

JD.COM 3PL Warehouse

Unique Heavy Payload Case-Picking Solution

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CASE STUDY

JD.COM is China's largest online retailer and internet company by revenue. It covers 99% of the population providing a standard of sameand next-day delivery that is unmatched globally.

The company provides 580.8 million active customers with direct access to an unrivaled range of products and helps leading international brands tap into China's fast-growing eCommerce market.

OVERVIEW

The first project JD.COM and ForwardX collaborated on was a ForwardX Max solution. The solution was built for case picking workflows in both B2B retail store replenishment and B2C eCommerce fulfillment. The high-tensity nature of case picking led to high turnover that JD.COM needed to address.

The flagship project needed to cover a large volume of orders while staying flexible for peak and slow seasons. The competitive market for labor meant that JD.COM needed to increase productivity using its existing workforce and decrease turnover.

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PAIN POINTS

• High Labor Intensity & Turnover

Traditional manual case-picking is labor intensive and leads to high labor turnover. This means high costs in training and recruitment and increased error rates.

Low Productivity

Due to the physically demanding nature of case picking, operations are slow, making it difficult to keep up with orders especially during peak seasons and promotional periods.

High Operational Costs

Seasonal peaks and changes in demand lead to high recruitment costs and often leave the warehouse understaffed. Additionally, the complex workflows make training difficult, expensive, and time-consuming.



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SOLUTION

The solution consists of 12 Max 600 AMRs and f(x) Fleet Manager that connects to JD.COM's existing warehouse control system (WCS). The Max 600 AMRs are configured to handheld devices that pickers use to scan and check goods as they are picked. After confirming a correct pick, the picker prints a shipping label and sticks it to the case. The simplified process and real-time checking has led to an increase in productivity and accuracy for the warehouse.

RESULTS

Over the course of 7 consecutive days, the units picked per hour (UPH) increased by 136% (2.36x) compared to its previous manual picking methods. This was 65% higher than the project acceptance rate.

With the added accuracy and productivity, the warehouse saved 30% on operational costs and was able to fulfill thousands of daily orders for both its B2B store replenishment and B2C eCommerce fulfillment needs.



Travel Time Reduction

Freeing pickers from long walks, ForwardX AMRs allow pickers and sorters to contribute maximum value to its operations.

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Rapid Deployment

2-week rapid deployment means no downtime in operations.

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Unmatched Scalability

1-week scale up allows the warehouse to increase the number of AMRs on the floor to meet increased demand during promotional periods.



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Reduced Labor Intensity

Max AMRs take care of all the heavy material transport so employees no longer need to haul heavy carts and pallet jacks, significantly reducing labor intensity and employee fatigue.



Operational **Cost Savings**

Deployed







Productivity

Increase



Forward X Robotics

The company is comprised of over 250 members hailing from top universities and leading enterprises around the world. As shown by the 200+ patents pending and its award-winning research work, such as 2 1st-Place Prizes at TRECVID, the 1st-Place Prize at IEEE's VOT-RT, RBR50's 2022 Innovation Award, and Frost & Sullivan's Technology Innovation Leadership Award, ForwardX's team boasts some of the world's top computer vision scientists and robotics experts.

With offices in the US, Japan, and China, along with partnerships around the globe, ForwardX is expanding and applying its proven solutions to warehouses and manufacturers worldwide.

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ForwardX Robotics





Want to learn more about ForwardX and how we can help you flexibly automate your material handling operations? For more information, visit: en.forwardx.com

