North American E-Commerce Supply Chain Strategies

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Presented by:

Bryan Jensen

Vice President/Principal

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Agenda

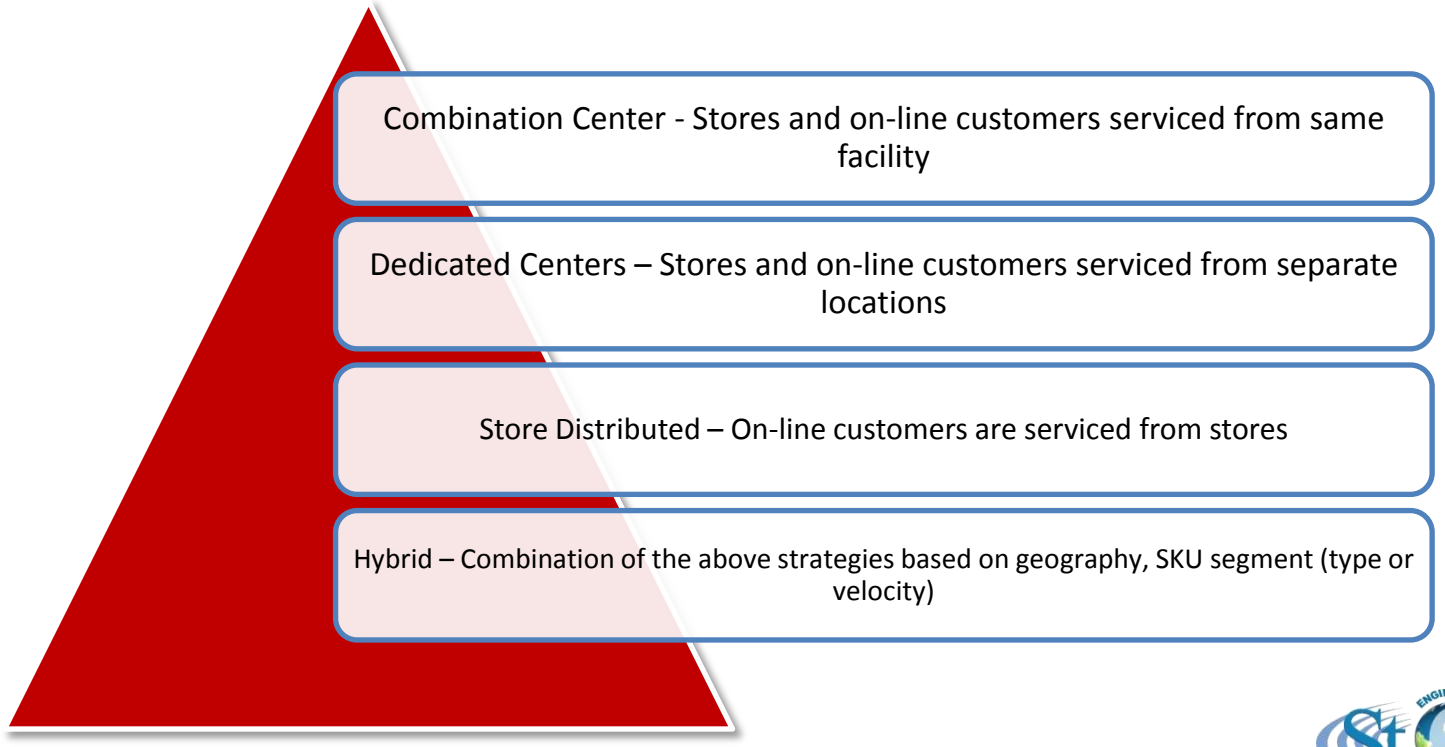
- Client Experience Background
- Logistics Strategies Review
  - "Types" of Networks & their Business Drivers
    - Cost
    - Cycle Time
    - Manageability
  - Pros/Cons
- Customer Communication
- Face to the Customer - Order Entry System Considerations
- 3PL vs. Internal Distribution
- Returns
- WMS Considerations
- Forecasting
- Specific Network Examples
- Conclusions

