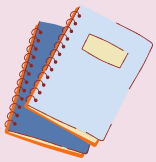
VP Informatics, Inc. Provides QA Solutions for a Leading Electronic Lab Notebook Company

Client Case Study

Abstract

VP Informatics, Inc. has played a core role in enhancing the performance and reliability of a cloud-based laboratory data platform. We have led the development of personalized quality assurance (QA) solutions for a suite of tools by engaging in close collaboration with laboratory scientists, ensuring functional robustness and regulatory compliance, and continuously refining test frameworks—transforming the platform into a stable, user-centered platform for integrated biology and chemistry data management.

Client Feature: Web-Based Electronic Lab Notebook Platform



Our client's Electronic Lab Notebook platform is a powerful module that is designed to simplify scientific data management by providing a centralized location for organizing and sharing research data.

Their fully integrated cloud platform combines both chemical and biological data in one system, making it the perfect tool for enhancing collaborative research among internal teams and with external partners.

Whether you are a researcher, scientist, or lab manager, it offers the tools to streamline your laboratory operations and increase productivity.

The Challenge at Hand

The company faced a recurring issue with the stability and reliability of its application in the production environment. With each new feature release, a significant number of user-reported bugs were emerging. These issues not only affected user experience but also led to frequent hotfixes and urgent rollbacks.

The root cause was a combination of inadequate testing coverage, lack of robust QA processes, and limited visibility into the impact of new code on existing functionalities. This cycle of frequent bugs hindered development velocity while reducing user trust and increasing operational overhead.

VPI's Multifaceted Solution

To ensure the functionality of various modules comprising the electronic lab notebook, we developed—and continue to execute—a multi-pronged quality assurance strategy.

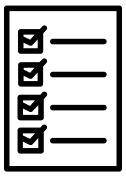
Requirements Clarification & Traceability

VP Informatics mapped functional requirements (ELN, Registration, Assay, Inventory, Search, and Workflow) and non-functional requirements (performance, security, availability). We then created a traceability matrix linking requirements with test cases and regression suites, making it easy to track what's been checked and to reuse tests when updating the system.

Test Planning and Coverage

VP Informatics developed a robust testing system for various facets of the platform, with specific protocols for each type of testing.

- **Functionality**: Creating, editing, and sharing experiments; inventory management; structure search; file attachments.
- **Compliance:** Audit log, e-signature workflows, role/permission enforcement, SAFE BioPharma flows.
- **Integration**: Mock instrument data feeds (NMR, MS), retriggering and parsing.
- **Security**: SSO, role-based access control, permission boundary validation.
- **Performance:** Browser performance under simultaneous users/data heavy operations.
- **Cross-browser/Platform:** Chrome, Firefox, Edge support across Mac/Windows in web UI.



User Acceptance Testing (UAT)

VP Informatics drafts test cases to cover typical workflows: drafting experiments, linking data, signing/co-signing, sharing with collaborators. Furthermore, we consistently recorded issues found (e.g., incorrect permission propagation, audit trail gaps) and tracked their resolution.

Regression & Release Validation

For each module update, we execute full regression testing.

In a Nutshell

VP Informatics improved testing coverage, leading to **more stable release cycles.**

Cross-browser stability increased, **reducing UI discrepancies.**

Bug leakage has dramatically decreased, **boosting user confidence** and compliance readiness.

UAT and real-lab readiness improved, with **fewer rejections and sign-off delays**.

VP Informatics, Inc. understands that QA for this company requires a hybrid strategy blending functional, compliance, integration, and performance testing—with a firm grip on domain-specific lab needs. Our personalized approach subsequently delivers a faster, more reliable platform, with improved compliance readiness and scientific accuracy optimized specifically for the company.

Inquire how VP Informatics can optimize your scientific data storage.

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