BUILDING THE FUTURE OF LABS

Why Quality Benches and SEFA 10 Standards Matter

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INTRODUCTION

The lab is more than a workspace, it's the engine behind discovery, innovation, and problem-solving. From academic research to industrial testing, every breakthrough begins at the bench.

Despite the critical role these environments play in advancing science, in too many labs, the infrastructure doesn't match the ambition of the work being done. I've seen scientists improvising with unstable surfaces, outdated designs, or furniture that simply doesn't hold up under real-world use. As a product manager in the lab furniture industry, I believe it's time we elevate the conversation, because lab benches are not just furniture. They are foundational tools that influence everything from safety to productivity.

This white paper is a call to the lab community to prioritize two essential things: **High-quality laboratory benches** and **SEFA 10 compliance**. These elements aren't just "nice to haves;" they're necessary for building smart, safe, and scalable lab environments.

THE CRITICAL ROLE OF LAB BENCHES

Few elements in the lab environment are as consistently utilized, or as essential, as the lab bench. They are used every day, often for long hours, by scientists and researchers performing complex and delicate tasks. These benches aren't just surfaces, they're platforms for precision. When they fail, so do the workflows, instruments, and even data reliability.

A QUALITY BENCH SUPPORTS:

- **Long-Term Durability:** Surfaces that resist corrosion, stains, and physical damage.
- **Workplace Safety:** Solid construction that prevents tipping, warping, or mechanical failure.
- **Operational Flexibility:** Ability to adapt to new experiments, teams, or equipment needs.
- **Compliance with Industry Standards:** Especially critical in regulated environments.

When labs try to save money by cutting corners on benches, it often results in higher maintenance costs, safety concerns, and layout constraints that stifle progress.

COMMON LAB ENVIRONMENT PROBLEMS

As I've toured labs across industries from biotech startups to large pharmaceutical plants, I've seen recurring pain points that all stem from underperforming furniture.

1. INCONSISTENT PERFORMANCE

Non-standard or low-quality benches often cannot maintain level surfaces or structural rigidity. This introduces variability and potential hazards, especially in environments with sensitive instruments.

2. COMPLICATED RECONFIGURATIONS

Many labs evolve faster than their furniture. When benches can't adapt, teams are forced to spend valuable time working around the limitations instead of solely focusing on the science.

3. LACK OF ERGONOMIC DESIGN

Improper bench heights, insufficient knee space, or poor component layout can lead to physical strain and reduced productivity. This isn't just a comfort issue, it's a workforce efficiency issue.

4. INEFFICIENT MAINTENANCE

Low-quality benches require more frequent repairs or replacements. Components like drawer slides, casters, or laminate finishes often fail early, pulling facility teams into avoidable maintenance work.

SEFA 10: THE INDUSTRY'S GOLD STANDARD FOR MODULAR BENCH SYSTEMS

The Scientific Equipment and Furniture Association (SEFA) developed SEFA 10 to provide a clear and consistent framework for what modern lab furniture should deliver. Specifically focused on adaptable modular systems, SEFA 10 is now widely recognized as a hallmark of quality and reliability in lab design.

CORE PRINCIPLES OF SEFA 10:

- **Modularity:** Systems designed for flexibility, so labs can adapt without needing full redesigns.
- **Interchangeability:** Components like uprights, shelves, and work surfaces that integrate across product lines.
- **Performance Testing:** Ensures that components can handle realistic loads, use, and environmental conditions.
- **Chemical Resistance:** Surface materials that endure exposure to reagents and cleaners.
- **Ease of Integration:** Works well with casework, fume hoods, and other lab systems.

SEFA 10 doesn't just define technical standards, it supports better science by enabling better, laboratory-grade environments.

REAL-WORLD IMPACT OF SEFA COMPLIANCE

One of the clearest cases I've seen of the SEFA difference came from a university science program upgrading their outdated teaching labs. Initially, their benches were piecemeal, using mismatched components that were never designed to work together. Shelves didn't align. Worktops bowed under moderate weight. Over time, these issues created safety concerns and frustrated faculty who couldn't optimize their lesson plans.

