The Future of the Scientific Workplace

The laboratory is much more than a building filled with scientific instruments; it is a place where minds come together to innovate, discover, and create solutions to pressing issues.

A suboptimal workspace can hinder collaboration as well as productivity, and a workspace that includes laboratories has specific needs. Sr. Laboratory Planner Marilee Lloyd recently sat down with Labcompare to discuss the new Scientific Workplace: framework that focuses on fostering collaboration and creating a space where scientists love to work.

COLLABORATIVE

Dedicated lab spaces are often thought of as isolated from the rest of a facility, in many cases simply due to the necessity of containing highly sensitive experiments. There is an understanding that areas of a lab may be closed off in a physical sense, but by incorporating design elements such as glass connections, it leaves the space open for greater visibility and idea sharing.

"Think about things like allowing space for collaboration, even if it's within the lab space, such as providing a small space that allows for some whiteboard or a piece of glass between workspace and lab space to be writable and allow for that ability to coordinate and communicate."

ANALYZING DATA ABOUT STAFF CONNECTION

Fostering team collaboration relies on positioning lab spaces centrally where there is easily accessibility from all department. Part of the process in design is analyzing data about staff connections, which informs how colleagues interact and therefore opportunities to create grouping workspaces.

"It's knowing who in research departments should be next to each other, so that information and workflows are optimized. There was a great thrust several years ago for social network mapping, and that is understanding who is connected to and needs information from whom in a particular company so you start to make connections between how these people interact, how many interactions per week, per month, per year they have. You get an idea of what department or research group should be next to whom to maximize the efficiency."

SUCCESSFUL SCIENTIFIC WORKPLACES

Integrative Bioscience Center | Wayne State University
Designed for surprise, IBio was crafted not only to accommodate individual research, but also to foster interconnection and support spontaneity. In reimagining the ways researchers can enrich - and advance - each other's work through collaborative problem-solving, IBio is powerfully shaping the ways we understand, study and treat systemic urban health risks worldwide.

- About 20% of the center's net area comprises collaboration, conference and lounge spaces.
- Project emphasized interdisciplinary engagement with a centralized communication space.
- Work spaces grouped by "theme" and use of glass walls to increase visual connections between departments.

Innovation Center & Regional Headquarters | Wacker Chemical
An engagement plan that brought together over a third of Wacker's staff highlighted the features most important to their work culture: flexibility, ergonomic workstations, and plentiful daylighting. Due to the nature and complexity of the projects, experts from the scientific workplace team work collaboratively within these engagement workshops, executive steering committee and move ambassador committees, addressing the needs and desires of three different groups. These multiple points of engagement resulted in a positive impact to the culture of the workplace fostering more collaboration, interaction and innovation.

- "Extroverted design" offering flexibility and opportunity to collaborate.
- Use of transparent glass and large continuous floor plates for both open office and lab space.

FLEXIBLE

An important quality in lab design, and a key component of the modern Scientific Workplace, is the space's flexibility to integrate changes both long-term and from day-to-day. When one is planning and designing for growth, the inclusion of more movable, adjustable and modular parts allows for spaces to make room for new installation and equipment with less disruption.

"Flexible and adaptable systems are used so that they can, to an extent, modify their environment to suit their needs. They can change the height of the workbench. We can use mobile cabinets frequently, so they can move the cabinet around to be what they want. They can adjust the height of shelves to accommodate a new piece of equipment."

ENJOYABLE

Elements like daylight and views can create a more pleasant work environment for scientists who work many hours at a time. The goal is to look at laboratory design as an experience, rather than a location, where the scientists can find themselves healthier, more productive, and thriving in a workplace that supports them. One way this design is informed is by having a conversation with staff members about what they needs to improve their day-to-day experiences.

"Be mindful of things like biophilic elements to make sure that there's a connection, if we can at all manage it, to the outdoors, so someone can see, even if they're in the lab, see trees, see the sky. That's one of those very important things that oftentimes, in scientific environments, you don't necessarily think of."

By Marilee Llolyd AIA | Associate. Explore more market and design insights at www.hed.design/insights