

SOLVE FOR X.

From DC to the Consumer: Using Reusable Packaging to Optimize ecommerce Fulfillment and Distribution

Presented by:

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Today's Reality

- In 2016, e-commerce retail sales increased 15.6% to \$423.34B
- Growth of the e-commerce channel has outpaced the traditional retail channel for 6 years in a row.
- E-commerce retail sales make up for about 8.1% of total retail sales
- Double digit growth predicted through 2020



What are the Supply Chain Challenges?

This growth brings new change and new challenges for companies:

- To efficiently integrate direct-to-consumer orders.
- Identify a better way to handle on-line pick-up orders.
- To integrate these orders into a model that has been setup for direct-to-store.
- To efficiently fulfill orders in locations traditionally focused on consumers.

Our Objectives for Today

Learn how reusable totes, pallets and mobile solutions can impact e-commerce fulfillment and distribution.

The retail environment



Consumers are shopping from all channels

95%

shop both website and store



Consumers want a seamless experience across all channels

53%

offline sales influenced by online behavior



Retailers looking to fulfill closest to the customer

60-73%

want to order online & pickup in store

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Impact on the Supply Chain



Consumer e-commerce Scenarios

- Click and collect
- Home delivery



Fulfilled from DC

- Buy online / pickup in store
- Buy online / ship from store



Fulfilled from Store

- Site-to-store
- Lockers



Inter-Facility
Fulfillment

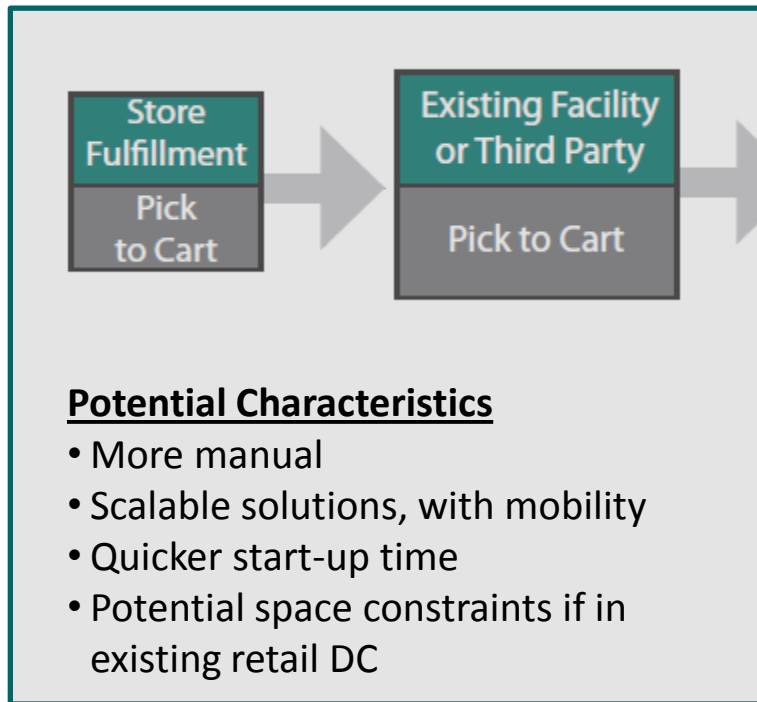
- Customer convenient returns



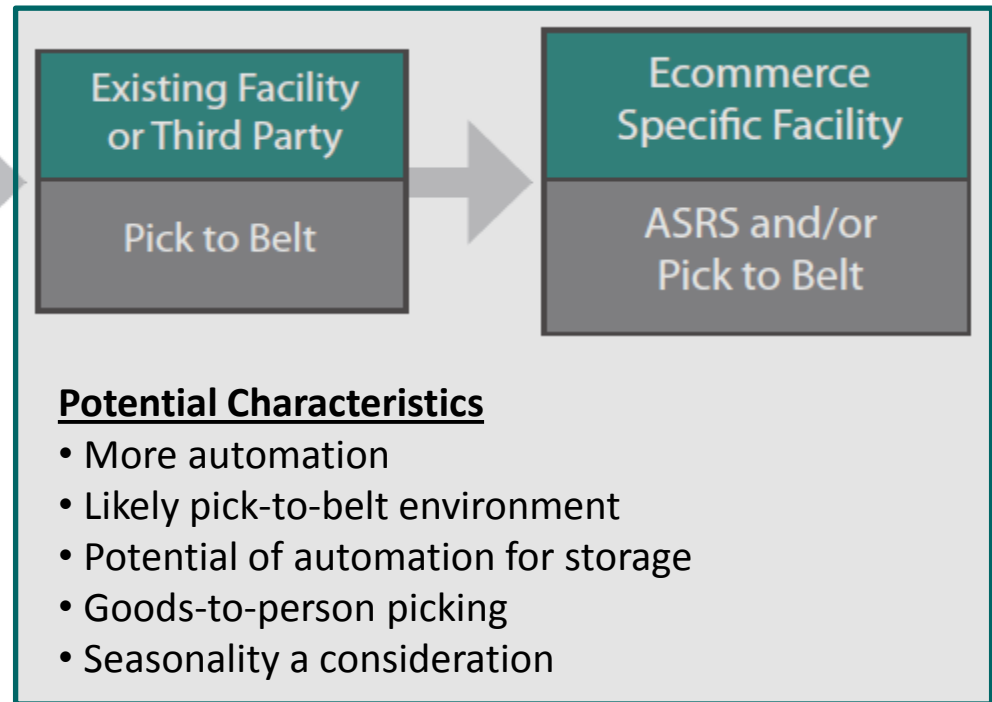
Returns / Reverse
Logistics

Distribution Center (DC) Fulfillment of e-commerce Orders

Primary mechanism: Cart



Primary mechanism: Automated solution



Store Picking/Fulfillment of e-commerce Orders

In the retail aisle, store associate picks orders into totes on a 1 or 2-sided picking cart

Potential Characteristics

- Clean, organized, shopper-friendly retail aisles
- Sequenced totes can be transferred to mobile pallet and staged for customer pick-up
- Minimizes material handling equipment needs
- Mobile solutions easily handled by store associates
- Multi-purpose solutions - picking, staging and car-side deliveries
- Indoor/outdoor



Inter-Facility Fulfillment

Facility associates preparing full pallet loads or floor loaded tote shipments for another facility

- Plastic pallets
- Stack-n-Nest containers or attached lid totes
- OPTE-Bulk containers

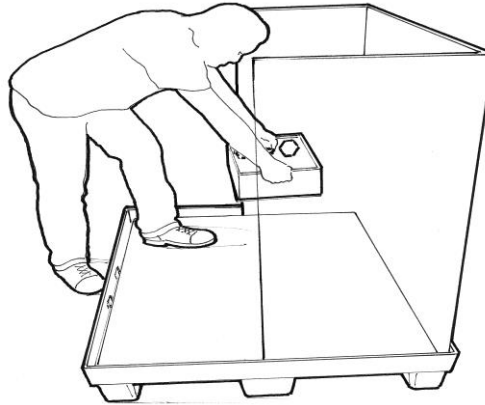


- Stack-n-Nest or attached lid totes
- Small format pallets
