

# Warehouse Automation Analytics

## Performance metrics and automation optimization insights

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

### Automation Overview

Total Warehouses: 5  
Total Robots: 60  
Average Utilization: 72.3%  
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	61.7%	1,637	2,463	96.3%	69.0%	Improvement Needed
Distribution Center B	Dallas, TX	73.3%	2,330	2,507	95.4%	61.5%	Improvement Needed
Distribution Center C	Atlanta, GA	75.6%	2,255	2,848	99.2%	79.8%	Improvement Needed
Distribution Center D	Los Angeles, CA	78.4%	1,818	2,690	96.1%	82.9%	Optimized
Distribution Center E	Newark, NJ	60.9%	2,748	1,565	98.3%	68.3%	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