REDUCING RISK IN LABORATORY CONSTRUCTION

What to Evaluate Before Selecting a Laboratory Furnishings Partner

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EXECUTIVE SUMMARY

Laboratory construction projects are among the most complex facility types to design and construct. Their success relies on effective coordination across multiple organizations and project teams throughout the project lifecycle.[1]

While significant attention is often given to laboratory design, supplier capabilities can have a substantial impact on project execution and long-term facility performance.

A supplier's capabilities often become most apparent once a project is underway. Challenges related to manufacturing, scheduling, design changes, and ongoing service requirements can reveal strengths or weaknesses that may not have been evident during procurement.

This paper outlines several areas project stakeholders should evaluate when selecting a laboratory furnishings provider and explains how those factors can influence project outcomes from initial planning through long-term operation.

THE COST OF LOOKING ONLY AT PRICE

Laboratory furnishing systems are long-term assets that are expected to support decades of scientific work. Despite this reality, purchasing decisions are often driven primarily by initial cost.

Focusing too heavily on cost alone can leave important considerations unexplored, including:

- Financial Stability
- Manufacturing Capability
- Delivery Performance
- Warehousing & Staging Resources
- Standards Involvement
- Long-Term Service Support
- Project Execution Expertise

A lower purchase price may appear beneficial during procurement, but it does not always lead to the best overall project outcome. Schedule disruptions, quality concerns, project coordination issues, operational impacts, or limited long-term support can create costs that outweigh any upfront savings.[2]

Because laboratory environments evolve over time, procurement decisions should account for a supplier's ability to support future facility needs as well as immediate project requirements.

THE IMPORTANCE OF FINANCIAL STABILITY

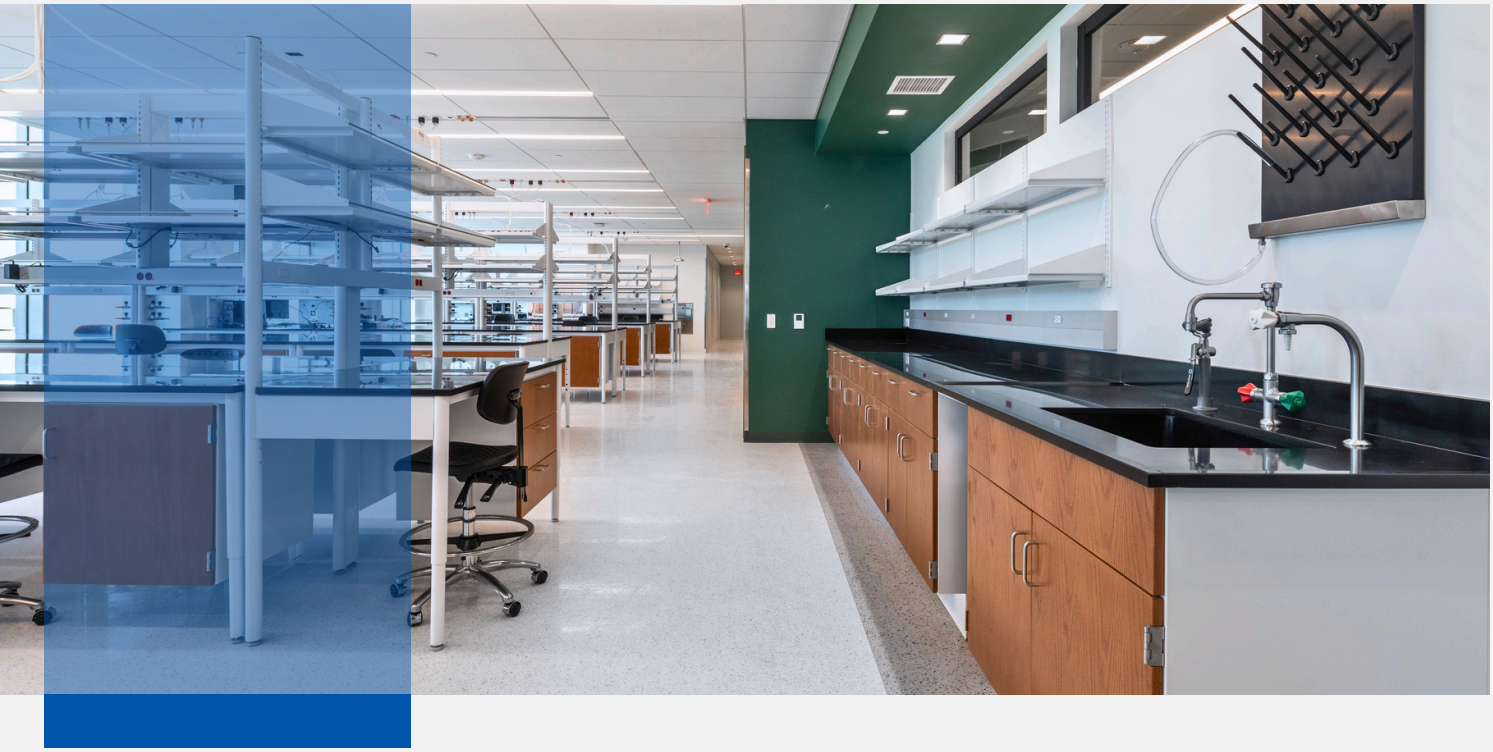
Many laboratory projects extend across multiple phases or several years. Future renovations, facility expansions, warranty support, and replacement components often depend on a manufacturer's ability to continue supporting the facility long after occupancy.

