

Tactic 2: Collaborative Ecosystem Design Checklist

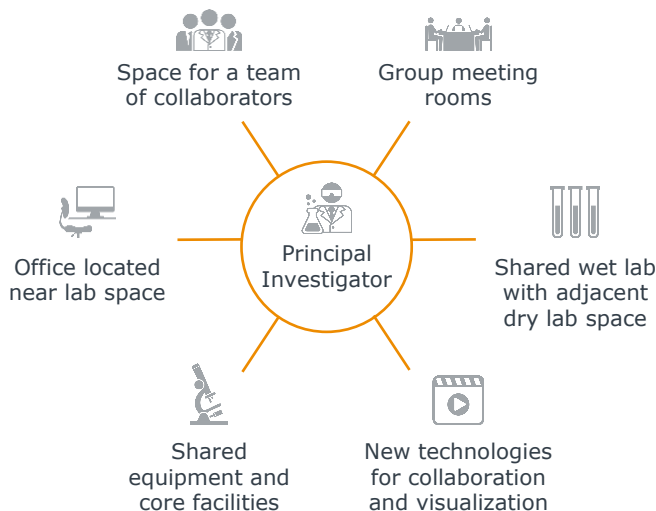
Research No Longer Confined to Individual Investigator Labs

Lab of Yesteryear



- Designed for an individual investigator
- Highly customized to meet unique needs and preferences
- Closed off space with permanent walls
- Included all needed equipment and materials for investigator's research
- Located near similar investigator's labs

Today's Lab "Ecosystem"



“Research happens in the labs, but collaboration happens in the hallways. That means non-lab spaces are just as important—if not more—than the design of the physical labs themselves.”

Senior Facilities Officer, Public R1 Institution

Thinking Outside the [Laboratory] Box

Building-Wide Design Considerations for Promoting Collaboration



In-Between Spaces and Shared Pathways

Design hallways, circulation spaces, and communal areas (e.g., restrooms, kitchens, elevators) to increase zonal overlap in walking patterns



Modern Amenities

Incorporate cafes, lounges, lockers, rooftop terraces, or other areas that encourage socialization and well-being



Shell Space

Intentionally leave several floors incomplete as shell space for later fill-in



Variety of Workspaces and Meeting Areas

Include private workstations, formal conference and meeting rooms, huddle spaces, call rooms, or auditoriums



Natural Light and Clear Sight Lines

Build open staircases and use glass to increase natural lighting, put “science on display,” and improve visibility between researchers



- Built Life Sciences Laboratories (LSL) using a “core and shell” strategy to take advantage of competitive bid market and economic incentives
- Proactively upsized all systems (e.g., HVAC, exhaust fans, sprinkler, alarms) to prepare for phase 2 buildout of shell space
- Cost \$28 million to build and fit out warm shell in 2010—the same work would have cost \$54 million in 2015

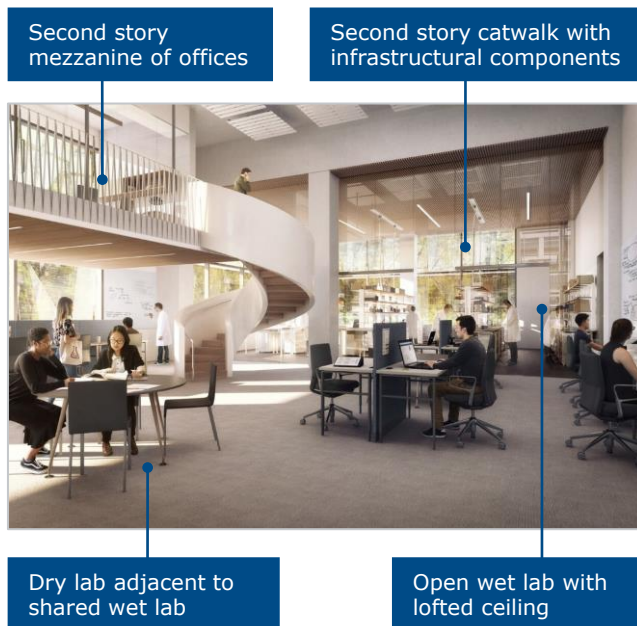
Making the Lab a Desirable Destination

Lab-Centric Design Considerations

- ✓ **Flexible Design**
Invest in flexible features (e.g., mobile casework, overhead service carriers) that allow for easy adaptation
- ✓ **Open and Shared Labs**
Include 5-8 lab modules that accommodate several researchers
- ✓ **Adjacencies**
Design wet labs so they are flanked by support space, dry labs, write-up space, and offices
- ✓ **Variety of Wet and Dry Spaces**
Devote at least 40% of facility square footage to dry lab space
- ✓ **Specialized Spaces**
Dedicate some space for specialized equipment or spaces (e.g., core facility, low vibration)



University of Oregon's Knight Campus Laboratory "Neighborhoods"



Modern Labs Are More Than a Pretty Face

Ecosystem Design Yields Concrete Collaboration Outcomes



Oregon Health and Science University's Assessment of KCRB's¹ Design in Collaboration with SRG Partnership

- 1 Step Analysis**
Pre- and post-occupancy data on steps and stairs taken by researchers showed occupants are moving more frequently throughout the day

- 2 Networking Survey**
Pre- and post-occupancy networking survey showed increased overlap between staff and leaders across research themes

- 3 Collaboration Survey**
A post-occupancy survey showed that **86%** of occupants agreed that the design of the building facilitated their ability to collaborate

- 4 Culture Survey**
Pre- and post-occupancy results showed improvements in positive perceptions in every survey area

Network Graphic for 2019 Respondents



| | |
|-------------------------|--------------------------------|
| Cancer Biology | Computational Biology |
| Administration | CEDAR ² |
| Outreach and Engagement | Prostate Research |
| Genetics | Shared Core |
| Heme Malignancies | Biostatistics Shared Resources |

1) Knight Cancer Research Building.
2) Cancer Early Detection Advanced Research Center.