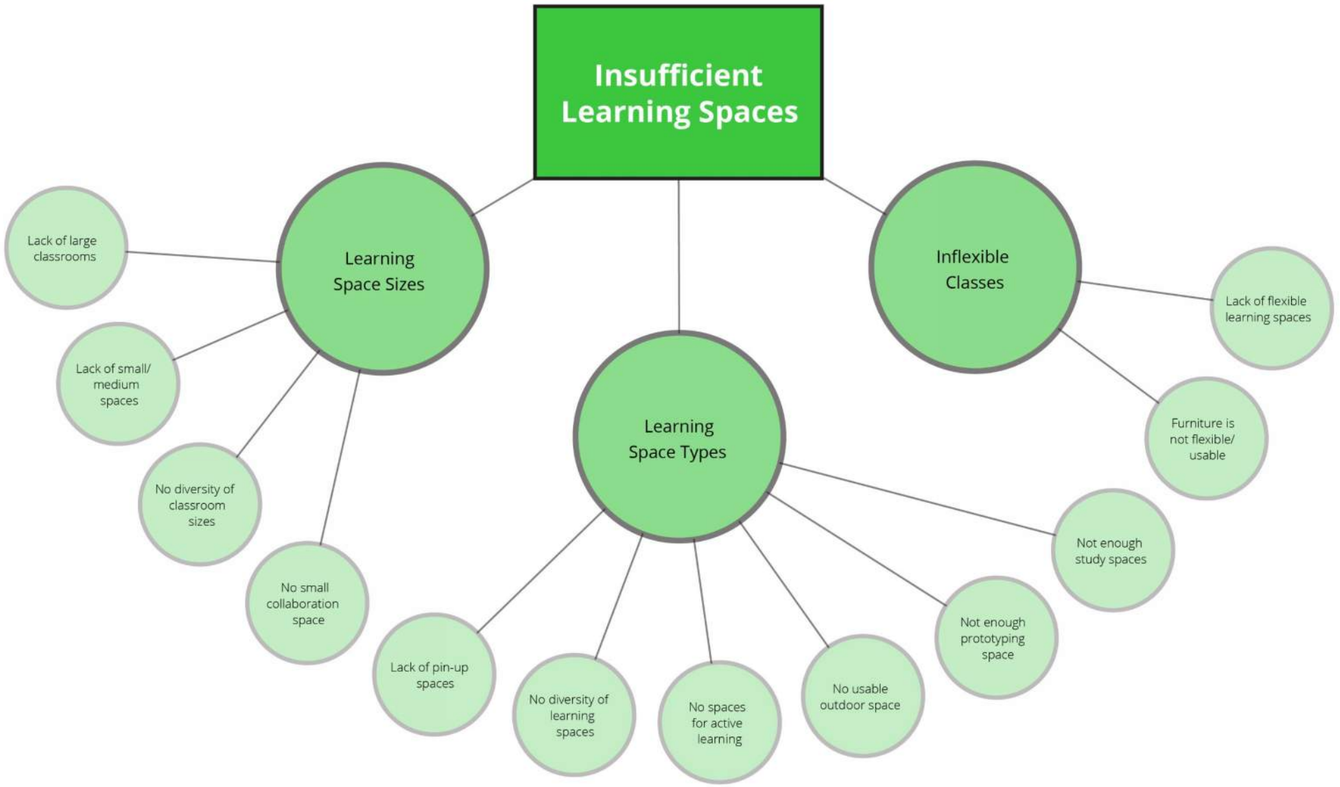
SUBTHEMES

1. Wrong sizes - Individuals lack medium sized learning spaces, large classrooms for lectures. And small spaces for meetings amongst the CBE's community members.
2. Wrong types - Individuals lack spaces for prototyping and modelling, usable outdoor space, and pin-up space. In general, there is a lack of diversity in learning spaces.
3. Inflexible spaces - Individuals are not able to change their spaces to fit their specific needs, primarily due to inflexible furniture.

CBE TASKS AND DECISIONS

1. Consider path to acquisition of scheduling control over large classrooms currently controlled by UW central such as Architecture Hall, Rm. 160.
2. Create reservable small meeting rooms that provide space for private conversations, video calls, and deep focused work.
3. Prioritize upgrades of exterior space for class time usage.
4. Implement a series of active learning classrooms in the CBE's facilities.
5. Re-organize the Fabrication Lab to provide more space for prototype work.
6. Provide more space for pin up (physical and virtual).
7. Prioritize upgrades of flexible furniture in classrooms for different teaching styles.





Insufficient Working Spaces

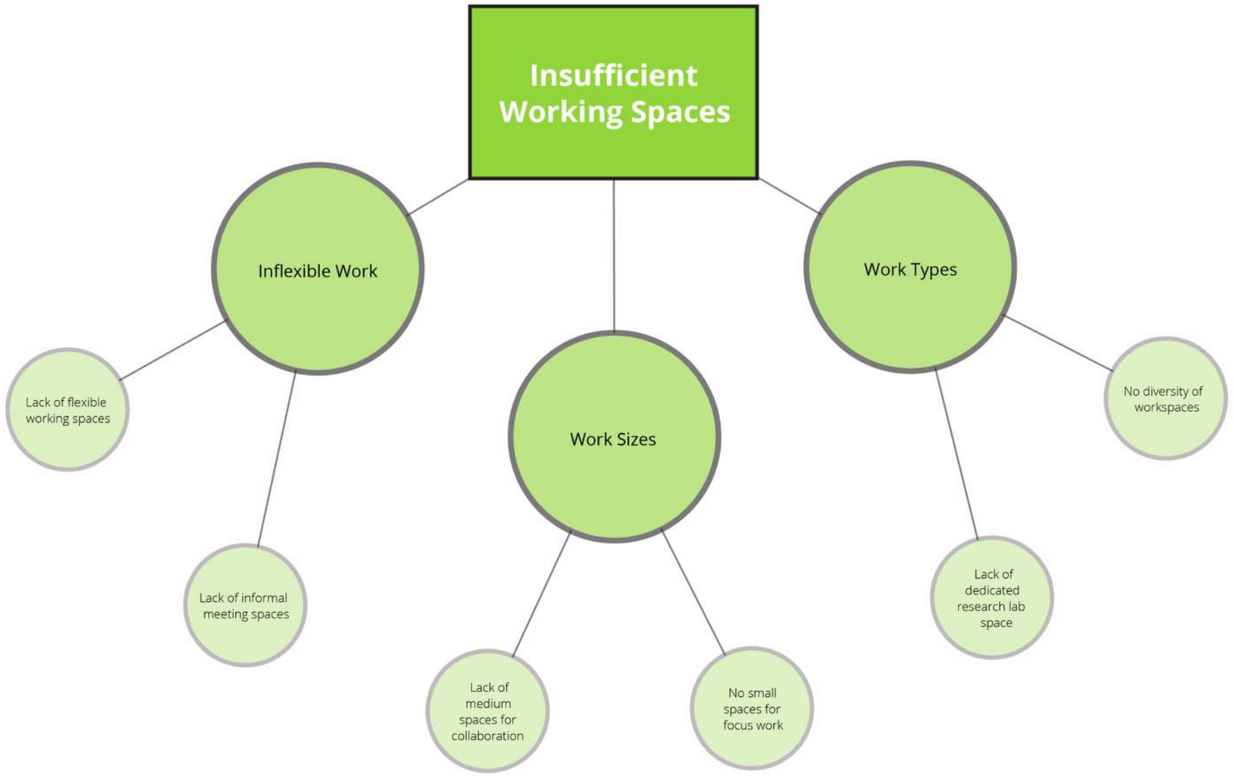
Prevents faculty and staff from working effectively. Individuals feel their working spaces are inadequate because they are the wrong sizes, they are the wrong types, or they are not flexible.

SUBTHEMES

1. Wrong sizes - Individuals lack small spaces for focus work and small/medium spaces for collaboration.
2. Wrong types - There is a general lack of diversity in working space types, and there is a lack of space that is dedicated to research.
3. Inflexible spaces - Working spaces aren't flexible in their scheduling or in their furniture.

CBE TASKS AND DECISIONS

1. Create meeting spaces of diverse sizes that are reservable and available to all of the CBE's members – spaces should accommodate collaborative and individual work.
2. Create reservable small meeting rooms that provide space for private conversations, video calls, and deep focused work.
3. Create open work areas for faculty, staff, and students to work on laptops in a casual manner.
4. Create a consolidated research hub with adequate work and storage space.



3.3 Space Workshop Analysis

Student Voices on Building Inclusivity,
Listening Session (Workshop 3)

Student Voices on Building Inclusivity: Findings

ACTIVITY OVERVIEW

CBE student identity and affinity group representatives virtually gathered with Dr. Karen Thomas-Brown to address four questions on using CBE spaces. Thomas-Brown's questions elevate counternarratives on space types and space use to represent historically minoritized voices in space assessments. She facilitated a similar session for the College of Engineering's new Interdisciplinary Engineering Building (COE IEB), designed by KT.

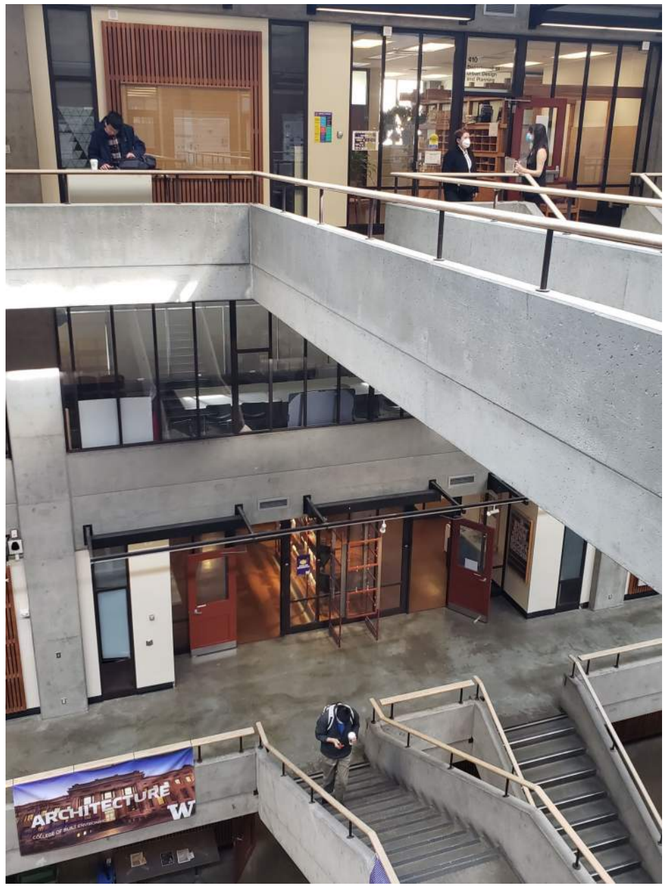
13 student representatives participated in the session, conducted via Zoom. Students self-identified as representing a range of identities varying across gender, LGBTQIA+, race, ethnicity, disability, economic background, family educational history, country of origin, neurodiversity, language background, family status, and employment status.

During the session, four questions were presented to the participants, each accompanied by a brief introduction. The participants were given ample time to contemplate each question and record their responses on a Microsoft Form. Once they had submitted their answers, the group came together to discuss their responses.

The responses provided by the students, amounting to over 2000 words, underwent analysis and organization into themes and subthemes by KT. As a result, it is possible to reflect on the attributes of CBE spaces that impact diversity, equity, and inclusivity.

LISTENING SESSION QUESTIONS:

1. ***What social identity/identities/groups do you represent and advocate for within the CBE and the UW?***
2. ***How do you and your affinity group/identity talk about the various spaces in the CBE?***
3. **Consider how one's degree program, prior life experiences, UW experiences, and expectations of the CBE factor into decision-making processes. *To what extent do you think the space distribution and allocation in the CBE are inclusive and equitable?***
4. **Consider what an inclusive space looks like to you. *How could the spaces in the CBE embody inclusivity goals?***



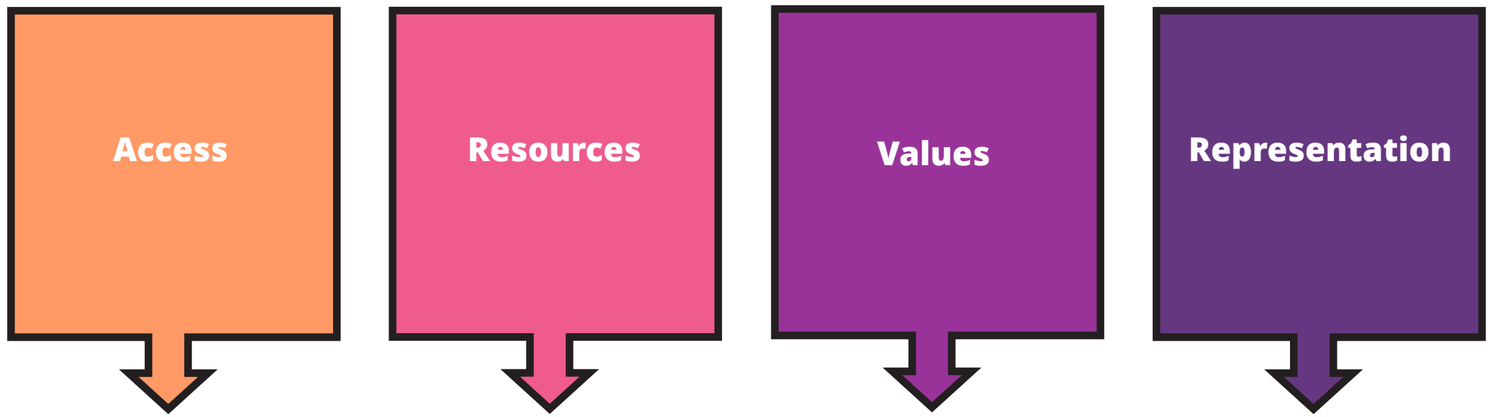
View at Gould Atrium

Student Voices on Building Inclusivity: Findings

Four primary themes are found in the student's responses:

1. **Access:** Spaces of inclusion understand the meaning of access. They dismantle barriers to entry for underrepresented groups.
2. **Resources:** Spaces of inclusion promote a culture that welcomes, respects, and empowers me to do my work.
3. **Values:** Spaces of inclusion promote a culture that welcomes, respects, and empowers me to do my work.
4. **Representation:** Spaces of inclusion offer, provide, and maintain the essentials that support learning, mentoring, and collaboration.

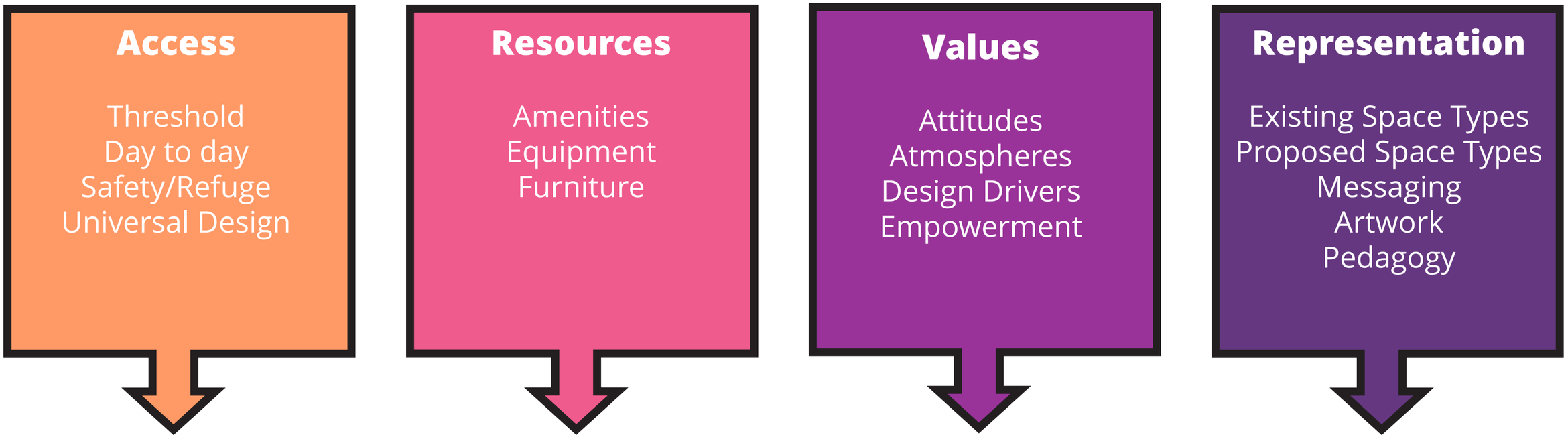
What attributes of spaces impact diversity, equity, and inclusivity at the CBE?



translates to decisions on building program, equipment, and operations

Student Voices on Building Inclusivity: Findings

What attributes of spaces impact diversity, equity, and inclusivity at the CBE?

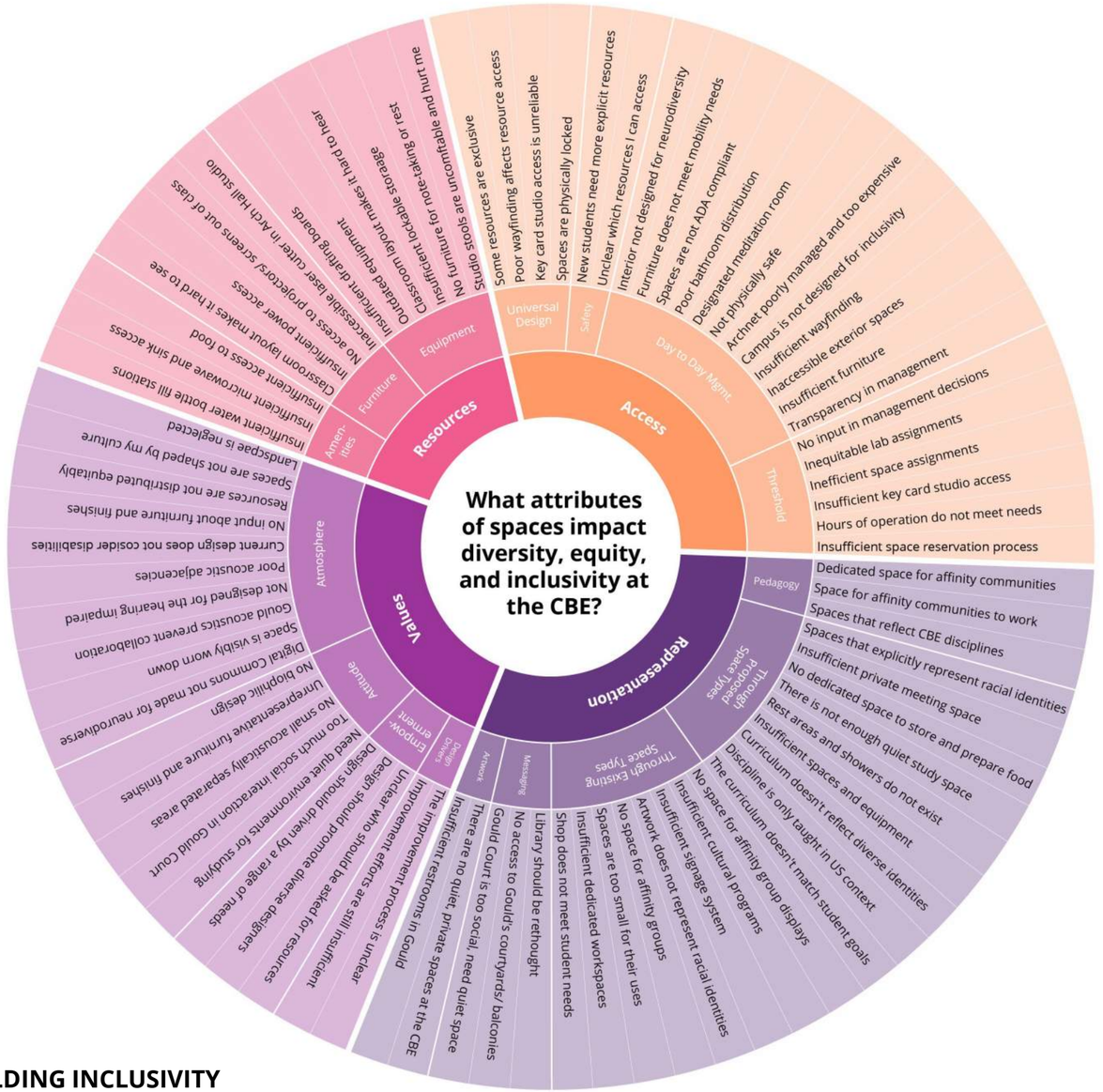


translates to decisions on building program, equipment, and operations

Student Voices on Building Inclusivity: **Thematic Analysis**

THEMATIC ANALYSIS FINDINGS

The four primary themes are illustrated in the wheel with sub-themes shown in an additional ring. The outmost ring contains space type and space use issues identified by participants.



