

# Warehouse Automation Analytics

## Performance metrics and automation optimization insights

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Use Case: warehouse-automation

### Automation Overview

Total Warehouses: 5  
Total Robots: 39  
Average Utilization: 85.2%  
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     | 43.0%         | 1,114       | 3,435        | 96.3%            | 90.4%            | Optimized          |
|                       | Dallas, TX      | 77.4%         | 2,769       | 3,587        | 95.8%            | 76.7%            | Improvement Needed |
| Distribution Center B | Atlanta, GA     | 76.9%         | 2,303       | 3,017        | 98.9%            | 85.4%            | Optimized          |
| Distribution Center C | Los Angeles, CA | 63.3%         | 2,886       | 2,521        | 96.9%            | 85.6%            | Optimized          |
| Distribution Center D | Newark, NJ      | 56.2%         | 1,549       | 2,739        | 98.3%            | 87.8%            | Optimized          |
| 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