



STRANG

ARCHITECTURE ENGINEERING INTERIOR DESIGN // PERFORMANCE SPACE®

DESIGN & TECHNOLOGY

MOVING UP: UNDERSTANDING & COMPARING FACILITY COSTS FOR NEW LABORATORIES

A growing life science company must channel resources toward operations rather than capital expenses.

When planning a laboratory, keep in mind that cheaper construction often results in higher operational costs and less flexibility.

Potential areas for cost savings and efficiency include space planning, equipment, casework and HVAC/plumbing.

Plans for a new or renovated facility represent a major investment for any growing life science company. Often, their goal is a facility that will help them get to the next level of strategic growth. Since these organizations must channel resources toward operations rather than capital expenditures, they often need a facility alternative that represents the least expensive initial cost.

It's important to note that cheaper construction often results in higher operational costs and less flexibility.

As long as you have all of the information up front, you will be well-equipped to make the design decisions that will deliver the best facility alternative that achieves your operational and budget goals.

When you begin the facility planning process for a laboratory, develop a detailed budget that achieves your operational requirements, while making the most efficient use of your dollar. Benchmark facility goals against other similar spaces, and identify costs from recently completed similar projects. An architectural/engineering firm can provide cost ranges based upon your facility needs, and may obtain input from a contractor to identify accurate costs.

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Tetrionics created efficiency by centralizing fume hoods for shared use in their new laboratory space.



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By incorporating chemically resistant surface casework rather than epoxy, Novagen reduced laboratory costs.

The following cost-saving tips will help you control expenses and achieve your facility goals for quality, flexibility and expandability.

Efficient space planning Consider reducing the quantity of space rather than sacrificing quality. An efficient layout also can improve operations and efficiency. For instance, centralize fume hoods for shared use and efficient HVAC design. Compared to a private space, an open lab provides more flexibility to respond to change, and requires less intensive mechanical systems.

Equipment - In order to control capital expenses, you may want to consider leasing equipment, such as water purification systems. There also are opportunities to purchase reconditioned fume hoods, centrifuges, autoclaves and furniture.

Casework Casework often represents a significant cost within a building project. A key cost-saving tip is to incorporate only as much storage as you really need. You can reduce costs by incorporating chemically-resistant surface casework rather than solid epoxy.

HVAC and plumbing

Keep in mind that a life science facility has special requirements for redundant systems that have an impact on costs, and that a building's HVAC system represents a significant portion of construction cost.

Any initial cost saving achieved with the mechanical system will result in reduced flexibility and redundancy, as well as limited expansion capability.

A simplified control system with thermostats and constant volume rooftop units can reduce initial control costs. In lieu of a widely distributed plumbing system, it may be possible to use point-of-use acid neutralization, which saves on piping, but may increase maintenance costs.

A facility expansion and/or improvement can put additional pressure on a company's staff and resources. Careful planning and budgeting will help minimize unexpected costs and delays once a project is started. Long-range planning of laboratory and support needs begins with a thorough understanding of comparative building options and their long-term value. This information ultimately will result in smoother transitions as a company expands.

FOR MORE INFORMATION REGARDING LABORATORY PLANNING, CONTACT STRANG AT (608) 276-9200 OR BY E-MAIL AT INFORMATION@STRANG-INC.COM.