Access

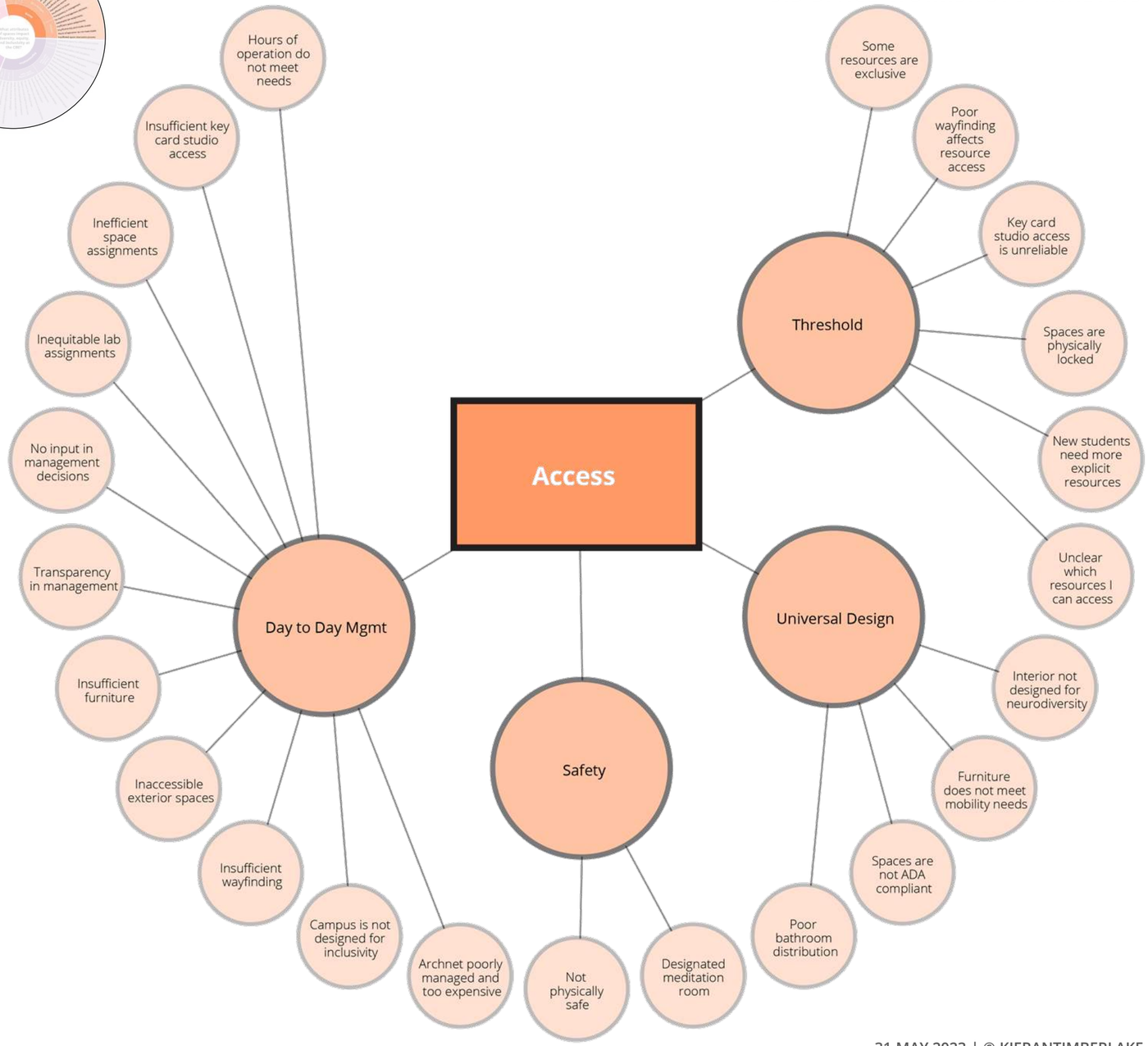
Spaces of inclusion understand the meaning of access. They dismantle barriers to entry for underrepresented groups.

SUBTHEMES

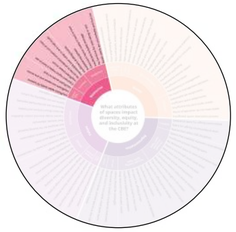
1. Universal design - The site, building, and space planning do not consistently promote access for everyone in our community.
2. Safety - I do not always feel safe here. I need a space for refuge where myself and belongings are secure.
3. Day-to-day management - Decisions on day-to-day management are not transparent to me, and pathways for using my voice are uncertain.
4. Threshold - The threshold to entry is physically too high for all users to use safely, and difficult to navigate.

CBE TASKS AND DECISIONS

1. Conduct a complete accessibility assessment of the CBE's buildings and plan of action for important upgrades; implement universal design principals in the CBE's facilities.
2. Install gender neutral restrooms in the CBE's facilities.
3. Address issues around safety on campus for student commuters.
4. Upgrade the wellness room of Gould Hall to have more biophilic qualities.
5. Address access issues with keycards; consider increased access hours to important resources such as Archnet, laser cutters, and the Fabrication Lab.
6. Include student voices in implementation of furniture upgrades in order to address all concerns and ergonomic issues.
7. Implement an audit of overall management systems at the CBE including how classes and studios are scheduled, how information is shared to community members, and database of available resources.
8. Implement an updated and transparent system for scheduling classes and meeting spaces.
9. Provide clear information on the CBE website about available resources for the CBE community.
10. Implement a cohesive wayfinding and branding system throughout the CBE's buildings with an emphasis on Gould Hall; implement a welcome desk in Gould Hall.



Resources



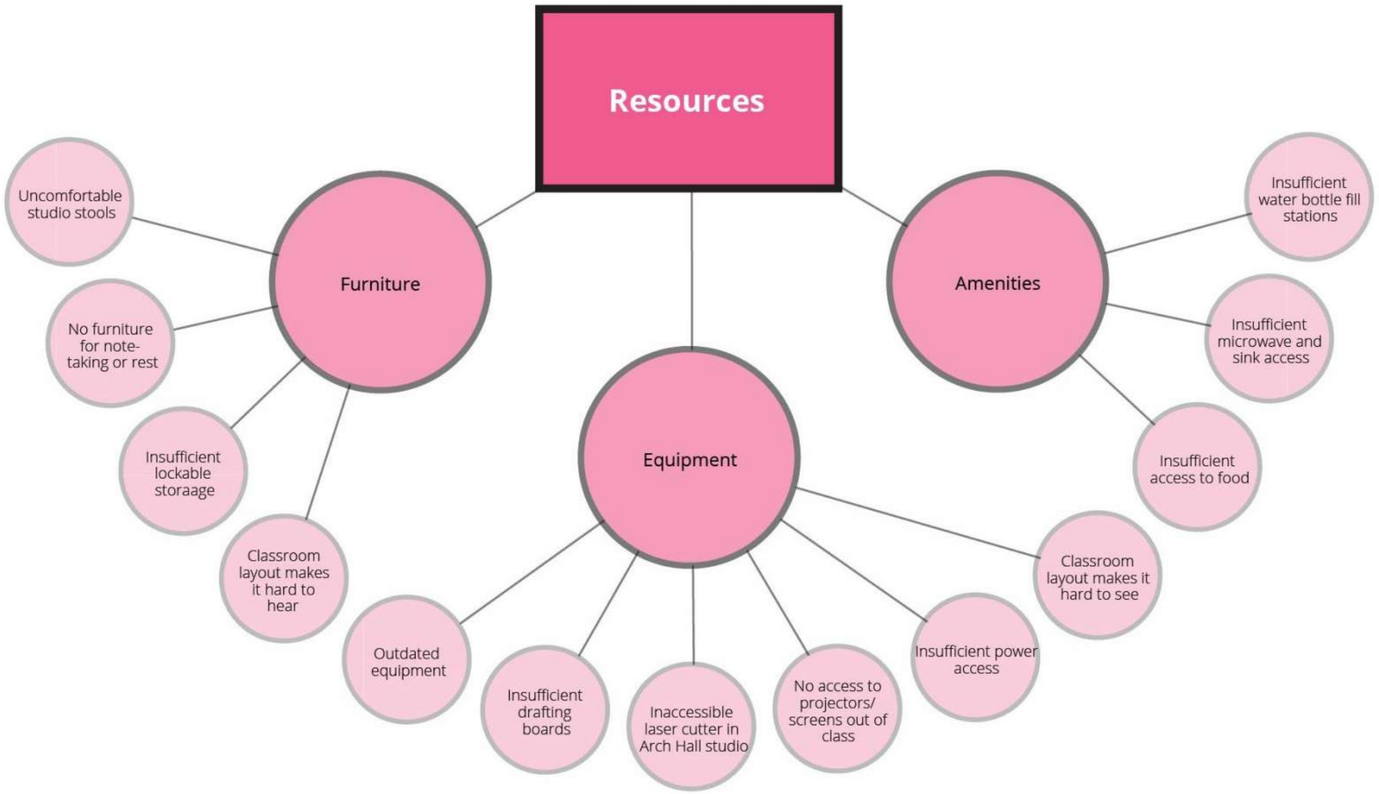
Spaces of inclusion promote a culture that welcomes, respects, and empowers me to do my work.

SUBTHEMES

1. Amenities - The space amenities are not evenly distributed, nor easily accessed.
2. Furniture - The available furniture is uncomfortable, broken, and does not meet my needs.
3. Equipment - The equipment is outdated, ill maintained, or broken, requiring more of my time and energy to use it.

CBE TASKS AND DECISIONS

1. Implement regular technology upgrades via an IT task team or advocacy group.
2. Include student voices in implementation of any upgrades in the CBE facilities.
3. Replace studio desks and stools with ones that are more ergonomic for computer-focused work.
4. Add a food prep and lounge space in one of CBE's main campus buildings for members to prepare and consume food.
5. Add more healthy and affordable meal options to the Buzz Café and extend hours to purchase healthful meals.
6. Provide secure storage for students to lock their belongings.
7. Provide flexible furniture in classrooms for various configurations and teaching styles.
8. In classroom design, be sure to consider all seats and their access to visual screens, and the professor speaking.
9. Incorporate an overhaul of electrical plugs throughout the CBE's buildings.
10. Increase access hours to the laser cutter, the Fabrication Lab, and Archnet.
11. Create reservable small meeting rooms that provide space for private conversations, video calls, and deep focused work.
12. Add accessible water bottle fill stations in Gould Hall.



Values

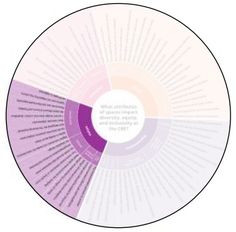
Spaces of inclusion promote a culture that welcomes, respects, and empowers me to do my work.

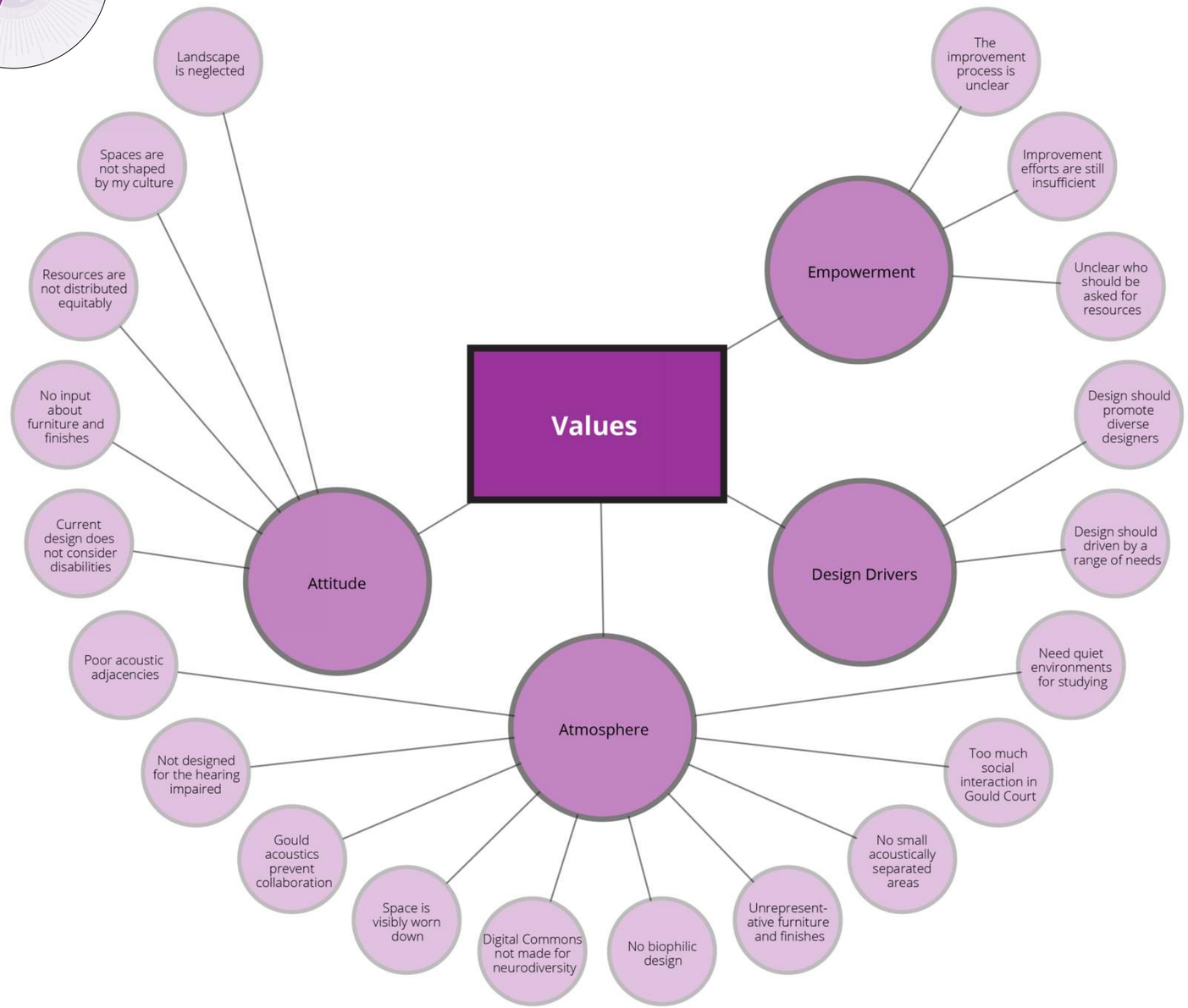
SUBTHEMES

1. Design Drivers - The space is not designed with certain needs in mind.
2. Empowerment - The space detracts from my ability to meet my goals.
3. Attitude - There are negative attitudes displayed in spaces throughout the building.
4. Atmosphere - Some qualities of the interior environment, including lighting, materials, and technology equipment are of poor quality and adversely impact my ability to do my work.

CBE TASKS AND DECISIONS

1. Include student voices in implementation of any upgrades in the CBE's facilities.
2. Employ an equity expert in the implementation of any upgrades to the CBE's facilities to be sure all identities are represented, especially those historically marginalized.
3. Empower students to express how the CBE's spaces can better serve them by meeting regularly with student advocacy groups and/or create a clear way for students to express their needs to the Dean.
4. Implement an accessibility and equity assessment of all the CBE's buildings – create a plan of action to address universal design standards lacking in current facilities.
5. Provide equity training for all the CBE's faculty and staff members.
6. Place an importance on hiring faculty and staff members of marginalized identities to better serve the student population.
7. Prioritize maintenance of exterior plantings, landscaping, and furnishings.
8. Implement biophilic design principals into the CBE's facilities such as indoor plants, organic materials, and access to daylight.
9. Upgrade the wellness room of Gould Hall to have more biophilic qualities.
10. Provide opportunities for student groups to install artwork on a rotating basis.
11. Create meeting spaces of diverse sizes that are reservable and available to all of the CBE's members – spaces should accommodate collaborative and individual work with soundproofing measures implemented.
12. Repair visible wear and tear on interior spaces as they have an impact on people's mental wellbeing.





SPACE WORKSHOP 3: STUDENT VOICES ON BUILDING INCLUSIVITY

Representation

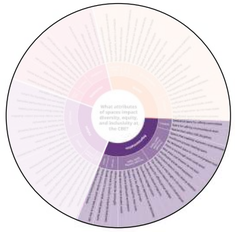
Spaces of inclusion offer, provide, and maintain the essentials that support learning, mentoring, and collaboration.

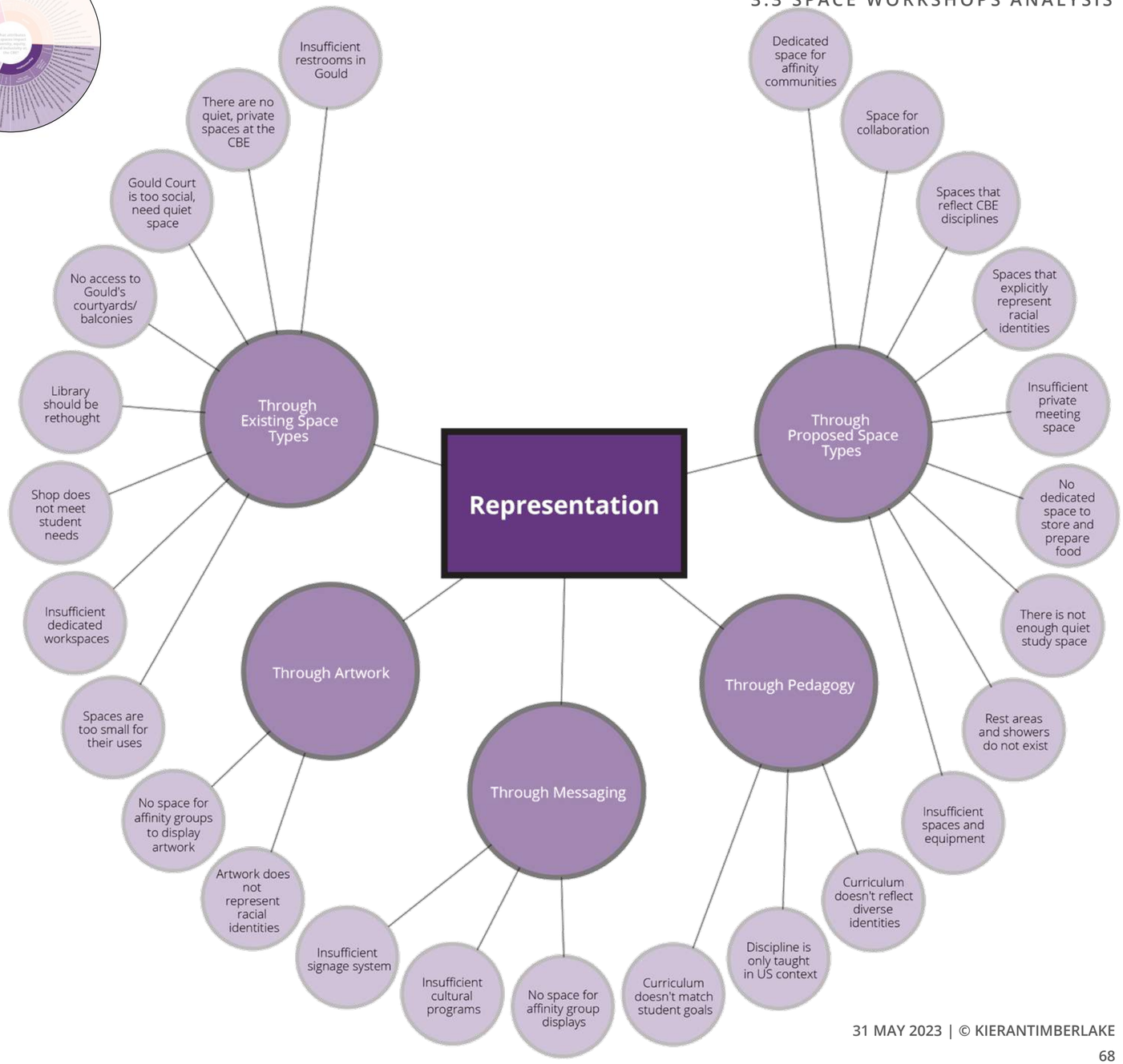
SUBTHEMES

1. Pedagogy - The instructors, teaching, and learnings in the community do not represent inclusion of all identities.
2. Representation Through Proposed Space Types - New space types are needed to represent me, my needs, and the needs of my community.
3. Representation Through Existing Space Types - The existing space types do not support me, my needs, and the needs of my community.
4. Messaging - The signage and displays in the space do not represent my identity and are not accessible to all users (visual text only).
5. Artwork - Any artwork is intentional in its representation. Where is artwork here that represents me?

CBE TASKS AND DECISIONS

1. Place an importance on hiring faculty and staff members of marginalized identities to better serve the student population.
2. Incorporate more class offerings which focus on history and practices of the built environment in a diversity of cultures. Provide space and support for cultural programs to take place at the CBE, outside of class time.
3. Provide space for student affinity groups to meet either through reservation of shared meeting rooms or designated space.
4. Allow student groups to help shape decisions about space in order to represent all identities at the CBE; provide opportunities for student groups to install artwork on a rotating basis.
5. Create small study pods with acoustic separation for use by individuals or small groups for private conversations and/or focus work.
6. Add a food prep and lounge space in one of the CBE's main campus buildings for members to prepare and consume food. Students should be able to rest and recharge between class in a comfortable environment.
7. Install showers for bike commuters to use before they start their school or workday.
8. Consider how all students could have a designated desk for working, rather than relying on hot desks.
9. Install gender neutral restrooms in the CBE's facilities.
10. Conduct a complete accessibility assessment of the CBE's facilities and a plan of action for important upgrades.

