

SOLVE FOR X.

Order Picking Solutions For Managing Increased SKU's

Presented by:

Perry Ardito

**General Manager - Jungheinrich®
Warehouse Products Group**



Order Picking: The Challenges

- Most complex and oftentimes chaotic process in warehousing due to dynamic changes; from order volume, product movement to SKU fluctuations.
- Most labor intensive process in warehousing
- Costly - errors in picking, fleet size, manpower, incidental damages
- Key industries are being impacted



Order Picking Challenges

- **SKU Growth or Explosion** is a common, and growing issue
- **Slotting** – not having any, enough or proper storage to handle the SKU's or Inventory Levels
- **Productivity** – not having the right quantity or right models to handle the workload
- **Ergonomics** – are the operators most effective during their time to do something by being comfortable in their “office”
- **Safety** – an ongoing concern and ever part of the decision-making process

WERC 2016 Survey – Who was canvassed?

FIGURE 3. RESPONDENTS BY INDUSTRY

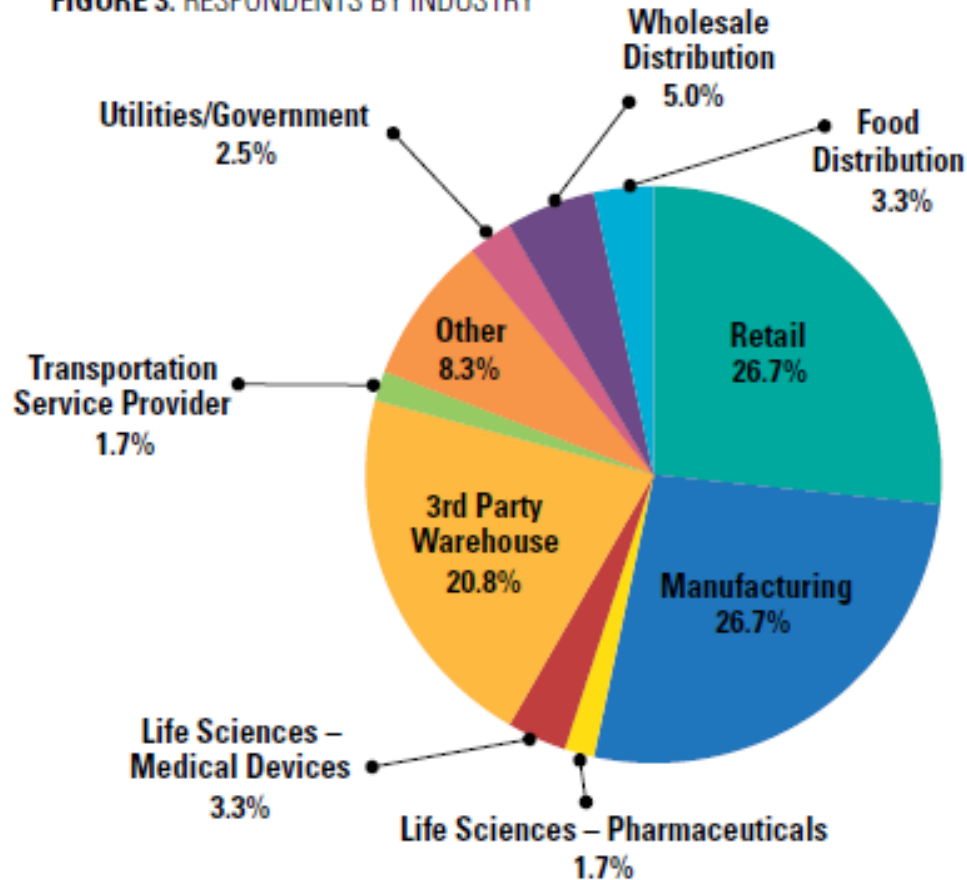
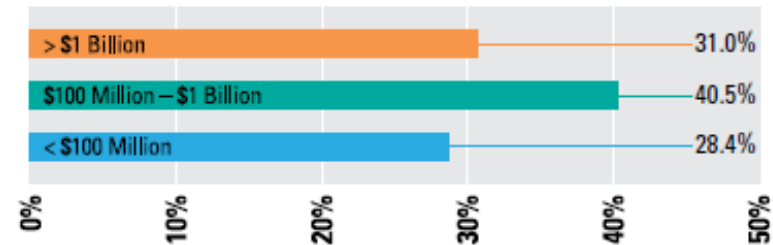


