Do you have Labor Shortages?
The Solutions Community of MHI can help

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Please log into Slido.Com and answer our opening survey question
Code #2021
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Session Objective

• Interactive session
• Strategies to overcome labor shortages
• Tactics to mitigate risks
• Improve labor scalability
• Tactical and strategic time frame
Tactical and Strategic Definitions

- **Tactical** - Thinking backwards from November 2021; what can you do today (while at MODEX) for a 3–6 months implementation cycle

- **Strategic** - Building the business cases for Automation – Hard & Soft Factors, Network Logistics & Fulfillment S&OP planning – keeping supply chain as a competitive weapon for 2021 with a 6–12 months implementation cycle
Results of the Poll

• You sure do have labor Issues……
It will not get any better without help!

- Lowest unemployment rates
- Healthy Economy driven by consumer spending
- Demand for same day or next day delivery
- Demand for piece packaging and shipping
- Demand for supply chain visibility
- Demand for customized customer experience
- Ecommerce is only 11.4% of retail sales
What you can do for 2020? (Tactical)

• Bring in process expert resources from the Solutions Community:
  • Consulting & Engineering
  • Solution Providers (Hardware & Software)
  • Equipment Manufacturers

• Gemba walking the critical fulfillment centers and identifying improvements (re-training plans, UI & notifications reporting, freeing up space)
  • What are your organizational goals?
  • Where are your current issues?
  • When the issues are resolved, what will your next bottleneck or issue become?
What you can do for 2020? (Tactical)

Tactical solutions to increase capacity speed and accuracy

- Intralogistics – Engaging a “tune-up session” for your automation systems to achieve max performance and mitigate potential down time events
- Instead of focusing on Technology/Tools – we should focus on “movement channels” and how to empower them with Tools & Technology
What you can do for 2020? (Tactical)

Eliminate unnecessary movement via Goods to Picker solution sets

- Light Goods via AGVs, Shuttles, AMRs, Carts
- Palleted Goods via AGVs
- Augmented automation via Robotic Picking, Palletizing, Induction
- Traditional automation via conveyors (zero pressure accumulation), sorters, pick modules, pick & put to light, manifest solutions
Examples of Successful Tactical Solutions

Case Study - Robotic Sorter Induction

• Company – Large clothing retailer that has operations that replenish stores and ecommerce fulfillment

• Solution – Collaborative Robot integrated with machine vision and barcode identification feeding misc items to sorter

• Solution Benefits
  • Robot can work unattended allowing employees to be reassigned when volumes are low
  • During peak times, the robot used can switch from high speed to collaborative mode to allow humans to work within the same space increasing volume for station
  • Robot manipulates products multiple times until it is scanned ensuring accurate inductions Items that remain unscanned are sent to exception lane for human inspection/induction
Examples of Successful Tactical Solutions

Case Study – Robotic Palletizing

• Company: Manufacturer of Meal Delivery Systems to the Healthcare Industry
• Solution: Robotic palletizer along with taper and barcoding solutions
• Company was able to:
  • Reassign 3 employees – solving labor shortages in other departments
  • Eliminate errors due to manual entry
  • Reduce potential repetitive motion and lifting related worker’s comp claims
Examples of Successful Tactical Solutions

Case Study – Automated Manifest System

- Company – an American designer, manufacturer and marketer of high-end tools and equipment for professional use in the transportation industry.

- Solution – Automated manifesting system including conveyors with diverts, barcode scanners, scale, and label print and apply system.

- Solution Benefits
  - Removed labor intensive manual operations in their fulfillment process
  - Eliminated errors by eliminated human keying and potential mislabeling of orders
  - Increased throughput (single system can process 20-25 orders per minute)
  - System software has ability to rate shop common carriers to save on unnecessary shipping costs
What you can do for 2020? (Tactical)

• Prepare Exceptional Training
  • Video record process and user screens
  • Create easy to follow PowerPoint training

• Use Visual Aides
  • Clearly label facility, consider colored labels

• Adapt User Interfaces
  • Create trainee vs expert modes
  • Simplify and visualize

• Gamification
What you can do for 2020? - (Tactical)

• Prepare exceptional training
  • Leverage on-line training materials
  • Video record process and user screens by function
  • Create easy to follow PowerPoint training
  • Add menu access
What you can do for 2020? - (Tactical)

• Visualize Operations
  • Color coded signs/labels to identify exceptions
  • Create and post legends for new and temp employees
What you can do for 2020? – (Tactical)