Laboratories rarely remain static. Research priorities change. Programs expand and facilities adapt to new technologies. Throughout those transitions, owners rely on manufacturers to provide continuity and dependable support.

Important considerations include:

- Maintaining Production Capability
- Supporting Original Specifications
- Honoring Warranties
- Supplying Replacement Components
- Supporting Future Renovations & Expansions

Organizations with demonstrated financial stability and long-term durability often provide greater confidence that support will remain available throughout the life of the facility.



MANUFACTURING CONTROL REDUCES PROJECT RISK

Laboratory furniture manufacturers vary considerably in how products are engineered and produced. Understanding a manufacturer's level of control over production can provide valuable insight into quality consistency and scheduling reliability.

Organizations that keep engineering and manufacturing closely aligned often have greater visibility into production processes and more flexibility when project requirements change. This can become especially important when accommodating custom applications, resolving field conditions, or responding to design revisions during construction. Close integration between design and manufacturing functions has been shown to reduce production challenges and support more efficient execution when requirements evolve.[5]

Areas worth evaluating include:

- Extent of In-House Manufacturing
- Reliance on Outsourced Production
- Integration Between Engineering & Manufacturing
- Ability to Accommodate Custom Requirements
- Quality Assurance Processes

When project conditions change, manufacturers with direct oversight of production are often better positioned to respond efficiently while maintaining quality and schedule expectations.

SUPPLY CHAINS HAVE BECOME A PROJECT RISK

Recent disruptions across global manufacturing and construction markets have highlighted how supply chain challenges can affect project schedules and budgets. Material shortages, transportation delays, supplier constraints, and geopolitical factors have increased focus on supply chain resilience across many industries.[3]

For laboratory projects, delays involving a single critical component can affect:

- Installation Activities
- Commissioning Timelines
- Equipment Startup
- Occupancy Schedules
- Overall Project Costs

Manufacturers that actively monitor supply risks, qualify multiple sources for critical components, and maintain contingency plans are generally better equipped to maintain schedule reliability.

As a result, supply chain practices have become an increasingly important factor in supplier evaluation.

PROJECT SCALE AND DELIVERY CAPABILITY

Laboratory furnishing providers are not all structured to support the same types of projects.

Some organizations primarily serve local or smaller-scale projects, while others maintain the personnel, manufacturing capacity, and logistical resources necessary for large, phased, or multi-site laboratory programs.

Understanding a supplier's delivery capabilities early in the process can help stakeholders avoid challenges later during execution.