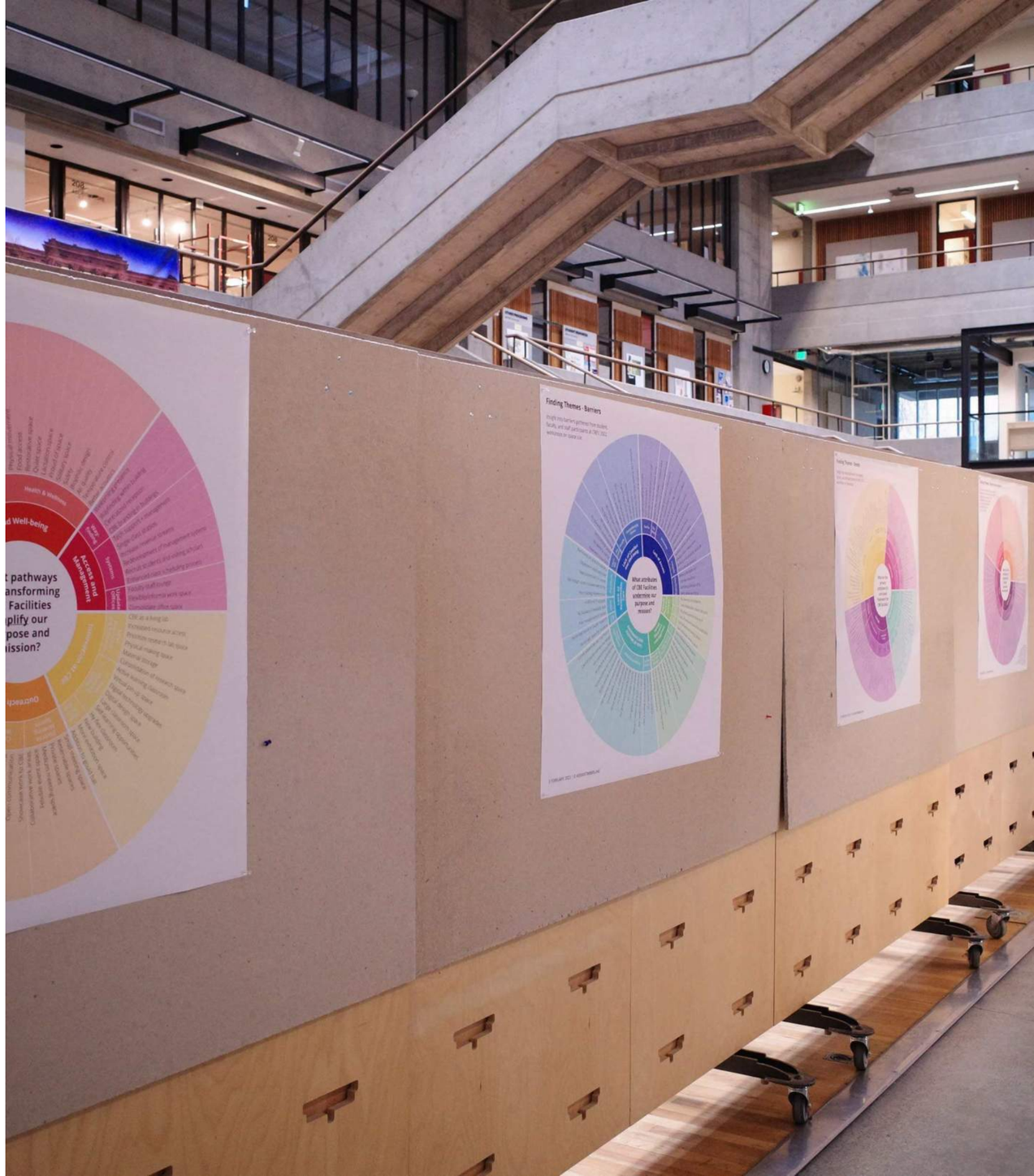




WORKSHOP 3: STUDENT VOICES ON BUILDING INCLUSIVITY

3.3 Space Workshop Analysis

A Care-Based Synthesis



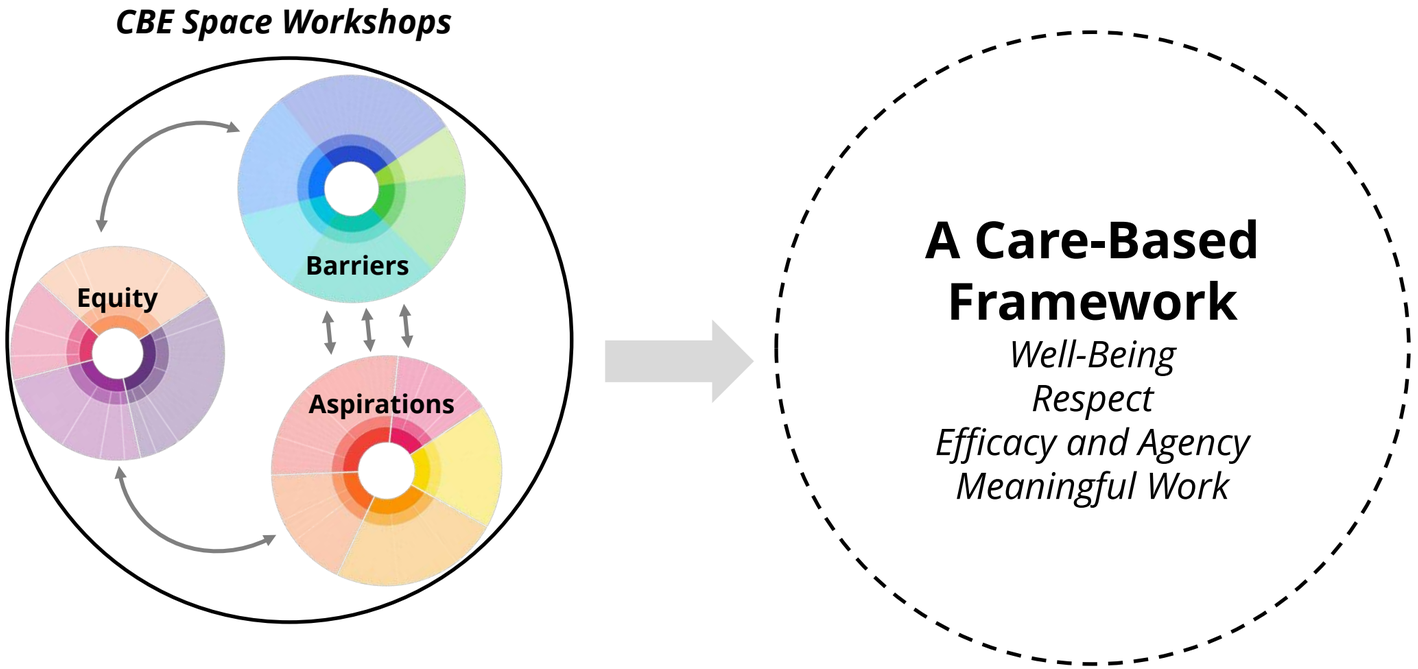
A Care-Based Synthesis

A CARE-BASED FRAMEWORK

A thematic analysis was conducted on all data collected from the three CBE Space Workshops. Feedback about barriers, aspirations, and inclusivity were analyzed qualitatively using a grounded theory approach to thematic analysis. Thematic analysis is a qualitative research method that involves searching for themes, patterns, and insights into qualitative data sources, like data that cannot be counted, including words or quotes. Grounded theory thematic analysis more specifically refers to qualitative analysis which involves reviewing relevant literature, introducing those findings back into your analysis, and cyclically coding until a theory has been reached and no new codes arise.

This process resulted in a framework which was informed by the findings from the three workshops and by additional research on dignity in the workplace and academia. The subject of research was chosen based upon an initial analysis of the engagement sessions, which revealed a pattern of feelings of indignity across each topic and each stakeholder group.

A care-based framework for the CBE would positively guide decision-making for the CBE's facilities by prioritizing the needs of the CBE community that were uncovered through the engagement sessions.



Thematic Analysis Findings: **A Care-Based Synthesis**

THEMATIC ANALYSIS FINDINGS

What are the primary attributes of a care-based framework for the CBE's facilities?

The combined data set of aspirations, barriers, and equity were synthesized into four themes:

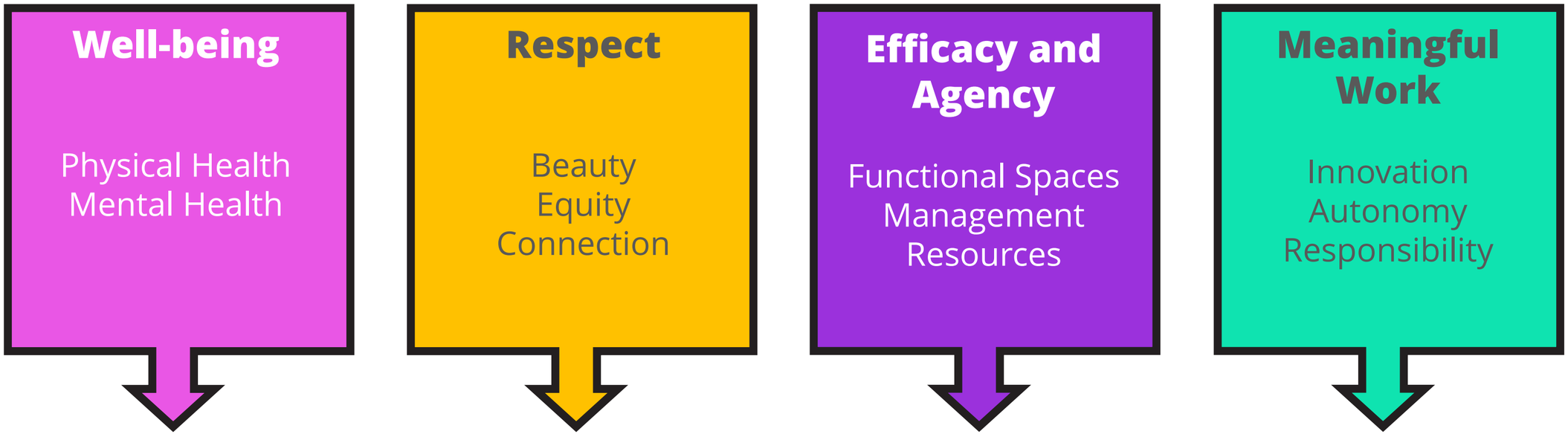
1. **Well-Being**: Individuals need to experience well-being in order to succeed at their jobs or studies. In buildings, a sense of well-being is created by comfortable and safe spaces that promote a culture that welcomes, respects, and empowers its inhabitants.
2. **Respect**: Individuals have a need to feel respected by the CBE. This is created by civility, positive relationships, having needs recognized, and having identity recognized. Persistent and visible lack of maintenance, care, and inclusive spaces erodes feelings of respect.
3. **Efficacy and Agency**: Individuals need to feel uninhibited by the CBE in their ability to demonstrate competence and agency. Managerial and spatial barriers can erode personal feelings of efficacy and agency.
4. **Meaningful Work**: Individuals need to feel that they have adequate opportunities to do work that encompasses their dreams, hopes, and sense of fulfillment and contribution to their community.

What are the primary attributes of a care-based framework for the CBE's facilities?

translates to decisions on building program, equipment, and operations

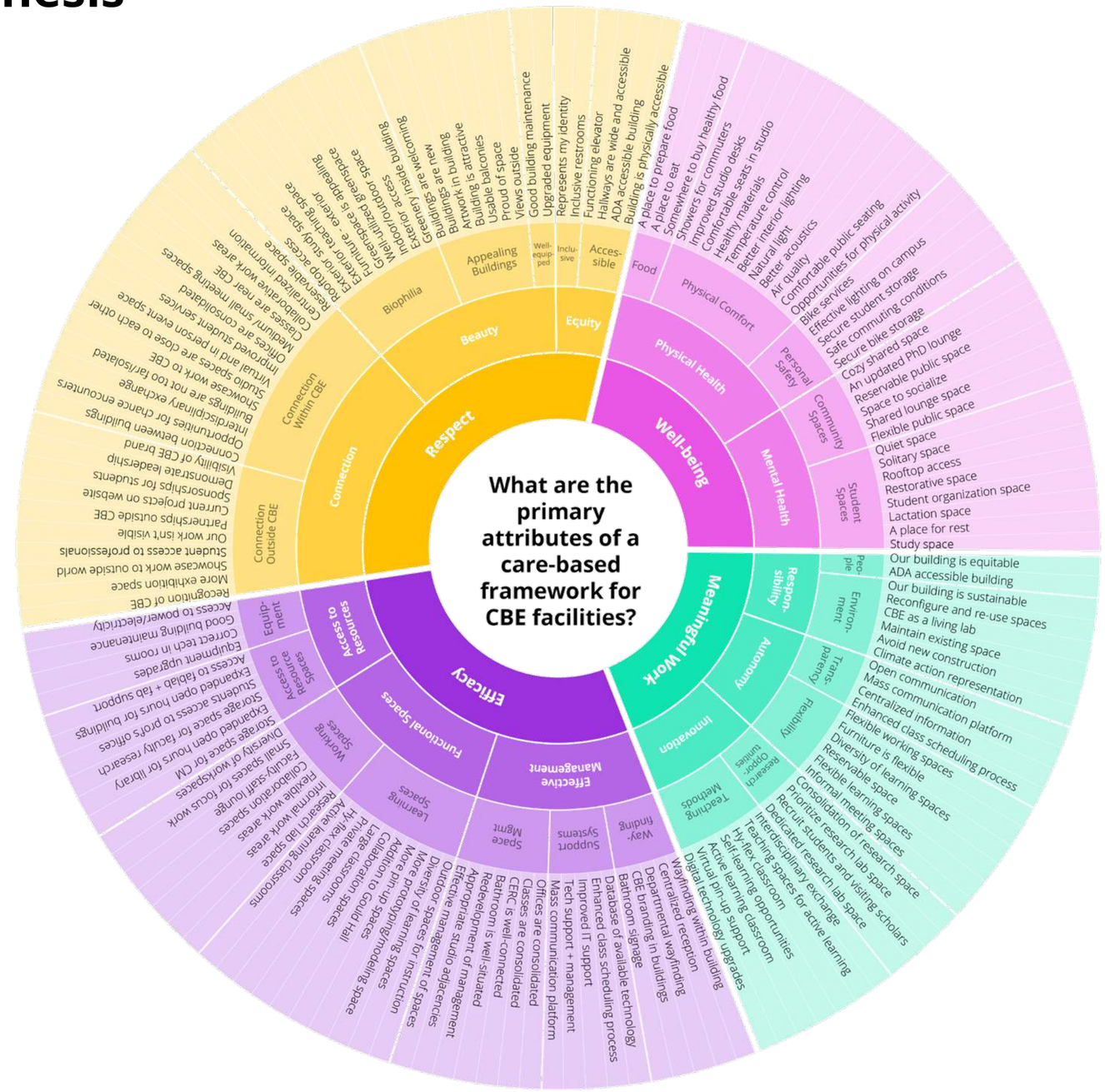
A Care-Based Synthesis

What are primary attributes of a care-based framework for the CBE's facilities?



translates to decisions on building program, equipment, and operations

A Care-Based Synthesis



Well-being

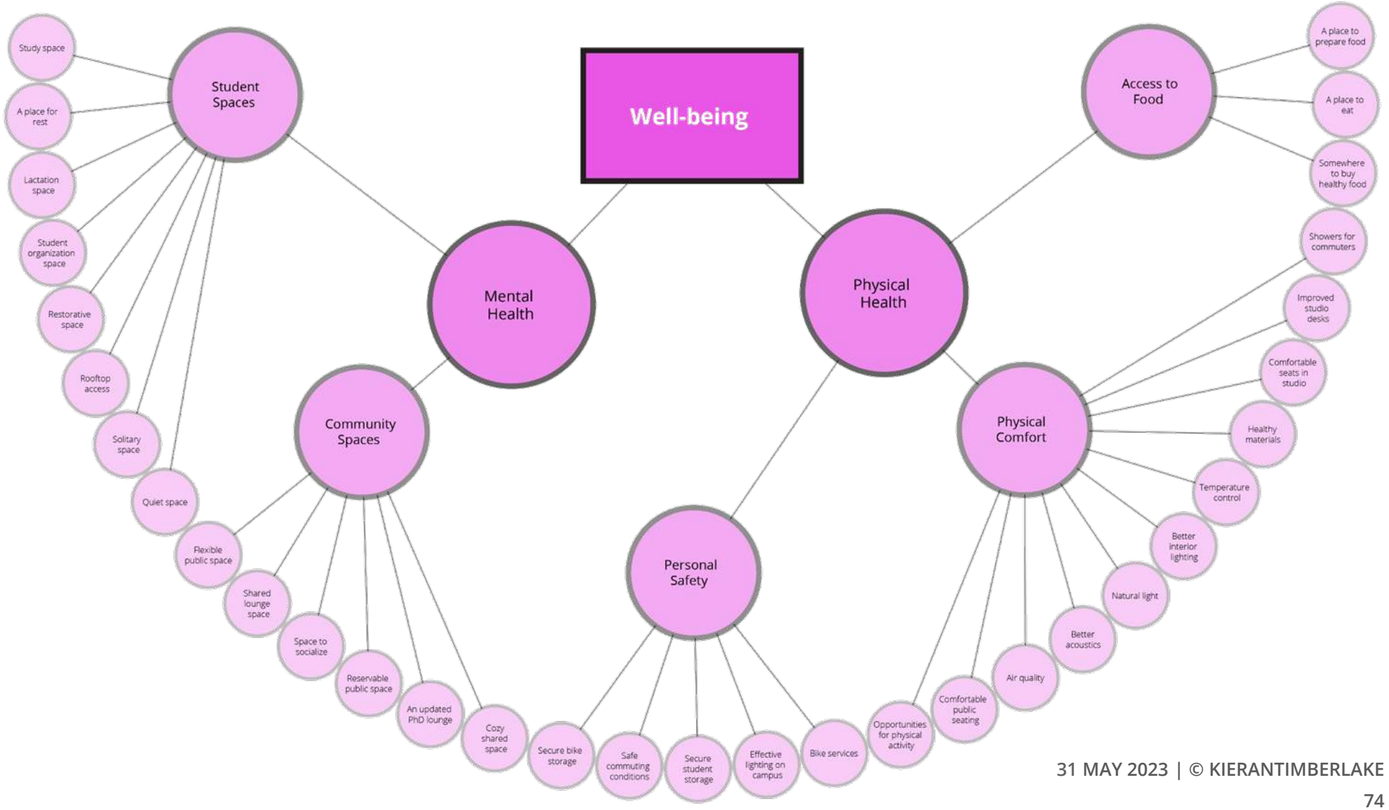
Individuals need to experience well-being in order to succeed at their jobs or studies. In buildings, a sense of well-being is created by comfortable and safe spaces that promote a culture that welcomes, respects, and empowers its inhabitants.

SUBTHEMES

1. Physical Health - Individuals need to feel physically comfortable. To meet this need, the CBE needs sufficient environmental controls, including acoustics, ventilation, lighting, and comfortable furniture.
2. Mental Health - Individuals need to feel mentally comfortable. To meet this need, the CBE must provide spaces to relax, study, or collaborate in a quiet setting, spaces to eat, and spaces that are safe to inhabit.

CBE TASKS AND DECISIONS

1. Add a food prep and lounge space in one of CBE's main campus buildings for members to prepare and consume food.
2. Add more healthy and affordable meal options to Buzz Café.
3. Install showers for bike commuters to use before they start their school or workday.
4. Replace studio desks and stools with ones that are more ergonomic for computer-focused work.
5. Provide controls for occupants to change the temperature of their space.
6. Incorporate healthy material choices into any upgrades at the CBE.
7. Provide better lighting including task lighting and overall light adjustments.
8. Implement biophilic design principals into the CBE's facilities such as indoor plants, organic materials, and access to daylight.
9. Prioritize maintenance of exterior plantings, landscaping, and furnishings.
10. Create a student lounge space for students to rest and recharge in between classes that includes comfortable furniture
11. Upgrade the wellness room of Gould Hall to have more biophilic qualities.
12. Provide space for student organization groups to meet either through reservation of shared meeting rooms or designated space
13. Create meeting spaces of diverse sizes that are reservable and available to all of the CBE's members – spaces should accommodate collaborative and individual work with soundproofing measures implemented.
14. Address issues around safety on campus for student commuters.



A CARE-BASED SYNTHESIS

Respect

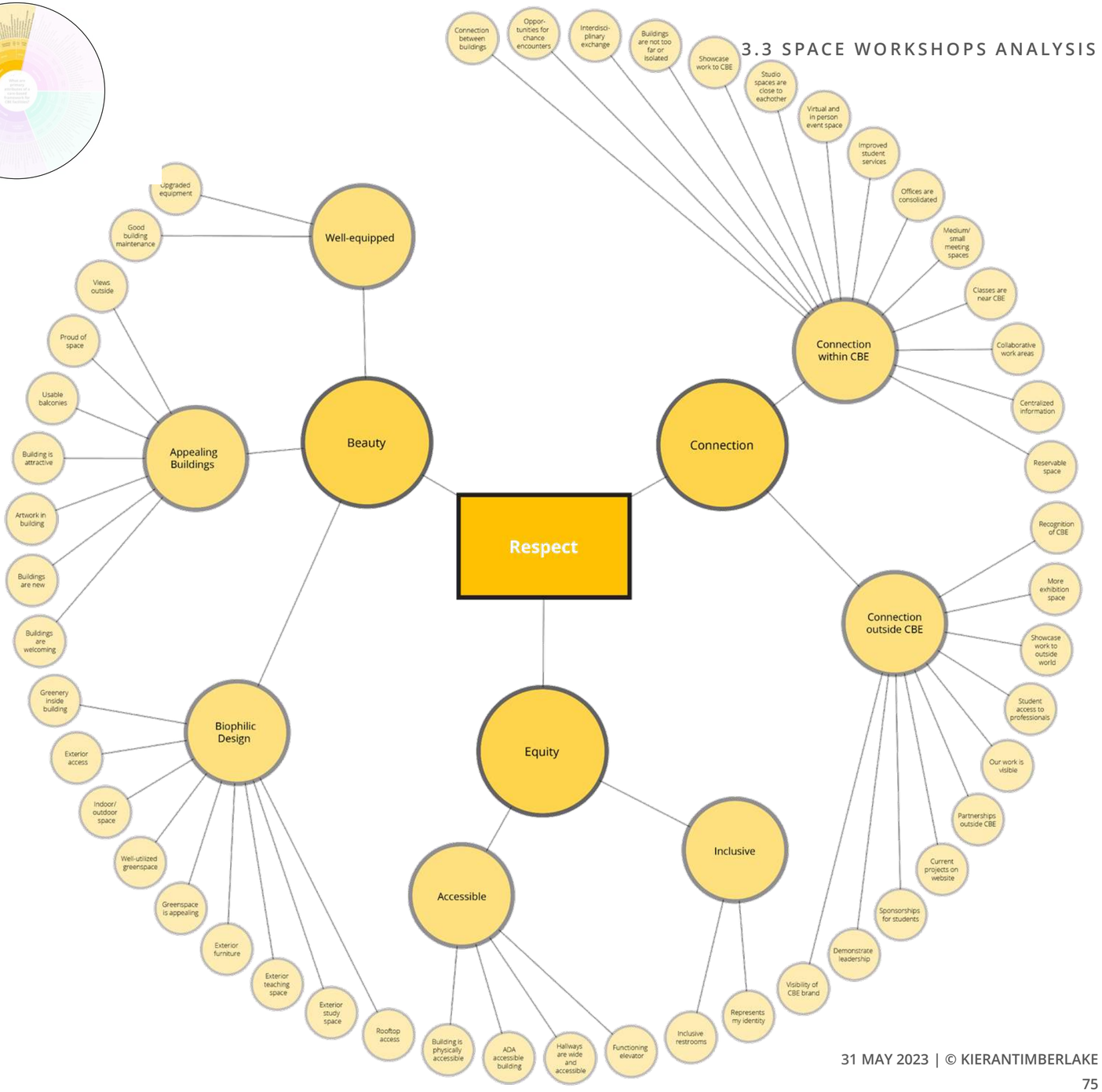
Individuals have a need to feel respected by the CBE. This is created by civility, positive relationships, having needs recognized, and having identity recognized. Persistent and visible lack of maintenance, care, and inclusive spaces erodes feelings of respect.

SUBTHEMES

1. Connection - Individuals need opportunities to see, collaborate, and socialize with other departments within the CBE and with external bodies.
2. Beauty – To feel respected, individuals require spaces that are well-maintained and utilized, with green space or biophilic design, and culturally diverse artwork.
3. Equity - To create a sense of respect, the CBE must have accessible building entrances and a functional elevator. Individuals also require more gender-neutral restrooms.