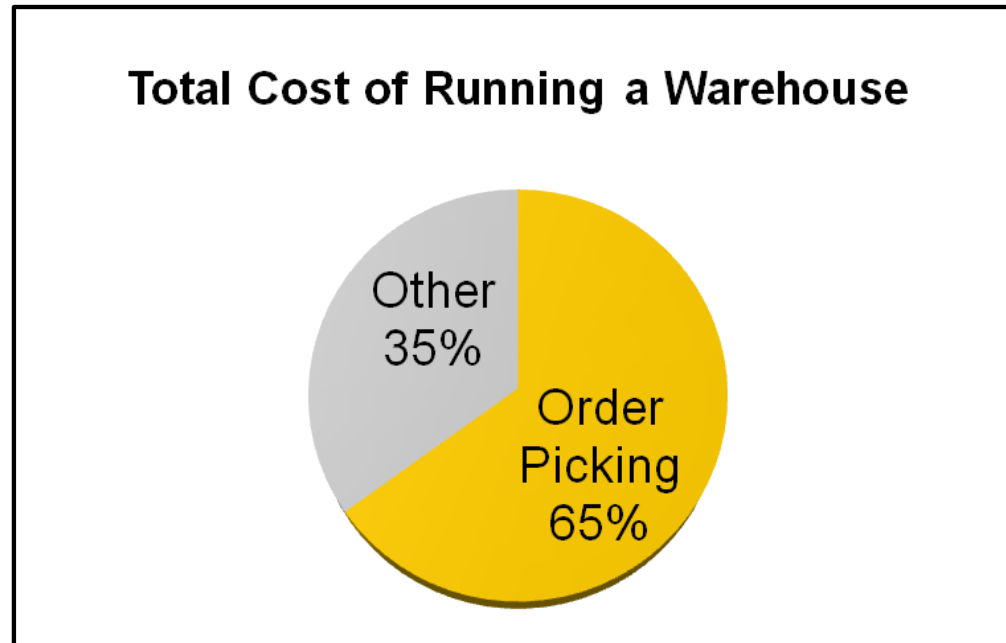
FIGURE 6. RESPONDENTS BY COMPANY SIZE



SOLVE FOR X.

Why do customers care about Order Picking?

Because it's expensive!



WERC Study

SOLVE FOR X.

What order picking type is most common?

TABLE 2. RESPONDENTS BY DC OPERATION			
Operations	2016 % of Total	2016 % Cases vs 2016 % Pallet	2015 % Cases vs 2015 % Pallet
Broken Case Picking	38.0%	66.5%	66.4%
Full Case Picking	28.5%		
Partial Pallet Picking	13.3%	33.5%	33.6%
Full Pallet Picking	20.2%		

■ WERC Study

Full / partial pallet picking will continue to decrease.

SOLVE FOR X.

What metrics really matter?

Metrics – 2016	2015 Rank	2014 Rank
On-time Shipments – Customer	1	1
Average Warehouse Capacity Used – Capacity	6	8
Order Picking Accuracy, Percent by Order – Quality	5	5
Dock-to-Stock Cycle Time, in Hours – Inbound Operations	3	4
Internal Order Cycle Time, in Hours – Customer	2	2
Percent of Supplier Orders Received Damage Free – Inbound Operations	10	7
Peak Warehouse Capacity Used – Capacity	7	9
Lines Picked and Shipped per Person Hour – Outbound Operations	11	6
Total Order Cycle Time, in Hours – Customer	4	3



SOLVE FOR X.

What are the “Key” Objectives?

- Productivity
- Reduced Cycle Time
- Accuracy
- Cost Reduction



Development of Solutions

- Order picking includes the movement of pallets, cases and/or pieces.
- All lift trucks are order pickers
- The challenge is to determine which solution(s) serve the customer best:
 - Equipment type(s)
 - Storage Medium
 - Technologies
 - Quantities

Understanding the Application

Getting the Details

Order Profile – Orders per Shift or Day

Velocity or Throughput Report –

(movement of product over time; to include pallets, cases, etc.)

Analyzing the Warehouse

Racking layout

- lift heights
- clear aisle dimensions
- rack levels
- vertical clearances

Inventory Analysis

- Inventory mix, and quantities by product (SKU)

Order Profile Summary

- **Pallet Dimensions:** 1) L 48" x W 40" x H 50"
- **Load Weights:** Avg. - 1,800 lbs.
- **Work Hours**
- 1 Shift: **X** 2 Shifts: ____ 3 Shifts: ____
- Number of Days Worked per Week: 5
- Hours per shift: 8
- Lunch: 30 Minutes Breaks: 2 x 15 Minutes each
- **Total Effective Hours: 7**

<u>Full Pallet Picking</u>	<u>Average</u>
• Number of Orders / Day:	200
• Number of Lines / Order:	5
• Number of Pallets / Line:	1
• Number of Pallets Picked per Shift:	1,000 (divided by 7 Hours)
• Average Pallets Picked per Hour:	145

Order Picking Alternatives

- Low-level versus High-level
- Based on the customer's objectives, utilizing unique alternatives of equipment that will help to achieve those goals.

SOLVE FOR X.



Order Picker Options

SOLVE FOR X.



SOLVE FOR X.

High-Level Order Picking – Full Pallet Picking



SOLVE FOR X.

High-Level Order Picking – Case Picking



SOLVE FOR X.

Automation



SOLVE FOR X.

Target Industries

Beverage Industry - The SKU Explosion

No longer able to bulk stack, or continue to use antiquated picking methods.

- 150+ **Different Flavored Waters**
- 100's of **Nutritional Drinks** (protein, vegetable)
- 4,000+ **Craft Breweries** + Cider + Coffee
- 5,000+ **Breweries**, with **2** new each day!
- 200 SKU's to over 1,000
- **Spirits and wine industry** is exploding too.



SOLVE FOR X.

Grocery Industry

- No industry relies on high throughput, cost-effective picking practices than this, due to traditionally low margins (therefore operator incentives)
- Inventory turns = higher volume = higher revenue = PROFITS
- More SKU's to satisfy (retain) more customers within their stores



SOLVE FOR X.

Retail Distribution

- Storage density and productivity is key
- Increased SKU's (think Amazon)
- Customer orders picked and shipped as quickly as possible.
- “One-Stop Shop” so that we stay on their websites longer, and return more often.



Cold Storage

- Coolers and freezers are being built taller, with increased storage density
- Productivity / inventory turn is key in justifying this very expensive real estate
- Need equipment that is reliable, offering exceptional runtimes
- Keep the operators working longer, up to 30% more per shift, using heated cabs



SOLVE FOR X.

For More Information:

perry.ardito@mcfa.com

Website: www.jungheinrich-lift.com

Or visit ProMat Booth - #3603