

HIXSON ARTICLE

Science + Technology

Five Things to Consider When Leaning Your Lab

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"We're making it work, but it's never been exactly right." That's a statement we hear over and over from lab users looking to renovate their labs. It is a typical problem that labs of all types face: Business needs change over time, often more rapidly than anticipated, but the design of the lab and supporting facilities are not flexible enough to accommodate these changes. When the facility doesn't work as needed (more tests than planned, not enough storage, too much walking between functions, etc.), employees will naturally find ways around the problem spots...workarounds about which their bosses may not even be aware. Because the very nature of labs means that they are often expense centers, not profit generators, such workarounds may be hindering the lab's core mission and may lead to unnecessary, ongoing expenditures.

Undertaking a lab renovation offers a great opportunity to look holistically at all functions and the flow-realities within each lab setting. The renovation process enables labs to undertake a detailed review of the long-term business objectives and financial outcomes for the facility, while simultaneously considering the functional design of

the space. A true win-win-win is the lab redesign that reduces expenses (waste, rework, etc.), without compromising customer or personnel safety, yet also allowing for productivity gains and throughput improvements. To achieve these goals, here are five things to consider when redesigning your lab space:

- 1. FOCUS ON THE FLOW.** The lab renovation process should begin with a measurable, detailed understanding of how work flows through the facility. Review from the bigger, whole facility perspective, down to work flows through the facility. Review from the bigger, whole facility perspective, down to the individual lab level. Seek measurable input data from logistics and operations, as well as safety managers and lab techs tasked with conducting a specific test. Understanding the work and impact involved in performing this one test/set of tests will aid in understanding the impact to the entire facility.
- 2. IDENTIFY THE NUTS AND BOLTS.** Once the facility workflow is known, it's time to get down to the nitty gritty details. Questions to be considered during this step include:

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- How does the item being tested arrive?
- How is it routed and delivered from Receiving to the specific test location?
- Who will touch the item?
- Is waste generated? If so, how is waste handled and recycled/discarded?
- Where does the test product/by-product go when it leaves?
- How is testing reported, showcased and improved?

Answering these questions helps create a loose diagram of the process flow of each known item to help designers and facility personnel understand how the process works today. Keep in mind, however, that today's reality may be vastly different from what you think it is and what it can and should be. Also consider that the processes employed by your teams today may not be the processes of tomorrow. Once problems are addressed through the lab re-

design, processes can and should adapt to be leaner and more cost-effective in the future.

3. REMOVE TERRITORIES. Even in today's era where workspaces are more open and collaborative, people have a natural tendency to become territorial – claiming areas for their own. This tendency is exacerbated when the space does not provide what the workforce needs.

For example, one Hixson client had pent-up storage demand among its lab workforce. Demand for space was so high that some personnel had widely unknown storage locations and processes, placing empty boxes in storage areas to "hold" the space for when it was needed.

Proper lab design takes into the account the territorial nature of humans, and offers ways to accommodate that territoriality into the natural flow of the space. In the case of the personnel with the rogue storage methods, Hixson was able re-design and lean the overall processes so that all personnel had access to what they needed,

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when they needed it, and, in some cases, even eliminated the need for storage altogether.

4. **CREATE CURRENT/NEAR-TERM (3-5 YEARS) PLAN.**

It is important, perhaps essential, to create a plan for how the facility may adapt and continue to change in the near-term. Creating a workable and realistic plan allows for labs and supporting spaces to change or be re-designed within a relatively brief time period and with a reasonable cost. Remember, though that people take longer to adjust to change. Use agreed-upon metrics to consistently and continuously monitor the lab's effectiveness to allow for planned and needed business and workforce adaptations. Both should be routinely addressed and managed using a near-term plan.

5. **MASTER PLAN THE LONGER TERM.**

If planning a lab re-design, it is appropriate to think beyond the near term and take the time to master plan for the future. The last thing you want to do is to wait another 20 years and allow the space to become non-functional again. Should an addition or significant remodel be part of your longer term planning, you have a great opportunity to begin to carefully and thoughtfully change your facility to what you want and need it to be. Adopting a master plan today and following that plan is key to keeping the facility in optimum operating condition for as long as possible.

CREATING THE LEAN LAB STARTS TODAY

For labs, every extra process or inefficient use of the space can lead to inefficiencies that drag down profitability. While re-design projects are not simple, following the tips outlined above can help you make the most of the space you have by driving out waste.



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