CBE TASKS AND DECISIONS

1. Install gender neutral restrooms in the CBE's facilities.
2. Upgrade elevator in Gould Hall.
3. Conduct a complete accessibility assessment of the CBE and a plan of action for important upgrades.
4. Provide opportunities for student groups to install artwork on a rotating basis.
5. Include student voices in implementation of any upgrades in the CBE's facilities.
6. Implement biophilic design principals into the CBE's facilities such as indoor plants, organic materials, and access to daylight.
7. Rehabilitate of Gould Terraces and increased consideration of exterior space use and design.
8. Create a strong connection between CERC and the main campus for CM students.
9. Create systems to showcase research and student work online and in the Gould Gallery.
10. Create a stronger identity for student services within the CBE.
11. Create meeting spaces of diverse sizes that are reservable and available to all of the CBE's members – spaces should accommodate collaborative and individual work with soundproofing measures implemented.
12. Implement programs to connect students with professionals outside of the CBE for mentorship and internship opportunities.



A CARE-BASED SYNTHESIS

Efficacy and Agency

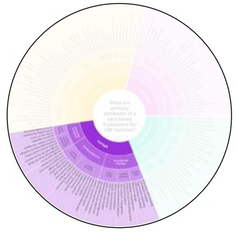
Individuals need to feel uninhibited by the CBE in their ability to demonstrate competence and agency. Managerial and spatial barriers can erode personal feelings of efficacy and agency.

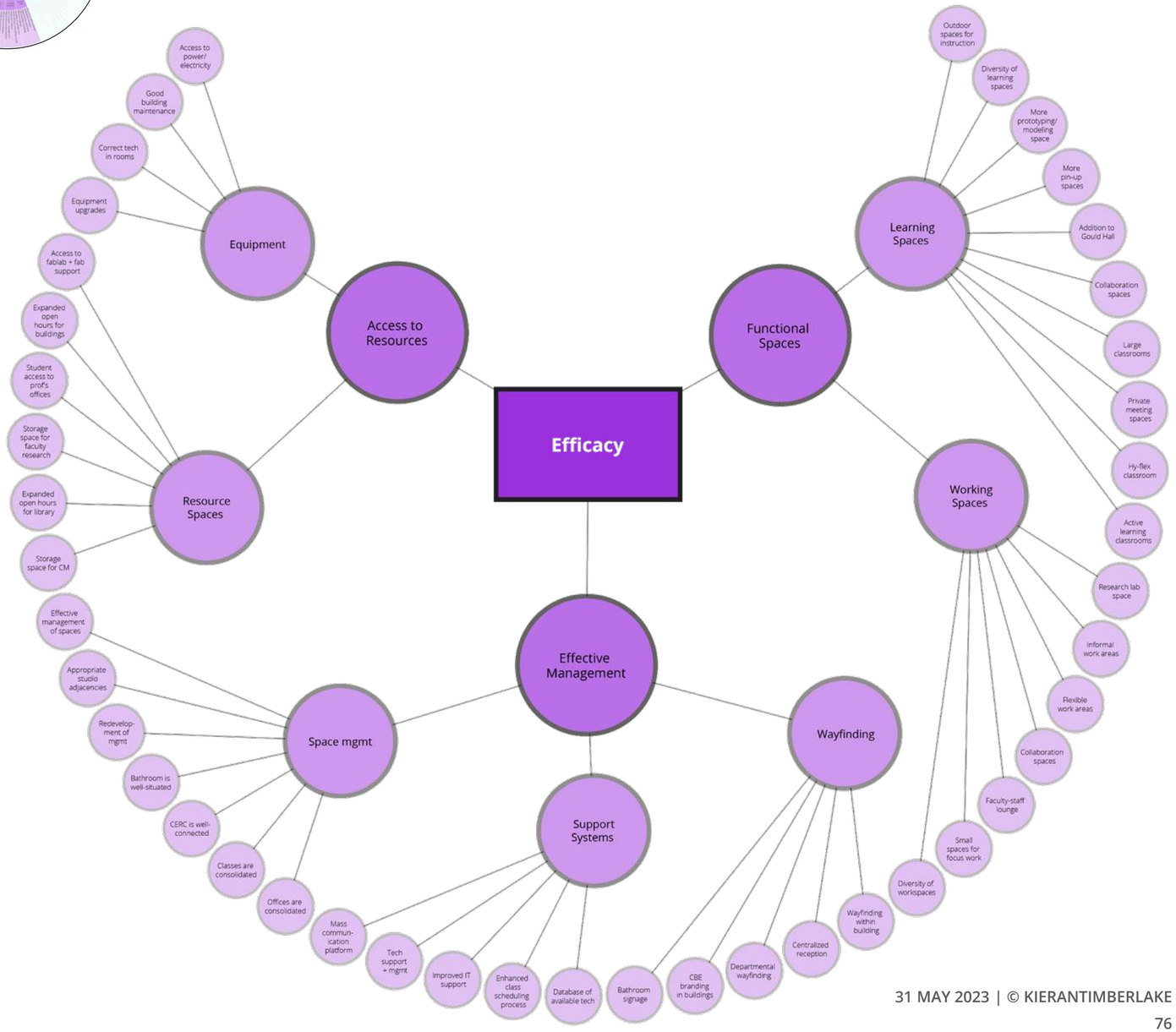
SUBTHEMES

1. Effective management – Effective management facilitates effective working, teaching, and studying because the systems for space management, support, and wayfinding make sense and are easy to use.
2. Functional spaces – Spaces do not hinder individuals' ability to perform their work or studies. Spaces are the correct sizes and types and contain the correct equipment.
3. Access to resources – Individuals can access the equipment and resource spaces they need to work, teach, or study.

CBE TASKS AND DECISIONS

1. Implement regular technology upgrades via an IT task team or advocacy group.
2. Implement an updated and transparent system for scheduling classes and meeting spaces.
3. Implement an audit of overall management systems at the CBE including how classes and studios are scheduled, how information is shared to community members, and database of available resources.
4. Provide clear information on the CBE website about available resources for the CBE community.
5. Implement a cohesive wayfinding and branding system throughout the CBE's buildings with an emphasis on Gould Hall.
6. Create meeting spaces of diverse sizes that are reservable and available to all of the CBE's members – spaces should accommodate collaborative and individual work with soundproofing measures implemented.
7. Create open work areas for faculty, staff, and students to work on laptops.
8. Implement a series of active learning classrooms in the CBE's facilities – consider a pilot program to determine needs.
9. Consider path to acquisition of scheduling control over large classrooms currently controlled by UW central such as Architecture Hall, Rm. 160.
10. Prioritize upgrades of flexible furniture in classrooms for various teaching styles.
11. Designate an additional Digital Teaching Lab in the CBE (like Gould 007)
12. Consider a pilot program for reorganizing office suite space in the CBE's Facilities
13. Add a welcome desk to Gould Hall for general questions.





A CARE-BASED SYNTHESIS

Meaningful Work

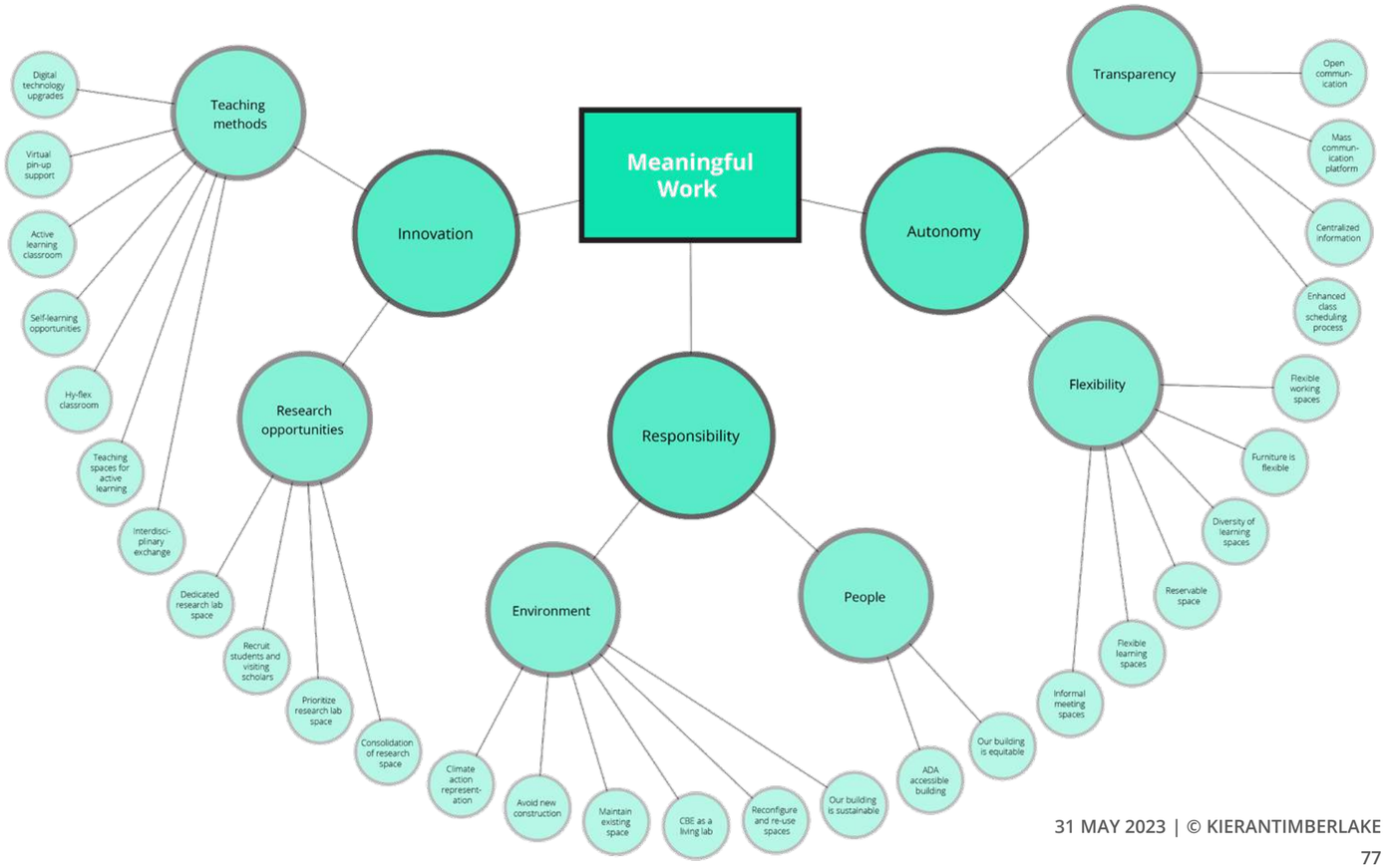
Individuals need to feel that they have adequate opportunities to do work that encompasses their dreams, hopes, and sense of fulfillment and contribution to their community.

SUBTHEMES

1. Responsibility – Individuals need to feel that their work contributes positively to the environment and society.
2. Autonomy – Individuals need to feel empowered by their environment to pursue their interests.
3. Innovation – Individuals need opportunities for innovation in their work, especially in teaching methods and research opportunities.

CBE TASKS AND DECISIONS

1. Reconsider mass communication techniques for all of the CBE's community via website portal or otherwise.
2. Conduct a complete accessibility assessment of the CBE's facilities and a plan of action for important upgrades.
3. Add a cohesive dashboard on the CBE's website that illustrates building usage and energy consumption.
4. Incorporate climate action PWT into all decision making for upgrades throughout the CBE.
5. Address long-standing deferred maintenance items potentially by coupling certain space planning projects with other repairs and upgrades.
6. Implement a series of active learning classrooms in the CBE's facilities – consider a pilot program to determine needs.
7. Consider path to acquisition of scheduling control over large classrooms currently controlled by UW central such as Architecture Hall, Rm. 160.
8. Prioritize upgrades of flexible furniture in classrooms for different teaching styles.
9. Designate an additional Digital Teaching Lab in the CBE (like Gould 007)
10. Consider creating a consolidated research hub with adequate work and storage space.
11. Provide more space for pin-up (physical and virtual).
12. Create systems to showcase research and student work online and in the Gould Gallery.



A CARE BASED SYNTHESIS

3.4 Deferred Maintenance Analysis & Impacts

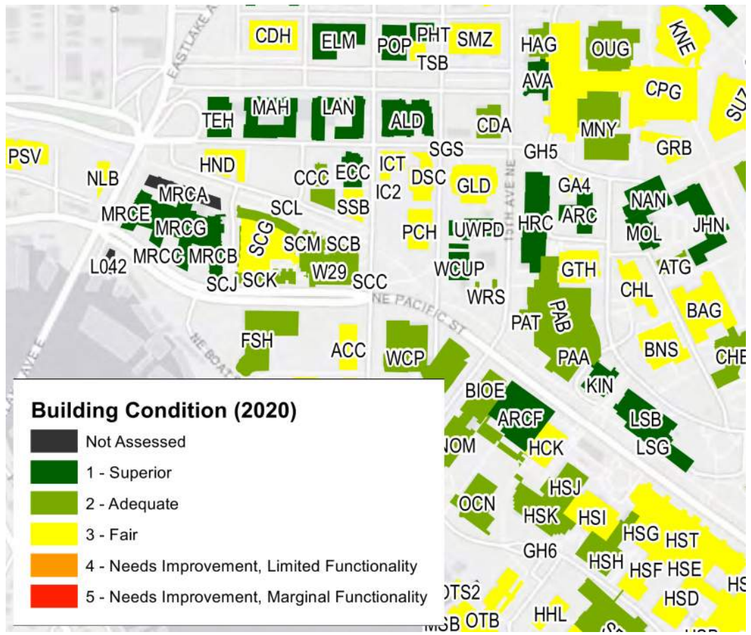
Deferred Maintenance and its Impact on the CBE

DEFERRED MAINTENANCE AT UW

In its FY 2022 Five-Year Capital Budget, the University of Washington identified a deferred maintenance backlog approaching $3 billion across its campuses (University of Washington Facilities, 2022). It is not alone among U.S. higher education institutions facing significant and increasingly costly maintenance backlogs, influenced by a number of factors. Buildings built during the construction boom of the 1960s and early 1970s, such as Gould Hall and the Community Design Building, have far exceeded the anticipated lifespan of many of their original building systems but often have not received the systems replacements they have needed over the past several decades.

Meanwhile, investment into new construction beginning in the late 1980s and extending into the early 2000s created an additional stock of buildings that are now beginning to need their own systems replacements (Gordian, 2022). Sharply increasing construction costs since 2020 have only exacerbated the increasing cost of addressing deferred maintenance issues in university buildings (Gordian, 2023).

Identifying the continued growth of its deferred maintenance backlog as its main institutional risk, the UW's FY23 Five-Year Capital Budget prioritizes building renewal (i.e. renovation or replacement) above growth in its new, non-clinical projects, in keeping with its Long-Term Capital Plan strategies developed in late 2019 and early 2020 (University of Washington Facilities, 2023). However, the deferred maintenance backlog is significant, and the number of buildings requiring renewal is high.



Excerpt from 2021-2023 Capital Budget Request

DEFERRED MAINTENANCE AT UW CBE

A 2020 building assessment of UW facilities identified Architecture Hall (renovated in 2007) as being in "superior condition", and Gould Hall (built 1971) and the Community Design Building (renovated 1997) as being in "fair condition". In the assessment, "fair condition" is the lowest rating for a building that is considered functional (UW Facilities, 2020).

As follow-up to this assessment, the UW developed a list of deferred maintenance issues for each of its facilities, items that have exceeded their estimated useful lifespan but have not been replaced. This list includes many aspects of the CBE's facilities: exterior roofs, doors, windows, walls, and lighting; interior walls, ceilings, floors, casework, stair finishes, doors, lighting, electrical distribution, mechanical systems, plumbing fixtures, and elevators. Some of these items are two years past their estimated useful life, while others are decades past this point.

The assessment identifies several items as non-recurring "one-time" needs. Many of these are accessibility upgrades to meet ADA requirements, such as door hardware, elevator controls, stair handrails, drinking fountains, and signage. Other "one-time" need items include exterior façade repair, asbestos abatement, improved exit signage, code-compliant guardrails at balconies and catwalks, and occupancy sensors.

Deferred Maintenance and its Impact on the CBE

IMPACT ON THE CBE COMMUNITY

Evidence of deferred maintenance is visible throughout the CBE's buildings, especially in Gould Hall. Interior finishes are visibly worn, the majority of outdoor space is not usable, and the heating system failed in 2022. Members of the CBE community shared many other instances of confronting the lack of maintenance: inability to control room temperatures, a malfunctioning elevator, building and room access issues, and inadequate electrical outlets are examples.

However, beyond the functional challenges a poorly maintained building presents to its users, the condition of the CBE's buildings impacts individuals' sense of well-being and belonging. Analysis of the data collected through the space workshops and the user surveys in this study demonstrate that the condition of the CBE's buildings is impacting equity and inclusivity at the CBE.

In the Student Voices on Building Inclusivity listening session, 82 specific concerns were identified by student participants (see p. 64 in Section 3.3). Of these 82 concerns, 19 of them (23%) relate directly to building maintenance and repair, impacting people's safety, mobility, well-being, identity, dignity, and sense of belonging. In Workshop 2's "Barriers" activity, 83 specific concerns were identified by faculty, staff, and student participants (see p. 53 in Section 3.3). Of these 83 concerns, 28 (33%) relate directly to building maintenance and repair, impacting people's identity, physical comfort, safety, ability to find and access resources, and ability to study or work effectively. In this workshop, participants also identified that the current condition of the CBE's buildings does not align with the CBE's mission on climate action.

Beyond the deferred maintenance, the lack of investment in the CBE's buildings, in particular Gould Hall, has resulted in a misalignment between the current configuration of interior spaces and the ways in which people teach, learn, study, research, work, collaborate, and live today, 50 to 120 years after the CBE buildings were built. In the Equity and Inclusivity session analysis, 37% of concerns identified by students relate to misalignments between building space configuration and program needs; in the Workshop 2 Barriers activity, 35% of concerns related to the misalignment between space configuration and program needs. Addressing deferred maintenance and non-recurring needs is critical to planning near and future projects at the CBE.

Gordian, State of Facilities in Higher Education, 9th Edition, (Gordian, 2022).

Gordian, State of Facilities in Higher Education, 10th Edition, (Gordian, 2023).

University of Washington, 2019 Seattle Campus Master Plan February 2019 Compiled Plan, (University of Washington, 2019).

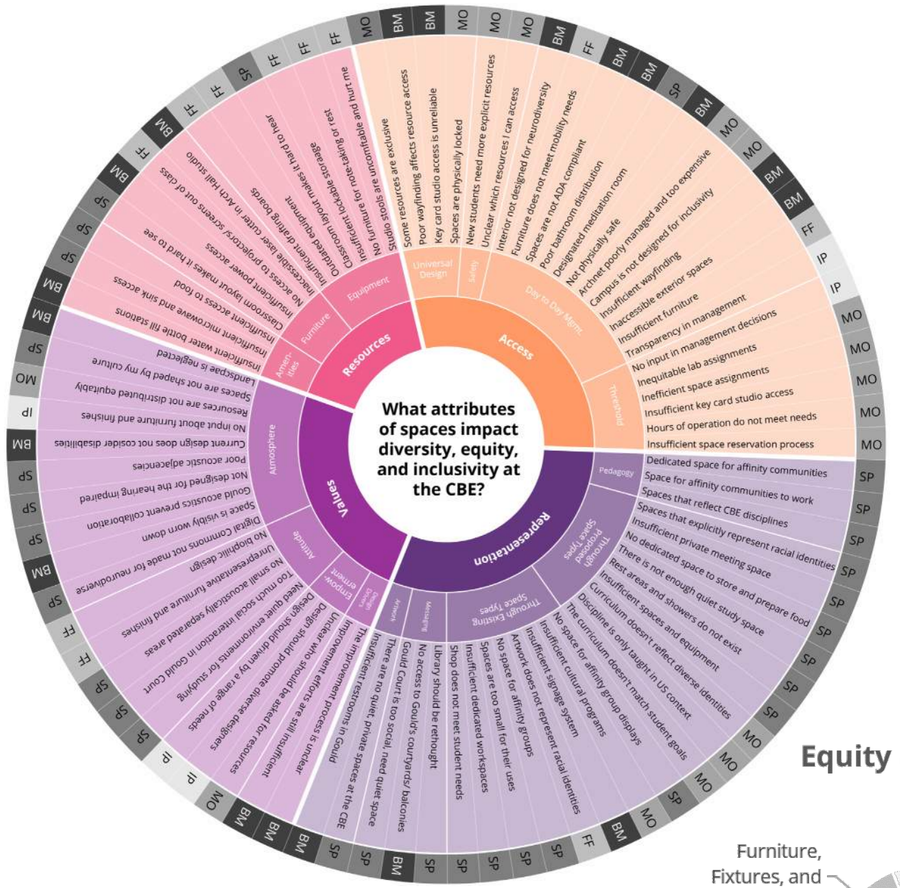
UW Facilities, 2021-2023 Capital Budget Request, (University of Washington, 2020).

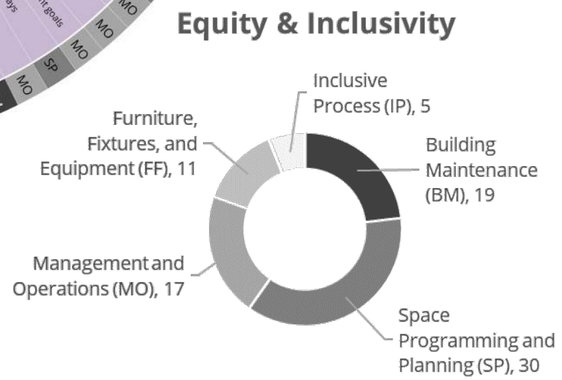
UW Facilities, Five-Year Capital Budget Fiscal Year 2022, (University of Washington, 2022).