Direct to Consumer Experience

- H&M
- Finish Line
- The Children's Place
- Sears
- Target
- HSN
- Shopko
- Zale Corp
- Netshops.com
- eFollet
- Walmart
- Golfsmith
- TJX
- Toys "R" Us
- QVC
- Gap Direct
- Home Depot
- Urban Outfitters
- Rue La La
- L.L. Bean
- David's Bridal
- Staples
- Office Depot
- Office Max
- Sephora
- Ikea
- West Marine
- Liberty Interactive
- Zulily
- B&N.com
- Budgetext
- Petfooddirect.com
- LTD Commodities
- Nordstrom
- Williams-Sonoma
- S5A.com
- Dell
- Chico's
- Scholastics Books
- Foot Locker

Network Types

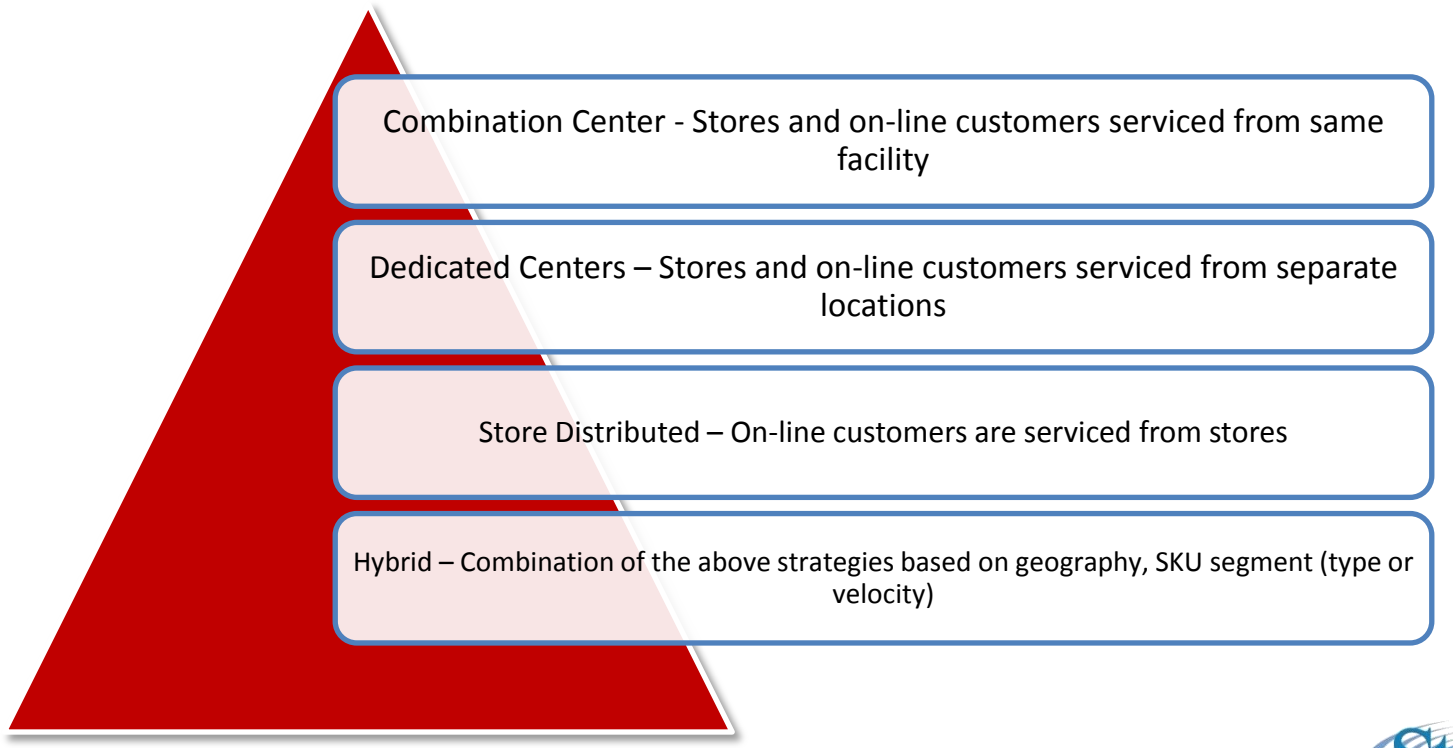
There are several basic network types and configurations for servicing direct to consumer customers. Those that are pertinent to our discussion and are detailed in some of the slides that follow are:



