BullsEye Computing

CSX RFID Asset Tracking Case Study

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Project Overview

CSX Transportation operates welded rail trains that move millions of dollars of high-value rail assets across the U.S. Using mobile devices with GPS and barcode/RFID scanning, CSX gained real-time visibility into rail unloading activities, even in remote areas without network coverage

Results

- Minimum of $50,000 in annual cost savings
- 75%-80% reduction in daily manual data entry
- Maintenance delays shortened by 30%

Business Problem

Lacking Asset Visibility

Each welded rail ribbon, worth thousands of dollars, was tracked using handwritten identifiers and paper rail maps. Managers had no confirmation of which ribbons were delivered, split, or relocated, resulting in missing inventory and inaccurate Oracle data. Time was often lost retracing deliveries and materials.

Maintenance Delays

Maintenance crews relied on outdated lists and phone calls to confirm rail availability at job sites. Without real-time status updates, projects were frequently delayed waiting for confirmation that rails had been unloaded or transported. The lack of timely data from the field created downstream impacts on repair timelines and equipment utilization

Solution Architecture

RFID-Enabled Tracking

BullsEye equipped each rail ribbon with durable barcode and RFID labels able to withstand outdoor exposure. Field users scan rails during unloading using GPS-enabled mobile devices that capture item and string numbers, timestamp, and exact location.

Oracle E-Business Suite Integration

BullsEye's EZ RF client communicates directly with CSX's Oracle E-Business Suite. Once connectivity is restored, all offline transactions automatically post to Oracle, maintaining accurate inventory transfers without manual entry.

Rugged Hardware and Labels

The mobile devices were protected with military-grade cases to withstand vibration, dust, and impact during train unloading. Ruggedized Zebra labels maintained legibility and adhesion under extreme heat and moisture. These field-ready devices ensured consistent data capture throughout the harsh environment.

Web-Based Architecture

The EZ RF client allows the same application to run on any smart device - phones or tablets - without installing dedicated apps. This web-based architecture simplifies enterprise rollout and future enhancements, such as extending to additional divisions or integrating RFID portals.

Our Team

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