

# Do you have Labor Shortages?

The Solutions Community of MHI can help

Presented by:

Kevin Reader

Christian Dow

David Schwebel

John Reichert

Knapp

MHI

Grenzebach

Tecsys



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



powered by  MHI

# Presenters



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MHI



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**David Schwebel**  
Global Head Intralogistics  
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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)

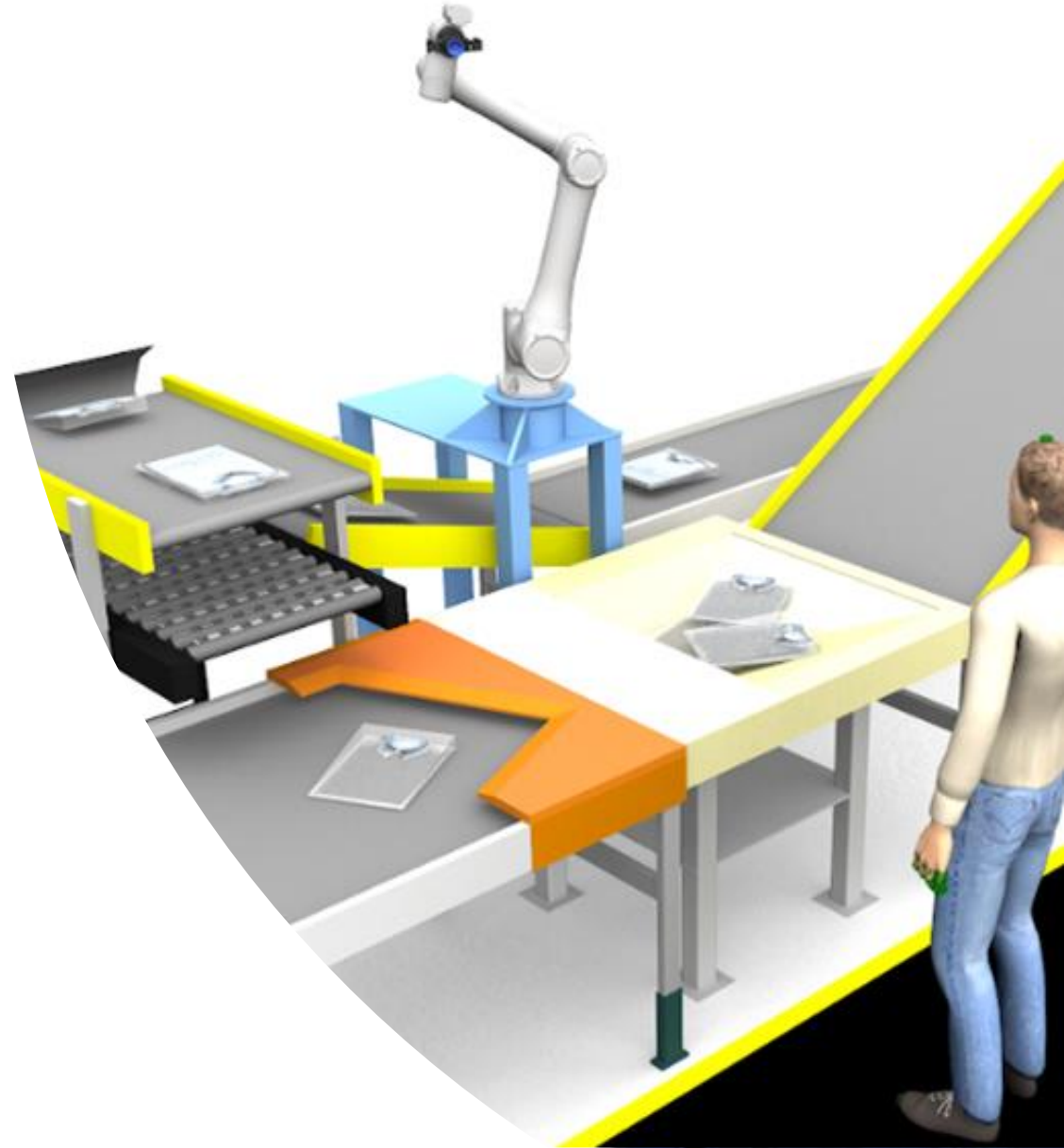
Eliminate unnecessary movement via Goods to Picker solution sets

