



**Making the LIMS
Business Case:
Getting Approval
for a New LIMS**





There's always a final straw. A file goes missing. A vital order's turnaround time sets a record for tardiness. An urgent client report sits waiting for approval after a supervisor goes on vacation. Whatever that threshold event, it becomes obvious that the way your lab has always worked doesn't work anymore. You know it's time to get a laboratory information management system ([LIMS](#)), but that's a huge decision you aren't authorized to make. That call belongs to your boss or her boss or an executive located half a continent away. So, how do you convince people far removed from what happens in your lab to approve a new LIMS?

It takes planning, [research](#), and an understanding of what motivates the people empowered to make decisions. This guide will suggest ways to build a data-backed business case that makes it easy to say "yes" to a new LIMS.

Understand your laboratory's organizational context

How you make the case for a LIMS will depend on the nature of your lab's organization. What does your lab's information management process look like? Is the lab a small specialist firm or a department in a global manufacturer?

Understanding this organizational context will help you tailor your proposal and deliver the right message to the right people.

Informatics maturity lifecycle

Labs approach the acquisition of a LIMS from different stages in their ability to manage laboratory information. Some use a system of spreadsheets and paperwork that they've pieced together over time. Others rely on laboratory software of varying capabilities.

Where your lab falls in this informatics maturity lifecycle will influence how you go about justifying the move to a new LIMS.

Starting up with a blank slate

For all the challenges a startup faces, the chance to design a lab from scratch is a fantastic opportunity. You can do things right and lay a solid foundation for your lab's future operations.

Information management should be as prominent in this process as spectrographs, labware, and ventilation. A LIMS shapes a startup lab's operations, making it more adaptable and responsive to new opportunities. Implemented correctly, a LIMS can set a startup lab on the path to accreditations that will drive future growth.

Of course, a startup's limited budget requires balancing priorities. High acquisition costs would mean unacceptable sacrifices in other areas of the lab. How do you convince investors that a LIMS investment is better than tried-and-true spreadsheets?

LIMS solutions that use a cloud-based service model are more straightforward to justify than traditional “packaged” software purchases. These LIMS-as-a-service vendors reduce your initial investment in IT infrastructure. Rather than incurring a high upfront capital expense, you pay subscription fees over time as an operational expense. Cloud vendors also absorb the ongoing cost of server and software maintenance.

Although more challenging to quantify, a LIMS that can evolve with your startup lab strengthens your business case. At first, the LIMS can provide the essential features the lab needs to get started. Over time, you can configure new processes and workflows in the LIMS or ask the vendor to extend its capabilities.

Spreadsheets and sneakernets

Quite often, the daily pressures of running a successful laboratory make long-term planning a luxury. That new client won’t wait for a drawn-out infrastructure upgrade. Everyone must get things done to deliver results right now. Over time, this *ad hoc* approach leaves the lab running on an information management system comprising a patchwork of spreadsheets, standalone apps, thumb drives, and paper forms.



Clearly, consolidating and streamlining everything in a LIMS would be better. But implementing a LIMS will take time, money, and attention away from the lab’s regular operations. How do you get decision-makers on board?

The financial arguments of lower up-front costs, operational expenses rather than capital expenses, and lower IT spending we discussed for startups apply. However, established labs enjoy an advantage their newly-founded competitors don’t have: history.



If your lab has a track record, draw upon it to justify a LIMS [implementation](#).

Start with the low-hanging fruit. Your existing performance metrics are the most accessible. For instance, instruments that generate activity logs make utilization rates simple calculations.

Other metrics are not so straightforward. Turnaround times, for example, are more than the differences between when samples arrive and when customers receive their reports. They are the cumulative effects of everything that happens in between.

A LIMS would make measuring these effects effortless. Without one, you need to do some detective work. You must compile file creation dates, timestamps, and other metadata scattered across multiple systems. Interviewing your lab's employees will reveal undocumented sources of inefficiency, such as the time analysts spend chasing managers for final approvals.

Building the case for replacing a patchwork system with a LIMS may require a phased approach. Pull together that low-hanging fruit and estimate the time or cost savings a LIMS would generate. Use that evidence to get approval for more in-depth investigations.

At this point, LIMS vendors could be helpful. They've seen a lot, so they can point out issues labs like yours often experience. Be sure to consider [consulting](#) services. Besides bringing outside perspectives, they do a lot of the legwork so you can keep your staff focused on their daily responsibilities.

Poorly aging industry-specific lab software

Software written to meet the needs of laboratories in a specific industry can be tempting. Everything about the application, from terminology to workflows, aligns with the standard ways that particular industry works. As long as neither the lab nor the industry changes, these off-the-shelf apps can be useful tools for managing laboratory data.

However, industry-specific software can constrain your lab's ability to evolve with changing markets.

Since your software may work fine for how you've always done business, you will need a different way to justify a replacement LIMS.