When they transitioned to SEFA 10-compliant modular benches, the improvement was immediate. The staff had more control over how they configured the space. Maintenance teams no longer fielded daily complaints. Most importantly, students gained a safe and consistent environment for hands-on learning.

WHY STANDARDIZATION IS A COMPETITIVE ADVANTAGE

In the lab furniture world, customization can sometimes feel like a selling point. But too much customization leads to complexity, inefficiency, and longer lead times. This is especially painful when you're on a deadline for facility upgrades or responding to a grant award.

That's where standardized, SEFA 10-compliant systems shine. By aligning with a clear framework:

- Dealers can spec products more efficiently.
- Facility managers get faster delivery and installation.
- End users enjoy a consistent, professional experience.

Standardization doesn't eliminate flexibility; it supports smart flexibility. Labs still get the options they need, without the added engineering overhead.

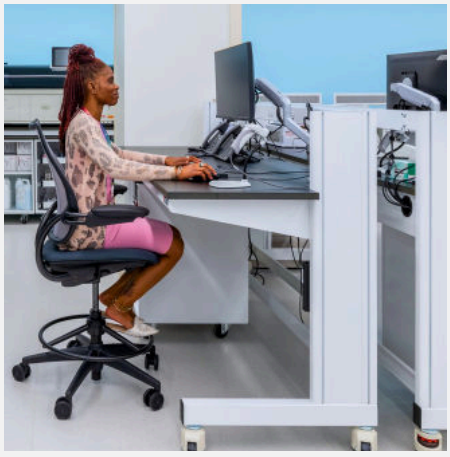
KEWAUNEE'S COMMITMENT TO QUALITY AND SEFA STANDARDS

At Kewaunee Scientific, our approach to lab furniture is rooted in collaboration with architects, lab planners, dealers, and end users. We build modular systems that go through rigorous SEFA testing and are designed to work in the real world, not just in a brochure.

As a product manager, I work closely with our engineers, sales team, and dealer network to ensure that every bench we produce is:

- Tested for performance under real-use scenarios.
- Built with standardized modular components that simplify design.
- Flexible and scalable for labs that grow or evolve.
- Compliant with ADA guidelines where applicable.

This isn't just about meeting checkboxes. It's about delivering products we can stand behind, because our customers rely on them every day.



ACCESSIBILITY AND INCLUSION IN LAB DESIGN

One area that often gets overlooked in lab planning is accessibility. Ensuring ADA compliance isn't just a regulatory issue. It's a statement about who belongs in science: Everyone.

That means designing lab benches with:

- Easy access to power and data
- Thoughtful component layout
- Adjustable heights
- Proper knee clearance

Proactively incorporating accessibility into product design promotes equitable access, and creates environments where students and researchers with diverse physical needs can thrive.

SUSTAINABILITY AND LIFECYCLE BENEFITS

Sustainability in labs is about more than energy-efficient equipment. It's also about how we design for longevity. Modular lab benches built to SEFA 10 standards have a significantly longer lifecycle than ad-hoc or low-quality alternatives. That means:

- Fewer replacements
- Lower waste generation
- Easier recycling and part reuse
- Better ROI for your lab build-out

We've seen projects where benches installed 15 years ago are still going strong, because the original investment was in quality and modularity, not quick fixes.

FINAL THOUGHTS

Labs are evolving. Science is advancing faster than ever. And yet, many facilities are still built on infrastructure that was never meant to support today's workloads. That's why we need to rethink lab furniture, not as background equipment, but as a critical enabler of success. Investing in quality benches and following SEFA 10 guidelines isn't just a best practice. It's a smart, strategic move for anyone designing or upgrading lab space.

As someone who works closely with the teams building and using these environments, I believe we owe it to them to provide tools that support their work. Benches that last. Systems that adapt. Designs that empower.

Let's build labs that are as future-ready as the science they support.

ABOUT THE AUTHOR

Lance Gray is a Product Manager at Kewaunee Scientific, where he specializes in laboratory furniture systems that support innovation, compliance, and long-term performance.

With a background in building products and a focus on fenestration and modular lab benches, Lance brings a practical, user-centric perspective to lab design.

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