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Update on Piece Picking & Returns Processing

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Learn how “on-demand” piece pick solutions are increasing capacity, throughput and productivity in the modern distribution center of 2019. This session will provide an overview of the processes and methods that can accommodate the requirements of e-fulfillment, in the “age of acceleration”. An overview will be provided that illustrates low-to-high volume solutions in a wide variety of market sectors, including solutions for the increasing amount of returns, typical in the world of omni-channel retailing.
Agenda

Business case
Process improvements
Examples
Business Case

• Labor
• Operating costs
• Efficiency
• Space
• Operational flexibility
• Speed
• Returns
• $ per order, Omni-channel
Business Case: Omni-channel

Phase 1: Get it out the door
Phase 2: Faster & more accurate
Phase 3: Make money doing it
Process Improvements

• System Management
• Receiving-to-Shipping
Process Improvements

- Processing Speed
- Labor Productivity
- Balanced Workflows
- Order Accuracy

- Receive
- Put-away
- Store, Buffer
- Replenish
- Picking, Kitting
- Consolidate
- Pack
- Palletize
- Ship
System Management

- Doorbell is ringing, turn the heat down
- Done first, replace it
- Kid is hungry - Nuke this one
System Management

• Warehouse Execution System
• Optimization
• Visibility & Insight
# System Management

Real time “on-demand” strategies

<table>
<thead>
<tr>
<th>Orders</th>
<th>Equipment</th>
<th>Inventory</th>
<th>Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimize analyze, prioritize, assignment</td>
<td>Optimize analyze to release work</td>
<td>Optimize dynamically slot</td>
<td>Optimize condense activities, workflows</td>
</tr>
<tr>
<td>Execute synchronize inventory with picking</td>
<td>Execute enable dynamic decisions</td>
<td>Execute bypass workflow</td>
<td>Execute user-friendly</td>
</tr>
<tr>
<td>Align order release exceptions</td>
<td>Align best practices</td>
<td>Align smarter location</td>
<td>Align report performance</td>
</tr>
</tbody>
</table>
System Management

- IIoT
- Unifies data
- Data driven decisions

Consolidated data
System Management

Flow
bypass natural order by skipping steps

Inventory
assign work to minimize inventory build-up

Motion
reduce idle time, omit wasted motions

Waiting
continuously flow work to resources without downtime

Overproduction & processing
move workers to priority work

Defects
embed quality control into workflows
System Management

- On-Demand e-Commerce
- wave-based retail/B2B
- hybrid multi- & omni-channel
System Management

Wave based

Push
System Management

Batch Pick to Cart  Wave-less  Put Walls
Levels of Automation

- Manual
- Mechanized
- Automated
Distribution Center
Receiving: Decanting

- Check in
- Remove
- Tote
- High density storage
Receiving: Decanting

• Check in
• Remove
• Tote
• High density storage
Returns
Returns
Temporary Storage

• Pouch system
• Pocket system
Low CapX

- Software
- Tablet
- Cart
Low CapX

• Fast deployment
Put Wall

• Order Consolidation
Pack Wall
Pack Wall
Low Velocity

• Dynamic slotting
Case Picking: Store & Ship
Case Picking: Palletizing
Case Pick: Robotic Palletizing
Auto Replen
Automated Replenishment
Auto Replen
Automated Replenishment
Automated Replenishment
Micro Fulfillment Center

- E-com orders
- Pick up or home delivery
- Fits compact footprint
- Reduce cost & time to pick
- Rapid, same day JIT fulfillment
- Locate inventory close to customers
Micro Fulfillment Center

Ground Chuck
SKU 123456
2lb package
Robotic Piece Picking

• Random bin picking
• Repetitive tasks
Robotic Piece Picking

Inventory totes from storage

Inventory totes back to storage

Order tote positions
Goods-to-Person

• Modular
• Standardized
• Predictable performance
Workstations

• Modular
• Standardized
• Predictable performance
Workstations

• Modular
• Standardized
• Predictable performance
Goods-to-Person

- Dividers
- 5 orders
- Weigh scale
Workstations

• Picking
• Value added services
• Packing
Storage Engine
Goods-to-Person
Workstations
Workstations, Packing

- Sort
- Document insert
- Pack
- Print label
Workstations, Packing
Workstations
One Inventory, Multiple Interfaces

Inventory pick module
Key Takeaways

• Process improvements, software and automation
• Operational excellence & flexibility
• Cost per order & processing time reduced
For More Information

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Or, visit Dematic Booths
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