How to Combat Labor Shortages with the Best Mix of Automation

Presented by:
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CAN YOU FIND QUALIFIED LABOR?

65% Extremely / Very Challenging

(from MHI 2019 report)
WHY IS THERE A LABOR SHORTAGE?

- Low nationwide unemployment causing challenges in many industries
- Manual labor & shift work less appealing to many jobseekers
- Aggressive poaching efforts in many markets
- Increasing number and size of DCs and shipping centers due to e-commerce
- Warehouses located in concentrated areas, driving up competition and limiting labor pool
E-COMMERCE GROWTH = WAREHOUSE WORKER GROWTH

Source: NY Times
“2019 to 2023, expect demand for an additional 850 million sq. ft. of industrial real estate in the US, led by e-commerce.”

Source: Deloitte
HOW TO JUSTIFY AUTOMATION

Don’t ignore

OR

avoid automation!
WHAT IS AUTOMATION?

‘Traditional’ Material Handling
• Conveyors, sortation, storage, etc.

Cutting Edge Material Handling
• Robotics, drones, etc.

Data Collection & Management
• Inventory Control, WMS, Internet of Things (IoT), advanced AutoID, analytics
WHAT IS AUTOMATION?

ADOPTION TRENDS - PREDICTED USE
Technologies that are in-use today vs. their predicted use in 5 years

- Cloud Computing & Storage
- Sensors & Automatic Identification
- Inventory & Network Optimization
- Robotics & Automation
- Predictive Analytics
- Internet of Things
- Wearable & Mobile Technology
- 3D Printing
- Driverless Vehicles & Drones
- Artificial Intelligence
- Blockchain

2019 Adoption Rate
Projected 5-Year Adoption Rate

Source: 2019 MHI Annual Industry Report

POWERED BY POSSIBILITIES.
WHERE AND HOW MUCH?

• What are the best areas to automate?
• What is the best amount of automation?
• There is no universal answer to either question
• Need to review your operation, challenges, and forecasted goals
WHERE AND WHAT OPERATIONS TO AUTOMATION?

Your worst labor-problem operation

Highly repetitive or process-oriented tasks

Labor intensive tasks

Error-prone tasks
RECEIVING / INBOUND

• Inventory control starts here!
  • Barcode labels and scanning automation
  • The right software streamlines entire process
  • Automated cycle counting = significant labor savings
RECEIVING/ INBOUND

• Semi- or fully-automated truck unloading
  • Operator controlled extendible conveyor
  • Bulk unload
ORDER MANAGEMENT

• Warehouse Management System (WMS)
• Warehouse Control System (WCS)
PICKING

• Goal is to improve pick productivity and accuracy
• Move on from manual picking to RF, Voice, Vision based picking
• Implement automation-friendly pick layouts to reduce travel time
PICKING

• Goods-to-Person (GTP) automation
PICKING

• Robotic Picking
TRANSPORT

• Rise of Automated Guided Vehicles (AGV) and Autonomous Mobile Robots (AMR)
SHIPPING

• Semi- or Full-Automated Order Packing
• Automated Print & Apply
• Shipping Software
SORTATION

- Picking, Routing, & Shipping
- Use the right sortation for the rate and product!
- Low, Medium, & Hi-Rate sortation options
SORTATION

Non-Traditional Sorters
EXAMPLE:
LARGE SCALE AUTOMATION DEVELOPMENT

Source: Modern Materials Handling
SUMMARY

The labor shortage isn’t getting better in the short term

Automation can help offset the labor challenge

You need to analyze your operations to determine the best fit

Don’t avoid automation!
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Or visit MODEX Booth #3019 and #2819