A67 LIMS: Getting What You Want

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After attending this presentation, attendees will know a minimum of ten concepts necessary for success when planning an information management project. The focus of the presentation is on project management ideas.

This presentation will impact the forensic science community by providing clear project management guidance to laboratories planning to implement a LIMS in the future or working to improve an existing LIMS. It will be beneficial to all laboratories with LIMS design or implementation aspirations.

Transitioning a laboratory from a traditional paper-based record keeping system to an automated information management system is a process that presents multiple challenges. Many crime laboratories either have faced this challenge already or will in the near future. Some are facing it for a second or third time due to dissatisfaction with initial attempts. The most common experience of this type is with the implementation of a laboratory information management system (LIMS).

During the three year period 2009-2011, the DNA database unit at the United States Army Criminal Investigation Laboratory contracted for, customized, and implemented an information tracking system. In the process, a number of key project management elements that proved important to the success of the system were discovered. Some elements were discovered because they were done well. Others were found because they could have been done better. The lessons learned are presented so that other laboratories may take advantage of them and avoid common pitfalls.

During the contracting phase, the goal must be to articulate and document detailed requirements for the system. No assumptions whatsoever can be made. The requirements document (or statement of work) will become the foundation of the development process. Items that are vague or left open to interpretation may become points of contention in the future and the system may not perform as expected. It was found to be highly beneficial to obtain statements of work from other laboratories as well as to visit other laboratories and observe similar systems in action. A contract officer representative who is not a member of the group writing the requirements should become involved in this phase. Where possible, it is advisable to engage an information technology specialist in order to ensure the system will work as planned on the laboratory's information services platform.

In the second phase of the project, design, or customization, laboratory management make a number of strategic decisions that determine the level of success. The composition of the design team is crucial. The most productive team was determined to be one which included someone who had performed every task the system would be expected to perform. Perspectives of different users ensure that no critical functions were overlooked. It was found to be imperative to establish a documentation system for recording all interactions with the vendor early is the design/customization process. Phone conversations and emails on a multitude of minute details can quickly become difficult to manage. Reliable documentation can prevent misunderstandings and help to ensure the final product is satisfactory.

Once the system is designed/customized, the work is by no means over. Implementation is a very involved process. Many issues must be considered including entry of static data, conversion of legacy data, and interactions with other databases. Finally, the implementation phase must include a formal user training program with carefully constructed training exercises designed to cover every routine function.

LIMS, Information, Management

 ** Presenting Author*