

# Warehouse Automation Analytics

## Performance metrics and automation optimization insights

Generated by: Vanguard Warehouse Controller  
Date: 8/3/2025, 8:07:15 AM  
Use Case: warehouse-automation

### Automation Overview

Total Warehouses: 5  
Total Robots: 76  
Average Utilization: 70.4%  
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	41.7%	2,528	2,969	95.5%	64.0%	Improvement Needed
Distribution Center B	Dallas, TX	43.8%	2,815	3,624	96.3%	61.1%	Improvement Needed
Distribution Center C	Atlanta, GA	36.5%	1,626	3,017	99.1%	62.0%	Improvement Needed
Distribution Center D	Los Angeles, CA	98.7%	2,424	2,343	96.1%	76.8%	Improvement Needed
Distribution Center E	Newark, NJ	76.4%	2,713	2,701	96.2%	88.0%	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