

# Creative Customization of a LabVantage LIMS for a Genomics Company

## CASE STUDY

### PROJECT AT A GLANCE

**Business Sector:**

- Life Sciences
- Clinical

**Informatics Systems**

- LabVantage 8.6 (LIMS)

**Service Offering**

- Implementation
- Customization
- Configuration

**Elements:**

- 2 Site
- 2 Labs
- 36 Months
- 2 CSols Team Members

A global clinical genomics company required some creative customization of their new LabVantage LIMS to better fit the workflows of their labs and to automate processes. The client trusted CSols with this work based on their extensive track record of successful LabVantage LIMS projects in the life sciences field.

### Objectives and Challenges

The goal of this project was to streamline processes to more closely match lab workflows, add additional product lines to the LIMS, and eventually to replace some of the more customized solutions that were originally implemented with more out-of-the-box (OOTB) solutions. Additionally, LabVantage LIMS was not used for sample test/result management or reporting; that was handled by in-house software that was custom coded to pull the data from the acquisition software database.

The challenge the client faced with this project was the frequency of release cycles—new features were to be rolled out to production every two months.

This meant constant pressure to have all features developed and tested in time for the validation process and not delay production deployment.

Fortunately, there were no overall time constraints; the project was open-ended with a goal of continual improvement of the client's LabVantage LIMS.

### CSols's Role in the Solution

The CSols consultant served as the principal developer for the project. The client's aim was solely to continue making incremental improvements to the LabVantage LIMS. CSols was there to add additional manpower to the development team. The CSols developer participated in some of the planning of new features and contributed expertise based on institutional LabVantage knowledge. The CSols developer brought LabVantage-specific knowledge to a team that had more of a software development background.

The principal contributions of the developer were to design and develop feature enhancements, while serving as production support.

## Benefits

With this project, the client gained significant abilities to create custom code with JavaScript libraries and LabVantage Actions, which would have no impact on future LabVantage upgrades.

The client now looks at feature designs with the goal of using LabVantage OOTB capabilities instead of complete custom solutions. The principal benefits of this work are as follows:

- Transitioned/decreased custom code to more OOTB solutions:
  - used LabVantage representational state transfer (REST) policy to allow communication between LabVantage and the result acquisition software
  - used LV Workflows to progress samples through review process
- Jaspersoft reports generate prefilled request forms on follow-up tests for doctors
- User-friendly webpages within the LabVantage browser interface with increased validation of input data
- Several new testing methods (the client's product lines) were brought into the LIMS with their associated workflows and sample processing pathways
- Ultimately, the client received a more stable and maintainable LIMS

