

Apex Laboratories – Mobile Phlebotomists Work Order Management

Objectives and Challenges

Elyxor was engaged to build a mobile application using hardened Android device with mobile bar code printers for Apex's field phlebotomists. The application replaced the existing paper-based workflow for home and clinical visits to improve productivity of field work force, accuracy of the test samples and labeling, and improve the efficiency inside the laboratory testing facilities.

Elyxor Approach

Elyxor delivered a simple to use application that connects wirelessly and in real-time to a custom backend utilizing hardened mobile devices and mobile printers. Orders are downloaded to the devices in the morning for the technicians to start their day. The application optimizes travel with turn-by-turn directions and custom workflow to process the orders eliminating cumbersome paperwork. The technicians can dynamically print labels for blood vials collected and upload completed orders for the day integrated with existing back office applications. The application is designed so the user can work without the need for a live data connection to the back end when in the field. The central office administrators can change priorities in the field, push new orders as needed, and monitor status in real-time. Routing rules and live map based on real-time GPS coordinates can route the orders to closest field technician.

Results

The system enabled Apex to increase the number of daily visits, improve the quality of work and reduce costs per work order. This was accomplished by giving management real-time visibility into the mobile workforce and mobile workforce better tools to accomplish their job. Management can track the status of all work orders in real-time and new orders can be inserted to a technician's work queue by supervisors who can select the nearest technician from a real-time graphical mapping module, and increase the number of jobs per day and technician can complete with the added efficiency. Automation of data collection and elimination of handwritten labels reduced errors and increase the efficiency of the laboratory and back-office functions.

Tech Stack

- Java
- Angular
- Android OS