Start by identifying the features or capabilities [your laboratory](#) software needs to support customers in a different industry. Perhaps it's new or modified workflows. Alternatively, the new industry may require [compliance](#) with different regulations.



Next, find out what it will take to support these new requirements. Which ones can your current software handle? Will you need the vendor to write custom code to make it happen, and at what cost? How many spreadsheet-based processes or extra software purchases will you need to bridge the gaps?

Finally, develop two plans and budgets. The first will use your industry-specific software to support your lab's growth. The second will use approaches from the previous sections to propose a new LIMS that offers a more affordable path with greater potential for productivity improvements. One way or the other, the correct choice for your lab will be clear.

Modernizing laboratory informatics

LIMS capabilities have changed considerably since the first applications entered laboratories over forty years ago. What began as reporting tools and customized relational databases has become sophisticated software that provides anywhere, anytime access to every laboratory process.

This early simplicity led many labs to create their own LIMS using in-house software developers. A bespoke approach ensured the LIMS had precisely the combination of features the lab needed for its specialized work. Over time, however, the disadvantages of rolling your own LIMS become more apparent.

In-house development requires a commitment to decades of in-house maintenance and support, which presents considerable challenges for labs within larger organizations. IT best practices have evolved over the past few decades. Supporting on-premises servers running in-house apps may no longer be the IT department's top priority. In addition, the programming languages popular a generation ago may not be in common use today. As a result, supporting an in-house LIMS becomes more difficult and expensive over time.

Making the case for a third-party LIMS solution may be easier than you think. You'll have ready allies in the IT department who can estimate cost savings from reducing their support burden.

Building on IT's technical input, follow the previous sections' advice to show how your aging LIMS constrains your lab's operations and how a replacement will improve efficiency and productivity.

Aligning with the decision-making culture

Another variable you must address when making the case for a new LIMS is how your organization makes decisions and who makes the final call. Small organizations will rely less on structure and more on relationships. At large organizations, the distance between frontline employees and decision-makers means approvals processes will be more formal and by the numbers.



Making the case in small organizations

People at the top of a lab's organization chart are not usually the first to notice the lab has outgrown its information management system. Frontline staff see it first-hand. Frustrations with the current system will spread, but an independent lab's decision-makers will need convincing.

Depending on your lab's context, you may need approvals from one or more professional executives, the lab's founder, and the lab's investors. Each will have their own priorities.

Laboratory executives will need evidence that the new LIMS will improve performance metrics throughout the organization, not merely make life easier for a few teams.

Founding scientists, while sympathetic to frustrations in the lab, will want to know how a new LIMS will support their vision for their lab's future. At the same time, this new project can't undermine your founders' vision by competing for limited resources.

Investors will want to see the financial justification: how large of a return will the investment generate, how soon, and is that return better than what other funding priorities promise?

You'll make the most robust case by showing support from teams beyond your part of the lab. Odds are, others are just as frustrated. Talk to your colleagues in accounting, customer service, and other departments to learn how improving your lab's processes affects their performance.

Making it through layers of approvals

Laboratories within enterprises must navigate a more structured approval process. Networking and consensus-building are still essential. However, internal laboratories are usually cost centers rather than revenue generators, which sets a higher bar for large projects.

A key tactic is to get support from your lab's internal customers. Show how upgrading your lab's internal systems can help them achieve their objectives. Consider a **quality control** lab that currently issues paper reports or emails PDFs. Its managers could show how interfacing with, and feeding test results directly to, **manufacturing** systems could improve product quality and assembly line uptimes.

Likewise, discuss the project with departments that serve your lab. The finance department will appreciate LIMS-enabled processes that cut inventory expenses or improve instrument utilization rates. As mentioned earlier, reducing your lab's burden on the company's resource-limited IT department can earn their support.



Even with other departments on board, performance improvements are necessary but not sufficient justifications for laboratory infrastructure upgrades. Decision-makers want to see proposals aligned with the company's strategic objectives.

Let's say senior leadership set a mid-term goal of expanding into European markets. A LIMS could help you increase throughput to perform the additional tests required by European import regulations without expanding headcount. Similarly, a LIMS makes it easier to achieve and sustain the [ISO/IEC 17025](#) accreditation that's a prerequisite for many European customers.

Ultimately, the strongest move you can make is to show how little capital expense your new LIMS requires. Enterprises set capital expense thresholds that determine who makes the final call. Team leaders may approve sub-\$50,000 projects while division heads can green light \$500,000 plans. Larger expenses require approvals higher in the organization. The more layers you must pass reduces the chances of getting an approval through.

Show how adopting a cloud-based LIMS solution does not require a significant capital expenditure. You will bring the decision threshold closer to home where executives more familiar with your lab's merits will make the final call.

Focus on results

While important, aligning your message to the nature of your lab's organization and decision-making culture does not replace the message itself. A well-crafted but weak business case will not get you the necessary approval. Decision-makers want to know how the trouble and expense will make a difference to your lab and the organization as a whole.

