

# Warehouse Automation Analytics

Performance metrics and automation optimization insights

Generated by: Vanguard Warehouse Controller  
Date: 8/3/2025, 8:04:15 AM  
Use Case: warehouse-automation

## Automation Overview

Total Warehouses: 5  
Total Robots: 46  
Average Utilization: 74.2%  
Throughput Increase: 34.2%  
Labor Cost Reduction: 28.5%  
ROI Period: 2.3 years

## Warehouse Performance

| Warehouse Location    |                 | Capacity Used | Inbound/Day | Outbound/Day | Picking Accuracy | Automation Level | Status             |
|-----------------------|-----------------|---------------|-------------|--------------|------------------|------------------|--------------------|
| Distribution Center A | Chicago, IL     | 129.2%        | 1,528       | 1,509        | 97.6%            | 72.1%            | Improvement Needed |
| Distribution Center B | Dallas, TX      | 56.0%         | 1,227       | 3,076        | 99.0%            | 79.4%            | Improvement Needed |
| Distribution Center C | Atlanta, GA     | 52.1%         | 1,969       | 3,560        | 97.1%            | 64.6%            | Improvement Needed |
| Distribution Center D | Los Angeles, CA | 57.2%         | 1,883       | 2,336        | 98.9%            | 75.6%            | Improvement Needed |
| Distribution Center E | Newark, NJ      | 63.8%         | 2,909       | 3,147        | 98.3%            | 79.5%            | Improvement Needed |

## Optimization Opportunities

- Deploy 5 additional AGVs in Warehouse 3 to increase throughput

by 20%

- Implement voice-picking system to improve accuracy to 99.8%

- Upgrade WMS integration for real-time inventory visibility

- Add automated sortation system for small package handling

- Implement predictive analytics for demand-based staffing

- Consider AS/RS system for high-velocity SKUs