Medical Manufacture – Ingredient Capture System

Objectives and Challenges

The ingredients used to produce a blood testing product are both costly and have a finite shelf life. The objective of the Ingredient Capture system is to employ machine readable coding plus automated verification procedures and equipment for incoming raw materials and track work in progress (WIP) to systemically reduce potential for common errors in the production of blood testing products.

Elyxor Approach

Elyxor partnered with BarCodeDirect to design and build the Ingredient Capture System on an Android platform using hardened device for hash environments. The technicians responsible for production of the final product using bar code scanning to tie the end final product with all the ingredients (by serial/lot number and expiration date) used in the manufacturing process. The application tracks the steps in the process to ensure the technician is following proper procedures. The application is designed to be multi-lingual, distributed to facilities in North America and China. A middleware was developed to simplify the integration into existing ERP systems and allow the Ingredient Capture System to operate independently to meet the required performance.

Results

The system warns the technician if an incorrect ingredient or expired ingredient was selected before being used. It monitors the order and process steps to alert on the completeness of the final product. The Ingredient Capture System saves time and money in the process by preventing waste and bad product from being produced. It allows the manufacture to efficiently track the production steps for each product that is produced for audit and regulatory purposes, fully integrated into the existing ERP manufacturing and reporting systems.

Tech Stack

- Java – Android OS
- Zebra Hardened Handheld with integrated bar code scanner
- .Net backend with MS-SQL/Server