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Optimizing Orders to Drive Operational & Environmental Savings

Introduction

Charlene Sedgewick

Manager, Supply Chain Solutions

Charlene is a Lean Six Sigma certified Green Belt. She has extensive project management experience having previously worked for several large CPG organizations where her responsibilities centered around driving efficiencies and reducing waste. Charlene's 25 years of Supply Chain expertise brought her to CHEP in 2016 to embark upon her career in consulting where her primary role is to identify organizational inefficiencies and implement holistic margin management.

Charlene holds a Computer Programming degree from DeVry Institute of Technology and a Business Degree from Sheridan College.

Overview & Agenda

- This webinar will discuss how to change processes in order to eliminate inefficient ordering leading to reduce DC labor costs, improve dock capacity & on shelf availability while generating a positive environmental impact

Agenda

- Inbound Handling
- Causes of Case Handling
- Combating Inefficiencies
- Order Optimization
  - Example
  - Benefits
  - Actions for Optimization
- Questions

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Inbound Handling Costs

Inefficient ordering increases operational costs

- Efficient ordering often accounts for 40-45% of the direct labor costs within a distribution center
- Handling individual cases due to inefficient ordering (not in a layer or full pallet) adds even more labor costs
- We have identified with many of our retail and wholesale customers an additional cost of up to 44% due to handling individual cases

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Causes of Case Handling

The inefficiencies that cause case handling exist within retailers, wholesalers and manufacturer's supply chains processes

Retailers

- Inaccurate MOQ entry
- Too frequent order patterns
- Inefficient DC reporting & processes
- Conflicting objectives

Manufacturers

- Inaccurate master data
- Frequent packaging changes
- Poor communication process with retailers
- Inefficient 3rd party logistics reporting & processes
- No ongoing volume review by SKU

Wholesalers

- Inaccurate master data
- Poor communication process with retailers
- No ongoing volume review by SKU
- Conflicting objectives

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Combating Inefficiencies to Save