- Light Goods via AGVs, Shuttles, AMRs, Carts
- Palletized 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

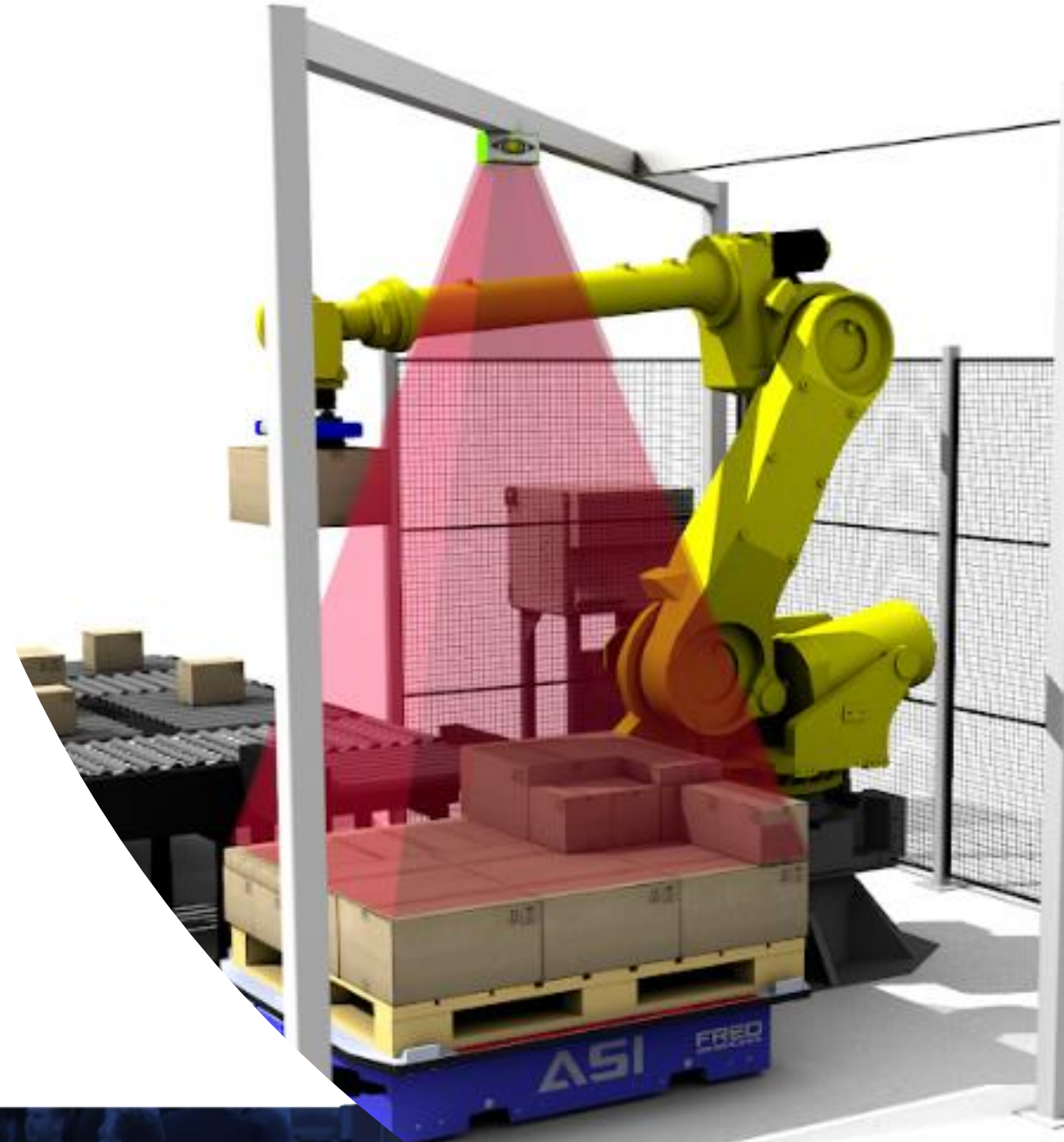
- Company – Large clothing retailer that has operations that replenish stores and ecommerce fulfillment
- Solution – Collaborative Robot integrated with machine vision and barcode identification feeding misc items to sorter
- Solution Benefits
  - Robot can work unattended allowing employees to be reassigned 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

