

# Warehouse Automation Analytics

## Performance metrics and automation optimization insights

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Use Case: warehouse-automation

### Automation Overview

Total Warehouses: 5  
Total Robots: 44  
Average Utilization: 72.4%  
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     | 101.9%        | 1,087       | 1,919        | 96.2%            | 63.8%            | Improvement Needed |
| Distribution Center B | Dallas, TX      | 51.1%         | 2,463       | 3,731        | 98.1%            | 69.5%            | Improvement Needed |
| Distribution Center C | Atlanta, GA     | 100.8%        | 2,082       | 2,261        | 96.1%            | 68.5%            | Improvement Needed |
| Distribution Center D | Los Angeles, CA | 86.8%         | 2,590       | 2,423        | 97.0%            | 75.6%            | Improvement Needed |
| Distribution Center E | Newark, NJ      | 57.2%         | 1,135       | 2,798        | 98.9%            | 84.4%            | 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