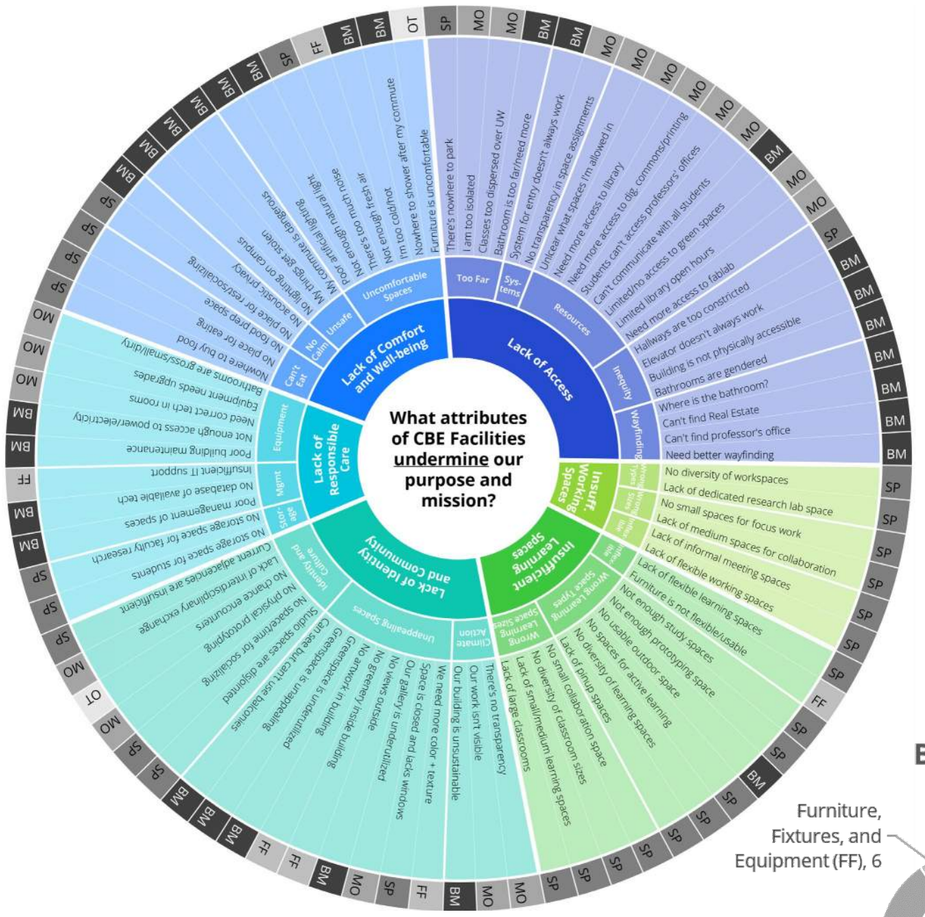
UW Facilities, Five-Year Capital Budget Fiscal Year 2023 (University of Washington, 2023).

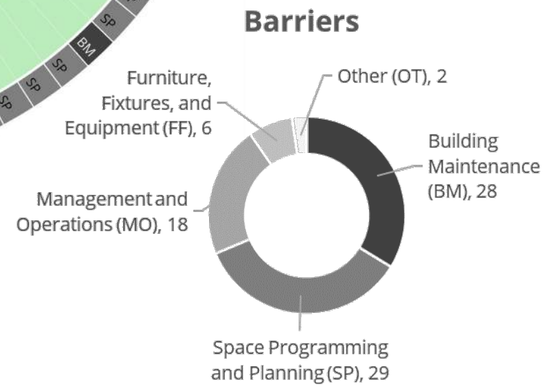
Gould Hall Mechanical Room

Deferred Maintenance and its Impact on the CBE



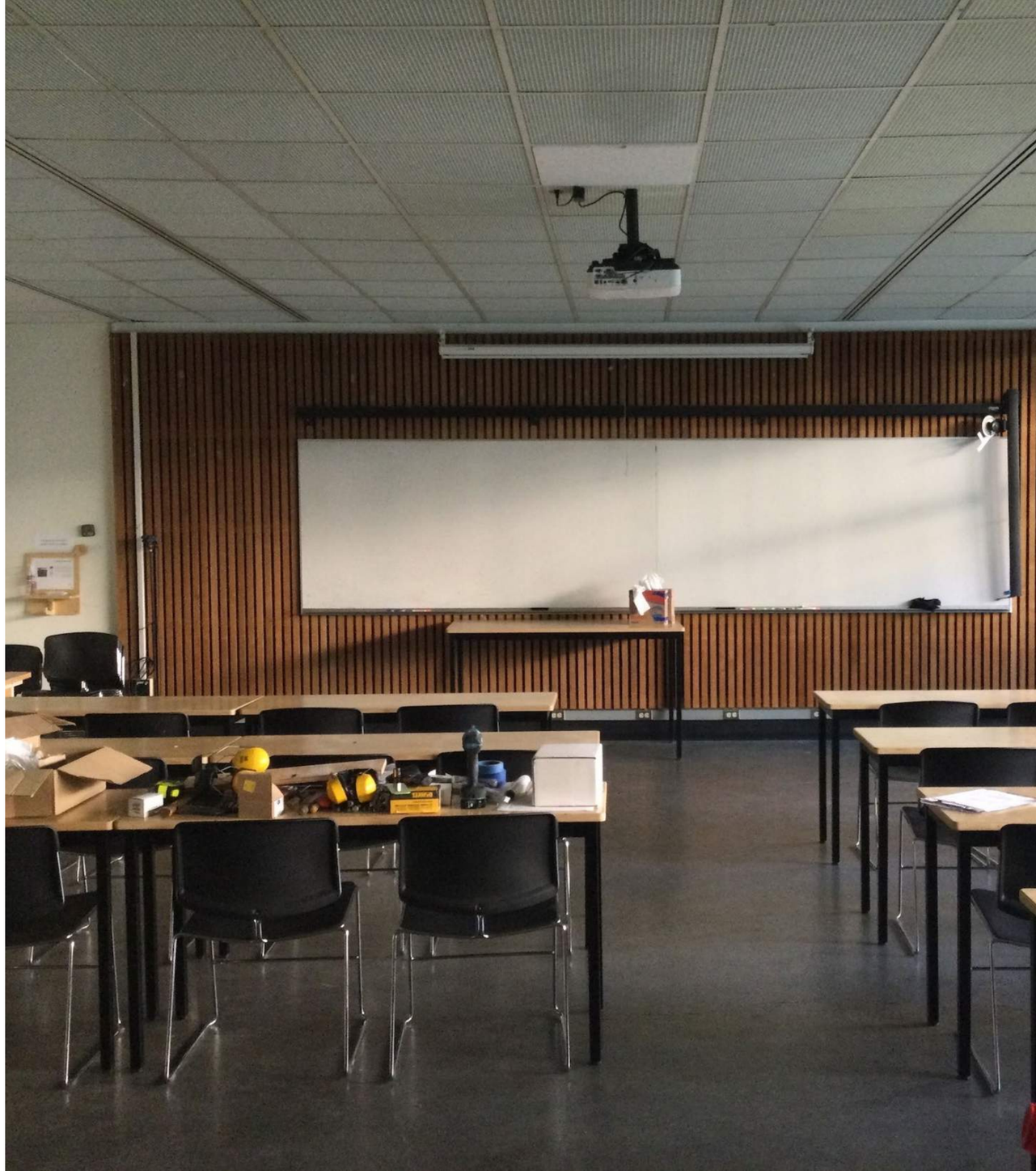






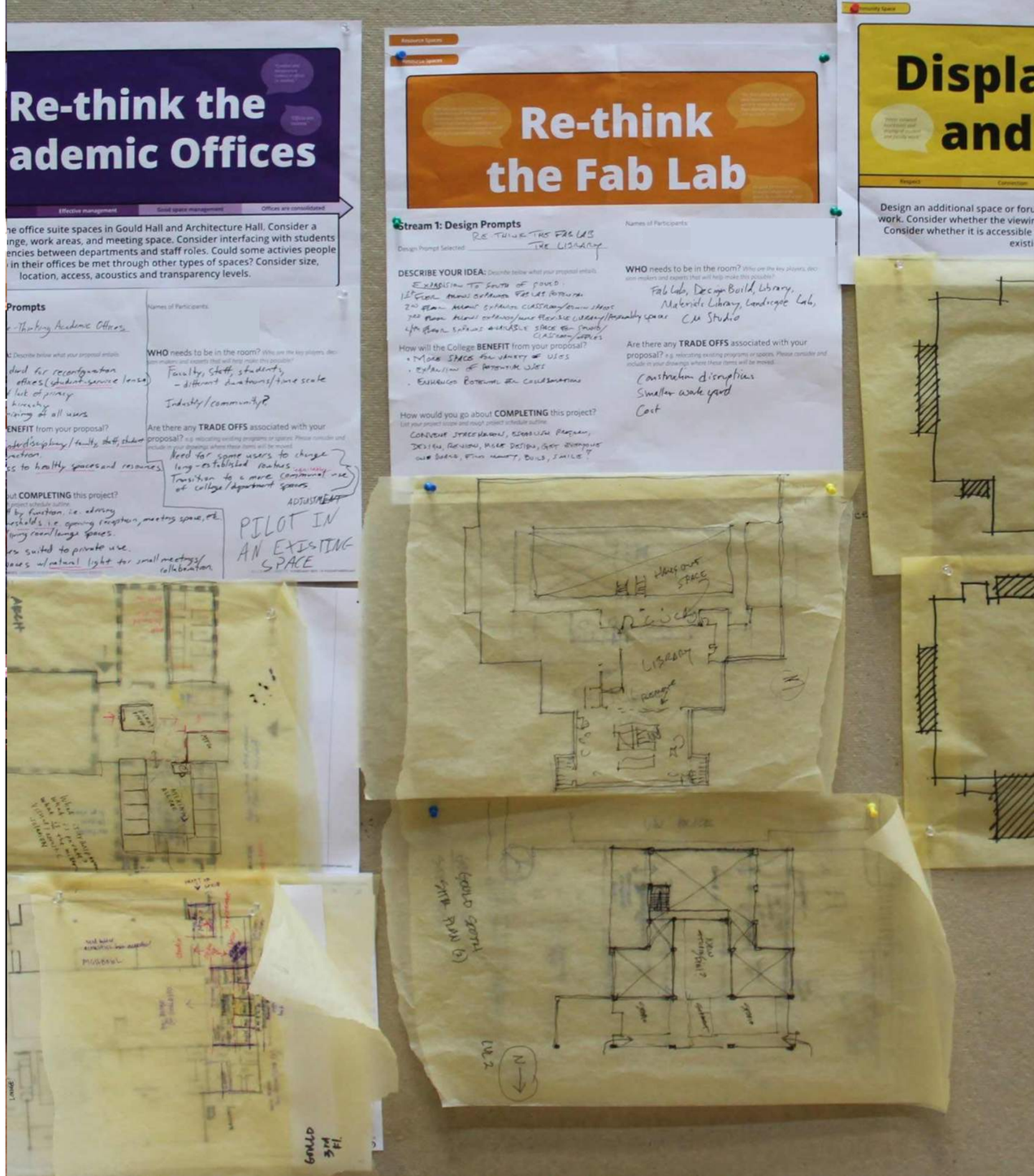
3.5 Space Goals and Strategies

All College Charrette: *Future Roadmaps* and *Key Initiatives*
Sustainability Workshops and Goals
Space Standards Goals



3.5 Space Goals and Strategies

All College Charrette

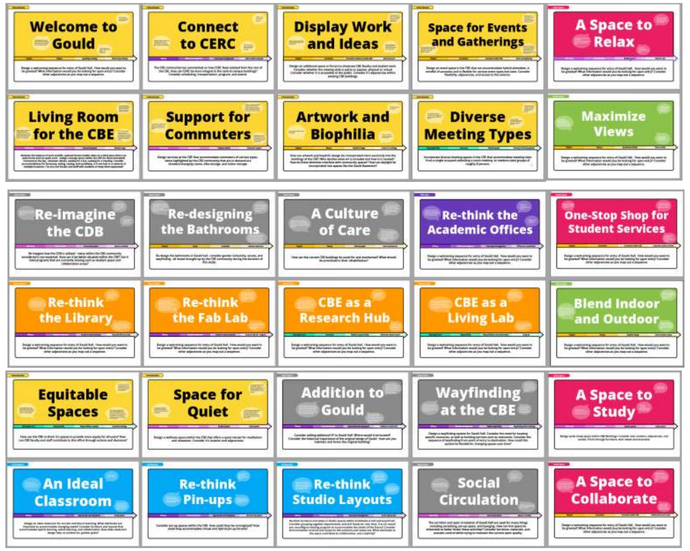


All College Charrette

CHARRETTE OVERVIEW

The CBE All College Charette was organized by KT as the final event of the study to generate positive momentum towards envisioning the future of CBE Spaces. Participants used 30 design prompts inspired by the feedback gathered from the CBE Community through assessments, user surveys, and space workshops. They formed teams and worked through one of two workstreams:

1. Envision Key Initiatives of various scales across CBE's four buildings.
2. Co-create key initiatives Roadmaps for the future of CBE spaces



Design Prompts highlight specific issues and programmatic needs at the CBE.

WORKSTREAM 1

Envisioning Key Initiatives

Participants interested in working on specific Design Prompts gathered into small teams. Teams selected a Design Prompt from the wall and worked together to draw, write ideas, and diagram their thoughts on the issue. Teams were self-formed and typically included a mix of faculty, students, and staff, often from different departments. Team members worked collaboratively and then presented their proposals to the whole group. Teams were encouraged to work on multiple prompts if time allowed.

WORKSTREAM 2

Planning Near Future and Future Roadmaps

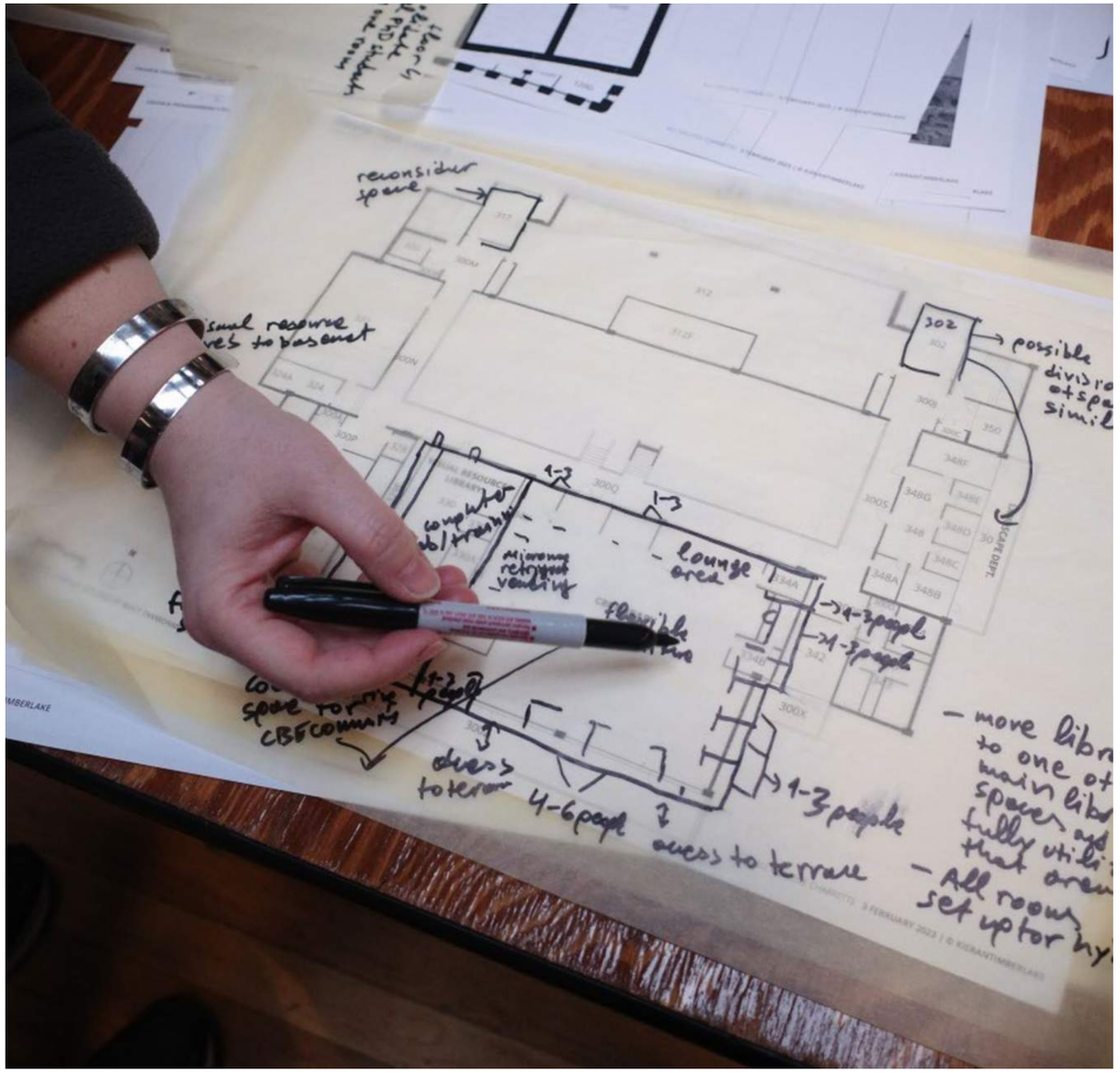
Participants interested in future planning formed two teams – participation across departments and roles on each team was encouraged. Using the Design Prompts cards, each group proceeded to sort, rank, and bundle these items through discussion and iteration. Using the provided timeline graphic illustrating the next 30 years, teams worked to map key initiatives – prioritizing and thematizing as they saw fit.

All College Charrette, Gould Court

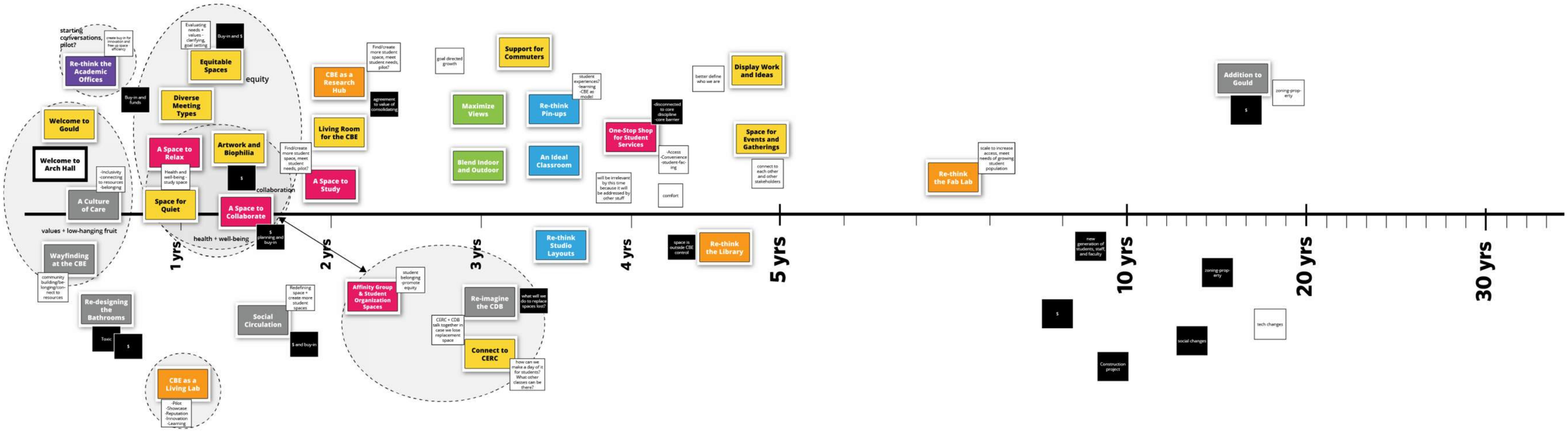
Charrette Activity 1: **Key Initiatives**

12 Teams selected 17 Design Prompts (out of 30):

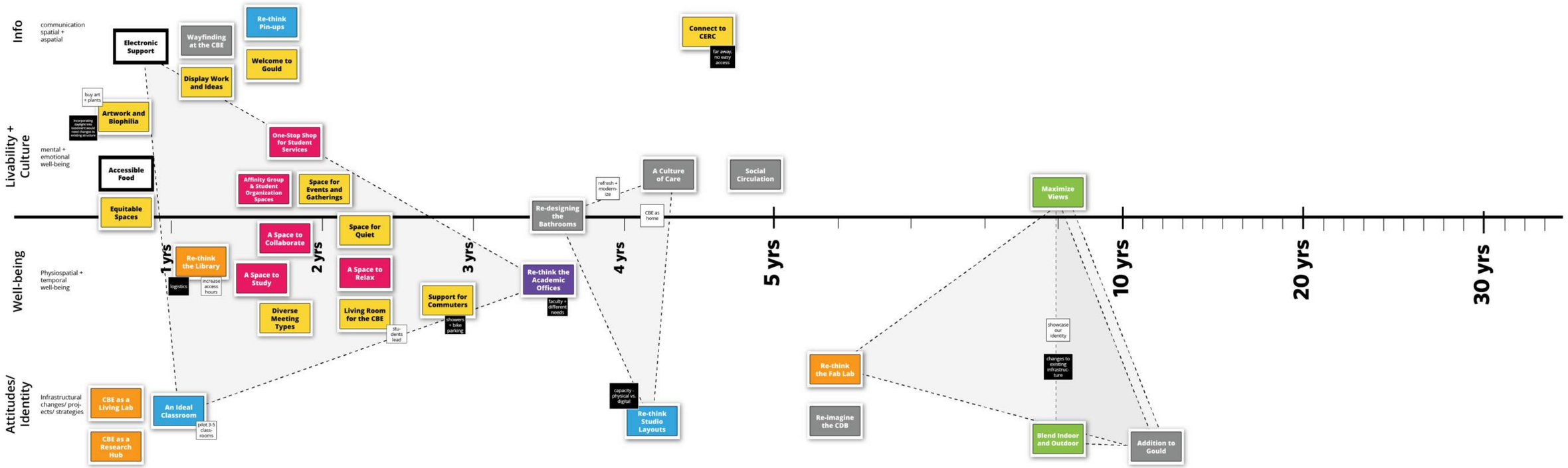
- *Living Room for the CBE*
- *Re-Think Pin-Ups*
- *Re-Think Studio Layouts*
- *Re-Think the Academic Office*
- *Space for Events and Gatherings*
- *An Ideal Classroom*
- *The CBE as a Living Lab*
- *Display Work and Ideas*
- *Diverse Meeting Types*
- *One-Stop Shop for Student Services*
- *Re-Designing the Bathrooms*
- *Re-Think the BE Library*
- *Re-Think the Fabrication Lab*
- *A Space to Relax*
- *A Space to Collaborate*
- *Welcome to Gould*
- *Blend Indoor and Outdoor*



Charrette Activity 2: **Team 1 Roadmap**



Charrette Activity 2: **Team 2 Roadmap**



3.5 Space Goals and Strategies

Sustainability Workshops and Goals

Sustainability Workshops

WORKSHOP OVERVIEW

Sustainability Workshops 1 and 2, Both Virtual

Student, faculty, and staff participants explored six topical areas together and their work informed draft sustainability goals for the CBE's building projects. Key questions considered during the workshops included:

> *What can the CBE achieve to reduce the impact of carbon emissions over the next 1-30 years?*
>
> *How should the CBE spaces reflect an approach to well-being, community, and equity?*

WORKSHOP PART 1: CARBON & RESOURCES

What can the CBE achieve to reduce the impact of carbon emissions over the next 1-30 years?