- Mobile solutions



Returns / Reverse Logistics

Goal of plastic packaging in this loop is to get product back in ***saleable condition*** and help with the processing of returns.



Packaging Considerations

Tote and Container Style

- 180-degree turn
- Bail arm
- Lids
- Collapsible
- Hopper (open or door)
- Hand-Held or Bulk

Benefits

- Efficient empty storage (up to 4:1)
- Provides stable loads for WIP movement
- Can be palletized for inter-facility movement
- Increased spacing for in / out on cart or other tight pick options
- Increased visibility for shelved systems
- Bulk containers ideal for returns



Pallet & Container Footprints

42 x 30	21 x 15
48 x 40	24 x 16, 24 x 20, 16 x 12
1200 x 1000:	600 x 400, 600 x 500, 300 x 400

Benefits

- Other equipment often set on these standards
- Translates to pallet and trailer cube efficiency
- May not be need now but could be in future



Mobile Pallets and Carts

- Dollies
- Picking Carts (1-sided, 2-sided, collapsible or with shelves)
- Mobile Pallets

Benefits

- Scalable
- Reduces truck load and unload times
- Allows for one-touch merchandise
- Cross-selling
- 1-sided or 2-sided picking
- Retail friendly



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Recommendations

Determine your business objectives

- Looking to reduce touches? Increase deliveries per route? Cut transportation costs? Increase retail associates time towards consumer? Figure out what is important to you so can measure it and show the value that reusables bring to your supply chain.

Balance local needs with an eye towards broader supply chain

- Local decisions could lead to inefficiencies as more movement occurs between locations (Examples: Sizes that don't cube a pallet, products that don't condense well)

Fulfillment method today likely will change in the future

- Establishing standards in certain areas will allow the system to evolve without a complete reset (Examples: Picking totes on carts that could transition to belt in future and keep pick unit the same)

How to Get Started

1. **Analyze your product flow** - Collaborate with packaging suppliers
2. **Prove** – Use learnings and identify cost and environmental savings
3. **Design** – Create the best solution
4. **Implement** – Rely on suppliers to help test, pilot and ultimately seamlessly implement.
5. **Evolve** – Always be open to new ideas. Review your system on a regular basis to ensure packaging efficiencies are still there.

Sources

- <https://www.emarketer.com/Article/Worldwide-Retail-Ecommerce-Sales-Will-Reach-1915-Trillion-This-Year/1014369>
- <http://www.businessinsider.com/e-commerce-growth-has-hit-a-two-year-high-2016-8>

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