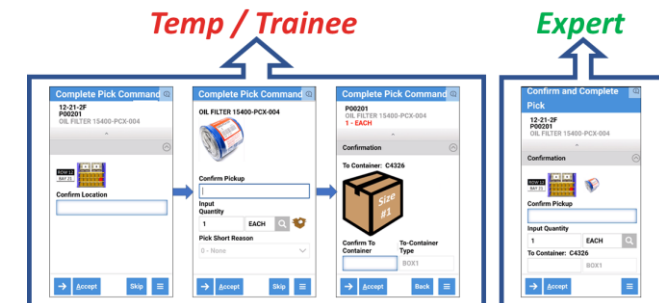
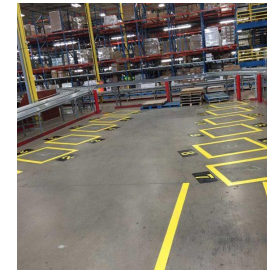
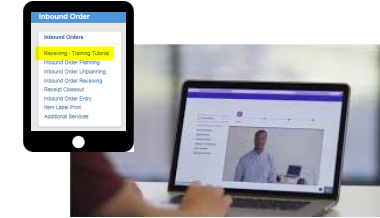
## Case Study – Automated Manifest System

- 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)

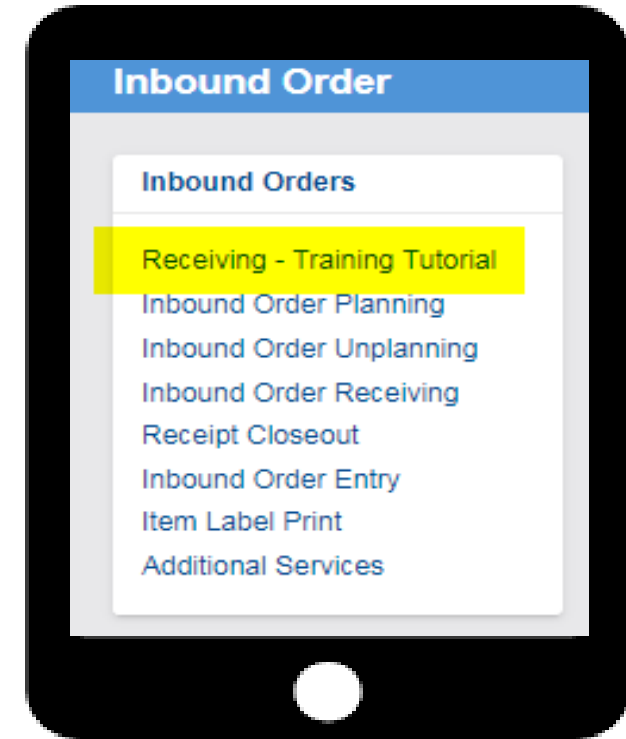
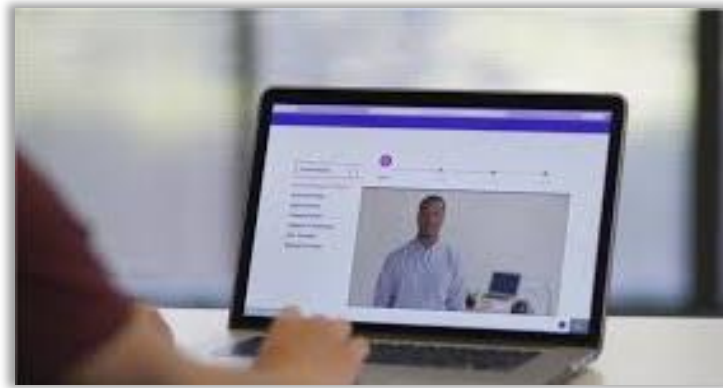
- Prepare Exceptional Training
  - Video record process and user screens
  - Create easy to follow PowerPoint training
- Use Visual Aides
  - Clearly label facility, consider colored labels
- Adapt User Interfaces
  - Create trainee vs expert modes
  - Simplify and visualize
- Gamification