Topics

- Operational Carbon
- Embodied Carbon
- Ecosystems

WORKSHOP PART 2: HEALTH, COMMUNITY, EQUITY

How should the CBE spaces reflect an approach to well-being, community, and equity?

Topics

- Physical & Psychological Health
- Education & Engagement
- Community & Equity

Gould Hall Bike Racks

Sustainability Goals

NET ZERO CARBON

Exceed UW's sustainability goals and strive toward net zero operational carbon in CBE facilities.

Apply a holistic, lifecycle view to using the existing CBE buildings and materials and procuring new building materials.

ECOSYSTEMS & RESOURCES

Target net zero water for the CBE's facilities, reducing potable water consumption, and capturing and reusing rainwater.

Reduce stormwater runoff and increase biodiversity in landscapes and terraces, using nature-based strategies and native plantings.

Reduce waste and provide recycling and composting options within CBE facilities.

HEALTH & WELLBEING

Create beautiful, welcoming, accessible spaces that occupants enjoy inhabiting, and that are visually or physically connected to the outdoors.

Ensure high indoor air quality by using healthy building materials and implementing regular deep cleaning of all occupied spaces with healthy cleaning products.

Implement equipment and policies that enable occupants to manage their thermal and visual comfort, and access to spaces.

USER ENGAGEMENT

Support CBE community members in making sustainable choices in their daily actions that impact energy, water, waste, and transportation. Provide amenities, education, and policies to enable informed decisions, and share data about building performance and occupant choices.

Leverage the creativity, expertise, and lived experiences of CBE students, faculty, and staff to co-design sustainable strategies for CBE facilities.

LIVING LAB

Use CBE facilities as a model for innovation, experimentation, education, and sustainability in retrofit university buildings.

Conduct post-occupancy evaluation of living lab projects, track building performance data, and share findings with the CBE and UW communities.

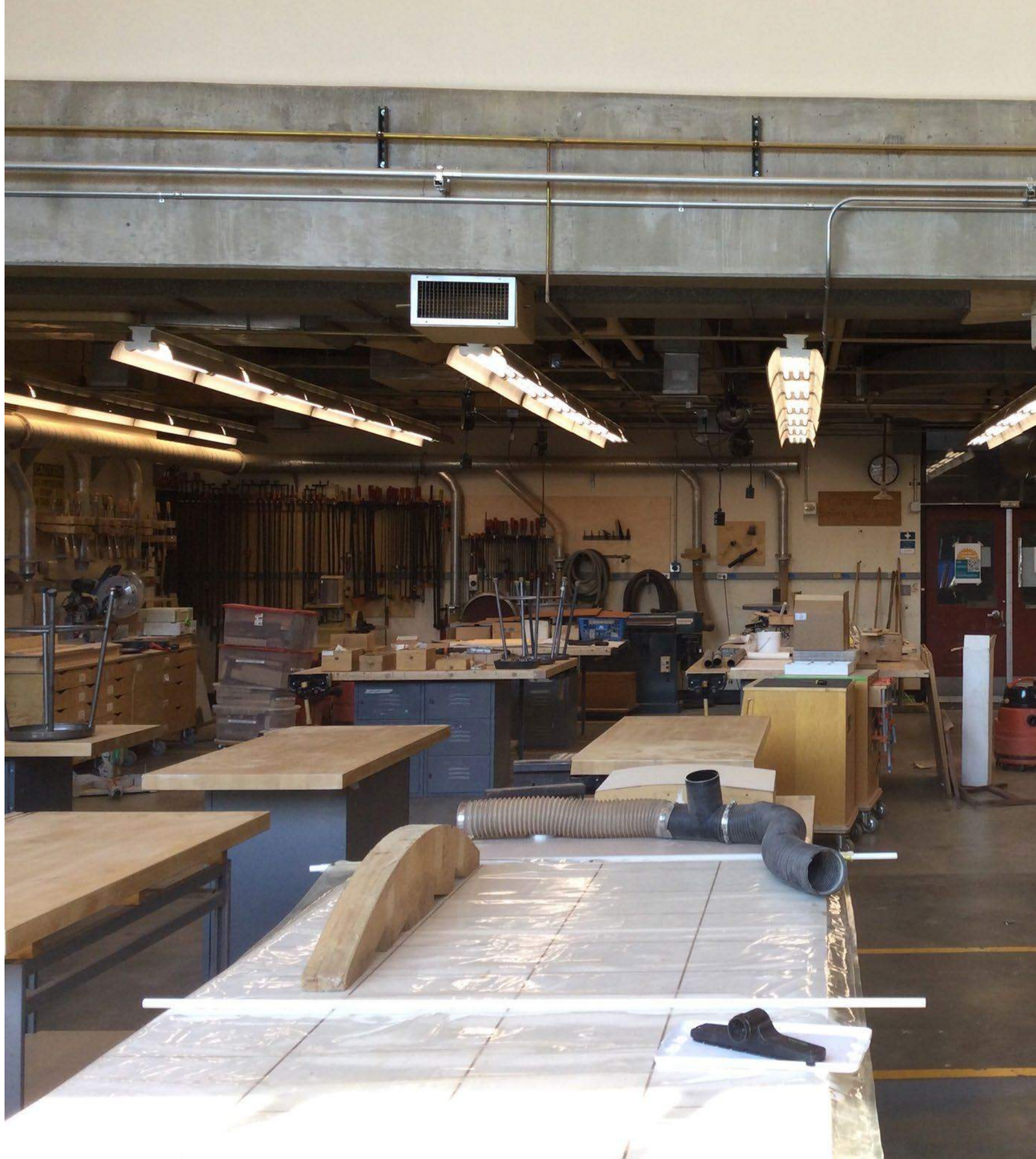
RESPONSIBLE SOURCING

Ensure ethical procurement of materials and services for CBE facilities. Consider opportunities to increase procurement from socially or economically disadvantaged businesses.

Seek out suppliers with certifications addressing social equity and environmental impacts within the manufacturing supply chain.

3.5 Space Goals and Strategies

Space Standards Goals



Space Standards Goals

STANDARDS PROJECT WORKING TEAM

The Standards Project Working Team (PWT) was formed during this study to provide feedback on existing and emerging standards for teaching, collaboration, and research. This group will continue to interface with the proposed Workstreams outlined in Section 2 of this report by continuing to guide the CBE's space standards as they evolve over time and especially as new space types emerge.

With five departments and various degree programs that each have their own requirements for accreditation processes, this group will help to streamline information for space in terms of needs and requirements by way of furnishings, equipment, capacity, and other qualities. The nature of changing pedagogy requires standards to remain flexible and to be revisited regularly; an effort that will be championed by this group for years to come.

The Standards PWT has begun the work of defining goals for select space types within the CBE. Several of these are existing space types that could benefit from reinvention, while others are new program types based on changing needs in the community and feedback from this study.

RENEWED SPACE TYPES

Renewed and new space types that the CBE would benefit from:

- **Classrooms (Active Learning Classroom)**
- **Studios**
- **Office Suites**
- **Research Labs**
- **Diverse Meeting Spaces / Break Out Rooms**
  - **Small (1-2 people, accommodates virtual attendees)**
  - **Medium (3-6 people)**
  - **Large (7-15 people)**
- **Study Space**
- **Student Lounge**

Other spaces and systems within the CBE that would benefit from updates and standardization are:

- **Fabrication Spaces**
- **IT/Equipment**

GENERAL SPACE GOALS

The following 7 space types (and all space types at the CBE) should aim for the following target qualities:

- Universal Design Principals for spaces, furniture, and equipment
- Thermal controls for occupants
- Appropriate acoustics per activity
- Appropriate lighting quality and types for working / task with an emphasis on dimmable lighting for energy saving and customizable purposes
- Programmable access security (Locking Hardware CAAMS)

Gould Hall, Lighting Lab

Space Standards Goals

	Classrooms (Active Learning Classroom)	Studios	Office Suites	Research Labs
Space Goal	*Reconfigure existing CBE classrooms to better align with values of collaboration and student agency.*	*Update studio spaces to better suit changing needs in technology, student comfort, and access to all CBE members.*	*Reconfigure departmental suites to support multiple modes of working such as quiet focused individual work, virtual meetings, large group meetings, and impromptu interactions with other students, faculty, and staff.*	*Facilitate more visibility of research initiatives at the CBE within and outside of the community by consolidating lab space in a prominently visible location.*

Space Purpose	• Facilitate group learning
	• Space can be used for open collaboration outside of class time via a CBE-wide reservation system
		• Forum for design studios with potential for hybrid participation
		• Space can be used for open collaboration outside of scheduled class times
			• Home-base for departments:
			  • Flexible shared work areas for faculty/staff to use for different needs: Mix of shared offices, private offices, and 'hot desks'
			  • Meeting rooms, both closed and open
			  • Storage of faculty and staff items, with a sensitivity that many items will contain secure information
			  • Include secure storage for faculty books and other critical items
				• Space for faculty to conduct research, collaborate with one another, and work with students on various research initiatives (likely to change over-time)
				• Display of research work and publications

Target Qualities	• Flexible furniture for easy reconfiguration, generally set up to maintain groups of ~5 students ("Pods")
	• Ergonomic furniture that accommodates sitting, standing, and wheelchairs
	• Resilient IT/AV for ease of operation
	• Multiple display screens for laptop plug-in, ideally 1 per every 5 students (or "pod" of tables) plus one for an instructor
	• Provide analog alternatives such as whiteboards in the scenario of IT failing
	• Daylight preferred
		• Reconfigurable seating and work surfaces
		• Storage for students is included or nearby
		• Multiple display screens for laptop plug-in, ideally 1 per every 5 students for group work or crits involving digital pin-up
		• Space is durable and has the space and equipment to accommodate physical making including:
		  • Material cutting areas
		  • Material storage
		  • Easy access and payment to printers and supplies
		  • Laser cutters are available in the room or nearby
		  • Spray booth nearby
		• Ergonomic furniture that accommodates sitting, standing, and wheelchairs
		• Access and security needs are well balanced
		• Daylight preferred
			• Welcoming to students – has strong CBE identity
			• Transparency to general circulation for easy wayfinding
			• Multiple monitors for laptops to plug-in using a 'hot desk' model
			• Careful consideration of acoustics in meeting areas, for hosting virtual or in-person meetings without disturbing others
			• Small kitchenette
			• Ergonomic furniture that accommodates sitting, standing, and wheelchairs
			• Biophilic materials
			• Daylit or has borrowed light
				• Identity of each individual lab is visible; all labs have a collective identity to the rest of the CBE community
				• Ideally all labs are consolidated to a shared space and/or adjacent to one another
				• Acoustic privacy
				• Some visual transparency
				• Flexible furniture to increase ease of collaboration and reconfiguring of space when lab sizes/types change
				• 'Hot desks' for student researchers or other temporary users are available

Space Standards Goals

	Meeting Space / Break-Out Rooms	Student Lounge	Study Space
Space Goal	*Spaces for all CBE community members to reserve for various meeting sizes and types, including virtual and hybrid meetings.*	*Space within the CBE where students have agency and feel welcomed to occupy in between classes. A dedicated student lounge would support strengthening community bonds.*	*Space within the CBE where students can study peacefully with minimal visual and acoustical disturbance.*

Space Purpose	• Reservable space that accommodates small, medium, and large group meetings, and virtual or hybrid meetings
	  • Small (1-2 ppl)
	  • Medium (3-6 ppl)
	  • Large (7-15 ppl)
	• Potential to add to centrally coordinated meeting rooms in *SCOUT* system
		• This space is available for students to socialize, rest, and meet with one another in between classes. It may function as a part of a larger student lounge network within UW	• Space for students to quietly focus on studying, reading, and writing

Target Qualities	• Display monitors to assist in hybrid attendees and screen share • Mobile displays in larger meeting rooms • Cameras that are formatted to adjust with table height to assist in virtual meetings • Borrowed daylight ideal • Acoustic separation • Some visual transparency • Whiteboards	• Mix of lounge seating and high-tops for eating • Ample access to power for laptops, solo work, and charging • Biophilic materials and/or bright colors • Artwork that represents student identities • Daylight ideal • Connected to exterior space with additional seating • Access to microwave and small kitchenette for food prep	• Ideally adjacent to Student Lounge • Acoustically protected from loud sounds • Calm environment, minimal visual disturbance • Desk carrels or similar with ergonomic seating • Daylit ideal with soft overhead lighting and task lights

Appendix

Project Management and Working Teams

PROJECT MANAGEMENT TEAM

Renée Cheng	CBE Dean
Brittany Faulkner	CBE Project Manager
Karla Kross	UW Facilities
Billie Faircloth	KT Partner, Research Director
Zinat Yusufzai	KT Principal, Project Manager

KIERANTIMBERLAKE (KT) PROJECT TEAM

Christopher Connock	Principal, Design Computation Director
Brandon Cuffy	Researcher, Computation
Billie Faircloth	Partner, Research Director
Matthew Krissel	Partner
Leslie Louie	Researcher – Circularity
Jelani Lowe	Architectural Staff
Sabrina Naumovski	Researcher – Computation
Jake Pardee	Project Administrator
Surya Prabhakaran	Researcher – Building Performance
Valerie Speirs	Architectural Extern
Caitlin Sylvain	Architectural Staff
Ryan Welch	Principal, Researcher – Building Performance
Zinat Yusufzai	Principal, Project Manager

PROJECT WORKING TEAMS

The Project Working Team (PWT) model is fundamental to UW Facilities' Integrated Design Build (IDB) process and provided a flexible teaming approach for subject-matter guidance throughout this study. The PWT model assembles people with specific knowledge or expertise to address planning and decision making on selected topics. Four teams of student, faculty, staff and administrators who volunteered their insight, knowledge, and experiences throughout the study convened to create the *CBE Project Advisory Committee*, *Schedule & Logistics PWT, Sustainability PWT,* and *Standards PWT.*

CBE PROJECT ADVISORY COMMITTEE

Ahmed Aziz	CBE Department Representative: Construction Management
Gundula Proksch	CBE Department Representative: Architecture
Sofia Dermisi	CBE Department Representative: Real Estate
Vanessa Lee	CBE Department Representative: Landscape Architecture
Christine Bae	CBE Department Representative: Urban Design & Planning & PWT Sustainability Member
Kimo Griggs	CBE Lab Expertise
Megan Herzog	CBE Student Services
Alan Michelson	BE Library Representative
Diana Siembor	CBE Student Advisor Representative
Raj Dewangan	CBE Student Representative
Cole Perry	CBE Student Representative
Meredith Jones	CBE Student Representative
Fred Aguayo	CBE At-large Representative
Meegan Amen	PWT Standards & Facilities Representative
Renée Cheng	PWT Logistics Member

KT Project Team

SCHEDULE & LOGISTICS PWT

Renée Cheng	CBE Dean
Brittany Faulkner	CBE Project Manager
Giovanni Migliaccio	CBE Faculty with Project Management Expertise
Jim Nicholls	CBE Faculty with Project Management Expertise
Vikram Prakash	CBE Faculty with Design Expertise
AnnMarie Borys	CBE Faculty with UW Facilities & Design Project Experience

KT Project Team

SUSTAINABILITY PWT

Kate Simonen	Carbon Leadership Forum
Christopher Meek	Integrated Design Lab
Christine Bae	Transportation expertise
Christoph Strouse	CBE Students & UW Sustainability
Jan Whittington	CBE Representative to UW Sustainability group
Meegan Amen	CBE Facilities
Vikram Prakash	PWT Logistics member

KT Project Team

STANDARDS PWT

Debbie Underwood	Department Administrator
Josh Polansky	CBE Operations
Meegan Amen	CBE Facilities
Ross McKenzie	CBE IT
Sara Moghadasipour	CBE Students & Lab Representative
Karla Kross	UW Facilities
Giovanni Migliaccio	PWT Logistics member

KT Project Team

Schedule of Meetings and Events

September 2022

9th PWT/Schedule & Logistics #1: Project Kick-off
22nd PWT/Schedule & Logistics #2
28th Meeting with Phinney Bischoff: Project Introduction

October 2022

5th PWT/Schedule & Logistics #3
6th Department Chairs Meeting
12th Project Advisory Committee #1
19th PWT/Schedule & Logistics #4
24th Department Tours
25th Department Tours
26th Space Workshop 1 and 2: Faculty & Staff
Space Workshop 1 and 2: Students
27th Space Workshop 1 and 2: Faculty & Staff
Space Workshop 1 and 2: Students

November 2022

2nd PWT/Schedule & Logistics #1: Project Kick-off
9th PWT/Schedule & Logistics #2
10th Meeting with Phinney Bischoff: Project Introduction
Space Workshop 2: UDP Faculty & Staff
16th Student Voices on Building Inclusivity, Listening Session
23rd PWT/Schedule & Logistics #6

December 2022

7th PWT/Schedule & Logistics #7
14th Project Advisory Committee #3
PWT/Sustainability #1: Kick-off
PWT/Standards #1: Kick-off

January 2023

4th PWT/Schedule & Logistics #8
11th All College Meeting
PWT/Schedule & Logistics #9
23rd Sustainability Workshop #1: Carbon & Resources
24th Sustainability Workshop #2: Health, Community & Equity
25th Project Advisory Committee #4

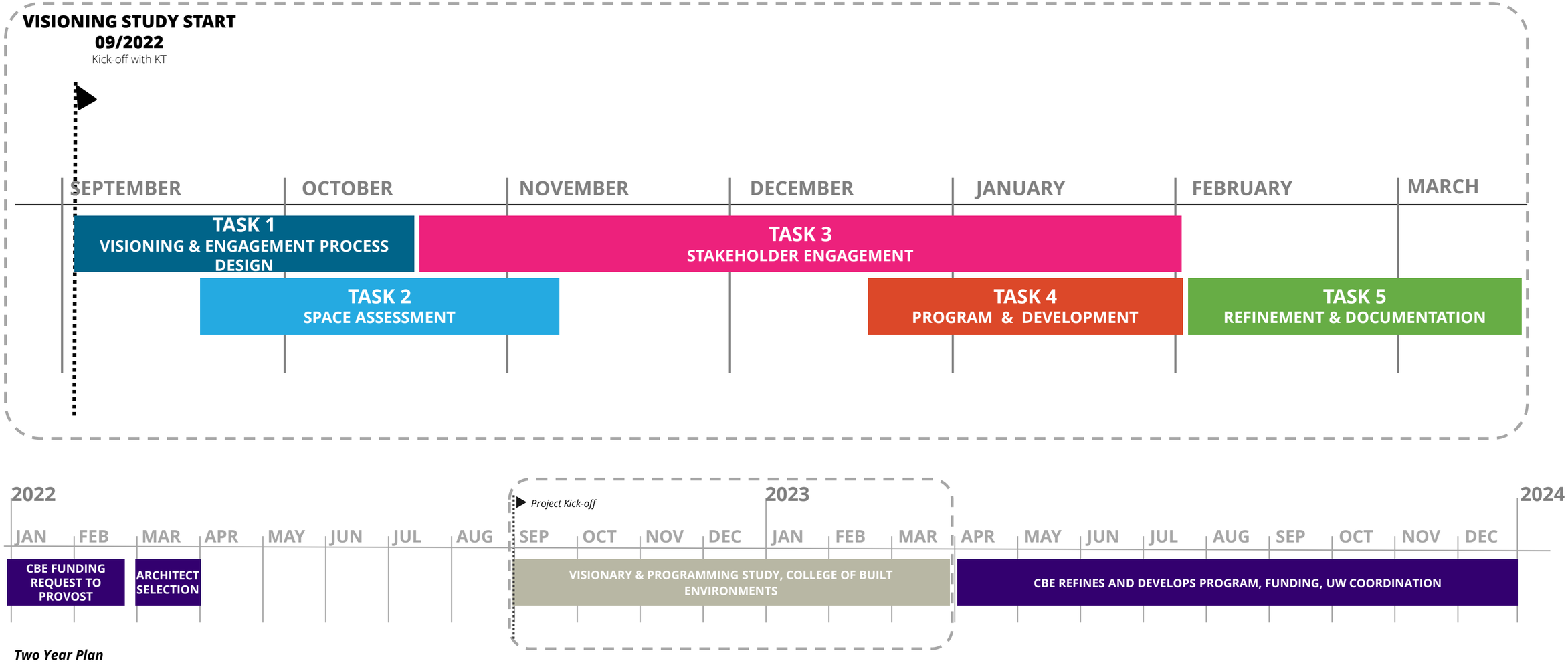
February 2023

3rd All College Charrette
22nd PWT/Schedule & Logistics #2

May 2023

15th Standards PWT Meeting #2
16th Sustainability PWT Meeting #2

Schedule and Workstreams



Two Year Plan

APPENDIX

Community Engagement: Types and Categories

ON-LINE SURVEYS

STUDENT SURVEY
Gather feedback on space, equity, and resources
10/21/22 to 12/21/22

FACULTY + STAFF SURVEY
Gather feedback on space, collaboration, and resources
11/30/22 to 1/3/23

DEPARTMENT SURVEY
Gather feedback on space, priorities, and resources
10/7/22 to 10/17/22

IN-PERSON WORKSHOPS

WORKSHOP 1
Faculty + Staff
Conflict and Consensus
10/26/22 and 10/27/22

WORKSHOP 1
Students
Conflict and Consensus
10/26/22 and 10/27/22

WORKSHOP 2
Faculty + Staff
Control, Influence, and Accept
10/26/22 and 10/27/22

WORKSHOP 2
Students
Control, Influence, and Accept
10/26/22 and 10/27/22

TOURS
Department representatives meet with KT
10/24/22 and 10/25/22

VIRTUAL WORKSHOPS

WORKSHOP 2
Faculty + Staff
Control, Influence, and Accept
UDP 11/10/22

STUDENT VOICES ON BUILDING INCLUSIVITY
Students
11/16/22

SUSTAINABILITY WORKSHOP 1
Faculty, Staff, Students
Operational Carbon, Embodied Carbon, Ecosystems & resources
1/23/23

SUSTAINABILITY WORKSHOP 2
Faculty, Staff, Students
Physical & Psychological Health, Education & Engagement, Community & Equity
1/24/23

