

emerdis



UnBoxSort Case Study



For more case studies, scan the QR code or visit emerdis.com/robots

UnBoxSort System for Order Consolidation

About the Customer

The customer is one of India's largest consumer supply chain companies, operating over 10 million sq. ft. of advanced distribution and fulfilment centres. With over 2,000 trucks servicing 15,000 pin codes, they provide express and less-than-truckload (LTL) services across the country.

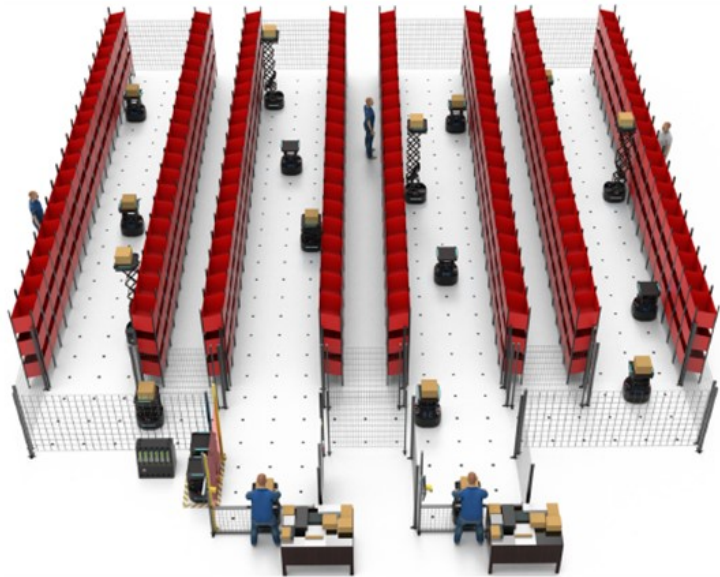
Location: Store fulfilment centre, Northern India.

The Challenge

The customer faced low productivity in picking and order consolidation, along with challenges in managing a large workforce. They used bulk picking based on customer orders, with three pre-sorters sorting parcels into five putwalls, which were then handled by 16 sorters across 450 locations. The customer wanted to improve store order fulfilment by consolidating apparel, shoe boxes, and fashion accessories into 450 totes at a rate of 1,050 packages per hour. Their goal was to maximise putwall destinations while minimising the required footprint.

The Solution

Industry	3PL
Process	Store Replenishment
Throughput	1050 pph
No. of Robots (SR450)	13
Destinations	450
Rack Types	3 level: tote racks
Area	250 sqm
Personnel (Feeding + Bag closing)	4 (2+2)



A comb-shaped layout with four segments was designed to accommodate 450 destinations. Parcels were dropped directly into carton boxes arranged on 150 three-level racks. Each box could hold between 20 and 60 packages, depending on the item type. A slide system guided parcels into the boxes, while sensors detected when the boxes were full and needed replacing. The installation was completed in less than a week without disrupting operations.

Benefits

- **Faster Payback/ROI:** The system improved sorting productivity and accuracy while optimising floor space and robot numbers. This staggered increase in capacity allowed a quick payback on system costs.
- **Pick-to-Pack SLA Improvement:** Processing time reduced by 40% due to fewer touchpoints and streamlined sorting, leading to better compliance with service level agreements (SLA) — a critical factor in fashion fulfilment.
- **Quick Installation and Scalability:** Installation was completed in just a couple of weeks with minimal operational disruption. The system can easily scale or shift to larger facilities when needed.
- **Improved Sort Accuracy:** UnBoxSort's direct-to-box sorting and intuitive apps enabled a 99.99% accuracy rate, increasing customer satisfaction and reducing the need for internal audits and supervision.