Warehouse drones for automated inventory management

Presented by:

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Objectives

• Learn what digital inventory technologies are available and delivering value to organizations
• Understand how autonomous drones and robotics can help you better manage your inventory levels
• Understand if your operation is a good fit for this type of technology
LOGISTICS BUDGET

66% OF LOGISTICS BUDGETS ARE SPENT MOVING ONLY 10% OF THE TOTAL INVENTORY

THE OPPORTUNITY

90% OF RESTING INVENTORY CAN BE OPTIMIZED FOR MAJOR BOTTOM LINE IMPACT AND EFFICIENCY GAINS
ALL ORGANIZATIONS STRUGGLE WITH INVENTORY CERTAINTY

E-Commerce
Supporting outbound velocity of goods to customers

Manufacturing
Timely delivery of materials and supplies to the production line. Facilitating distribution of inventory to the network

Retail
Timely receipt of bulk shipments and orchestrating waves of store deliveries

3PLS
Efficiently managing the operations for the shippers and providing the required transparency
2019: INVENTORY MANAGEMENT IS GETTING MORE COMPLEX

CONSUMER DEMANDS
LABOR SHORTAGE
WAREHOUSE CAPACITY
TARIFFS AND CHINA
OMNICHANNEL STRATEGY
AVERAGE INVENTORY
ACCURACY IN MOST
WAREHOUSES DUE
TO MANUAL CHECKS
AND ACTIVITY.

94%

OF INVENTORY
CHECKS ARE DONE
MANUALLY IN
WAREHOUSES AND
RETAIL STORES.

90%
INVENTORY ACCURACY IMPACT

APQC data shows a nearly 11 percent difference between top performing and bottom performing organizations regarding inventory value as a percentage of revenue:

16.0% -- Bottom performers
9.4% -- Median
5.2% -- Top performers

For an organization with $5 billion in revenue, this difference translates into $540 million in inventory carrying costs.

| One Percent Increase in Inventory Accuracy and Performance on Logistics Metrics |
|--------------------------------------------------|----------|----------|
| 98% Inventory Accuracy | 99% Inventory Accuracy |
| Median | N | Median | N |
| Pick-to-ship cycle time in hours for customer orders | 14.0 | 45 | 8.0 | 99 |
| Percentage of orders expedited | 4.0% | 43 | 3.5% | 104 |
| Percentage of sales orders delivered on time | 92.0% | 45 | 96.0% | 88 |

AERIAL INVENTORY ROBOTS

AUTONOMOUS DRONE TECHNOLOGY

COMPUTER VISION & ARTIFICIAL INTELLIGENCE

CLOUD APPLICATION

PROMAT 2019
McCormick Place | Chicago
April 8-11, 2019
promatshow.com
powered by MHI
CASE 1:

Goal: Improve inventory accuracy and visibility of safety stock.

- CUSTOMER: RETAIL
- WAREHOUSE: 600,000 SQFT
- AISLES: 50
- BIN LOCATIONS PER AISLE: 1000
- WMS: 2
- PINC AIR ROBOTS: 2
- TIME TO SCAN AISLE: 2 hours
- FULL WAREHOUSE SCAN TIME: 60-65 hrs
  - Collect information
  - Process information
  - Compare to WMS
  - Generate reconciliation report

CASE 2:

Goal: Improve inventory accuracy to improve on-time delivery.

- CUSTOMER: FOOD DISTRIBUTOR
- WAREHOUSE: 100,000 SQFT
- AISLES: 15
- BIN LOCATIONS PER AISLE: 300
- WMS: 1
- PINC AIR ROBOTS: 1
- TIME TO SCAN AISLE: 1 hour
- FULL WAREHOUSE SCAN TIME: 18-20 hrs
  - Collect information
  - Process information
  - Compare to WMS
  - Generate reconciliation report
KEY TAKEAWAYS
For more information

Thank you,

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