# Warehouse Automation Analytics

Performance metrics and automation optimization insights

Generated by: Vanguard Warehouse Controller
Date: 8/3/2025, 8:06:14 AM
Use Case: warehouse-automation

## Automation Overview

Total Warehouses: 5
Total Robots: 50
Average Utilization: 73.8%
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 | 63.5% | 1,503 | 2,481 | 95.0% | 68.8% | Improvement Needed |
| Distribution Center B | Dallas, TX | 67.1% | 2,731 | 1,665 | 95.3% | 76.3% | Improvement Needed |
| Distribution Center C | Atlanta, GA | 58.3% | 1,698 | 3,336 | 95.5% | 71.9% | Improvement Needed |
| Distribution Center D | Los Angeles, CA | 46.3% | 1,957 | 3,681 | 95.3% | 69.8% | Improvement Needed |
| Distribution Center E | Newark, NJ | 87.2% | 1,061 | 3,982 | 99.0% | 82.2% | 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