

# Warehouse Automation Analytics

Performance metrics and automation optimization insights

Generated by: Vanguard Warehouse Controller  
Date: 8/3/2025, 8:02:10 AM  
Use Case: warehouse-automation

## Automation Overview

Total Warehouses: 5  
Total Robots: 29  
Average Utilization: 81.3%  
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     | 63.4%         | 2,808       | 3,005        | 98.0%            | 91.9%            | Optimized          |
|                       | Dallas, TX      | 67.0%         | 1,300       | 1,855        | 97.8%            | 93.8%            | Optimized          |
|                       | Atlanta, GA     | 44.9%         | 2,128       | 3,996        | 99.3%            | 60.1%            | Improvement Needed |
| Distribution Center B | Los Angeles, CA | 85.4%         | 1,525       | 3,712        | 96.3%            | 76.3%            | Improvement Needed |
| Distribution Center C | Newark, NJ      | 58.3%         | 2,920       | 2,474        | 97.6%            | 84.3%            | 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