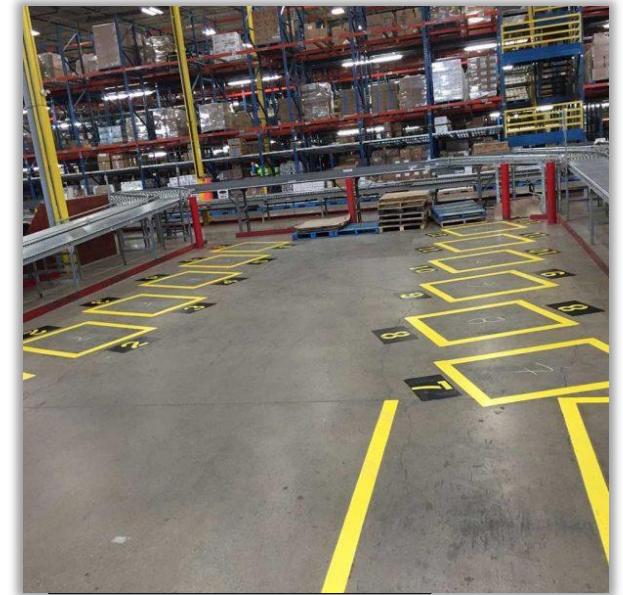
# What you can do for 2020? - (Tactical)

