



ASAP Automation Customer Success Story - Roche Diagnostics Operations

Overview



Roche Improves Pack Rates 30% While Reducing Operational Costs

“We have seen multiple very positive benefits since the changes. The changes have also positioned us for growth in our business.”
— Bryan Sheedy, Manager Warehouse Operations

Customer Profile

As a global leader in healthcare, Roche Diagnostics offers a broad portfolio of tools that help healthcare providers in the early detection, prevention, diagnosis and treatment of diseases like congestive heart failure, HIV, hepatitis and diabetes, as well as other medical conditions, such as fertility and blood coagulation.

- Fulfill more than 9,500 order lines per day
- Four warehouses totaling 210,000 sq.ft.
- Warehouse 1, has more than 3,400 feet of conveyor

Benefits

- Reduced overtime/weekends worked by 75%
- Increased carton pack rates 30%
- Ability to manage peak demand throughout the year

Solution

- Exacta Warehouse Management System
- Exacta Warehouse Control System

The Situation

In April 2008 the Indianapolis Roche Diagnostics Operations (RDO) began reviewing warehousing practices as compared to best practices in the warehousing industry. Roche's system was about 15 years old and needed to be updated to meet current and future business requirements. During the analysis, Roche realized there were opportunities to improve business processes and efficiencies by standardizing across all warehouses. The project objective aimed to holistically evaluate current and best business practices in warehousing and to bring the Indianapolis RDO warehouses up to standards appropriate for a global Roche strategic hub. “One of our challenges that we knew up front was that we didn't want to add bricks and mortar so we knew we had to implement a new system over the existing system”, says John Leonard, Director of Supply Chain Projects.

“The key thing was the amount of product touches that we had. We really felt we could implement a more efficient, cost-effective process that would eliminate touches and improve our quality.”
— John Leonard, Director of Supply Chain Projects

Some of the main goals and objectives were to :

- Improve the overall material flow through reduction in touches and optimization in material handling
- Improve quality, accuracy and efficiency through the use of cubing algorithms and weight check
- Reduce overtime and weekend work
- Reduce noise levels
- Improve handling of various shipping carton sizes and types of orders (hazardous materials, cold chain etc)

“You need to clearly understand the process changes. It's not just about software and conveyors but really how the process works.”
— John Leonard, Director of Supply Chain Projects

Exacta Warehouse Management System

The [Exacta Warehouse Management System](#) provides functionality to manage all operational aspects in distribution centers. Exacta WMS efficiently manages and balances inbound and outbound material flows while providing operational visibility to all warehouse activities.



The Solution

Roche receives finished goods from affiliates and other manufacturing sites. The finished goods are stocked into secondary storage locations and through a replenishment process the finished goods are moved to a forward pick zone. Forward pick zones are the pick modules both in the cooler area and the ambient environment.

The administration cube area is the hub of the warehouse floor operations. Employees in the area handle release of picks to the floor, manage the [warehouse control system](#), troubleshoot conveyor issues using the HMI and handle overall warehouse process control.

The picking process starts at the administration cube. Roche selects a batch of orders that have been imported into the Exacta WMS from SAP and releases the work to the picking areas.

There are two, two-level pick modules where Roche performs picking activities via RF mobile devices or through voice-directed picking. The operator takes a batch of container labels, selects the proper carton sizes indicated on the container label and applies the labels to the empty containers. The operator is directed in location sequence to pick the necessary items for the containers in the batch.

Exacta's Automated Order Routing module of the [Exacta warehouse control system](#) (WCS) interfaces with the PC controlled conveyor system to route orders through the picking zones and sortation.

“The new design gives us the ability to route cartons between different pick zones and the result is the ability for us to process our orders more efficiently, maximize the cube of our outbound shipping cartons and really reduce the number of touches that are required during the processing of an order.”
— Chris Upwards, Manager Process Engineering

Once all items for a carton are picked, the carton is routed to the pack mezzanine for pack out and quality checks. Roche has two dedicated lanes for quality checks and two dedicated lanes to handle hazardous products which require additional labeling and documentation. The remaining lanes handle all other cartons.

After cartons are packed out on the pack mezzanine, they are reintroduced to the conveyor system and are routed over an inline weigh scale. A weight check occurs on each carton to compare the actual weight to the expected weight and any out of tolerance cartons are routed to an exception lane to be checked. Cartons shipping via parcel carriers are automatically manifested in a hands free approach as they pass over the scale.

“Three shipping lanes were felt to be the optimal number that we needed for our operation. It gives us the flexibility to manage our business and through the ability within Exacta to configure shipping lanes based upon carrier we are able to dynamically route cartons to one of three lanes based on order volume conditions or carrier requirements.” Says Upwards. Roche typically uses one lane for parcel carriers and two lanes for LTL shipments.

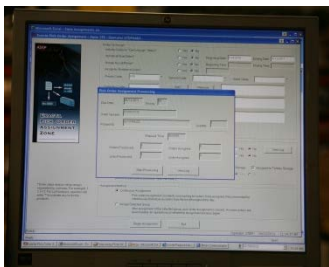
The pack mezzanine is really geared around packing and processing orders for parcel carriers but LTL orders require palletization. The lanes used for LTL shipments provide a process Roche calls pallet build which is a consolidation type process. Individual cartons for an LTL order are routed down the

About ASAP Automation

Software and Automation for Supply Chain Logistics

ASAP Automation provides supply chain software and automated material handling solutions. ASAP's systems help customers reduce operating expenses, accurately track and minimize inventory levels, and improve service to their customers.

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shipping lane and the operator uses the pallet build process to collect and place all cartons for that one order onto a pallet or pallets. Once all cartons for the order have been palletized, the order is transferred to a pack station located downstairs where the order is organized, a packing list is generated and the pallet is readied for shipment and tendered to the carrier.

“The shipping lanes are really an integral part of the system that enables us to keep our operation running at maximum capacity.”
— Chris Upwards, Manager Process Engineering

“A useful tool that was included in the system is event alerting. We have the ability to be notified by email or page if jams occur or motor faults or mechanical failures, those notifications are sent to our maintenance crew who then can respond in a timely manner and get the system back up and running with as minimal downtime as possible”, says Upwards.

The Benefits

Increased carton pack rates by 30%

With the added cubing functionality to the Exacta WMS to determine up front the contents for each carton, how many cartons to use for the order and which size cartons to use, the pack process speed has improved.

Reduced operating costs

Overtime and weekend work was reduced by 75% and an overall headcount reduction of 15% was achieved.

Access to increased carton level detail and statistics

The visibility provided by the Exacta warehouse management system and the [Exacta warehouse control system](#) tools increase the amount of information available to managers to oversee the operation.

Provided the ability to manage peak demand throughout the year

Positioned the operation for future growth

“One of the additional advantages we had with Bastian and ASAP was really an integrated solution provider. The fact that they were a team helped us work together as a team.”
— John Leonard, Director of Supply Chain Projects