SHARING FINDINGS

ALL COLLEGE MEETING
Stakeholder engagement analysis and space analysis feedback
1/11/23

CHARRETTE

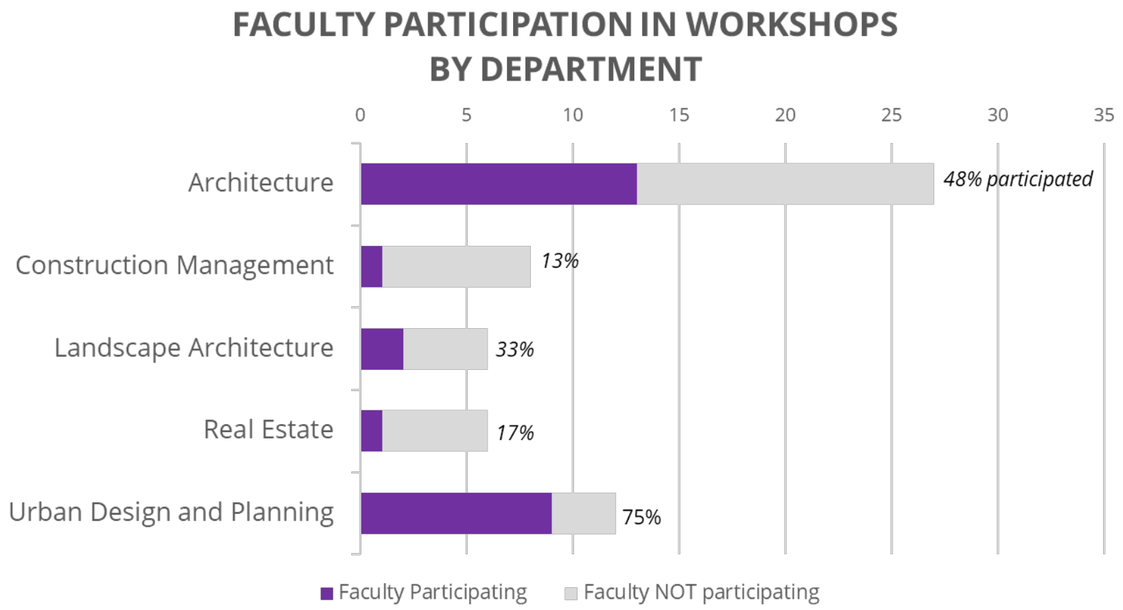
CHARRETTE
Faculty, Staff, Students
Co-creating roadmaps
2/3/23

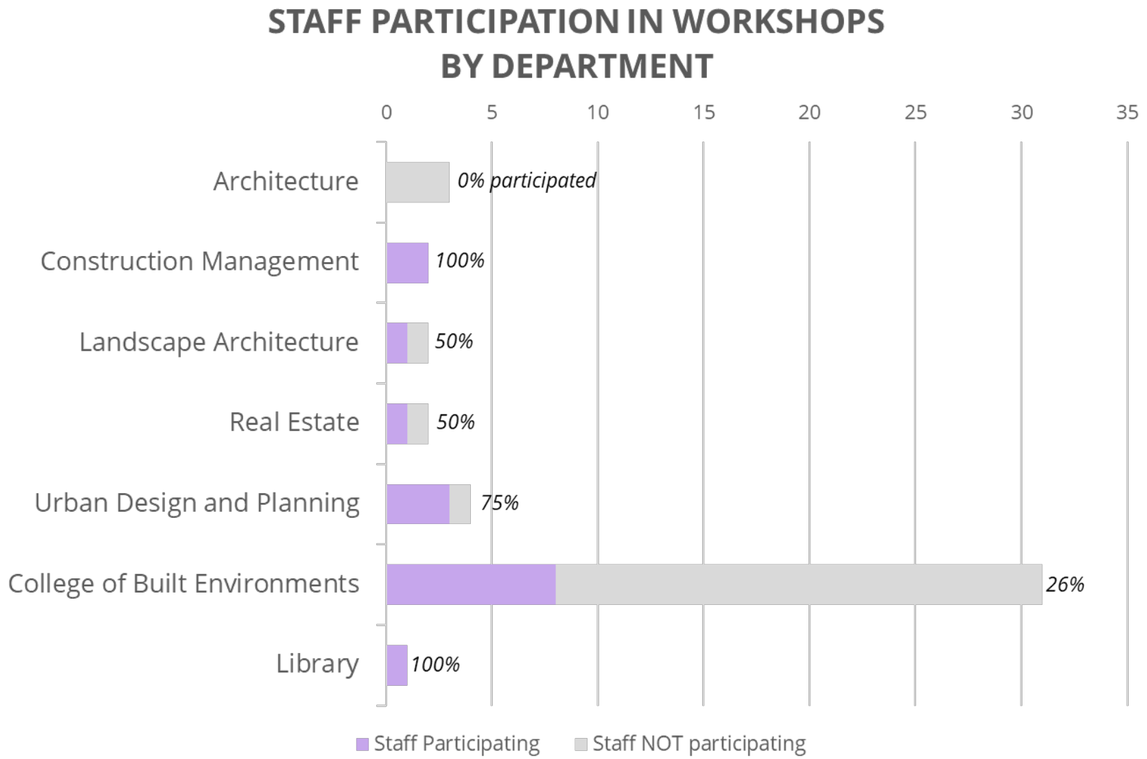
OCTOBER - JANUARY · OCTOBER - NOVEMBER · NOVEMBER - JANUARY · JANUARY · FEBRUARY

APPENDIX

Workshop 1 & 2 Participants: Faculty & Staff

WHEN AND WHERE
October 26- 27, 2022, Gould Court
November 10, 2022, Virtual Workshop 2 for UDP Faculty/Staff





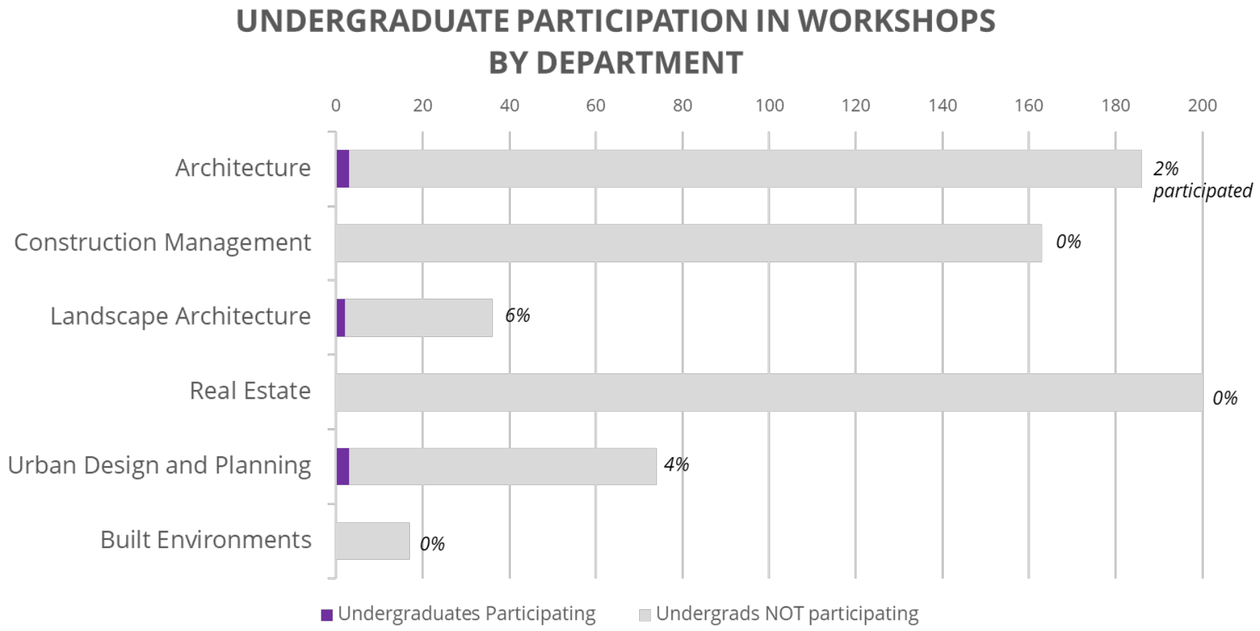
Notes:

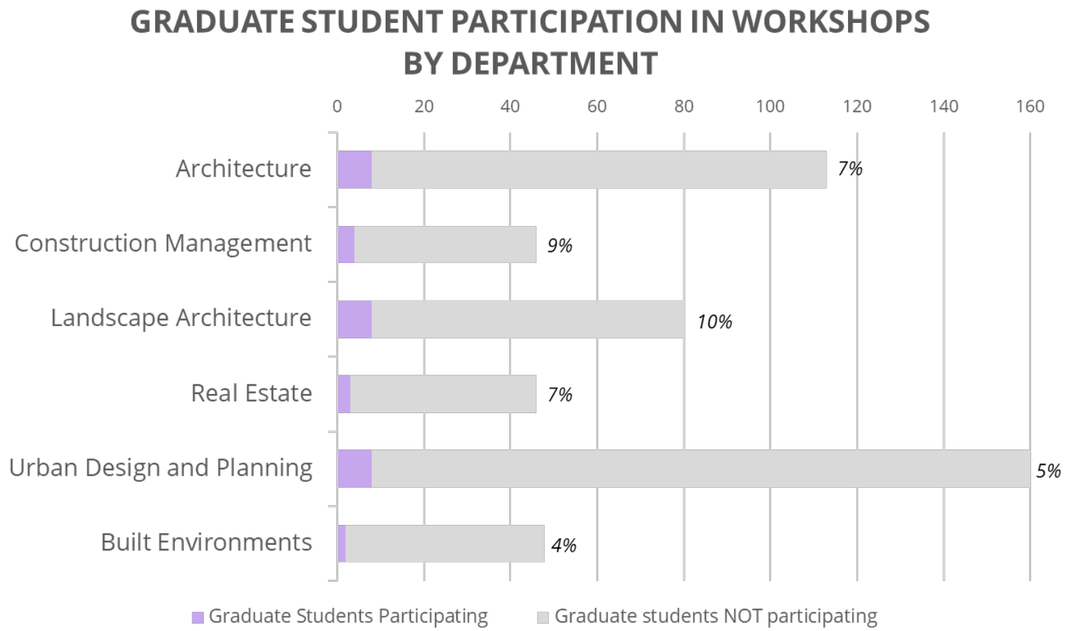
1. Department faculty and staff employment numbers were provided by department administrators
2. Departmental full-time faculty and staff numbers are represented here; affiliate, TA, and student staff are not
3. Faculty and staff in two departments are represented in both departments

Participants: 39

Workshop 1 & 2 Participants: Students

WHEN AND WHERE
October 26- 27, 2022, Gould Court





Notes:

1. 10 students of unknown department affiliation participated in workshops. These are not included in the charts.
2. Department student enrollment numbers were provided by department administrators
3. Students in undergraduate majors or graduate degree programs are represented here; minors and certificates are not included
4. For Construction Management, on-line MS CM students are not included
5. Students pursuing dual degrees are included in Built Environments, and in the individual departments

Participants: 47

CBE All College Charrette: Process & Participation

WHEN AND WHERE
January 3, 2023, Gould Court

OBJECTIVES

The CBE All College Charette was organized by KT as the final event of the study to generate positive momentum towards reimagining CBE Spaces. Its main goals were to:

1. Envision Key Initiatives of various scales across CBE's four buildings.
2. Co-create key initiatives Roadmaps for the future of CBE spaces

PARTICIPANTS

The charette welcomed all voices, identities, experiences, perspectives, and roles. Participants included CBE students, faculty, staff, and administrators and encouraged cross-departmental collaboration.

All College Charrette Participation	*Student*	*Faculty*	*Staff*
Architecture	8	14	3
Construction Management	4	3	3
Landscape Architecture	1	6	2
Real Estate	3	3	1
Urban Design & Planning	4	6	
Office of the Dean			9
TOTAL	**20**	**32**	**18**

APPENDIX

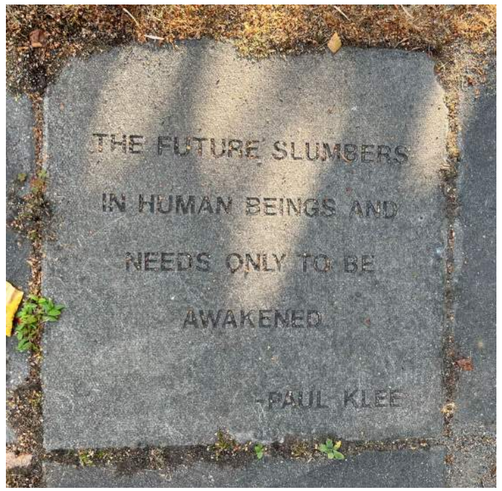
Sustainability Workshops: Process & Participation

SUSTAINABILITY WORKSHOPS SYNOPSIS

January 23-24, 2023 Faculty, Staff, Students

The workshops aimed to leverage the roles, perspectives, and expertise of participants to speak about aspirations for the CBE buildings and community, to help shape sustainability goals for CBE's buildings.

Workshop Participation	Workshop 1			Workshop 2		
	Student	Faculty	Staff	Student	Faculty	Staff
Architecture	3	3			7	
Construction Management	1	1				
Landscape Architecture				1	1	1
Real Estate	1				1	
Urban Design & Planning	1	2		1		



Gould Hall, SE Courtyard Paver

WORKSHOP 1: Carbon & Resources

January 23, 2023

What can the CBE achieve to reduce the impact of carbon emissions over the next 1-30 years?

Topics
- Operational Carbon
- Embodied Carbon
- Ecosystems

Objectives
- Review the CBE's Strategic Framework, UW's commitments and policy context
- Identify goals, barriers, and opportunities for achieving these goals.

Subtopics
- Occupant Controls and Comfort
- Systems Replacement
- Metering Systems
- Building Reuse
- Low Carbon Procurement
- Building Maintenance
- Water Systems
- Land Use
- Biodiversity

WORKSHOP 2: Health, Community, Equity

January 24, 2023

How should the CBE's spaces reflect an approach to well-being, community, and equity?

Topics
- Physical & Psychological Health
- Education & Engagement
- Community & Equity

Objectives
- Review the impact of building design and construction on the individual and broader community
- Identify goals, barriers, and opportunities for achieving these goals.

Subtopics
- Occupant Comfort and Health
- Climate Change and Air Quality
- Biophilic Design
- Living Labs
- Student, Faculty, and Staff Engagement
- Enhancing Community
- Inclusivity
- Materials Transparency
- Supply Chain Equity

APPENDIX

Methodologies: **Space Assessment of Existing Buildings**

OVERVIEW

KT conducted a thorough analysis and inventory of the existing CBE spaces and space types. This consisted of two site visits, including tours from each department, historical research on the buildings, and correspondence and iteration with key CBE community members, as well as the Project Advisory Committee and *Schedule & Logistics PWT*.

The KT team obtained the following documentation from UW to aid in this analysis:

Existing Building Documentation:

- Gould Hall: Rhino model of Exterior Walls, CAD plans, PDF plans
- Architecture Hall: CAD Plans, PDFs of elevations
- CDB: PDF plans, sections, elevations
- CERC: PDF plans

Additional Documents:

- Room Assignments, Excel Document
- PDFs of department use and space type for Architecture Hall and Gould Hall
- Gould Hall Studio Materials (Ken Oshima Studio)
- Gould Hall Renovation Study, 2002
- UW Master Plan, 2019
- CBE Strategic Framework, 2019
- UW Time Schedule Database, 2018-2022
- CBE 2019 Space Assessment Documents
- CBE Building Energy Use, 2017-2022
- UW Space Guidelines and Standards
- Building User Audit, University of Washington, 2015

Site Visit September 21-23

163 Key rooms visited with a focus on learning, collaboration, and shared spaces. During this visit the team used MS Lists to take note an inventory of the following information for these 163 rooms:

- Confirm Current Space Use
- Confirm dimensions to as-builts
- Determine quality of space
- Document through photographs, drawings, and notes
- Document Outdoor Spaces
- Took note of room technological equipment, windows, and furniture types.
- Wayfinding and Adjacencies

Site Visit October 26-27 *(Concurrent with Space Workshops)*

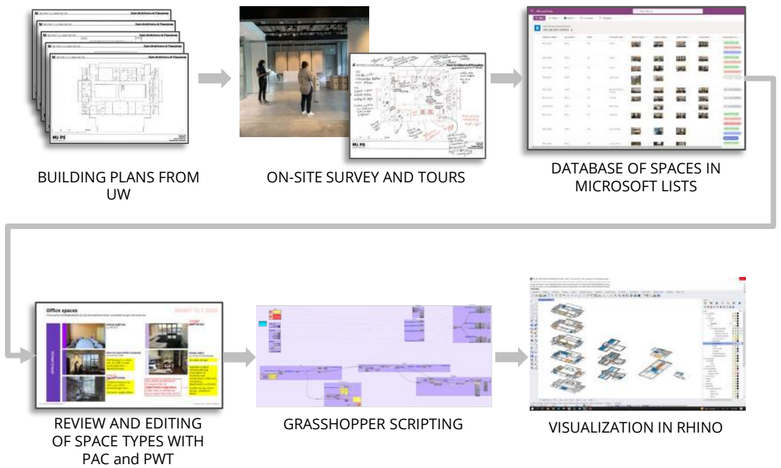
Documentation of additional existing CBE rooms that were not documented on the first site visit were completed by the team during this trip, which resulted in a complete inventory in the MS List document.

Additionally, the team was able to receive tours of key CBE spaces from the following CBE community members:

- Architecture Department: Brian McLaren
- Construction Management Department: Debbie Underwood, Rachel Faber Machacha, Andrew Beddell
- Urban Design & Planning Department: Diana Siembor, Christopher Campbell
- Landscape Architecture Department: Vanessa Lee
- Real Estate Department: Melissa Best
- BE Library: Alan Michelson

PROCESS

The team created 3D Rhino models of the four existing buildings in order to create building plans and collect area information. The MS List, which held data for every room in the CBE spaces, was integrated with the Rhino models using Grasshopper scripting. This allowed the team to visualize program diagrams, department diagrams, and square footage pie charts. As the team iterated on categorizing each room into a space type, the PAC and PWT provided important feedback and insights during weekly meetings. The team also corresponded with Meegan Amen as she manages and had provided the original room list data information for CBE spaces. This resulted in the colored plans, axonometric drawings, and pie charts seen throughout the report. The team utilized additional hatching over primary space types to illustrate multi-use functions where applicable.



APPENDIX

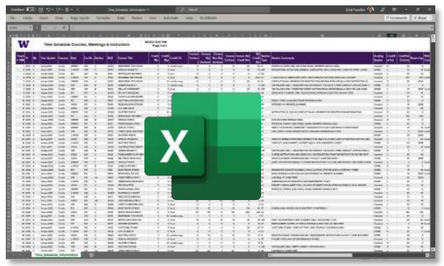
Methodologies: **Class Schedule Space Analysis**

DATA SOURCES

The team's analysis of learning space utilization was primarily based on an export from the university's Time Schedule database of 5,900 scheduled course sections from 2018 through 2022, provided by Meegan Amen and Debbie Underwood.

- Relevant fields from this dataset include:
- Term & Meeting Time(s)
- Department(s)
- Building & Room Number
- Room Capacity
- Course Enrollment

These fields served both as visualization filter criteria and as a means of connecting schedule information with Rhino models of room and building geometry and with other room-level metrics from the MS Lists CBE room database created during the initial space assessment.

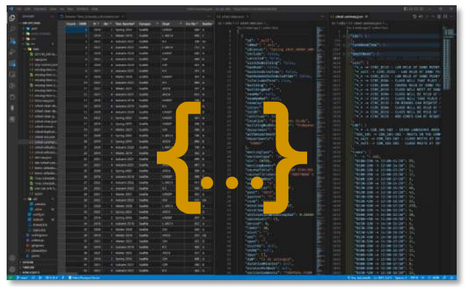


2018-2022 CBE Course Schedule
Excel Workbook

DATA PROCESSING

Raw schedule data contained a high frequency of missing information (such as when a course's meeting time and location was established informally and went unrecorded) and a high frequency of duplicate entries (such as when a single section was listed separately for instructor and a teaching assistant).

Through conversations with Meegan Amen, the team identified criteria for resolving such cases, leading to the removal of 1,994 duplicate entries and imputing missing location data for 184 course sections. After this exercise, 91 course sections remained with unidentified locations and 245 with known locations but unidentified schedules. Studios and special topics courses made up a significant portion of these and are consequently underrepresented in visualization.



Parsing, Deduplication, & Validation
VSCode + Typescript + JSON

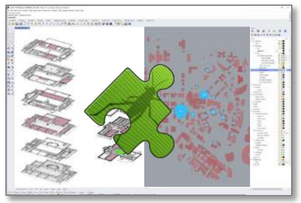
VISUALIZATION

Processed schedule data were visualized in two forms: (1) spatial representation in Rhino and (2) interactive schedule-based visualization in a custom web application.

Spatial representation was itself presented in two forms: (1) as exploded isometric views of CBE buildings with rooms color-coded based on time-aggregated or point-in-time utilization and (2) as a site plan visualization of the UW main campus and CERC, with circles for each building sized to represent its time-aggregated or point-in time CBE course enrollment.

Web visualization took on a variety of resolutions according to the spatial and temporal scope of the analysis, discussed in further detail on the next page.

In both cases, visualizations only depict what is known from the available course schedules. Use of CBE learning spaces for self-scheduled meetings, non-CBE courses, or other formal or informal gatherings are not represented in these figures. Due to this limitation, this analysis should not be interpreted as a complete record of learning space utilization.



Spatial Room + Building Utilization
Rhino + Grasshopper

Temporal Room + Building Utilization
Custom Web Application

APPENDIX

Methodologies: **Class Schedule Space Analysis**

VISUALIZATION

Web course schedule visualization spans across spatial scales (campus - building - room) and temporal scales (term - week - day - hour).

A view by location and term (fig. 1 and 3) allows one to see how course enrollments have been distributed between CBE and non-CBE buildings over the last several years.

Filtering by a single term (fig. 2) illustrates how course enrollment distribution varies over the course of a typical week.

The room view (fig. 4) illustrates how each room is utilized over a typical week relative to its capacity.