- 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*

Complete Pick Command

12-21-2F  
P00201  
OIL FILTER 15400-PCX-004

ROW 12  
BAY 21

Confirm Location

→ Accept Skip

Complete Pick Command

OIL FILTER 15400-PCX-004

Confirm Pickup

Input Quantity  
1 EACH

Pick Short Reason  
0 - None

→ Accept Skip

Complete Pick Command

P00201  
OIL FILTER 15400-PCX-004  
1 - EACH

Confirmation

To Container: C4326

Confirm To Container  
BOX1

To-Container Type  
BOX1

→ Accept Back

*Expert*

Confirm and Complete Pick

12-21-2F  
P00201  
OIL FILTER 15400-PCX-004

ROW 12  
BAY 21

Confirm Pickup

Input Quantity  
1 EACH

To Container: C4326

Confirm To Container  
BOX1

→ Accept

Confirm Pick

Go To Location: B03AK03

Select Tag: 24-45381

161318\_HON-PM  
LC230-1 METHANOL

Confirm Tag

Pick Count  
0

1,000 CASE Lot: DV291-US

Store Move Cyc Cnt Oth Srv

Continue

*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



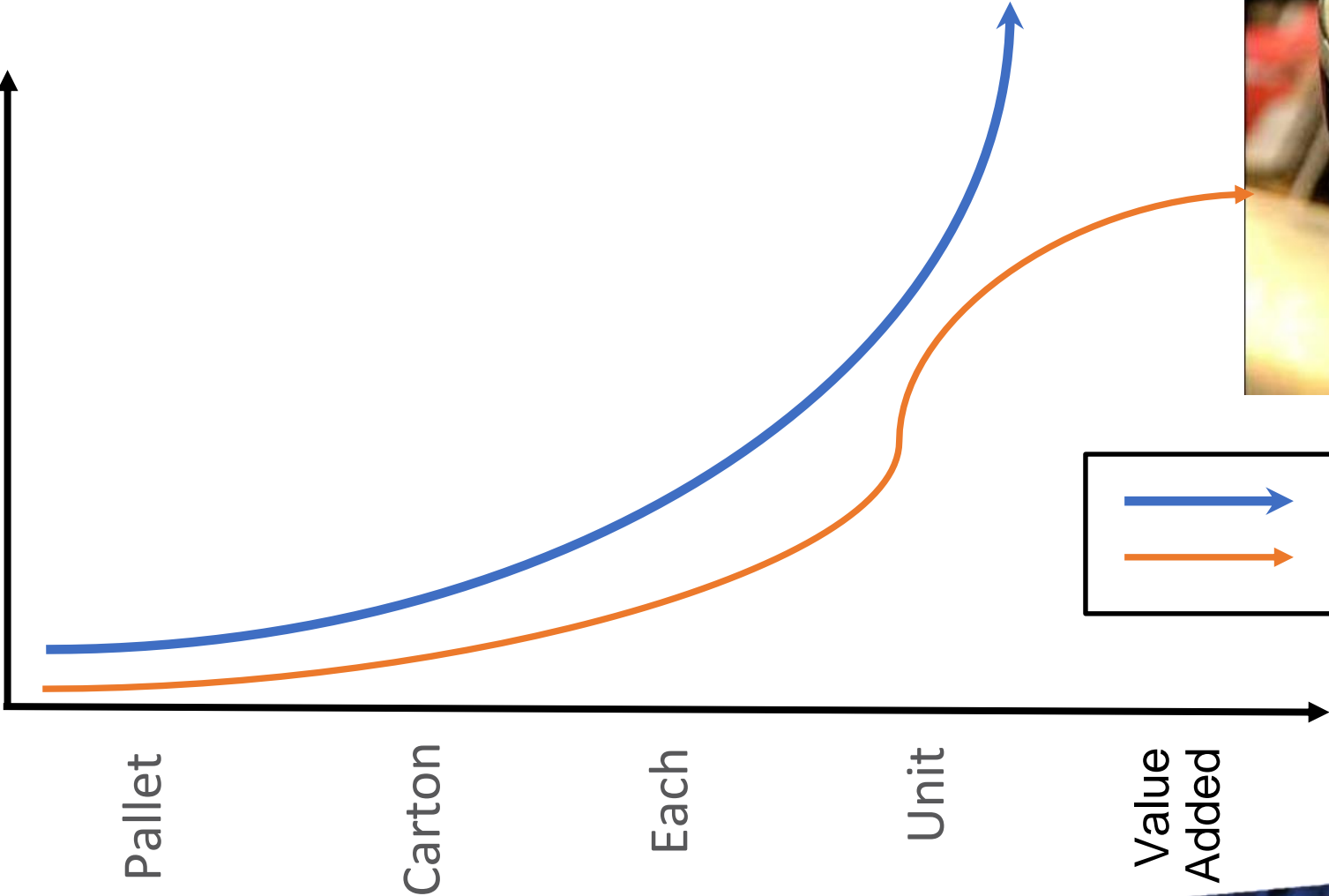
# What can you do for 2021? Strategic Examples

## **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



# 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



How many  
fulfillment centers  
do you need?

**Next –**  
**Improve Quality & Right Size Orders**

**Are you dynamic enough for consumer's preferences?**

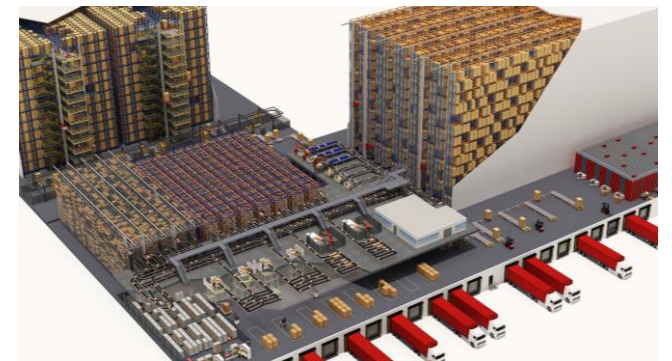
- Look at tools in support of taking the digital automation step
- Don't have WMS? get digital
- Have a WMS? Get it ready
  - Your lowest level of decisions blended strategy for retail and eCommerce?
- Keep it distinct - only retail or only eCommerce)



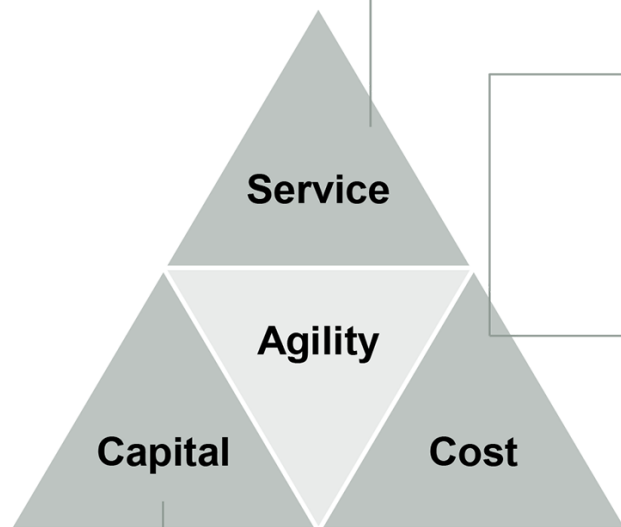
**Finally –**  
**Increase the speed of delivery**

