Most existing research facilities were built in the post-WWII construction boom. Today, they are outdated and incompatible with modern research demands. New construction offers a blank slate and the opportunity to hardwire desired behaviors into the physical space. Yet, most new research buildings have failed to meet evolving researcher needs and to achieve their interdisciplinary goals.

This infographic illustrates 15 forward-looking design and management principles to help leaders hardwire new research buildings to spur researcher interactions and support collaborative projects.

### Lab-Centric Design Principles

01. Adjacencies between wet labs, dry labs, and offices
   - Boost collaboration and convenience by creating lab "neighborhoods" that have wet labs flanked by support space, dry labs, write-up space (for students and staff), and offices.

02. Flexible lab design
   - Invest in features—such as mobile casework or overhead service carriers—that enable easy adaptations to meet future research needs.

03. Variety of wet and dry lab spaces
   - Devote at least 40% of square footage to dry lab space so investigators can conveniently conduct data analyses.

04. Open and shared labs
   - Increase space efficiencies and researcher interactions through open labs with 5 to 8 lab modules that support several investigators.

05. Specialized research spaces
   - Ensure the building can support diverse research groups by dedicating some space to specialized equipment and spaces, such as high-demand core research facilities or low-vibration labs.

06. Variety of workspaces and meeting areas
   - Maximize building versatility by including private workstations, formal meeting rooms, huddle spaces, call rooms, or auditoriums.

### Building-Wide Design Principles

07. Modern amenities
   - Facilitate casual interactions and promote space utilization through cafes, lounges, locker rooms, or rooftop terraces.

08. "In-between" spaces and shared pathways
   - Promote chance encounters by intentionally designing hallways, circulation spaces, and communal areas to increase zonal overlap in walking patterns.

09. Natural light and clear sight lines
   - Encourage researcher connections by using glass to put "science on display" and open staircases to enhance sight lights.

10. Shell space
    - Reduce up-front costs and enable future flexibility by intentionally leaving a floor(s) incomplete as shell space.

### Space Management Principles

11. Centralized management
    - Give the Research office oversight of the facility so that space utilization is aligned with research goals.

12. Formal space application
    - Require teams to submit applications that explain their proposed work advances interdisciplinary collaboration and aligns with building priorities.

13. Project-based space allocation
    - Challenge misperceptions about permanent space “ownership” and guarantee collaboration by allocating space to team projects rather than individual researchers.

14. Maximum occupancy periods
    - Set a maximum occupancy period for teams based on their projects, review their progress annually, and claw back space if productivity expectations are not met.

15. Dedicated swing space
    - Meet short-term researcher needs by carving out a research lab as centrally controlled swing space for temporary allocation.

Learn more about designing research labs

eab.com/products/facilities-forum

© 2020 by EAB. All Rights Reserved. 37301