



Selecting LIMS Successfully

Several key factors beyond functionality and features must be considered when evaluating a LIMS purchase.

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For labs interested in upgrading or replacing their Laboratory Information Management System (LIMS) software, key requirements typically focus on system features and functionality. For example, can the system automatically calculate sample turnaround times? What about automatically creating PDF reports and e-mailing them? And can the system schedule all of the labs' samples?

Considering the vendor, however, is as important as considering the technology. Not all vendors have the same focus/credentials, such as alliances with database vendors, ISO Certifications, or years experience in your market. Some LIMS companies have been bought and sold many times, leaving clients that invested in one solution without long-term service, upgrades or support.

By including multiple variables in the decision making process, customers can make sure they are making an informed, long-term decision. Several key factors to be considered include: technology, platform, product demonstrations, implementation time, support quality, and the consultant dilemma.

Introduction

Objectively observing your lab's operations is necessary in order to gain a solid understanding of the lab's market and automation position, as well as where you desire the lab to be in 3, 5 and 10 years. Having a "needs assessment" performed on your lab can be helpful, providing you with an objective understanding of your lab's current state of automation. Today, the lab may generate \$10 million in revenue, but the 3-year goal may be \$50 million.

Software solutions that are deployed in global pharmaceutical firms may be too large and costly for the average lab. Conversely, the low-end solution of laboratory automation software developed by one or two individuals may lack the software quality, service, support and staying power required for the planned growth.

The perfect package is one that can be purchased today from a stable firm in the LIMS industry (ISO Certified), with the key components needed, that can be extended as the lab grows. A copy of the vendors ISO certificate will verify exactly what the certification is in.

The platform

No LIMS selection should be based solely on the technology platform (i.e. SQL Server, Oracle, .NET, hosted solution) because doing so detracts from the real value a LIMS solution can provide. For example, a Web-based solution may be a critical element for a new LIMS purchase; however, if you are convinced that only one particular platform will provide the solution, then the many other possible options have already been eliminated before being considered.

At a Glance

- Look at the system functionality (features/functions) as a whole and consider if any compensates for any platform differences.
- Make sure the vendor addresses new technology trends and updates their product on a regular basis.
- A key element in purchasing any software product is the quality of the technical support.



Figure 1. Overview of the entire LIMS selection process.

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A wiser approach is to not eliminate any software vendor based on just one criterion. Instead, look at the system functionality (features/functions) as a whole and consider if any of the functionality compensates for any platform differences.

Over the years, many firms have bought a solution based solely on platform and discovered that only the IT team's needs were met. Once a lab realizes they are not able to utilize the proposed solution and a new system must be selected, no one is happy. To avoid this costly mistake, all factors of a proposed solution must be examined carefully.

Evolving technology

Technology is constantly evolving—just look at the various versions of Windows that are running in many labs. Many times they are still using Windows 98 and 2000, especially those used as instrument controllers.

Purchasing a new LIMS is a long-term partnership with your vendor. Thus you need to make sure the vendor addresses new technology trends and updates their product on a regular basis. The vendor should not only support current and past software versions but also invest in R&D for new product offerings. If specific functions or features are not currently available, make sure they will be offered in a future release. You should also ask how user-added functionality is imported into newer releases to “future-proof” your LIMS investment, and find out how many vendors will contribute to your software package. LIMS can be built on the technology of several different vendors yet packaged as a single solution; this may cause incompatibilities.

Product demonstrations

A product demonstration is the next step after creating a LIMS requirements list that is grouped according to critical functionality, preferred functionality (will require in the future), and non-critical functionality, along with a short list of qualified vendors.

LIMS vendors can be qualified in many ways. Common criteria include ISO certification, years in business, presence in your market segment, company reputation, quality of support, and personnel chemistry—how well do you think you can work with the proposed vendors?

Inviting vendors to provide a product demonstration is an excellent way to see the LIMS in action. The demonstration also provides a unique opportunity to evaluate not only the LIMS/technology solution but also the vendor and the product demonstration team. During the product demonstration, evaluators can determine if questions that arose were answered clearly and completely.

Implementation

This may be one of the largest variables in deploying various commercial LIMS solutions. Year-long implementation for a lab is not unheard. Longer implementations are common with certain products due to the design, tool kits, and onerous deployment. Ask the vendor what the typical implementation time is based on a lab with roughly the same size and project scope. Often when implementations take years, there is a serious underlying problem with the product, meaning it may not fit the lab's industry, or the implementation team may lack resources, commitment or support.

In addition to checking referrals, visit the company Web site for customer articles; beware of companies that do not have any customers listed. A firm that cannot provide a list of multiple clients more than likely does not have many happy customers.

Support quality

A key element in purchasing any software product is the quality of the technical support. Many clients learn this after it is too late. Often the support is of such poor quality that users are trained not to call.

LIMS evaluators should definitely ask about customer support: Is live toll-free technical support available? How quickly are they typically able to resolve issues? Does the vendor host a user support forum? Does the support site have Frequently Asked Questions with answers, white papers, and a knowledge base? Are formal and informal training classes offered? Are Web-based and customized interactive training available? A vendor that emphasizes training is committed to ensuring their clients utilize their products to the fullest.

The consultant dilemma

There are many reputable LIMS consultants that are helpful in the LIMS selection process and can provide useful and informative evaluation information. Most have extensive lab experience (10+ years), which is essential to understanding the requirements of analytical laboratory operations.

Beware of consultants that have affiliations with a specific LIMS vendor; they are supposed to be paid for an unbiased opinion. If any consultant asks to be a part of the evaluation team, that may be a red flag. Before you hire a consultant, ask how many varied software packages they have recommended and interview previous clients to see if the majority purchased only one. Also, find out if the clients were satisfied.

Selecting a new LIMS is not just about the current requirements of the various end-users in the lab. It is about finding a solution and a partner that meets current requirements and that can support the lab's future data management needs.

The dynamic environment of a lab is influenced by market trends, regulatory pressures and customer needs. Take the time to make sure you select the most credible vendor to provide you with the solution that best "fits" your lab.

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