



Yard Management System Improves Postal Mail And Package Delivery Company Efficiency And Service

Accelerates Parcel Velocity And Accuracy Across 21 Distribution Centers

CREATING A MORE RESPONSIVE POSTAL SERVICE

Given the enormous logistic challenges of transporting standard and priority mail over vast geographies, the client, a large postal mail and package delivery company was continuously looking for ways to streamline operations, improve service, and keep costs down.

Facing competition from private carriers and burdened with rising fuel costs, the postal mail and package delivery company took notice that their existing yard management system (YMS) was very slow, and frequently interrupted mail-processing operations. Their customers expect that when they pay for a priority delivery, the package will arrive on time, regardless of the path it takes to get to its final destination.

CHALLENGE

One of the top postal mail and package delivery company's initiatives is improving the velocity of mail movement to and from the distribution center yards, making sure that priority mail delivery performance meets customer expectations.

Across 21 distribution centers, management commissioned detailed studies to gather statistics in multiple categories including late trips, inbound and outbound mail velocity, switcher move effectiveness, and dock door utilization. The ultimate goal was to examine productivity metrics at facilities by studying average trips, why they were underperforming, and where opportunities for labor savings and reduction existed.

Managers at various DCs discovered that on many occasions truck trailers filled with mail did not enter the switch queue, or became lost in the staging yard. They determined that the average request-to-complete times, number of switcher moves, and late arrivals and departures exceeded acceptable levels. While the typical DC deployed from four to six switchers depending on waves of activity, any impediment to velocity resulted in higher fuel costs, delays in mail delivery, and employee overtime.

In addition, the postal mail and package delivery company recognized the need to have a YMS that supported efficient trailer check-in and check-out, an automated method for directing trailers within the yard, and the capability to interface seamlessly with their warehouse and transport management systems.

Customer

Postal Mail and Package Delivery Company

Industry

Mail and parcel delivery for consumers, businesses, and government

Challenge

- Replace legacy yard management system
- Increase inbound and outbound yard velocity
- Improve priority parcel delivery time and accuracy
- Reduce workload and overtime
- Reduce driver detention
- Measure performance and utilization of yard resources

Solution(s)

- Zebra® Yard Management System
- Zebra® WhereNet® Real-Time Locating System (RTLS)

Results

- Reduced late trips while improving mail delivery performance
- Accelerated inbound and outbound mail processing
- Optimized switcher productivity
- Reduced warehouse, switcher, and driver overtime
- Gained a future-proofed, seamless, business-rules driven yard management system

SOLUTION

The optimal DC solution called for a system that delivered improved check-in time and checkout time, boosted switcher productivity, and improved tracking accuracy. Such a solution would allow staff to easily schedule inbound and outbound trailers, process more mail parcels, and assign the most appropriate switchers to perform trailer moves. Achieving these goals required a yard management system that seamlessly integrated with other in-house systems.

Yard management systems that bridge transportation, logistics, and distribution operations allow organizations like this large postal mail and package delivery company to tighten delivery times and increase overall velocity, which reduces waste and costs. Systems that provide rich yard planning and exception management capabilities with configurable business rules can help optimize yard operations, and connect directly into transportation and warehouse systems.

After extensive evaluation of various solutions, the postal mail and package delivery company project team concluded that Zebra® YMS was best suited for enabling tight orchestration of their switchers, parcel trailers, and warehouse operations. Zebra YMS includes an application-programming interface API that provides connectivity with back-end warehouse management systems (WMS) and transportation management systems (TMS), enabling continuous flow of inbound and outbound mail. It also provides alert notifications to yard operators for exception conditions, which results in parcel processing continuity, more effective management of equipment, and lower congestion in yards.

RESULTS

In 2006, the postal mail and package delivery company deployed Zebra® YMS and Real-Time Locating System (RTLS)

technology for full asset locate at the largest mail distribution center in the world sited in New Jersey, and a medium size DC in Pittsburgh. Upon “go live” the postal mail and package delivery company realized immediate benefits. The combination of Zebra YMS planning and scheduling capabilities combined with flexible business rules for exception management allowed the postal mail and package delivery company to increase gate transaction speed. At the two DCs, the company demonstrated greater fluidity of switcher, trailer, and parcel movement throughout the yard along with lower congestion.

Equipped with a yard management system that helped ensure that the right trailer arrived at the right door at the right time, the postal mail and package delivery company also reduced detention expenses. An efficient yard enabled by proper inbound and outbound scheduling can reduce driver wait time, lower fuel costs, and lessen the wear and tear on vehicles. With Zebra YMS, the company improved their inbound and outbound scheduling, provided staff with a way to configure intelligent parking and door rules, and an intuitive interface for managing switcher tasks.

Built upon the success of the New Jersey and Pittsburgh DCs, the postal mail and package delivery company chose Zebra Professional Services to deploy Zebra YMS at 19 additional distribution centers across the contiguous U.S. — from Jacksonville, Florida — to Seattle, Washington. Zebra deployed the entire system at all remaining 19 sites within 18 months, enabling the postal mail and package delivery company to accelerate parcel velocity, improve scheduling accuracy, and reduce overtime expenses.