Several factors warrant consideration:

- Experience with Large-Scale Installations
- Availability of Project Management Resources
- Staging & Warehousing Capabilities
- Support for Phased Deliveries
- Experience with Occupied Renovations & Multi-Phase Projects

Alignment between supplier capabilities and project complexity can significantly influence execution, scheduling, and overall project performance.

STANDARDS PARTICIPATION MATTERS

Industry standards establish important benchmarks for laboratory safety, durability, performance testing, and long-term reliability.[4]

Compliance with recognized standards is an important consideration when evaluating products. Manufacturers that participate directly in standards organizations often maintain closer connections to evolving industry requirements, emerging technologies, testing methodologies, best practices, and changing expectations within laboratory environments.

Organizations commonly involved in laboratory industry standards include:

- Scientific Equipment and Furniture Association (SEFA)
- American National Standards Institute (ANSI)
- ASHRAE
- Forest Stewardship Council (FSC)
- Architectural Woodwork Institute (AWI)

For many project teams, that level of engagement demonstrates an investment in the advancement of the laboratory industry rather than simply compliance with existing requirements.

EVALUATE EXPERIENCE ON MORE THAN YEARS IN BUSINESS

Laboratory environments present unique challenges, including chemical exposure, utility integration, workflow requirements, safety considerations, and long-term product durability. Organizations with extensive laboratory experience often have a deeper understanding of these complexities and can help identify potential issues before they affect the project.

Experience should be measured by more than the age of a company. Factors such as engineering expertise, manufacturing knowledge, quality systems, technical resources, and project support capabilities can provide a more meaningful indication of a supplier's ability to contribute to project success.

Long-established organizations often bring knowledge gained through thousands of projects and multiple generations of product development.

PROJECT EXECUTION CAPABILITY

Successful laboratory projects depend on much more than the products delivered to the job site. Engineering coordination, communication, risk management, stakeholder alignment, logistics planning, installation support, and project closeout activities all influence project outcomes.[2]

When evaluating a furnishings partner, project teams should understand:

- Available Engineering Support
- Submittal & Drawing Review Processes
- Project Management Resources
- Change Management Procedures
- Post-Installation Support Capabilities

Strong execution processes help projects stay on schedule, maintain coordination among stakeholders, minimize disruptions, and improve project performance throughout construction.

AN EVALUATION FRAMEWORK FOR PROJECT TEAMS

Category	Considerations
Financial Stability	• Can the organization demonstrate long-term financial health? • Is financial information publicly available?
Manufacturing	• Are products manufactured internally? • How much operational control exists over production processes?
Supply Chain	• Are critical suppliers qualified and monitored? • What measures are in place to mitigate supply disruption risks?
Standards, Testing, & Compliance	• Are products tested to recognized industry standards? • Is third-party verification available when applicable?
Experience	• Does the organization have a demonstrated history in laboratory environments? • Are technical resources available throughout project execution?
Project Delivery	• Can the supplier support large-scale, phased, or complex projects? • What support is available after occupancy?

CONCLUSION

Selecting a laboratory furnishings partner has implications that extend far beyond procurement.

Price, aesthetics, and product features remain important considerations, but they represent only part of the evaluation process. Financial stability, manufacturing oversight, supply chain resilience, industry involvement, laboratory experience, and project execution capabilities can all influence how successfully a project is delivered and supported over time.

Evaluating these factors early helps stakeholders make more informed decisions, avoid preventable project challenges, reduce overall risk, and improve the likelihood of long-term facility success.

The laboratory furnishings partner selected today may ultimately influence project execution, facility adaptability, future renovations, and operational performance for many years after construction is complete. That makes supplier selection an important strategic decision that deserves the same level of attention as other major project investments.

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ABOUT THE AUTHOR

Mason Cain is a Product Manager at Kewaunee Scientific. He brings over four years of product management experience in engineered systems and currently leads strategy and lifecycle management initiatives for lab casework and fume hoods. He partners cross-functionally with engineering and dealer teams to deliver compliant (AWI/FSC/SEFA), high-performance lab solutions that meet project requirements and drive successful outcomes.

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