Agenda

• Current Logistics Issues
• Logistics Disruption: Ecommerce
• Traditional vs Ecommerce Logistics
• Next Steps
• Principles for E-Supply Chain success
Current Logistics issues

- **30%**: Reduction in transportation costs by using a TMS
- **28%**: Of a company’s transportation costs are last mile logistics
- **50%+**: Of those who adopt lean logistics practices report immediate improvement
- **TODAY’S SOFTWARE**: Can measure and analyze just about anything, giving you a good chance of success at any logistics venture
- **YOU CAN’T JUST BUY AN EXPENSIVE TMS**: And expect to start seeing results right away
- **8.1%**: Of total sales is the average retailer’s reverse logistics costs for consumer goods
Logistics issues

69% of customers think of great customer service as quick resolution of problems
Logistics disruption: Ecommerce
How Ecommerce disrupt logistics

• The difference between manufacturing and retail is starting to get fuzzy
• More manufacturers are becoming drop-ship suppliers, and have to support a business-to-consumer (B2C) distribution model.
• Manufacturers have to decide to better get in the game and sell their products directly to the consumer, or an Ecommerce platform is going to do it, taking revenue and margin that could have been captured
• In the past, manufacturer supply chains often included master distributors, distributors, and retailers.
• Each party earned a margin, driving up overall costs.
• **Ecommerce has made personal relationships less important, and shortened the distribution channel**
How Ecommerce disrupt logistics

• Another change is the consumer-like behavior of many industrial and manufacturing customers. "They want their orders fulfilled quickly, at a price they want, and delivered where and when they want!"

• E-commerce has accelerated the speed with which order volumes move both up and down the supply chain.

• Another challenge facing some manufacturers is growing pushback from retailers that are also struggling to manage changing consumer expectations,

• Meeting customers' expectations, always a challenge, has become even more demanding.

• A firm can lose customers if it fails to meet expectations, yet the complexity of fulfilling all orders, across all channels, accurately and on time, is significant.
Role of Social Media…

- Having technology that can provide inventory visibility across channels and drive proactive management is critical for both business-to-business transactions and direct-to-consumer sales.

- Critics find it easy to be vocal when companies fall short.

"Social media opens brands/firms to a tremendous amount of exposure!!"

Traditional vs E-Commerce Logistics

Potential Trouble Areas in e-commerce Fulfillment

- Small number of pieces per order
- Extreme peak season volumes
- Fast 24 to 48 hour delivery
- High volume of returns from end consumers
- High potential for brand damage from poor fulfillment performance
- Real-time, accurate inventory and order visibility
<table>
<thead>
<tr>
<th>Log. Activities</th>
<th>Traditional</th>
<th>Ecommerce</th>
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<tr>
<td>Order Patterns</td>
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<td>Order Cycle</td>
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<td>Size of shipment</td>
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<td>Replenishment</td>
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<td>Warehouse configuration</td>
<td>Static/Unchanging</td>
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<td>Distribution network</td>
<td>Trucking/Point 2 point</td>
<td>Express/Hub&amp;Spoke</td>
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Challenges to international Ecommerce logistics?
- Speed x Flexibility
- Cultural Diversity
China’s “singles day”
E-Commerce Fulfillment

Locker Solutions

Drones?

Singapore Post, Like Amazon, Tests Package Delivery by Drone

Chinese delivery company develops drones which can fly packages to your doorstep

The drones, designed by SF Express, can fly to altitudes of 100m and deliver packages to remote locations

New trials for delivering goods by drones

By Richard Westcott
Transport correspondent, BBC News

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E-Commerce Logistics Enablers

LOGISTICS TECHNOLOGY

Visibility, accessibility and connectivity along the supply chains

- GPS tracking
- Mobile computing
- Big data analytics
- Supply chain control tower
- Wearable technology
- Robotic butlers
- Omni-channel fulfilment
- IoT & RFID
KSF for Ecommerce Logistics

Modern Logistics Facilities

- 10,000 s.q.m or more
- 5.5m or above
- Large floor area
- High ceilings
- High load tolerance
- Wide column spacing
- Wide truck yard
- Elevated berths
- Dock leveler
- Ramp ways
- Elevator with large capacity
KSF for Ecommerce Logistics

Warehouse Set up Equipment

Receiving -> Put-away -> Storage -> Picking

Delivery -> Sorting -> Packaging
KSF for Ecommerce Logistics

Warehouse Operation Flow
Six steps designed to establish the foundation of an optimized order fulfillment system

1. Classify inventory
2. Match inventory to storage technology
3. Slot inventory within the storage technology
4. Automate to reduce cost
5. Map processes and workflow
6. Integrate business systems to maximize visibility

Enhances both productivity and accuracy
Integrate business systems to maximize visibility

KSF for Ecommerce Logistics

Own Ecommerce Website
3rd Party Ecommerce Platform
Branch/Shop 1
......
Branch/Shop n

ERP SYSTEM

Order Management System

Finance System
......
Sourcing System

Warehouse Management System (WMS)
Warehouse Control System (WCS)

Conveyor Module (PLC)
Lift Module (PLC)
Sorter Module (PLC)
...(PLC)

Field Bus/Ethernat/...

Components
......
Components

Components

Field Bus/Ethernat/...
Next steps…

• The customer centric supply chain
• supply chain organizations are expected to delight customers
• Gone are the days of one-size-fits-all
• Need to create customized supply chain
• Shift to leading indicators
  – This will require employing a mix of artificial intelligence and machine learning to arrive at signals that can act as proxy for leading indicators.
  – It also requires greater interaction between a company's supply chain organization and its sales and marketing functions.
• Improved predictive capacity is key
Next steps…

- One important factor for success in an omnichannel, e-commerce world is an order management system that allows you to see the inventory across all channels in real time.
- The system should be able to determine the optimal fulfillment source for each product, based on its location, and customer's location.
- Selecting 3PL with a network of facilities can provide the flexibility needed to manage inventory and orders across multiple locations and to accommodate growth.
- Flexibility is needed today within firm’s own operations.
The future?

• Blockchain can offer hope for new entrants to get in on a trusted and standardized platform
• Many shopping malls will be repurposed into warehouses
• Transportation rates will continue to rise
• Labor shortages exist in many supply chain functions, boosting competition for qualified candidates
  - 3PLs can offer the flexibility of sharing labor across multiple customers
• The supply chain of the future needs to be a front-and-center competitive edge.
Principles for E-Supply Chain Success

1. Strategy, people, process together with technology
2. Continual interest and commitment to innovation and improvement
3. Open and collaborative – think digital ecosystems
4. Internal transformation equally critical as external