

# Warehouse Automation Analytics

Performance metrics and automation optimization insights

Generated by: Vanguard Warehouse Controller  
Date: 8/3/2025, 8:06:33 AM  
Use Case: warehouse-automation

## Automation Overview

Total Warehouses: 5  
Total Robots: 25  
Average Utilization: 75.0%  
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     | 60.1%         | 2,391       | 1,680        | 97.5%            | 78.7%            | Improvement Needed |
| Distribution Center B | Dallas, TX      | 80.9%         | 2,233       | 3,952        | 98.3%            | 78.3%            | Improvement Needed |
| Distribution Center C | Atlanta, GA     | 81.8%         | 2,904       | 3,088        | 97.2%            | 61.6%            | Improvement Needed |
| Distribution Center D | Los Angeles, CA | 51.5%         | 1,595       | 2,190        | 96.3%            | 75.0%            | Improvement Needed |
| Distribution Center E | Newark, NJ      | 61.8%         | 1,557       | 2,436        | 96.2%            | 81.4%            | Optimized          |

## 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