

OMNI-CHANNEL FULFILLMENT – RETAIL AND ECOMMERCE

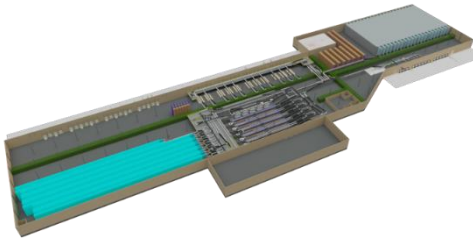
Faced with facility constraints, labor shortages, and explosive SKU growth, a major retailer partnered with Trew to automate a 430,000 sq ft omni-channel fulfillment center. With a \$60–\$80 million investment, the solution integrated SmartMoves-WX® WES, ASRS, and over 3.5 miles of conveyance to support both retail and e-commerce. The result? 5–8x throughput gains, 80% automation of manual tasks, and a scalable, future-ready operation—powered by Trew’s flexible engineering and mastery of complex fulfillment.

Project Overview

- Type: Fulfillment Center
- Facility Size: 430,000 sq ft.
- Cost of Solution: \$60–\$80 million
- Success Factor: ROI of solution
- (2) Aisle Shuttle ASRS
- Cross Belt Disposition Sorter
- Other: Trew Resident Maintenance Program
- Print and Apply Stations
- Inline Weigh Stations to assist with Rate Shopping
- Fluid Truck Loading via Telescopic Boom Conveyors
- Automated Case Sealing
- Other: Fully Staffed Trew Resident Maintenance Program

Contents:

- Large integrated system
- SmartMoves-WX® WES
- (4) Aisle Mini-Load ASRS



Challenges

Facility Constraints: The pre-built facility had multiple sides, low ceilings, limited power, and flooring issues, making it unsuitable for automation.

Labor Shortages and Costs: A spike in labor shortages caused difficulties finding qualified labor for a fair cost.

Unmanaged SKU Growth: No prior record of expected product volume made handling a fast-growing number of SKUs difficult.

Inventory and Returns Management: The customer needed to manage inbound goods from diverse suppliers, while managing returns to vendors and unsold products.

Inefficient Storage: No efficient storage solution for a variety of types of orders.

Solutions

Adaptation to Facility Constraints: Despite the facility constraints, the customer maintained manual operations and secured DC commitments while the new system was installed. Project managers ensured project success, including floor remediation, pouring a new slab, and running the facility on generators due to switch gear delays.

Advanced Technologies Integration: The integration of advanced technologies, such as WES, put-to-light, and cross-docking, allowed the operations to scale as well as reduce labor dependency and cost.

Customization for Fulfillment: The solution was customized to accommodate shared inventory and omnichannel fulfillment.

Results

Operational Transformation: Trew's solution transformed operations by optimizing storage, order processing, and shipping with WES, put-to-light, and cross-docking.

Throughput Improvement: The system automated over 80% of the previous manual process, increasing throughput by 5-8x.

Long-Term Benefits: The client achieved long-term scalability, enhanced operational efficiency, cost savings, and future growth.

Why Trew:

Flexible Engineering: Trew's ability to engineer around infrastructure limitations and deliver a flexible, high-throughput solution.

ROI Consideration: The project demonstrated a four to five-year ROI.

Complex Project Management: The installation required detailed planning ensuring operational continuity while integrating automation.

About TREW

TREW provides automated material handling solutions for integrators and end users, including Warehouse Execution Systems (WES), Warehouse Control Systems (WCS), PLC-based machine controls, motorized driven roller (MDR) conveyor and services such as concepting, engineering, technical support, parts, field service and training. Serving the North American retail, warehouse, distribution, manufacturing and ecommerce industries, TREW's experienced staff and broad network of integrator partners enable uncommonly smart solutions scalable to any material handling needs.

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