Case Study: Lab Information Management System for Clinical Trials
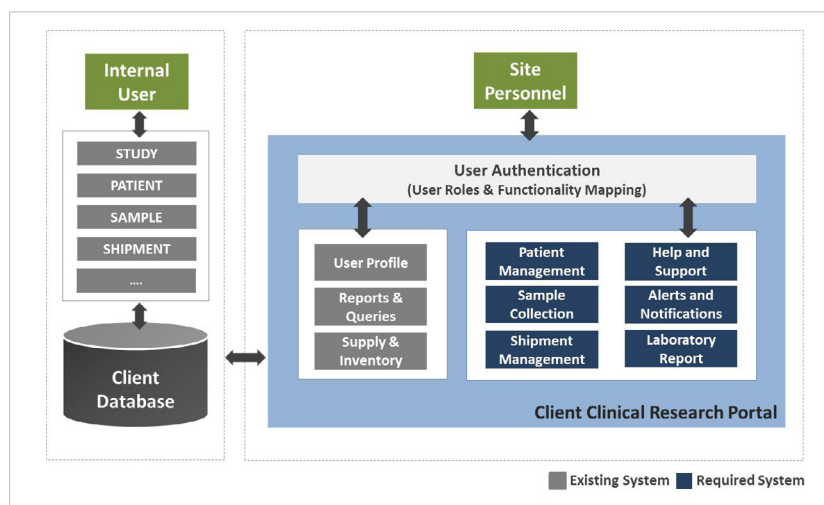
Client Requirements

Client is a leading contract research organization providing clinical research services to life sciences, pharmaceutical, and biotechnology organizations.

Client needed to extend the capabilities of its web based clinical research portal to manage patients, order supplies, track shipments, and generate reports. The additional features included enhancements to the lab and specimen management workflows during clinical trials including patient management, order management, specimen tracking, and results management. Given its expertise in healthcare interoperability, integration and healthcare workflows, CitiusTech was selected to develop the additional modules.

CitiusTech Solution

CitiusTech assembled a strong engineering and interop team to develop the enhancements using Java and Java based technologies - Spring, Spring MVC, JSP and JPA. The solution designed included -

- Optimized user interface and application workflow for study investigators
- User authentication protocols for data security
- Data synchronization and reconciliation processes to manage the collection of samples
- Real-time alerts for missing and unshipped samples
- XML based dynamic report generation and support for rich media and multiple formats
- Support for web, enterprise and mobile frameworks

Key Features Required

- Manage new and returning patients with relevant demographic details for the enrolled clinical studies
- Manage clinical solutions integration including lab and results reporting, ordering and supply of study kits and management of study documents
- Manage visits, sample collection, storage and shipment of samples based on study requirements
- Reconcile samples and shipments between the client's research portal and the central database
- Generate unshipped / missing sample alerts and other critical alerts and notifications

Value Delivered

By partnering with CitiusTech, the client was able to:
- Leverage CitiusTech's interoperability expertise to interface with the existing modules and enhance the platform functionality
- Improve operational efficiency and data accuracy for enhanced decision making
- Significantly reduce setup time for new patients
- Ensure real-time reporting, timely alerts and notifications to reduce discrepancies
- Reduce time for application development, deployment, testing and reduce time-to-market

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