Eliminating the need to handle inefficient orders

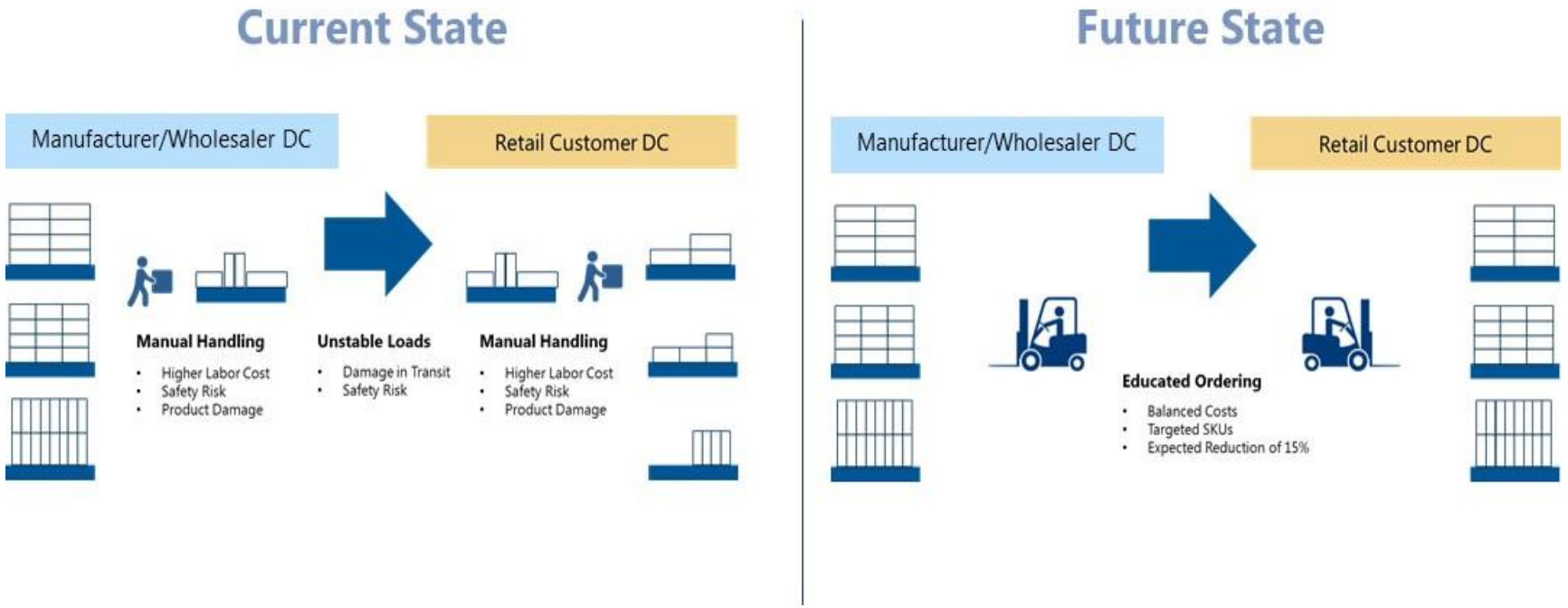
Order Optimization

A quantitative analysis of historic order data to provide minimum order quantity (MOQ) recommendations[1] for each SKU & DC that result in product being shipped in full layers or full unit load (pallet) to eliminate inefficient ordering and generate cost & environmental savings

[1] *Retailer's days on hand inventory targets are not exceeded*

Order Optimization

Optimal ordering generates end to end efficiencies



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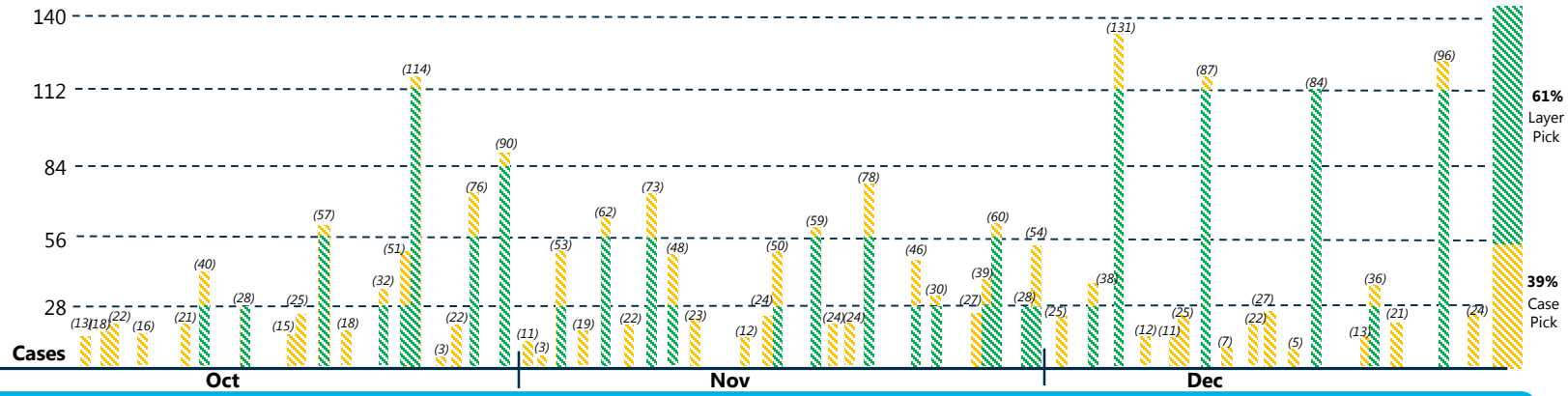
Order Optimization - Example

One SKU shipped from one Manufacturer's DC to one Retailer DC

Current State Ordering Pattern

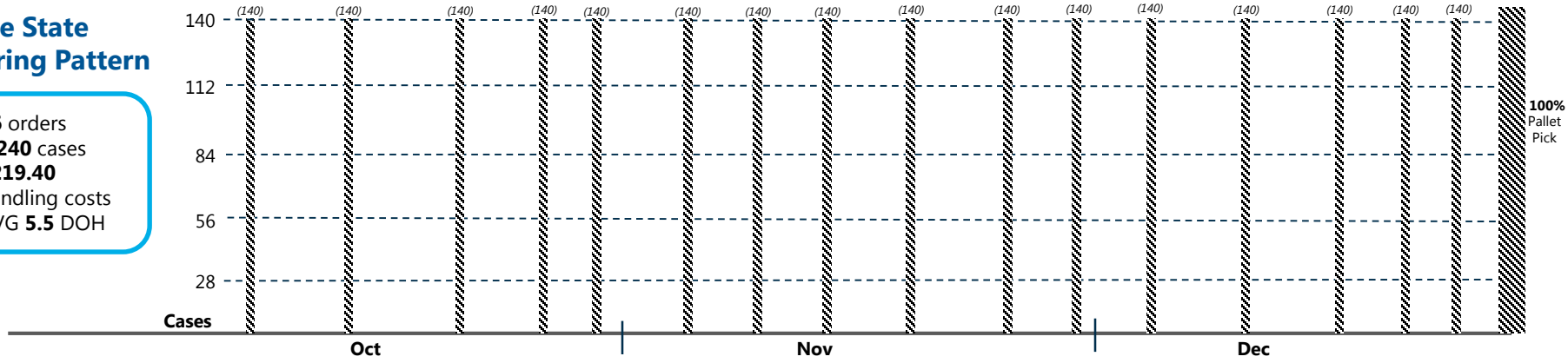
- **58** orders
- **2,194** cases
- **$466.48** handling costs



