

# Warehouse Automation Analytics

Performance metrics and automation optimization insights

Generated by: Vanguard Warehouse Controller  
Date: 8/3/2025, 8:01:43 AM  
Use Case: warehouse-automation

## Automation Overview

Total Warehouses: 5  
Total Robots: 53  
Average Utilization: 75.8%  
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     | 49.1%         | 2,202       | 3,395        | 95.7%            | 74.6%            | Improvement Needed |
| Distribution Center B | Dallas, TX      | 74.7%         | 1,167       | 2,595        | 96.0%            | 80.4%            | Optimized          |
| Distribution Center C | Atlanta, GA     | 88.6%         | 2,154       | 3,380        | 95.0%            | 79.5%            | Improvement Needed |
| Distribution Center D | Los Angeles, CA | 59.6%         | 2,008       | 3,791        | 99.0%            | 76.7%            | Improvement Needed |
| Distribution Center E | Newark, NJ      | 74.5%         | 2,622       | 2,563        | 96.3%            | 68.0%            | 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