

# Custom Laboratory Information Management System Drives Growth and Operational Excellence

**Customer:** An industry leader in the environmental and marine chemistry laboratory testing field.

**Size:** 10,000+ employees

**Region:** USA

**Industry:** Professional Services, Engineering

**Profile:** An industry leader in the environmental and marine chemistry laboratory testing space and provides analytical services to private industry, government agencies, and consultants.

**Services:** Custom application development

## Business Need

The client is one of the largest environmental testing laboratories in the Bay Area. They were experiencing rapid growth and lacked a laboratory information system (LIMS) that was comprehensive enough to accurately store, manage, and process their data for all the stages in their processing and testing phases. They needed a tool that could not only manage huge volumes of data, but one that could also track component verification, accurate sample tracking, and handling their existing complex workflows.

During their research, they realized that a commercial off the shelf solutions (COTS) did not meet their exact needs and they needed a custom web-based tool that was user-friendly with flexible architecture.

## Solution and Approach

The client partnered with Indusa to develop their web-based LIMS application. Not only did they gain an application with a flexible architecture and user interface, their analysts now had the capabilities to upload data directly from their lab instruments into LIMS.

Below are some of the key modules incorporated in the application:

**Client Management** – This module facilitates managing of client details, association of consultants

and third party labs, and maintaining client contact information.

**Test Management, Project Management, and Quality Control** – This module manages standard test methods (analysis) and their details including holding times, preparation methods, instruments, SOP documents, and managing analytics. Project management handles all project specific details like project name, client specific method configuration, reporting limits configuration, reporting requirements, and invoicing information. Quality control helps in managing various limit sets, which can be configured with the specific needs of the project or client.

**Quote Management** – Information related to clients' quotes can be generated, printed, and tracked easily.

**Sample Control** – This module facilitates tracking samples throughout their life cycle.

**User Management, e-Signature, and Traceability** – A robust security and rights management utility feature configured in the app helps in managing the app security and role based customization in a seamless way.

**Instrument Management** – Facilitates monitoring, calibrating, and maintaining instruments to ensure they meet the defined performance criteria and are fit to use for testing environmental samples.

**Analytical Process** – Once the samples are received and tracked by the sample control component, analysts have the capabilities to upload relevant documents and subject them to data review, data qualification, and validation.

**Material Management** – The application maintains inventory for laboratory supplies, tracking the inventory on hand, re-order levels, and minimum threshold levels.

**Report Generation** – Reports can be generated via email, network location or FTP as a PDF, Access database, CSV, delimited text, or Excel file.

## Business Results

Through the software-based modern laboratory information management system, workflow handling

became more resourceful for the client. They needed modules that were well defined with their data, in line with their processes, and capable of maintaining their standards of quality control. Dashboard updates and auto-refresh dashboard features, always keeps the lab users informed about the latest data updates.

By facilitating the requirement of a browser-based software application which can be accessed via the intranet (or Internet), users now work without the constraint of being tied to a desktop/workstation.

After the deployment of the customized LIMS, the client observed a 17% increase in the sample throughput with minimal effort. Also, they benefited from a 12% savings in time and lab resources.

## About Synoptek

Synoptek is a Global Systems Integrator and Managed IT Services Provider offering Comprehensive IT Management and Consultancy Services to organizations worldwide. Our focus is to provide maximum "business value" to our clients enabling them to grow their businesses, manage their risk/compliance, and increase their competitive position by delivering improved business results.