

Report Development and Dashboard Assessment for a LabVantage LIMS Implementation

The client is a global specialty biopharmaceutical company that operates as a Contract Development and Manufacturing Organization (CDMO) supporting a diverse range of clients at various stages of drug development and production. The company specializes in vaccines and antibody therapeutics for infectious diseases and has earned significant trust from both the U.S. and international agencies as a reliable supplier of these critical products.

The client remains committed to delivering high-quality services and products, and to support this commitment, they sought to refine and modernize their manufacturing processes and supporting systems. Further, to support their growing operations and regulatory needs, the client initiated the implementation of the LabVantage Laboratory Information Management System (LIMS) across its research and development (R&D), clinical, and quality control (QC) laboratories. In the first phase, the Environmental Monitoring (EM) module and Jasper Reporting were deployed in the manufacturing labs.

The client encountered challenges related to reporting accuracy, dashboard performance, and compliance with global regulatory standards. With increasing demands for data integrity and operational transparency, there was a clear need for more robust and efficient reporting tools. Clarkston was brought in to evaluate the existing Jasper Reporting performance, assess current reports, and provide recommendations for new reports and dashboards to better support laboratory workflows and regulatory compliance.

Life Sciences Case Study

PROJECT OVERVIEW

INDUSTRY:



Biopharmaceutical

PRODUCTS AND SERVICES:



Vaccines and Antibody
Therapeutics

PRIMARY OBJECTIVES:

- Assess all current reports and dashboards for accuracy, usability, and performance against the existing data model and business reporting requirements
- Identify and remediate performance issues by updating SQL queries for better performance and user-friendliness
- Develop new reports and dashboards that align with global standards for data visibility and reporting
- Replace manual generated Certificate of Analysis (CoA) reports with standardized electronically generated global templates
- Create comprehensive technical documentation (URS, FRS and validation testing) for all developed reports

SOLUTION:

- Conducted a comprehensive assessment of 27 reports and 6 dashboards within the LabVantage LIMS platform
- Fine-tuned SQL queries to enhance performance and processing times by adding database indexes, eliminating unnecessary SQL statements, and optimizing query structures
- Designed and developed new reports and dashboards based on findings, including enhanced EM data trending reports to improve process efficiency
- Replaced manual CoA reporting processes with a global template, improving standardization and reducing manual effort
- Customized out-of-the-box (OOB) reports to align with the user's specific needs and regulatory requirements
- Delivered comprehensive technical documentation for all updated and newly developed reports.

KEY BENEFITS:

- Increased operational efficiency by optimizing current reports and dashboards required for EM data trending reports
- Faster system performance achieved through SQL tuning, reduced query response, and overall improved system responsiveness
- Enhanced user experience by adding parameter functionality for greater flexibility and tailored data views
- Improved data integrity and harmonization established by electronically generated CoAs that replaced manually generated reports
- Boosted dashboard performance based on targeted optimizations with improved data visualization and usability
- Regulatory compliance achieved through leveraging customized reports aligned with FDA and global reporting standards
- Readiness for future phases with well-positioned reporting platform to advance to the next stage of the LIMS rollout with scalable and robust reporting capabilities



KPIs

- 7 reports and 4 dashboards reviewed, updated, and optimized
- 20 reports and 2 dashboards created to address identified gaps
- 100% replacement of manual CoA reports with standardized global templates, improving consistency and reducing manual effort

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