Laboratory Information Management Project – Where to go for advice?

When to hire which consultant?

Why would you?

The average laboratory selects and implements a new laboratory information management software ("LIMS" = LIMS, ELN, LES, SDMS etc.) solution every 10-15 years, sometimes even closer to 20 years. This means that most laboratory employees will experience a software selection and implementation process at most ones or twice during their entire career. Only few laboratory employees gained sufficient experience during their career to successfully manage such a complex project without "outside" help of an experienced consultant.

Many laboratories have tried to save costs on expert advice, unfortunately to find themselves stranded along the way with a project that went over budget, took way to long and did not provide a solution that fits the needs for a system that supports the laboratory workflow in an efficient and user-friendly manner.

Involving expert knowledge costs money initially, however saves a lot more money during all the different stages in doing everything right the first time and gaining the best possible project result. Does it matter which consultant you ask for advice? Yes, it matters, and it depends on the stage of the project that you are in. Hiring the right type of consultant at the right time is key.

Mixing this up can have severe consequences for the result and success of the project. Before we go into that let us first determine the different types of consultants.

- Vendor consultants – employed by a software vendor. These consultants have detailed knowledge of the "LIMS" solution provided by the vendor and are specialists in implementing their solution on the laboratory processes of the laboratory.
- Services/solution provider consultants. These consultants generally have a fair amount of detailed knowledge of one or two vendor software packages and laboratory processes. These consultants can either be hired by the vendor of directly by the laboratory.
- Freelance project-consultants – self-employed and offering their services to whoever needs it. The expertise provided ranges from project management to implementation project member. Many freelance consultants end up working for or collaborating with one or more vendors.
- Independent project-consultants – either self-employed or working for a vendor-independent consultancy company.
  These consultants need to have in depth knowledge of the laboratory information management ("LIMS") market, vendor software, requirements gathering, a structured selection process and not in the least of the laboratory processes that need to be supported by the "LIMS".
  Independent consultants can only provide services directly to the laboratory and can't work for or collaborate with software vendors. This also means that an independent consultancy company can't sell (their own) software.

A laboratory information management project until "go-live" can roughly be divided into the following stages:

- Preparation Stage
- Selection Stage
- Implementation Stage

Preparation Stage

The preparation stage is an important stage of a laboratory information management project. During this stage the laboratory needs to determine the requirements for the future "LIMS" based on the current- and/or future workflow and laboratory processes. This is also the time to re-evaluate your current processes, potential paperless workflow and current software solutions. The requirements for the "LIMS" should be based on the future (optimized) situation. To achieve the above within a reasonable timeframe and also document it in such a way that it has the right level of detail so that it can be used during the selection stage, requires special skills and experience that only few laboratories have within their own workforce.

The type of consultant that you might hire to assist you during this stage needs to have the skills and experience to be able to evaluate and optimize your current processes / workflow, gather the user requirements for the future "LIMS" and document all this with appropriate detail for vendors to be able to respond on it during the selection stage.

Next to that, it is essential that the consultant of choice does not have any personal or commercial interest in any potential vendor candidates. Already during the preparation stage, a bias towards one or more vendors can distract from defining your requirements solely based upon the technical needs of the laboratory.

To get control over the outcome, some vendors offer their own consultants to support you during the preparation and selection stage with training and requirements gathering (URS). This results in an unwanted bias towards their own software solution. Which vendor will advise a solution that they can't deliver themselves or represents one of their own weaknesses?

The consultant type of choice can also not have any particular interest in the execution of the implementation, which might favour one or more vendors that fall into the experience comfort zone of the consultant.

This often rules out a service/solution provider consultant.

Freelance project-consultants need to take on all kinds of project-roles, making it very difficult to stay vendor-independent. For this stage the ideal consultant type is an independent consultant with the appropriate skills. Many consultants like to call themselves independent, so make sure that the one you want to hire really is.

Selection Stage

During the selection stage the longlist of potential vendors is filtered during a few selection steps, each having a number of selection criteria and ultimately rendering the vendor(s) that has the best fit. The steps applied usually are URS/RFI vendor-response; presentation & case demonstration; reference check; commercial/contract negotiations. Even more than during the preparation stage, the selection stage must be unbiased towards any potential vendor and should be based on functions & features of the software and the experience & capabilities of the professional services department of the vendor. During the selection stage we like to minimize commercial and marketing influences. It may be the vendors job to try to influence its potential customers towards choosing their solution over the ones of their competitors. I respect that; however, some vendors seem to think that all means are allowed to achieve this, including discrediting other vendors and consultants.

The consultant of choice for the selection stage must make sure that these vendor influences do not disrupt the process and that the selection process towards the best requirements fit is safeguarded. To be able to do this the consultant must be vendor-independent and can't give in to any influences that might arise.

This requires a fair amount of seniority and experience.

For many of the same reasons as for the preparation stage, the consultant type of choice during the selection stage can't be a vendor consultant and likely also not a services/ solution provider consultant. The ideal consultant type for this stage is a vendor-independent consultant with a great deal of experience with managing and supporting a software selection process.

Implementation Stage

The implementation of the vendors "LIMS" solution should be an active cooperation between one or more vendor consultants and a project team from the laboratory. Both parties, vendor and laboratory, need to supply their own project lead / project manager. These two project managers are responsible to keep the project within budget, scope and the set timeframe. The division of work between vendor and laboratory needs to be defined and controlled. The vendor mostly supplies their own implementation consultants. In case of vendor-consultant shortage, one or more experienced solution provider consultants could be deployed by the vendor or even by the laboratory directly. In case of deployment of a solution provider it is essential to keep involving both a laboratory project team and responsible vendor consultants.

Laboratories often do not have a skilled IT project manager within their workforce.

A laboratory implementation project manager is often hired externally and could be a freelance project manager or could be supplied by a services/solution provider.

Consultants from a vendor-independent consultancy company should limit their involvement during the implementation to safeguard their vendor independence.

In case of a conflict situation between laboratory and vendor, an independent consultant could be hired to mediate the situation, even more so when this consultant was also involved during the preparation and/or selection stage and therefor is very knowledgeable on the scope of the implementation and the final agreement.

Louis Uunk
Senior Consultant & Owner
LUFC LabConsultants

LUFC LabConsultants is a vendor-independent LIMS & Laboratory project consultancy company operating from the Netherlands.