

# Warehouse Automation Analytics

## Performance metrics and automation optimization insights

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Use Case: warehouse-automation

### Automation Overview

Total Warehouses: 5  
Total Robots: 40  
Average Utilization: 79.3%  
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     | 105.7%        | 2,051       | 3,733        | 97.1%            | 63.6%            | Improvement Needed |
| Distribution Center B | Dallas, TX      | 82.1%         | 1,308       | 3,381        | 98.9%            | 69.0%            | Improvement Needed |
| Distribution Center C | Atlanta, GA     | 91.8%         | 2,687       | 3,714        | 96.2%            | 83.1%            | Optimized          |
| Distribution Center D | Los Angeles, CA | 67.2%         | 1,216       | 3,751        | 97.4%            | 93.9%            | Optimized          |
| Distribution Center E | Newark, NJ      | 87.9%         | 1,624       | 3,345        | 98.4%            | 87.0%            | 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