

# Warehouse Automation Analytics

## Performance metrics and automation optimization insights

Generated by: Vanguard Warehouse Controller  
Date: 8/3/2025, 8:01:05 AM  
Use Case: warehouse-automation

### Automation Overview

Total Warehouses: 5  
Total Robots: 47  
Average Utilization: 69.0%  
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	41.6%	2,761	3,042	97.3%	67.8%	Improvement Needed
Distribution Center B	Dallas, TX	50.5%	1,264	3,209	96.0%	69.9%	Improvement Needed
Distribution Center C	Atlanta, GA	47.5%	2,779	2,764	97.6%	81.6%	Optimized
Distribution Center D	Los Angeles, CA	110.2%	2,165	3,044	99.3%	60.7%	Improvement Needed
Distribution Center E	Newark, NJ	32.1%	1,187	2,997	98.6%	65.0%	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