

CBE TECHNOLOGY TASK GROUP

EXTERNAL SURVEY RESULTS

1. When it comes to research in the realm of technology, what are the strengths, weaknesses and potential of the CBE?

| Strength | | | | |
|----------------------|---------|--------------|----------|--|
| LEARN TECH AS A TOOL | FAB LAB | COMPUTER LAB | LOCATION | |
| 8 | 7 | 3 | 3 | |

- a. Summary of Strengths: our students learn about technology as a tool, through the Fabrication Lab and computer lab. Also, the location of Seattle, and the surrounding tech community.

| Weakness | | | | |
|----------------|---------|-------------------|--------------------------|---------------|
| UNDERDEVELOPED | CLASSES | REAL-WORLD ISSUES | MAINTENANCE OF BUILDINGS | FEW RESOURCES |
| 9 | 2 | 7 | 1 | 1 |

- b. Summary of Weaknesses: Our technology courses are uncoordinated/underdeveloped, and not connected to real-world issues (technology for its own sake)

| Potential | | | | |
|------------------------------|---|------------------|----------------|--|
| STUDENT PREPARATION FOR WORK | PUBLIC ENGAGEMENT / COMMUNITY CENTERED TECH | GRAND CHALLENGES | BE TECH NIMBLE | INTERDISCIPLINARY/ PROFESSIONAL PARTNERSHIPS |
| 11 | 17 | 8 | 10 | 27 |

- c. Summary of Potential: Huge potential for interdisciplinary partnerships to leverage CBE. Huge potential to support a community-centered technology that encouraged public engagement / social equity. Huge Potential to be “Tech Nimble,” especially in Seattle and use tech to address grand challenges.

- d. Example Responses:

“The move to focusing on the built environment was prescient. To me the goals of the BCE should be: Optimizing resource use and sustainability in creating habitat; transitioning the existing built environment to accommodate today's technology, demographics, and energy systems; and using the built environment to stem isolation and the erosion of community.”

“CBE can learn a lot from more agile, tech models of research and practice. Not just visual representation, but tech leadership in the built environments.”

“CBE has a wealth of resources and professionals interested in working with them, yet does not always find the right fit. Sometimes it is successful (dig. fab lab) and sometimes things don't seem to connect (design computation).”

“Strength- having the resources of a world-class research university for collaboration. Weakness (possible) - relating technology and findings to the general public. Potential- to use technology to bring the activities and goals of the our professions to the broader public”

2. As CBE balances technological skill and knowledge education, what are the essential attributes and abilities our graduates should possess for long-term success?

| SKILLS / PROF. KNOWLEDGE | GRAND CHALLENGES | KNOWLEDGE / CONT. LEARNING WITH TECH | DESIGN / SYSTEMS THINKING/ CRITICAL THINKING | COMMUNICATION, LISTENING & LEADERSHIP | INTERDISCIPLINARY COLLABORATION | SOCIAL JUSTICE |
|--------------------------|------------------|--------------------------------------|--|---------------------------------------|---------------------------------|----------------|
| 48 | 12 | 57 | 55 | 46 | 19 | 17 |

- a. Summary: The most important quality in graduates was the perspective on technology that comes with knowledge, and ability to continuously learn. This was followed closely by a desire for systems/ critical/ design thinking in their work. Professional knowledge/ skills and communication + leadership skills were also highly valued. Other attributes mentioned were abilities to facilitate interdisciplinary collaboration, to address social justice issues and other grand challenges.

- b. Example Responses:

“Graduates should understand when they come out of school that they have only scratched the surface of what it takes to be an architect. They should however have a grasp for how to do a code analysis, at the same time as understanding the relationships we have with engineers, and other subs to coordinate a project. Often the value of recent graduates is that they are the best users of the technological tools available to us. The ones that understand how to use them to help us to communicate to clients and contractors are the best prepared.”

“Ability to manage complex, multi disciplined projects. Communicate effectively. Technology is great but the most successful members of the community possess strong team and communication skills as well as looking at complex projects from multiple directions and managing to minimize the risks and mistakes

“We need faculty that are not content on delivering the same old lesson plans year after year. I want faculty to be out in the community, engaged, and with the times. I understand this has gotten better over the last few years but is necessary moving forward.”

“Graduates need a basic foundation of knowledge for long term success. Their technological skill will require a lifetime of continuing education to stay relevant.”

3. With the goal of better interdisciplinary collaboration and better design of the built environment, how do you see technology affecting your institution / practice/ work in the future?

| MUST ENSURE IMPROVED COMMUNICATION / VISUALIZATION, NOT WORSE | AUTOMATION COMING | TECH CHANGES FAST/ MUST KEEP UP | MUST USE TECH CRITICALLY TO EXPAND DESIGN CAPABILITIES (VR/AR...) | USE DATA IN DESIGN | WITH UBIQUITOUS TECH, MUST BE FLEXIBLE / GENERALISTS NOT SPECIALISTS | KEEP ETHICS/ SOCIAL RESPONSIBILITY |
|---|-------------------|---------------------------------|---|--------------------|--|------------------------------------|
| 53 | 3 | 24 | 40 | 3 | 8 | 5 |

- a. Summary: The biggest priority is to ensure that communication (including visualization of design ideas) improves with changing technology, and doesn't get worse. This was followed by a sense that the disciplines must critically expand technology-enabled design & facilitation capabilities (not only to 'keep up' but advance the field). Other responses described how with the rapid changes in technology and ubiquitous, we must strive to be well-rounded generalists rather than specialists.
- b. Example Responses:
- "AR/MR will be huge; VR is for realtors; Realtime / x-platform interfacing/operating is a boon; Developing and deploying custom software/ops/algorithmic processing sets some firms apart; Being able to fluidly incorporate new tools for design productivity (e.g. auto-grading, cut/fill schematics, climatological calcs, etc) into the work flow w/ discreet intentions provides room for individual growth, design exploration and firm-wide benefit."
- "Data-driven design, and technological support for iterations and review design implications will continue to have a significant impact on practice. The value of design (monetary and cultural) will be determined by our professions' ability to integrate these technologies into practice."
- "leverage technology to support big ideas of carbon footprint reduction in our built environment from construction materials and methods to building efficiencies in systems and lifecycle costs but integrated thinking architects have to have the vision and ideas that technology can be used to help solve"
- "As someone who's worked for the City of Seattle for more than a decade, I'm dismayed to see the lack of partnerships between academia, UW, and the City. We were very intentional in creating the biotech hub in South Lake Union, but missed opportunities to create career pathways for local students AND to preserve and build more affordable housing. We need to do better moving forward, particularly in monitoring how the city and region is growing."