**Can automation accelerate?**

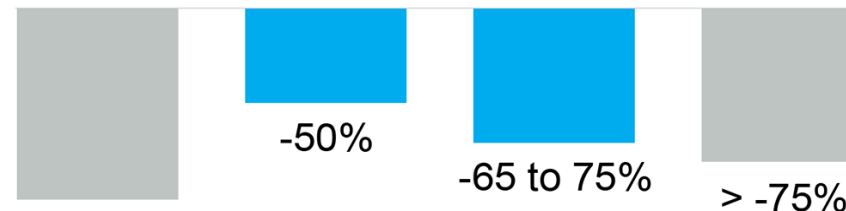
- 10 projects at \$1MUSD vs 1 project at \$10MUSD
- Automate most difficult processing (each) before automating pallets / cases
- Build ecosystem around the lowest level of order (eaches) and grow outward from there to mitigate pain



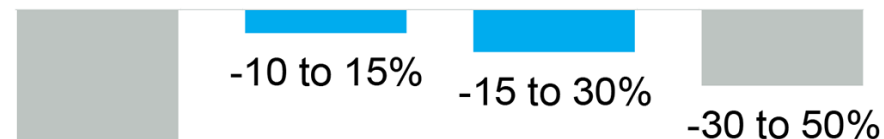
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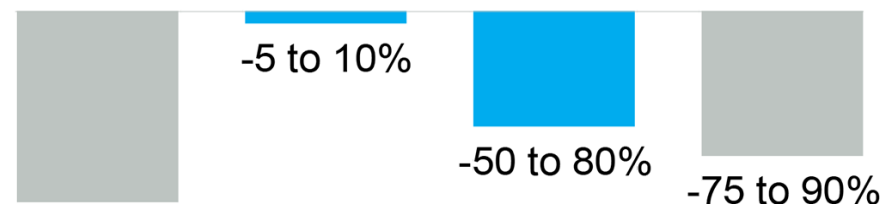
Lost sales (service)



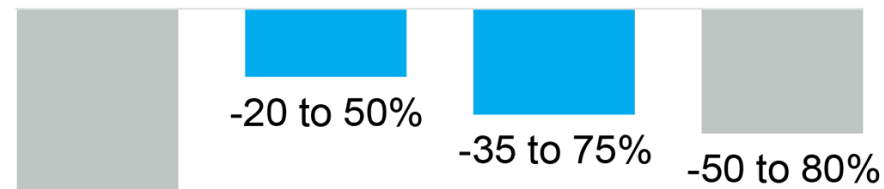
Transport and warehousing costs



SC admin costs



Inventories



Baseline  
(SC 2.0)

Basic  
(SC 3.0)

Advanced  
(SC 4.0)

Visionary

Traditional  
(Baseline)

Digital WMS  
Manual  
Processing

Digital WMS  
Semi -  
Automated  
Processing

Fully Digital  
WMS  
Automated  
Processing

Source: Deloitte, Bain Research, 2010 - 2018

# Getting Value for your Strategy

# Review Slido Results

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# Audience Participation

- Experiences
- Questions and answers





# Your Resources

- 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.

AGILE  
BUSINESS  
MEDIA, LLC

AHS  
LLC - A GREGORY POOLE AFFILIATE

ASSOCIATED  
INTEGRATED SUPPLY CHAIN SOLUTIONS

BANNER  
more sensors, more solutions

Battery Watering Technologies

BEUMERGROUP

CCS  
Intelligent Automation

CONVEYCO

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EATON  
Powering Business Worldwide

ELECTRIC80

ELITE  
STORAGE SOLUTIONS

EVANHOE  
& ASSOCIATES

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FOX IV  
Technologies, Inc.

