



LABS FOR THE 21ST CENTURY®

Labs21 Breakfast Session Summary

Scientists as Creative Collaborators: Working Styles and Environments in Multi-disciplinary Labs

San Antonio, Texas
Thursday, October 19, 2006

AT THE LABORATORIES FOR THE 21ST CENTURY (Labs21) 2006 Annual Conference, held in San Antonio, Texas, Steelcase Inc. hosted a breakfast session entitled, Scientists as Creative Collaborators: Working Styles and Environments in Multi-disciplinary Labs. The primary goal of this session was to generate discussion about the thoughtful design of laboratories that meet specific end-user needs and foster collaboration. Margaret Alrutz, User-Centered Researcher, Steelcase Inc. (616-554-8362 or malrutz@steelcase.com) led the session.

Eleven people attended the breakfast session, including representatives from:

- U.S. Environmental Protection Agency (EPA)
- U.S. Department of Agriculture (USDA)
- Architecture firms
- Universities
- Building technology vendors
- Construction planning and management firms

Introductory Remarks

Ms. Alrutz kicked off the session by providing some background about her research and a general summary of some of her recent findings. Ms. Alrutz studies how researchers work and interact in their occupied space. Through numerous personal interviews and observations, Ms. Alrutz has discovered that there is a noticeable trend toward increased collaboration within research institutions. Ms. Alrutz provided the attendees the following key observations:

- Destinations are important when designing for collaboration.
- Researchers are very hands-on and creative in customizing their own space.
- Principal investigators (PIs) are becoming increasingly willing to sacrifice personal space for collaborative space.
- There is an increasing need for multi-generational building design (i.e., appealing to both the “old school” and “new school” groups of researchers).
- To meet the demand for increased collaborative space, designers should think about alternative arrangements for traditional spaces.
- Considerations for innovative design techniques, such as alternative posture, will be important to foster “shoulder-to-shoulder” collaboration and increased eye contact.

Open Discussion Remarks

Following the session’s introductory remarks, Ms. Alrutz initiated open discussion among the group by asking about participants’ experience with designing space for collaboration. Following is a highlight of comments provided by the various attendees:

- The private/corporate industry covets the academic lifestyle.
- There is a trend of designing hybridized space (i.e., increasing amounts of office space contained within laboratory space).



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- Strict boundaries between spaces, such as a threshold, can dramatically affect personal behavior and interactions.
- Researchers are more likely to use space that is more flexible in its use and can be readily changed.
- Visual accessibility is crucial for successful collaboration.
- In large pharmaceutical laboratories, collaborative areas are typically met with a lot of resistance.
- Fancy and deliberate areas are not necessary for impromptu meetings and collaboration.
- Future technology and equipment may begin to affect the design of our space and ability for collaboration.
- There appears to be a cyclical trend in the design of laboratory space over the last several decades; the 1960's were characterized by open laboratories, which gave way to more closed laboratory space, and we are now back to designing more open laboratory space.
- There is a significant difference in how researchers from different generations perceive work space. Many individuals who have been working in laboratories for several decades have embraced the "old school" way of doing research; recent college graduates have embraced the technology revolution and have different expectations regarding laboratory work space and equipment. The design community needs to be aware of this critical difference.
- Post-occupancy studies of academic research centers have demonstrated that individuals struggle with having their office space in the laboratory because they get lonely and don't have as much opportunity to interact with colleagues. Designers are looking at ways to remove the office space from the laboratory but keep it in close proximity.
- Meeting space within laboratories is what people are asking for. The design community as a whole is still working on conceptualizing this idea.
- Most researchers tend to want more than they actually need and end up having many of the same supplies and pieces of equipment as their colleagues; this is partially driven by how grants are structured. There is, however, a way to thoughtfully design laboratory space to bring a lot of these materials together and reduce redundant supplies and equipment.
- In hospitals, nurses often complain about having to walk too much and a general lack of eye contact with their colleagues.
- In one particular fisheries laboratory, there is a great deal of collaboration because researchers have worked there for their entire careers and have built strong professional and personal relationships with one another. In addition, their field work is on ships, where there is a great deal of multidisciplinary work and a "forced collaboration" due to the physical confines of the ship.
- One design firm created a new piece of furniture for a laboratory that combined a flat screen monitor, a computer, and space for resource materials. The firm learned that this piece of furniture would be more valuable to users if it was mobile.
- Since there is no single solution to designing laboratory space, successful projects are those that are built for flexibility.
- If scientists are not part of the design process, you can end up with a beautiful space that doesn't function.