- Update / Simplify User Interfaces
  - Personalize screens for ease of use
  - Create expert vs trainee versions

**Temp/Trainee**

**Expert**

Intuitive, Easy to Use
What you can do for 2020? (Tactical)

Untapped Labor Pools

• Veterans – https://www.dol.gov/agencies/vets

• The Disabled

• High Schools

• Trade Schools
Examples of Successful Tactical Solutions

Case Study – Visual Labeling

- **Company** – Hospital Distributor

- **Solution** – Graphic by delivery point, yellow receiving labels

- **Benefits**
  - Reduced staging/shipping errors
  - Simplified reading internal vs external labels
Examples of Successful Tactical Solutions

Case Study – Optimized UI

• Company – Regional electrical products distributor

• Solution – Personalized, visual screen for parallel cable cutting

• Benefits
  • Positive user experience
  • 45% labor improvement
Examples of Successful Tactical Solutions

Case Study – Gamification

• Company – Healthcare product distributor

• Solution – Real-time competition feedback

• Benefits
  • 20% Productivity gain
  • Zero quality impacts
  • Employees demanded keeping app long term
Examples of Successful Tactical Solutions

Case Study – Hire the Disabled

• Company – Retail Pharmacy

• Solution – Hired 30% disabled staff, tailored work environment to needs

• Benefits
  • #1 in productivity and safety
  • Most could not find employment
  • Same standards/pay as abled bodied
  • Improved management skills
What can you do for 2021? Strategic Examples

Strategic solutions to increase capacity speed and accuracy

• AS/RS / Shuttles
• Integrated Automated Conveyor Solutions
• Shelf to picker
• Others?
• Completely integrated Automation Solutions (WMS, WCS, others)
  • Physical Automation
  • Digital Automation
• Metrics of what it can mean in terms of performance
• Time savings - speed vs complexity and implementation time
Evolving your Strategy for 2021+

Cost to fulfill (time, complexity)

Present state
Desired state

Value Added

Pallet, Carton, Each, Unit

POWERED BY POSSIBILITIES.
Getting ready for 2021+

First – Get closer to the customer

Is network in the right place to serve?

- Supply Chain Fulfillment Network
- Import and Manufacturing Processes/Locations
- Physical Locations – Micro fulfillment

Next – Improve Quality & Right Size Orders

Are you dynamic enough for consumer’s preferences?

- Look at tools in support of taking the digital automation step
- Don’t have WMS? get digital
- Have a WMS? Get it ready
  - Your lowest level of decisions blended strategy for retail and eCommerce?
  - Keep it distinct - only retail or only eCommerce)

Finally – Increase the speed of delivery

Can automation accelerate?

- 10 projects at $1MUSD vs 1 project at $10MUSD
- Automate most difficult processing (each) before automating pallets / cases
- Build ecosystem around the lowest level of order (eaches) and grow outward from there to mitigate pain
Getting Value for your Strategy

Source: Deloitte, Bain Research, 2010 - 2018
Review Slido Results
Audience Participation

• Experiences
• Questions and answers
The seventy-three (73) MHI’s Solutions Community members are industry thought leaders on automation, software, equipment, and services that support a fully integrated supply chain. The Community includes suppliers, integrators, consultants, media, academia, and end-users.

MHI’s Solutions Community mission is to provide a unique venue where equipment, systems and service suppliers can collaboratively work with users to improve the marketplace for all. The Community provides a Safe Harbor environment for open discussion of material handling equipment types, technologies, systems, best practices and lessons learned.
End User Speakers and Media Partners
Find Solutions Community members at MODEX
Solutions Community Resources

http://www.mhi.org/solutions-community
Best Practices For Keeping Personnel Safe Around Conveyors, Sortation Systems

Keeping personnel safe and injury free is of critical importance to warehouse, distribution and manufacturing facilities...

Four Myths About AS/RS — Busted

With the substantial growth of e-commerce driving order fulfillment operations to look for different solutions to...

3 weeks ago

Want Higher Performance Rates? Add Robotics To Human Workforce

The collaborative robot market will grow from $710 million in 2018 to $12,303 million in 2025...

4 weeks ago
Thank you for your attendance!

We invite you to join us at MHI’s Annual Conference

2020 Annual Conference
October 12-14, 2020
Walt Disney World
Swan and Dolphin Resort
Orlando, Florida

Questions? Contact: Christian Dow (cdow@mhi.org)
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