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Group

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INCORPORATED  
Reinventing Unit Load Technology

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DIFFERENCE... by design

St. Onge  
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UNEX

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MODEX 2020  
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# End User Speakers and Media Partners

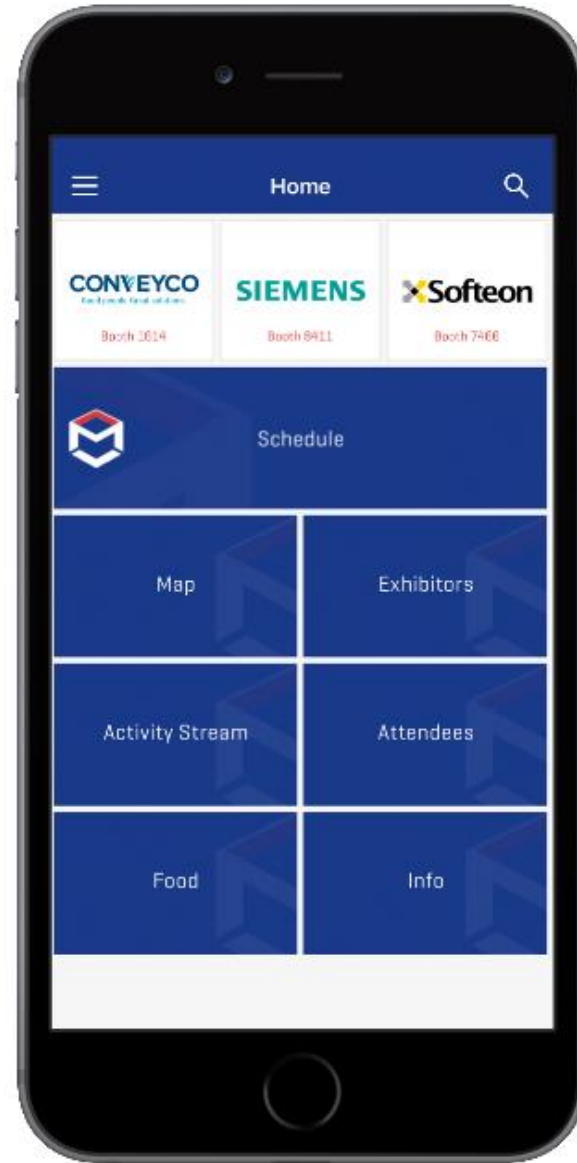


DAVID'S BRIDAL



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Find Solutions  
Community  
members at  
**MODEX**

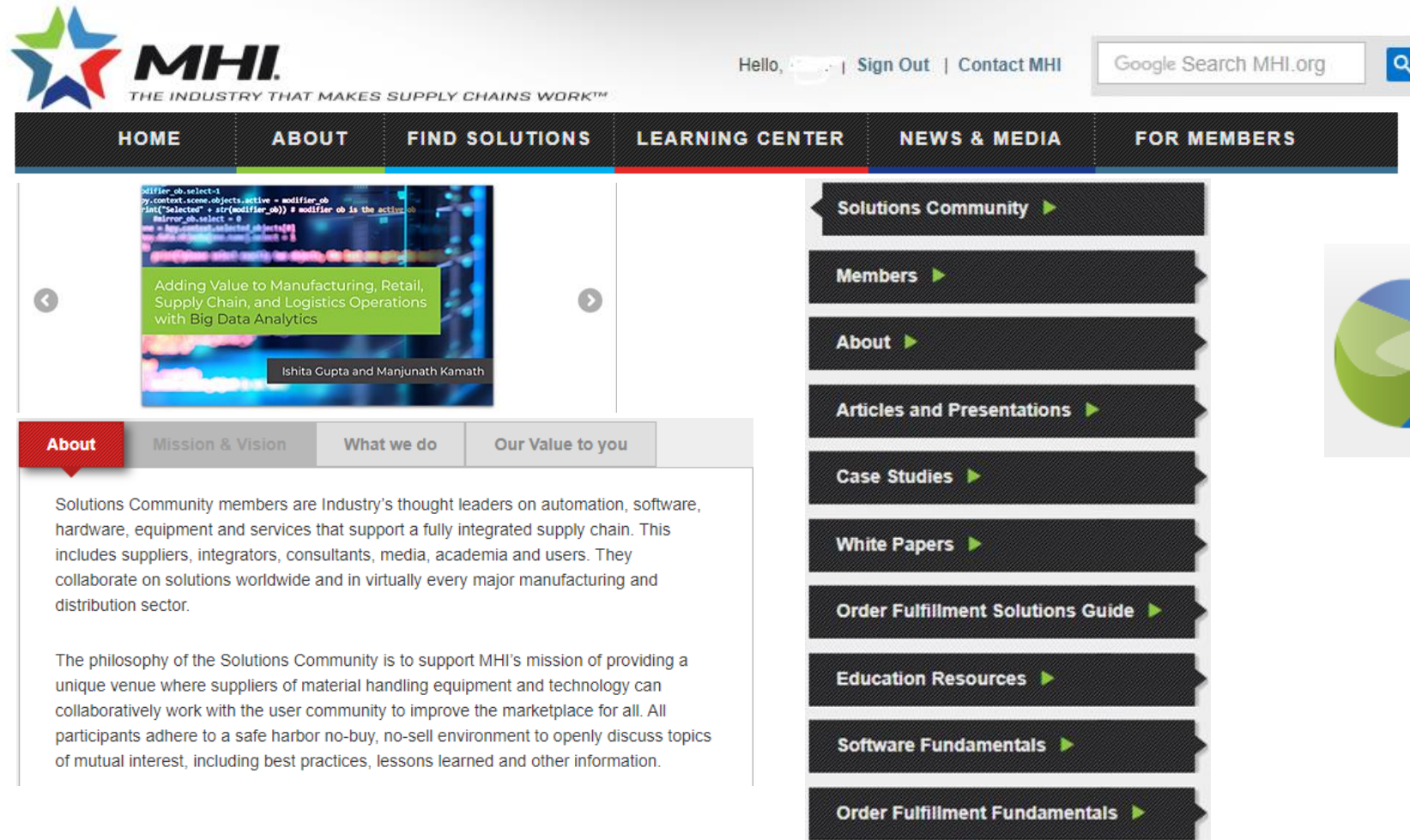
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# Solutions Community Resources