Fig.1 CBE Course Enrollment by Location & Term

Fig. 2 CBE Course Enrollment by Day & Hour (1 Term)

Fig. 3 CBE Course Enrollment by CBE Building & Term

Fig. 4 CBE Room Utilization by Day & Hour (1 Term)

Methodologies: **Thematic Analysis**

KT conducted a thematic analysis on feedback collected on sticky notes and in listening sessions from the CBE Space Workshops. Feedback about barriers, aspirations, and inclusivity were analyzed qualitatively using a grounded theory approach to thematic analysis. Feedback from the workshops were first transcribed and compiled, then using the thematic analysis software Taguette, KT coded the materials, categorized them, and created thematic maps.

What's thematic analysis?

Thematic analysis is a qualitative research method that involves searching for themes, patterns, and insights into qualitative data sources, like data that cannot be counted, including words or quotes.

What's a code?

"A code in qualitative analysis is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data." (Saldaña 2015, 3)

What's a thematic map?

A thematic map analysis is a qualitative analysis method which involves graphically organizing and diagramming the themes and codes that are generated during a thematic analysis. It is used to facilitate pattern recognition and categorization of data.

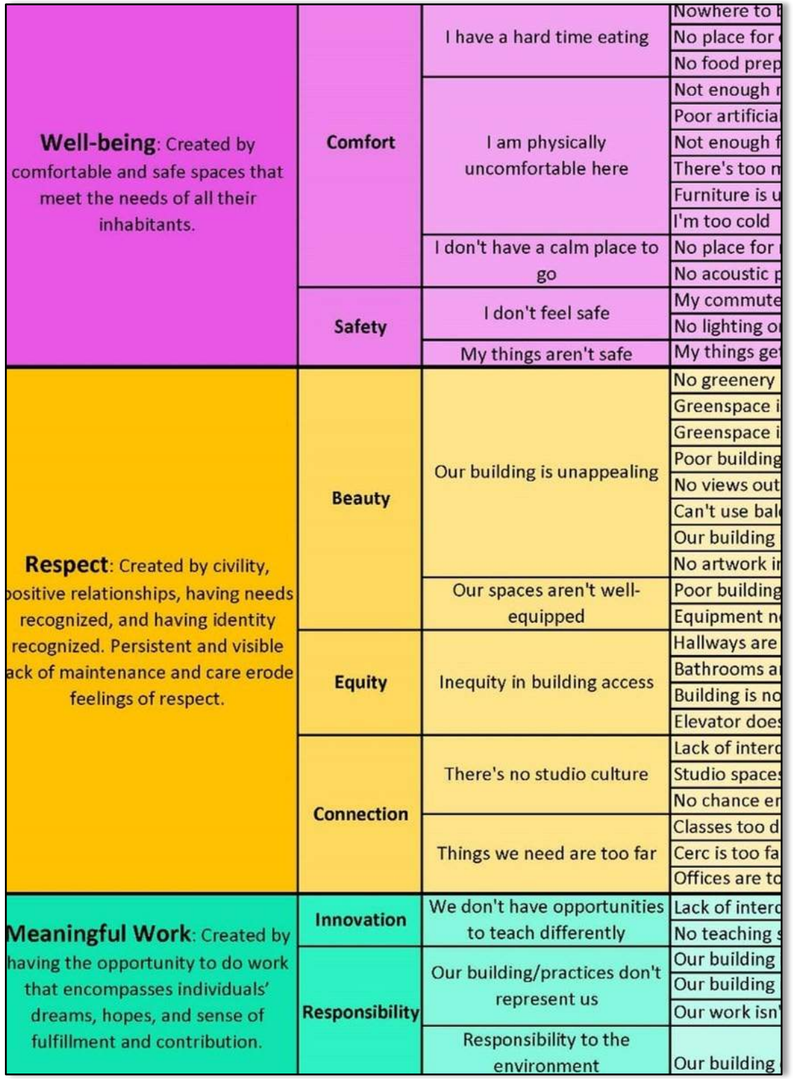
Johnny Saldaña, The Coding Manual for Qualitative Researchers, (SAGE Publishing, 2021).

The coding method

The coding process is done in cycles; the first cycle of coding constitutes the analysis, or taking apart of the data, and the second cycle synthesizes the data into new meaning. The coding process results in a series of codes, categories or groups of codes, and themes. For this study, the coders first used an inductive approach to coding, then conducted background research and iterated through thematic maps to categorize and re-think the codes, and finally re-coded the sticky notes deductively based on those refined codes. An inductive approach involves deriving the codes from the text, and a deductive approach involves applying already-created codes to that text.

Dignity at the CBE

To inform the categorization and theming of the data, KT conducted background research on dignity in academia and more generally in the workplace. The thematic analysis showed a connection between factors of indignity and specific aspects of the built environment. These connections were then translated into actions and workstreams for the future CBE.



Well-being: Created by comfortable and safe spaces that meet the needs of all their inhabitants.	**Comfort**	I have a hard time eating	Nowhere to
			No place for
			No food prep
		I am physically uncomfortable here	Not enough r
			Poor artificia
			Not enough f
			There's too n
			Furniture is u
			I'm too cold
		I don't have a calm place to go	No place for
			No acoustic p
	Safety	I don't feel safe	My commute
			No lighting o
		My things aren't safe	My things ge
Respect: Created by civility, positive relationships, having needs recognized, and having identity recognized. Persistent and visible lack of maintenance and care erode feelings of respect.	**Beauty**	Our building is unappealing	No greenery
			Greenspace i
			Greenspace i
			Poor building
			No views out
			Can't use bal
			Our building
			No artwork in
		Our spaces aren't well-equipped	Poor building
			Equipment n
	Equity	Inequity in building access	Hallways are
			Bathrooms a
			Building is no
			Elevator does
	Connection	There's no studio culture	Lack of interc
			Studio spaces
			No chance en
		Things we need are too far	Classes too d
			Cerc is too fa
			Offices are to
Meaningful Work: Created by having the opportunity to do work that encompasses individuals' dreams, hopes, and sense of fulfillment and contribution.	**Innovation**	We don't have opportunities to teach differently	Lack of interc
			No teaching s
	Responsibility	Our building/practices don't represent us	Our building
			Our building
			Our work isn't
		Responsibility to the environment	Our building

Care-based Framework Codebook Selection

APPENDIX

Methodologies: **Online Surveys**

DATA SOURCES

KT's analysis of student, faculty and staff space use and needs leveraged two online surveys across students, and faculty/staff populations. Demographic data for these populations were sourced through a combination of faculty interviews and exports from the Enterprise Reporting & Analytics at the University of Washington dashboard provided by Megan Herzog.

Student, Faculty and Staff Space Preferences

- CBE Faculty & Staff Survey: Visionary Programming Model for Academic Work & Learning Spaces (Nov 30 2022 – Jan 03 2023)
- CBE Student Preferences Survey: Visionary Program Model for Academic Work & Learning Spaces (Oct 21 2022 – Dec 21 2022)

University Demographics

- Enterprise Reporting & Analytics at UW
  - UW Diversity Profile and Trends Report (Fall 2022)
  - Enrollment Summary Report (Fall 2022)
- Faculty Interviews (Nov 7-21 2022)
  - Shanna Sukol (Architecture), Debbie Underwood (Construction Management), Vanessa Lee (Landscape Architecture), Melissa Best (Real Estate), Edith Olguin (Urban Design and Planning) and Megan Herzog (College-wide).

ONLINE SURVEY DESIGN

The student survey asked respondents 35 questions across 8 topics that were a mix of single-choice (3), multiple-choice (14), Likert (11), and long-form (7) questions. The faculty and staff survey's 36 questions across 12 topics followed a similar structure with single-choice (5), multiple-choice (13), Likert (9), and long-form (9) questions.

The student, and faculty and staff surveys were delivered to the University of Washington College of Built Environments' respective listservs as a voluntary survey using non-probability sampling methods and because of this were susceptible to self-selection bias. The voluntary nature of the surveys also led to nonresponse (unit) bias as some demographic groups were not captured. Nonresponse (item) bias could also have occurred in a few questions that either had optional responses or a large series of response options.

The overall number of people who received the online surveys was not captured at initial deployment and because of the fluid nature of the listserv, was not able to be calculated after the fact. Overall populations for students (1,185) and faculty/staff (278) were determined from the Enterprise Reporting & Analytics at UW Enrollment Summary Report and Faculty Interviews, respectively. These population figures were used for calculating survey coverage.

DATA WRANGLING

In order to understand potential gaps in survey data, schema spreadsheets were for created for the student and faculty/staff surveys that mapped all possible response options. Small naming conventions (syntactic, not semantic) were adjusted to align the two surveys across shared variables such as department name, building name, and hours ranges.

A similar alignment and mapping occurred with demographic (population) data as an exact one-to-one wording did not exist between many response options. An attempt was made to only analyze groups in which there was a clear alignment with survey language, available population data, and a minimum number of samples (>15). These criteria limited comparisons to select department, program, class, race/ethnicity, and identity options. In a few cases where the sample size was small but trends divergent, we noted as such and recommended future study. The only proxy used was Pell Grant eligibility to represent an identity option of "low-income."

After the schema for the surveys was aligned, an imputation process was applied to account for missing responses in the questions that did not require an answer. In addition to this gap-filling, open-ended questions on the most likely specific space per space type, and faculty/student experiences were coded by typology/building/space/room and topic, respectively. Additional categories of "Did not answer", "N/A", "Unclear" and "Nonspecific" were added to the open-ended questions to represent the nuance of response interpretation. When open-ended questions contained more than one response embedded in the text, an inclusive approach was taken that counted all responses from that individual. 98% of students and all faculty and staff had on average 3 or fewer responses per such questions.

Methodologies: **Online Surveys**

DATA ANALYSIS

After relational models were created for the many interconnected questions, descriptive analysis was performed to understand the distribution, central tendencies (Median, Mode) and variability (Interquartile Range) for each question. Likert scale questions were treated as ordinal and because of this, no parametric tests were leveraged.

DATA VISUALIZATION

Student, Faculty and Staff space preference data was visualized in a series of dynamic PowerBI dashboards. These dashboards leveraged tables, clustered bar charts and 100% stacked bar charts to represent categorical (nominal) and Likert (ordinal) data. All charts could be cross-filtered by each other or scoped to specific demographics available in dropdown menus. Spatially explicit data, such as the most likely space for specific program types was also visualized on campus site maps via the Rhinoceros 3D modeling environment and Grasshopper 3D node-based scripting language.

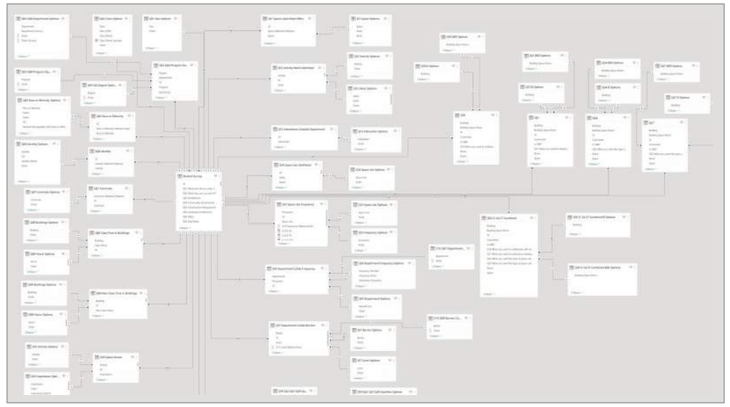


Fig.1 Build relational model that connects sample and population data.

Fig.2 Calculate the five number summary and visualize survey responses to understand central tendency, variability and distribution.

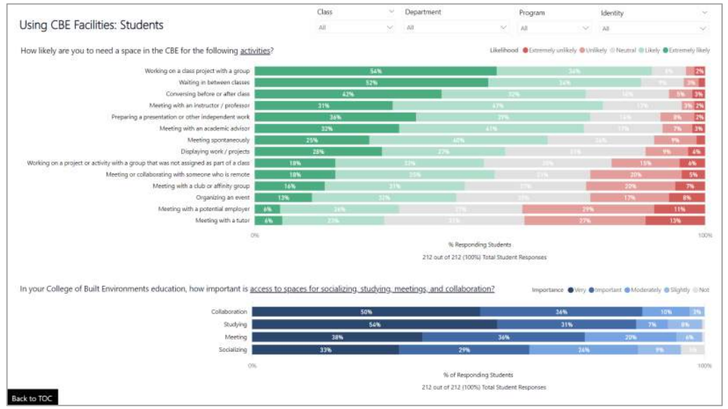


Fig.3 Visualize all survey questions with cross-referenced filters across key groups: class, department, program and identity.

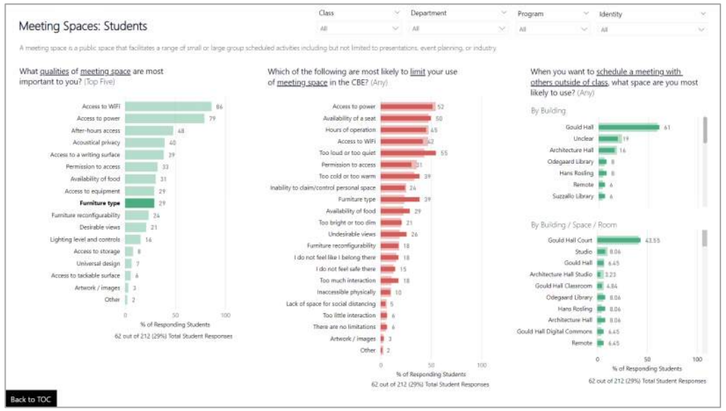
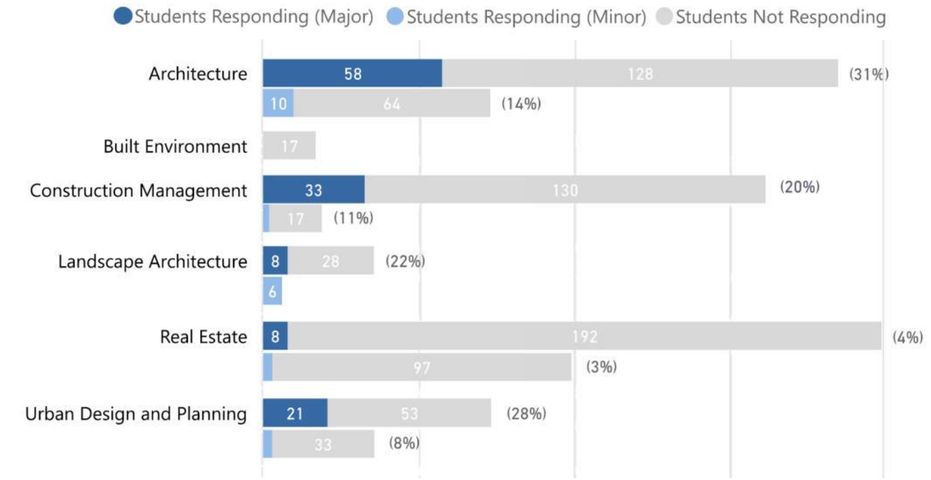


Fig.4 Leverage dynamic cross-filtering of each graph for exploratory analysis.

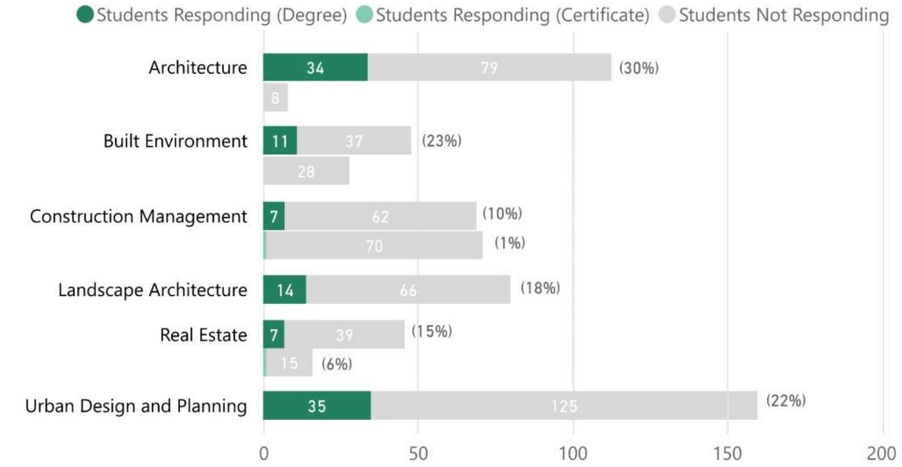
Online Survey Participation: Students

212 Responses out of 1,185 Total Students (18% Response Rate)

Undergraduate Response Rate by Department

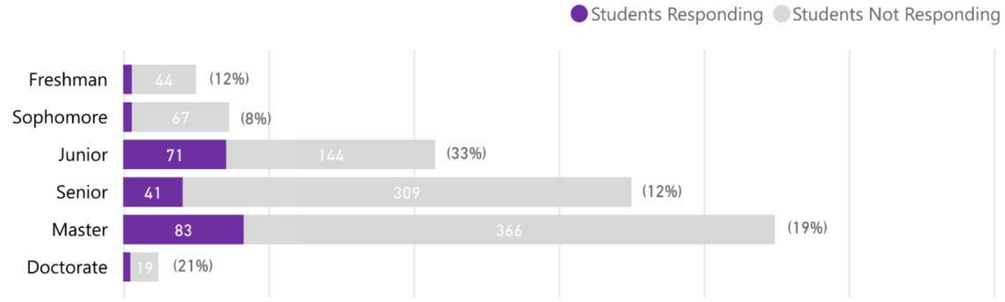


Graduate Response Rate by Department



Number of Students Responding (% of Population Responding)
(*n* = 212, *N* = 1,185)

Student Response Rate by Class



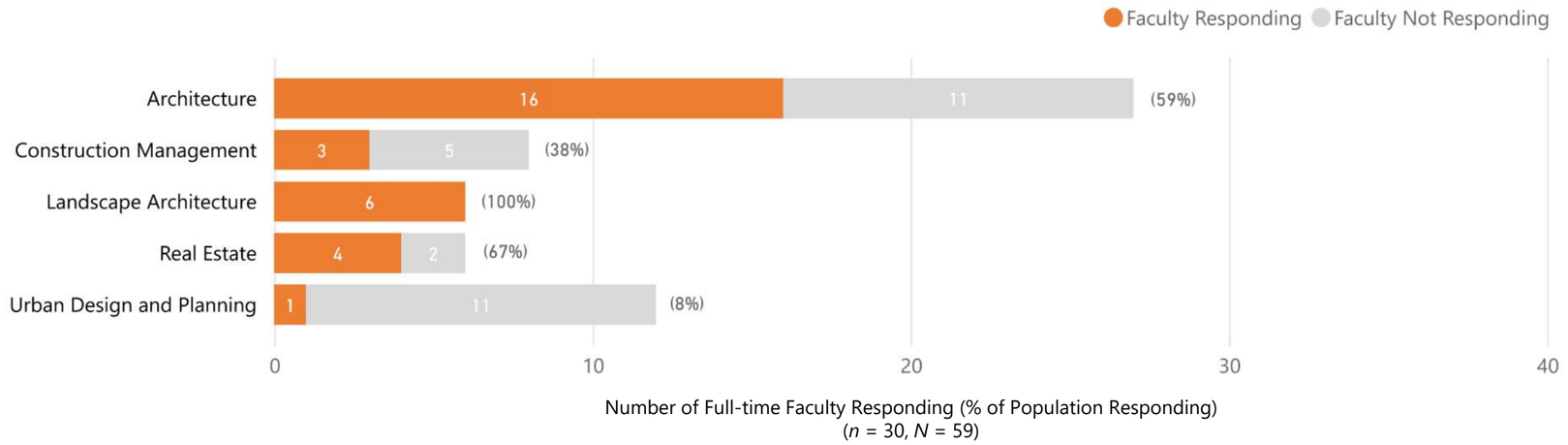
Number of Students Responding (% of Population Responding)
(*n* = 212, *N* = 1,185)

APPENDIX

Online Survey Participation: Faculty & Staff

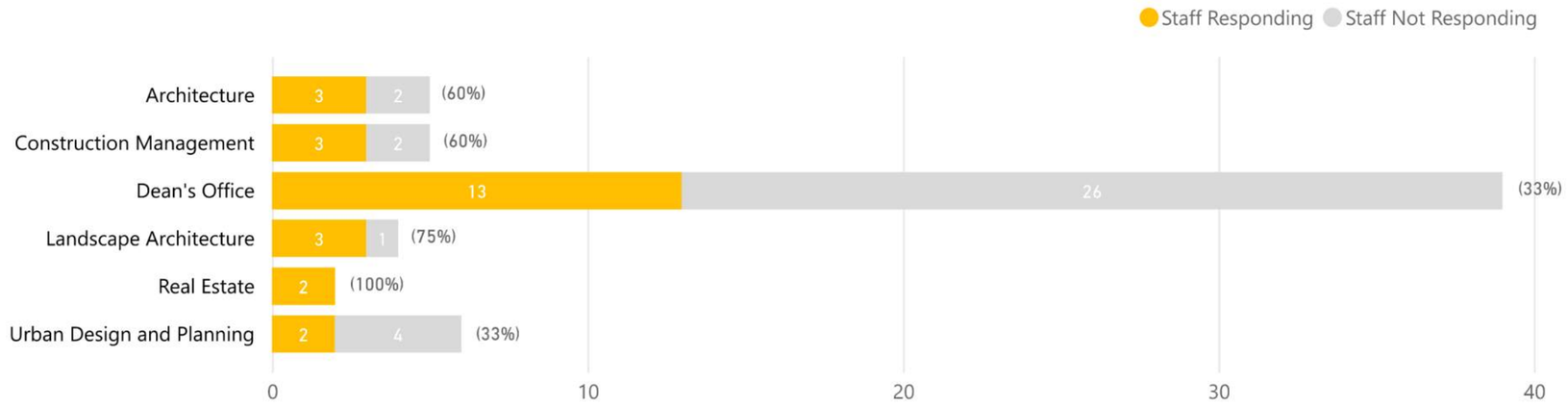
59 Responses out of 278 Total Faculty and Staff (21% Response Rate)

Full-time Faculty Response Rate by Department*



Number of Full-time Faculty Responding (% of Population Responding)
(*n* = 30, *N* = 59)

Staff Response Rate by Department*



Number of Staff Responding (% of Population Responding)
(*n* = 26, *N* = 59)

* The survey also recorded 2 part-time or affiliate faculty responses and 1 staff response outside of the CBE that were not included in this visualization.

The Architecture staff reported 1 part-time staff, but had two part-time staff respond, thus the 5 total overall.

The Landscape Architecture staff reported 3 total staff, but had 1 student staff respond that was not previously accounted for, thus the 4 total.