$247.08 saved in handling costs

Future State Ordering Pattern

- **16** orders
- **2,240** cases
- **$219.40** handling costs
- AVG **5.5** DOH



Quantity case-picked

Quantity layer-picked

Quantity pallet-picked

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Benefits

Optimizing ordering results is a win/win situation for Retailers, Wholesalers & Manufacturers

Retailers

- Reduce DC handling costs
- Increase dock capacity
- Product damage reduction
- Reduce lumper costs
- Improve OSA
- Reduce OS&D
- Visibility to sku discontinuation
- Increase warehouse utilization
- Enable Automated DC efficiencies
- Reduce waste & empty miles (positive environmental impact)

Manufacturers & Wholesalers

- Reduce DC handling costs
- Product damage reduction
- Reduce lumper costs
- Improve OSA
- Reduce OS&D
- More stable unit loads
- Gain transportation efficiencies
- Improve inventory accuracy
- Enhance retail partnership
- Reduce waste & empty miles (positive environmental impact)

Benefits – Retail Savings

Conventional Retail DC benchmark data

Benchmark Labor Savings:

Using conventional retail DC benchmark data, a reduction of 25% layer & casepicked inbound product would result in $1.4MM annual savings in labor costs

Average daily inbound cases 145,000	Average DC worker wage $20.00/hr. (excluding benefits,etc)	Case handling inbound orders 44%	Receiving rate cases/hr Full pallet: 504 Layer: 210 Case: 175

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Benefits – Retail Automation

Automated Retail Distribution Centers

Benchmark data:

Automated retail distribution centers report an average of 54 units loads daily that require manual intervention resulting incremental costs and delays in moving product to stores

The Unit Load Specifications Committee has been formed to rewrite guidelines for building efficient unit loads for automated & non-automated retail distribution centers. Educated ordering, through Order Optimization, can result in 37% less manually touched unit loads.

Actions for Optimization

Changing processes to create efficiencies

- **Review Item Specific Master Data**
  - **Master data must be accurate for each SKU**
    - Retailers claim on average 40% of Ti/Hi data in their replenishment system is incorrect
- **Review Distribution model**
  - Understand order frequency
  - Warehouse vs. Assembly (FLOW)

- **Align on Objectives / KPI's**
  - Are there conflicting objectives between Replenishment & Warehouse?

Actions for Optimization

Changing processes to create efficiencies

- **Analyze Current State**
  - **Use 3 months of recent order data to identify focus areas**
    - By Distribution Center
    - Department / Category
    - Vendor
- **Determine Root Cause**
  - **Identify the drivers behind case handling**
    - Inaccurate Master Data
    - Data entry error
    - Volume related

Actions for Optimization

Changing processes to create efficiencies

- **Implement change**
  - **Taking Days on Hand (DOH) inventory target into consideration, apply recommendations for optimal ordering**
    - Change order multiple to layer quantity
    - Change order multiple to ½ pallet quantity
    - Change order multiple to full pallet quantity
    - Change order multiple to truck load stack quantity
    - Discontinue the item

Actions for Optimization

Changing processes to create efficiencies

- **Measure**
  - **Monitor benefits for 3 months to track……**
    - Order multiple changes are sustained in Replenishment systems
    - Savings are being achieved
    - Inventory targets are not exceeded

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Questions??

Thank you

Please direct any addition questions or comments to ….

Charlene Sedgewick
Supply Chain Solutions Manager
CHEP North America

Charlene.Sedgewick@chep.com
905-301-1186