Financial return on investment

You will make the best case for a new LIMS by delivering strong evidence that it will create a large, positive financial impact. Within large organizations, return on investment (ROI) comparisons are how decision-makers compare competing spending requests. Deliver a strong ROI, and your decision-makers have a reason to say "yes." Fortunately, a LIMS touches so many aspects of laboratory operations that ROI opportunities are easy to find.

Lower inventory costs

A LIMS is much better at tracking your lab's consumables. For example, the data lets you forecast reagent consumption rates. You can reduce the just-in-case supplies that tie up your inventory budgets by timing your replenishment orders better.



More efficient labor costs

Data from your LIMS will improve efficiency and eliminate the time your staff spends on unproductive activities. For instance, the delays, follow-ups, and miscommunications inherent to paper-based review and approval processes disappear when everything flows electronically through the LIMS. The time freed by LIMS digitization can go to increasing laboratory capacity.

Speedier compliance audits

Without a LIMS, gathering the reports and evidence to support an audit becomes an all-hands-on-deck project that disrupts the lab's daily business. A LIMS streamlines evidence collection, so auditors get what they need without impacting your lab's testing activities.

Laboratory quality performance

You may be unable to assign a dollar value to certain performance metrics. Still, not having a clear ROI doesn't make them less influential.

Results transmissions

In the case of labs replacing paper-and-spreadsheet operations with a LIMS, integrations with enterprise systems create real benefits that may not fit nicely into ROI calculations.

The volume and type of test results a quality lab sends to the production team may remain the same. But automatically transmitting the results to manufacturing systems rather than distributing Excel files is faster and less error prone.

Turnaround time variability

Turnaround time variability is harder to measure and investigate with laboratory data scattered across multiple servers, personal computers, and file cabinets.

A LIMS consolidates these data and makes them more accessible for analysis. You can uncover sources of delay in your lab's processes and measure the impact of process changes.

Although more predictable turnaround times may not have clear financial ROIs, they do impact your lab by letting you bid on new business with greater confidence.

Customer experience

Make sure the customer is part of your pitch for a new LIMS. Customer perceptions will impact your lab even if that impact has no clear dollar value. Decision-makers understand that the lab's future ultimately depends on its customers.



Being where the customers are

For example, public-facing labs can leverage a LIMS to enhance their websites. Integrating the LIMS with customer portals lets people place orders, view results, and make payments at their convenience. Customers don't have to call during office hours. They don't have to wait on hold.

Improving customers' experiences may not affect the lab's financials directly, but it reinforces the lab's commitment to serving the public.

Migrating old data to deliver new results

Labs often sit on untapped reservoirs of archival data. Migrating old data into a new LIMS creates opportunities to improve the lab's services.

For example, a used oil laboratory could use archival data to create more useful reports. Rather than simply stating the latest results, the report can place those findings within historical contexts that help customers make better equipment maintenance decisions.

A simple change in report format may not generate revenue, but increasing the lab's value to customers will affect retention in the long term.

Supporting enterprise risk management

Whether or not your lab operates in a regulated industry, compliance and risk management are growing concerns for business leaders. Your proposal should explain how your new LIMS will support the organization's compliance efforts.

Privacy compliance

Any organization that handles the public's personal information may be subject to data privacy regulations. If the lab touches that information in any way, its information management systems must comply with those regulations.

Consider how a LIMS can reduce a clinical lab's exposure to the Health Insurance Portability and Accountability Act's (HIPAA's) privacy regulations. Integrations with a local hospital's patient record systems can reduce the lab's collection of patient information. Access control rules will limit who may see patient data. Strong encryption will protect any patient information stored in the LIMS. These and other data security features of a LIMS help bring the lab into HIPAA compliance and make the organization audit ready.

Make the case for your LIMS

So, you've pulled the evidence together, built support among other stakeholders, and tailored your pitch for your lab's unique organizational context. Now what? It's time to start the steady march to "yes." The exact path you take will depend on you, your relationships within the organization, and your organization's culture.

You may need to draft a detailed proposal. Some organizations run off presentation slides. At others, a two-page executive brief works best.

How you make the case for a new LIMS is up to you, but doing the work to craft a solid proposal will pay dividends. Showing you've considered the organization's priorities and are making a data-backed request raises your proposal's credibility and makes decisions in your favor more likely.

Call on the LIMS experts for help

LabLynx employs a team of laboratory professionals who have faced the same challenges you see in your lab. They also have wide-ranging experiences helping laboratories of all kinds in every industry. Why not draw on our expertise as you start planning for a new LIMS? We can share our perspectives on how labs like yours have navigated the approvals process. On a more formal basis, our consultants can examine how your lab works and identify ways to justify a LIMS.

Contact us to learn more about the ROI, productivity, and other benefits a LabLynx LIMS solution can deliver.