

Dr Lal PathLabs Leverages Decade-Long Partnership with STARLIMS to Support Future Expansion

Founded in 1949, Dr Lal PathLabs Ltd (LPL) is India's largest private clinical diagnostic company. Operating more than 230 laboratories across the globe, LPL offers 4,000+ diagnostic tests, healthcare checks, and services to 25 million customers every year. With a focus on high quality testing, fast turnaround times, and efficiency for patients and physicians, LPL coordinates more than 3,700 patient service centers and 9,000 pickup points throughout India. The company has also expanded into Southeast Asia, the Middle East, and Africa.

BUSINESS CHALLENGES

With an outdated legacy Laboratory Information System (LIS) and a rapidly expanding test menu and service portfolio, LPL was having challenges managing data and streamlining laboratory operations. The archaic LIS forced LPL to heavily rely on manual operations at every stage, and the sheer volume and fast-growing throughput of tests caused daily performance issues and slowdowns.

"The legacy LIS could have become a real roadblock on our growth path, and with expansion in our sights, we were also looking for a LIMS that would be compatible with the latest generation of instruments and other technological developments. The STARLIMS platform has been a key enabler and integral facet of Dr Lal PathLabs Ltd's growth journey since the day of its implementation."

Dr Om P Manchanda, Managing Director, Dr Lal PathLabs Ltd



The company was looking to overhaul its laboratory informatics system and deploy a new solution that would support coordinated management of laboratory operations across every LPL site. It also wanted a platform that would enable complete workflow automation, reporting, and data handling, with integration capabilities into analytical instrumentation, hardware, and software.

More importantly, LPL was looking for a laboratory informatics system that would not only satisfy its immediate demands, but also support its growth and expansion goals of the future. For that, it needed a flexible solution that could easily scale to meet business needs, as well as integrate with existing and emerging technologies in fields such as genomics, bioinformatics, and proteomics.

"STARLIMS solution has delivered great results and is consistently serving the lab operations ever since the day of inception. Looking to the future as well on a positive note because the technology paradigm is changing so rapidly in healthcare and it is expected that STARLIMS keeps aligned with the same."

Bharath U, Chief Executive Officer,
Dr Lal PathLabs Ltd

WHY DR LAL PATHLABS LTD CHOSE STARLIMS

The decision to implement STARLIMS solution was made after a comprehensive review of all available globally compliant systems on the worldwide market. After multiple rounds of discussion with suppliers, product reviews and assessments, and operational analyses, a shortlist of providers were given specific use cases to showcase their respective products.

Key imperatives for the company were that the new supplier and platform would:

- Partner with LPL on its growth path for the next decade or more
- Help LPL update and optimize existing processes and lab practices to support a massive increase in data handling
- Work with new and emerging technologies to help drive LPL's future strategy
- Offer a scalable architecture for LPL to achieve business expansion both horizontally and vertically, including menu, volume, and geographical expansion

"I am happy to say we finally selected STARLIMS to be our partner and they have worked closely with us throughout the process, staying on task, on target, and on budget. I also appreciate their quick and courteous responses. I highly recommend their service!"

Munender Soperna,
Chief Information Officer,
Dr Lal PathLabs Ltd

Ultimately, LPL chose the STARLIMS LIMS and Scientific Data Management System (SDMS) solutions to effectively manage, streamline, and optimize its laboratory testing and operations at scale. Speaking more about the company's decision to move away from its previous platform, LPL's Chief Information Officer, Munender Soperna, said, "I will admit - originally, the thought of replacing the LIS scared the hell out of me. As a business owner, I was so used to managing the lab operations over the earlier LIS, that the thought of putting all the lab operations on a product I was not familiar with - i.e. the STARLIMS solution - kept on giving me sleepless nights until the time we actually went live with it."

Diving deeper into why LPL chose STARLIMS, Soperna stressed that the company's future strategy and need for a solution that could integrate with advanced technologies played a big role in the decision. "There is an expectation from Dr Lal PathLabs Ltd that STARLIMS must be adaptive towards new technologies and embed technologies such as AI, ML, business insights, patient reporting, and advancement in integration methodologies, into the solution suite itself."

STARLIMS DEPLOYMENT

Following a conventional System Development Lifecycle (SDLC) methodology, dedicated teams from STARLIMS worked closely with LPL for close to a year and a half to configure the platform. The development process and close partnership between STARLIMS and LPL helped to ensure:

- Timely actions were taken from relevant stakeholders
- The implementation was in line within budget
- That scope deviations, delays, and other challenges were caught and quickly addressed
- Change management was handled efficiently among users and stakeholders
- Directives from the leadership team were received in a transparent manner



When talking about the STARLIMS system deployment, LPL's Lab IT Practice Subject Matter Expert, Amit Dewan, said that, "The whole implementation program was designed in such a way that key modules and events of the implementation were tagged as the responsibilities of the OEM, including requirement gathering, designing of the forms and workflows, user acceptance testing, and the go-live support. Additionally, there were regular interactions and status updates meetings planned at various hierarchy levels."

