

## ESTABLISHING YOUR SYSTEM

### Overview

Typically, the LIMS implementation process begins with development of a set of specifications based on the laboratories requirements which are distributed to LIMS vendors.

As part of the evaluation process a review vendor responses will be carried out along with detailed discussions with vendors regarding their system's capabilities.

LIMS software is most often presented as a set of standard modules which perform specific types of functions that may be customised to meet individual user requirements along with a database which also may need to be custom developed to meet these requirements. In addition it is typical for a laboratory to require many types of reports including a range of Certificates of Analysis and laboratory Management Reports.

Due to the levels of system setup and configuration required to establish a LIMS most vendors will not be in a position to demonstrate the system in relation to your individual requirements but are more likely to speak in terms of "may be fully customised" to meet these requirements with reference to documentation on the process. In comparison, see: **Lims1 Pilot System Evaluation** on the following page.

***On commencing system implementation you are now faced with the realities of what the term "may be fully customised" means.***

### Scenario 1 - Classic LIMS Implementation

The implementation process is heavily dependent on vendor technical/IT staff to *customising* the system. ***The problems with this approach include...***

- The process is very expensive and time consuming for the laboratory.
- The laboratory is dependent on the vendor for future development to meet new requirements.
- On-going maintenance costs are high.

#### Examples

##### Custom User Interface Screens/Forms

The vendor is required to develop custom screens/forms to meet the laboratories sample log-in, results entry and sample management requirements as well as other processes.

##### Custom database development

The systems database is customised to meet the laboratories requirements. This is most often the case in establishing a unique range of laboratory setup conditions related to sample log-in, testing requirements and data processing.

##### Creation of Laboratory Reports

Reports are developed using generic Report Writer products which require an in-depth knowledge of the database structure to create. For future development or modification to these report you are dependent on the vendor or in-house staff with IT skills.

### Scenario 2 - Lims1 Implementation

***A major design criteria of Lims1 is that the system should be capable of being fully established and maintained by laboratory staff.***

While it may appear that this approach would involve major compromises in terms of system capabilities, Lims1 includes a comprehensive range of built-in System Setup Tables including a LIMS Report Generator which provide the laboratory with complete system control and flexibility.

*Lims1 is currently servicing a range of laboratory types which includes...*

- |                   |                     |                     |                 |
|-------------------|---------------------|---------------------|-----------------|
| • Air Quality     | • Environmental     | • Food & Beverages  | • Forensics     |
| • Oils/Lubricants | • General Chemistry | • Metals & Minerals | • Microbiology  |
| • Production QC   | • Sewerage          | • Trade Waste       | • Water & Soils |

All of these sites use standard Lims1 modules, a common database structure and have been customised using standard system Setup Tables. In addition, a number of these sites have used Lims1 development staff to provide additional specialised services unique to the laboratory.

## **Lims1 Custom Development { using built-in Lims1 development tools }**

Prior to system installation Lims1 consultants review system requirements with laboratory management and staff. This process includes examination of work undertaken by the laboratory, testing and reporting requirements. Examples of Certificates of Analysis and other reports are also generally collected.

From this point a **Lims1 Pilot System** is developed over a selected range of laboratory sample types or types of analysis. {for details on use of system **Setup Tables** in Lims1 development see Topic: Lims1 Setup Tables}. **On the day of installation the laboratory has a functional LIMS..**

## **Lims1 Implementation**

The **Pilot System** is reviewed with management and staff as part of initial system familiarisation. This includes a demonstration of samples log-in, entry of results, creation of reports and a range of general Lims1 functions.

From this point Lims1 consultants work with nominated laboratory staff in training sessions to develop in-house skills in system setup and use. As the Pilot System is based on actual laboratory operations it is easy for staff to relate to the principals put forward.

An integral part of training is also working with staff to further develop the system for new types of analysis to the point where the laboratory can effectively takeover system development.

## **Lims1 Time - Cost Effectiveness**

Pilot System development and full system implementation will obviously be dependent on the complexity of the laboratories operations however as a general rule a Pilot System can be provided within two weeks. For small, medium size laboratories it is common for the system to be fully operational within one to two months. Implementation costs are typically a fraction of industry standard costs for software of this type.

These major cost saving are also reflected in on-going system maintenance costs. Due to the commonality of all Lims1 systems and the ability the laboratory has to fully maintain and further develop the system Lims1 Maintenance Contract Costs are the lowest in the industry.

## **Lims1 Pilot System Evaluation**

A Lims1 Pilot System can also be developed as part of the laboratories LIMS Evaluation process.

A major advantage of this approach is that the system may be evaluated on a **“What you see is what you get basis”** and any outstanding issues can be reviewed. **This approach is unique to Lims1.**