



# Six Questions To Ask Before You Commit to a Laboratory Facility

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# Ask the right questions early to create a laboratory in which your researchers can thrive

For life sciences companies, finding laboratory and production facilities that best meet your needs can be challenging. Whether you're considering a facility designed for life sciences, or a newly converted office or industrial building, potential issues aren't always clear. It's easy to overlook key issues that mean the difference between a streamlined move and a winding, time-consuming path to occupancy and operations.

Understanding what to look for in facility selection will help you avoid costly delays in the complex project of creating operational laboratory space. To help you make the best decisions, the following are six questions to ask before you make a long-term commitment to a facility.

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## DOES THE BUILDING HAVE THE RIGHT PHYSICAL CHARACTERISTICS FOR YOUR LABORATORY?

Depending on the type of research to be performed in your laboratory, you may not find a facility that is already "perfect" for your use. Fundamental components include the floorplate size, number and size of loading docks, floor-to-ceiling heights, floor load capacity to support heavy research equipment, and infrastructure. Some degree of build-out is inevitable—but some facilities will be easier to modify than others.

You'll need a comprehensive picture of your needs versus the characteristics of a facility. Laboratories —especially vivariums—need more loading docks than the typical office. Depending on the building's square footage and your requirements, more docks may be needed. However, an urban property with a relatively small floor plate probably could not accommodate more docks and may not work for your laboratory.

Floor-to-ceiling heights of 15 feet or more are ideal. High ceilings allow for ducts, plumbing lines and wiring to be placed above a dropped ceiling, and reduce the risk of contamination or dust that could damage lab results.

However, close evaluation of a building's structure with a life sciences project manager may reveal opportunities to accommodate laboratory infrastructure within the current ceiling height. A knowledgeable project manager will be able to propose creative approaches to solve infrastructure challenges, such as installing piping along the roof or even on a standard office ceiling if not obstructed by beams.

## Six questions to ask before you commit to a laboratory facility:



Does the building have the right physical characteristics for your laboratory?



Does the facility have dedicated space for hazardous waste?



What are your unique build-out requirements?



Does the facility have the infrastructure capacity to support your laboratory?



Where will MEP equipment be placed?



Can the building accommodate flexible laboratory design and future growth?

Larger floorplates offer the most flexibility for lab design, but you'll need to know whether a space's column-to-column spans will accommodate your laboratory bays with casework and equipment. The prospective layout should also allow for adequate space between benches to avoid crowding and an unsafe work environment.

Many laboratory bays are based on an 11-foot module, which means that column spacing of 22, 33 or 44 feet is ideal. However, a creative life sciences project manager will likely be able to envision a flexible floor plan with less-than-ideal column spacing.

## Understanding what to look for in facility selection will help you avoid costly delays

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### DOES THE FACILITY HAVE DEDICATED SPACE FOR HAZARDOUS WASTE?

Before committing to a space, make sure you know your hazardous waste requirements and how your prospective facility will accommodate them. Ideally, your prospective facility will already contain a designated zone or zones in compliance with regulatory codes.

If not, hazardous waste management must be built into your space planning. Strategy is especially important if you're considering a multi-story building. A sixth-floor space may provide stimulating outdoor views, but you may incur higher costs to incorporate infrastructure for hazardous waste storage on higher floors—think dedicated air ducts, life safety equipment and sprinklers.

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### WHAT ARE YOUR UNIQUE BUILD-OUT REQUIREMENTS?

Even a purpose-built life sciences facility may require modifications for your laboratory. Before reviewing facilities, create a high-level inventory of any specialized equipment your laboratory will use. Will any of your equipment require, for example, reinforced floors, vibration control, dedicated exhausts or additional life safety protections? You'll need to allow adequate time to implement any essential capital investments.

For instance, if you plan to operate a vivarium in a multi-story building, you may need an elevator dedicated specifically for animal research transport. If you plan to place sensitive equipment next to an electrical infrastructure space, you'll need to invest in electromagnetic interference (EMI) shielding—which can be costly. For chemistry research, your fume hoods may need a dedicated exhaust duct.





#### 4 DOES THE FACILITY HAVE THE INFRASTRUCTURE CAPACITY TO SUPPORT YOUR LABORATORY?

Ideally, any space you consider will already offer the sophisticated, high-capacity mechanical, engineering and plumbing (MEP) systems that life sciences operations require. For example, a typical office building provides five to eight watts of electrical power per square foot, while a laboratory needs 12 to 15 watts—or more for on-site manufacturing. Many laboratories also need HVAC systems that support a high volume of air exchanges or negative airflow controls to prevent clean room contamination.

A life sciences project manager can help you ask the right questions before you sign a lease, and uncover information to inform your lease negotiations. A first step is to specify your MEP requirements based on the types of equipment needed for your laboratory. To avoid overbuilding, don't overlook the ratio of laboratory to office space—you don't need to provide high-capacity utilities for the relatively low demands of office space.

While some landlords provide a standby backup generator that any tenant can use, not all do. Or, you may prefer to control the backup power yourself. If you need to add backup power, you'll need to determine upfront whether the property can accommodate installation of a standby generator indoors or outside, and what is permitted by the local building code.

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**5 WHERE WILL (MEP) EQUIPMENT BE PLACED?**

Depending on the type of science involved, your laboratory may need dedicated exhaust shafts, negative air pressure chambers, specialized temperature and humidity controls, polished/filtered water, or lab gas services. If you need to retrofit some of these elements, where will they fit in the plan?

Often, MEP infrastructure is placed in the ceiling, which is why high floor-to-ceiling heights are highly desirable. A chemistry or biology laboratory may need four or five feet of vertical ceiling space to house exhaust pipes and other MEP equipment.

However, a less-than-ideal height may not be a deal-breaker. A life sciences project management team can propose creative work-arounds for limited ceiling heights, such as installing duct work along the roof or even on a standard ceiling if not obstructed by beams.

**6 CAN THE BUILDING ACCOMMODATE FLEXIBLE LABORATORY DESIGN AND FUTURE GROWTH?**

A common pitfall for young life sciences organizations is the failure to plan for growth and change. How will your requirements change in the future? As your organization continues to mature, you may need to adapt your space for development and production, rather than research. You will probably need more square footage for additional equipment and personnel. Ideally, your new space will be aligned with your future growth projections.

For a growing life sciences research organization, low-rise buildings with generous floorplates tend to be the most adaptable for current use and future growth. A larger floorplate can accommodate today's open, flexible labs with movable benches, ceiling-mounted utility outlets and other "plug-and-play" features that allow for streamlined reconfiguration as the work evolves.

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# Accelerate the journey from laboratory to marketplace

With countless new life-saving treatments on the horizon, it's an exciting time to be a life sciences organization. Facilities are essential for the work of innovation and development—and the right facilities decisions can help accelerate the journey from laboratory to marketplace.

By asking the right questions early, you can uncover important details about your laboratory requirements and prospective facilities. With the right project management team on hand, you'll be positioned to make the best decisions—and create the laboratory in which your talented researchers can thrive.

The right facilities decisions can help accelerate the journey from laboratory to marketplace.



# Considering the next move for your laboratory?

Ask us for an expert assessment to determine whether a space is right for your needs at [contact@redgate-re.com](mailto:contact@redgate-re.com).



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