After a 16-month development and configuration process, in 2013 the STARLIMS system was switched on simultaneously across every existing LPL site. Since then, the platform has scaled seamlessly across the LPL enterprise to handle increased volume and test types, as well as hundreds of test processes. The platform has also been able to easily support and extend to the dozens of new laboratories, patient services, and satellite facilities that have been built or acquired by the company.

THE RESULTS

The STARLIMS solution's ability to integrate with many diverse instrument types – including interfacing with upwards of 1,000 instruments across hundreds of sites – has given clinicians better access to all of their patient's results from different tests on each of the samples. Automated sample management, test scheduling, test results, and report generation have delivered faster, clearer, and more insightful diagnoses for nearly 100,000 patients per day.

Efficient management of the typical sample lifecycle, from sample collection through to results reporting, requires coordinated informatics capabilities that can schedule, assign, automate, and record each step in the workflow. STARLIMS' algorithms have optimized LPL's processes efficiency and accurately at each stage, streamlining traditionally manual functions across the board.

The automation and integration capabilities of the STARLIMS solution means that LPL no longer has to rely on manual data handling and transfer, which has dramatically improved turnaround time, minimized the risk of data loss and errors, and streamlined operations across its entire infrastructure. Workflow automation and hands-off data management have also resulted in greater confidence in data integrity and security, with full workflow transparency and an end-to-end audit trail.

LPL now has a much lower risk of unexpected instrument stoppages and a comprehensive oversight of its laboratories' functionalities through STARLIMS' managed instrument maintenance and validation. Additionally, tracked authorization and access controls for each laboratory has helped the company to maintain leaner, more efficient laboratory operations.

The different departments in each LPL laboratory have a responsibility for their own specific menus and workflows. The STARLIMS solution supports these various laboratory departments by coordinating every test workflow, integrating with new and emerging technologies, and testing modalities as part of the laboratory infrastructure.

"We thank the STARLIMS team, especially the R&D wing and our APAC account management team for the wonderful job in helping us get the STARLIMS solution implemented with the entire list of user requirements, 3rd party integrations and the features embedded. Everyone was professional, excellent, committed, and hard working. Thanks to them, we were able to achieve our goal on time and we look forward to continuing working with them in the future."

Munender Soperna, Chief Information Officer, Dr Lal PathLabs Ltd

FUTURE PARTNERSHIP

A decade on from the initial implementation, STARLIMS and LPL continue to work together to unlock the full capabilities of STARLIMS solution. As LPL continues to grow, expand, and diversify, STARLIMS has been able to scale seamlessly to match the company's initiatives. Today, LPL has confidence that they can perform substantially all of the diagnostic healthcare tests and services currently prescribed by physicians in India.



Dr Lal PathLabs Challenges	STARLIMS Solution	Results
LPL had a limited capacity to handle and manage large volumes of patient tests and results.	The STARLIMS solution easily scales to support growth and expansion without slowing workflows.	LPL can now process multiple samples and diverse tests for up to 100,000 patients per day.
Volume of tests, diversity of test workflows, and requirements for manual processes were impacting turnaround time.	The STARLIMS solution helps to fully automate laboratory processes.	LPL has witnessed double-digit reduction in turnaround time per sample.
Manual steps in sample and data transcription, transfer, and reporting increased the risk of errors and security issues.	STARLIMS automation eliminates the need for manual steps and removes the potential for transcription errors, as well as speeds data acquisition and reporting.	LPL has greater confidence in data integrity and security.
The prior LIS could not interface with the entire suite of existing instrumentation and software.	The STARLIMS solution offers an instrument interface layer to facilitate faster integration with existing instrumentation and software platforms, as well as new technologies.	STARLIMS' integration with 1000+ instruments has enabled faster results, data entry, and transfer.
LPL's prior system lacked the capacity to generate interactive reports.	The STARLIMS reporting engine creates complete, content-rich reports with improved data representation.	The STARLIMS solution has been configured to generate reports for more than 4,000 tests, helping LPL address the needs of its expanding facilities and testing abilities.
The legacy LIS could not interface with laboratory automation, and wasn't capable of driving sample management tracks and robotic arms.	The STARLIMS solution integrates with robotic arms and sample management tracks to enhance sample handling capacity and accuracy.	LPL's sample handling capacity has increased threefold and with greater accuracy.
LPL's legacy system lacked intuitive integration capacity.	The STARLIMS platform is used to embed instrument images on reports, as well as facilitate seamless integration with 3rd party quality control programs.	LPL has seen faster and better representation of result data from multiple tests for each patient and the potential for improved diagnostic capabilities.
The legacy LIS could not adapt to new technology advances or evolving technologies.	The STARLIMS solution supports the integration of state-of-the-art digital pathology for histology and cytology, as well as bioinformatics pipelines (i.e. NIPT & exome, etc.).	Integration of data from new imaging modalities, omics, and informatics technologies through the STARLIMS solution aids physicians in their diagnoses, as well as enhances prescriptions and clinical care.

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