

# Warehouse Automation Analytics

Performance metrics and automation optimization insights

Generated by: Vanguard Warehouse Controller  
Date: 8/3/2025, 8:00:56 AM  
Use Case: warehouse-automation

## Automation Overview

Total Warehouses: 5  
Total Robots: 48  
Average Utilization: 84.8%  
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     | 81.3%         | 2,985       | 3,655        | 95.0%            | 83.7%            | Optimized          |
|                       | Dallas, TX      | 90.1%         | 2,227       | 2,724        | 99.4%            | 94.4%            | Optimized          |
| Distribution Center B | Atlanta, GA     | 72.7%         | 2,845       | 2,935        | 96.7%            | 73.7%            | Improvement Needed |
| Distribution Center C | Los Angeles, CA | 61.9%         | 2,951       | 2,741        | 99.0%            | 92.4%            | Optimized          |
| Distribution Center D | Newark, NJ      | 34.2%         | 2,517       | 3,839        | 96.7%            | 79.8%            | Improvement Needed |
| Distribution Center E |                 |               |             |              |                  |                  |                    |

## 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