

CASE STUDY

Digitizing the Diagnostic Lab Ecosystem - From Test Booking to Report Delivery



A healthcare startup aimed to streamline diagnostic testing and preventive care by eliminating the need for lab visits, with a focus on delivering efficient and patient-centric pathology services.

They were looking for a user-friendly pathology platform that would enable patients to book tests with multiple NABL-accredited labs and avoid the hassles of visiting diagnostic centres.

Solution

To address these challenges, SpringCT developed a comprehensive digital diagnostic platform that streamlined the entire diagnostic journey, from test discovery and booking to sample collection, laboratory coordination, report delivery, and record management. The solution enabled patients to book tests from trusted NABL-accredited laboratories through a single platform, schedule convenient home sample collections, and securely access their diagnostic reports and medical history anytime.

Product Features

- **Patient Portal:** A user-friendly web interface enabling patients to book diagnostic tests based on preferred labs, access reports, and maintain their diagnostic history.
- **Administrator Portal:** A centralised interface for managing patient data, laboratory networks, and test configurations across labs.
- **Call Centre Interface:** Enables call centre executives to manage orders—create, modify, reschedule, or reject requests—and assign technicians for home sample collection.
- **Centre Operations Interface:** Supports centre coordinators in processing orders, preparing samples, and managing dispatch to respective labs.
- **Lab/Hospital Interface:** Provides lab partners with tools to manage received samples, conduct tests, and upload reports for completed orders.
- **Technician Mobile Application:** A mobile solution for field technicians to manage home collections, track assigned inventory, and update order status in real time.
- **Logistics Mobile Application:** Supports delivery personnel in tracking and managing the transportation of samples to designated labs.
- **Operational Management Interfaces:** Additional web modules to oversee inventory, resource allocation (technicians, delivery staff), and collection centre operations.

Technology Used

- Angular, PHP Yii2, MySQL
- Android, Java
- AWS

Key Technical Achievements

- Designed and developed a comprehensive multi-platform digital diagnostics ecosystem comprising web portals for administrators, laboratory personnel, and patients, along with dedicated mobile applications for patients and field technicians.
- Implemented a centralized diagnostic test booking and order management platform enabling seamless coordination across patients, collection centres, technicians, and partner laboratories.
- Developed an intelligent technician assignment and home sample collection module with mobile-based workflow management, route visibility, and real-time status updates.
- Built an end-to-end sample lifecycle management system covering sample collection, segregation, batching, logistics, laboratory receipt, processing, and report generation.
- Enabled real-time workflow visibility through dashboards and notifications for administrators, laboratory teams, technicians, and patients, improving coordination across the diagnostic network.
- Implemented inventory management capabilities for field technicians to monitor collection kits and consumables, ensuring operational readiness.
- Automated critical workflows including order processing, technician allocation, laboratory coordination, report publishing, and patient notifications, significantly reducing manual intervention.
- Designed the solution with a scalable and secure architecture capable of supporting multiple diagnostic partners, high transaction volumes, and future expansion of healthcare services.