<http://www.mhi.org/solutions-community>



The screenshot shows the MHI Solutions Community website. At the top is the MHI logo with the tagline "THE INDUSTRY THAT MAKES SUPPLY CHAINS WORK™". To the right of the logo are links for "Hello, [user]", "Sign Out", and "Contact MHI". A search bar labeled "Google Search MHI.org" is also present. Below the header is a navigation bar with tabs: HOME, ABOUT, FIND SOLUTIONS, LEARNING CENTER, NEWS & MEDIA, and FOR MEMBERS. The main content area features a large image with a code snippet and the text "Adding Value to Manufacturing, Retail, Supply Chain, and Logistics Operations with Big Data Analytics" by Ishita Gupta and Manjunath Kamath. To the right of this image is a vertical list of links: Solutions Community, Members, About, Articles and Presentations, Case Studies, White Papers, Order Fulfillment Solutions Guide, Education Resources, Software Fundamentals, and Order Fulfillment Fundamentals. Below the main content area is a section titled "About" with sub-tabs: About, Mission & Vision, What we do, and Our Value to you. The "About" tab is selected, showing text about the Solutions Community members and their philosophy.

**MHI**  
THE INDUSTRY THAT MAKES SUPPLY CHAINS WORK™

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HOME ABOUT FIND SOLUTIONS LEARNING CENTER NEWS & MEDIA FOR MEMBERS

Adding Value to Manufacturing, Retail, Supply Chain, and Logistics Operations with Big Data Analytics  
Ishita Gupta and Manjunath Kamath

**About** Mission & Vision What we do Our Value to you

Solutions Community members are Industry's thought leaders on automation, software, hardware, equipment and services that support a fully integrated supply chain. This includes suppliers, integrators, consultants, media, academia and users. They collaborate on solutions worldwide and in virtually every major manufacturing and distribution sector.

The philosophy of the Solutions Community is to support MHI's mission of providing a unique venue where suppliers of material handling equipment and technology can collaboratively work with the user community to improve the marketplace for all. All participants adhere to a safe harbor no-buy, no-sell environment to openly discuss topics of mutual interest, including best practices, lessons learned and other information.

Solutions Community ►  
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White Papers ►  
Order Fulfillment Solutions Guide ►  
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# Warehouse Automation Blog

<http://www.warehouseautomation.org/>



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CONVEYOR/SORTATIONS SAFETY

## 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 ...



AS/RS EDUCATION

## Four Myths About ASRS — Busted

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

3 weeks ago |



ROBOTICS WORKFORCE

## 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 |

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# 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](mailto:cdow@mhi.org))

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