Network Types – Location Strategy

- Single vs. Multiple locations – Strategy complexion that can apply to any of the identified network types

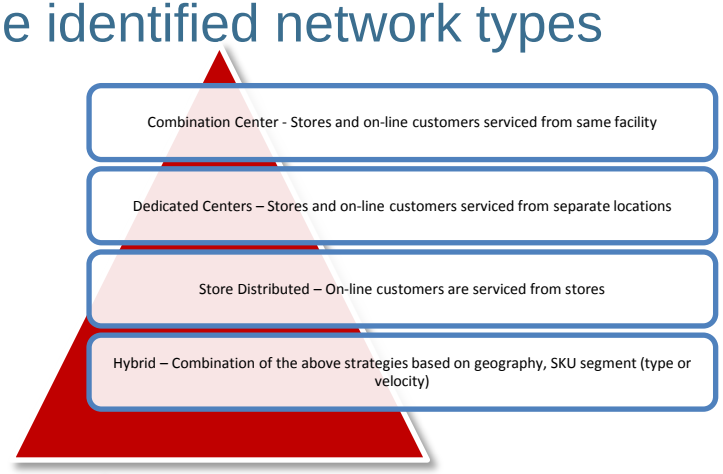
Single Location

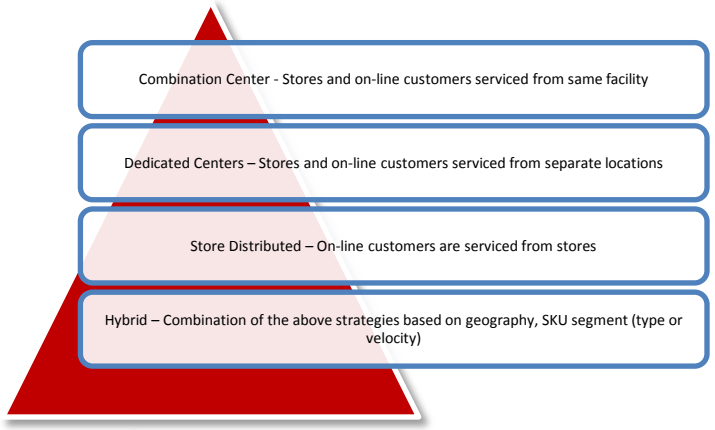


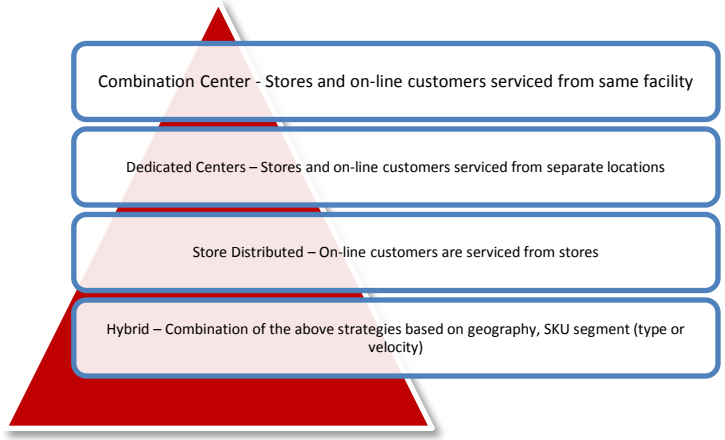
Network Types – Location Strategy

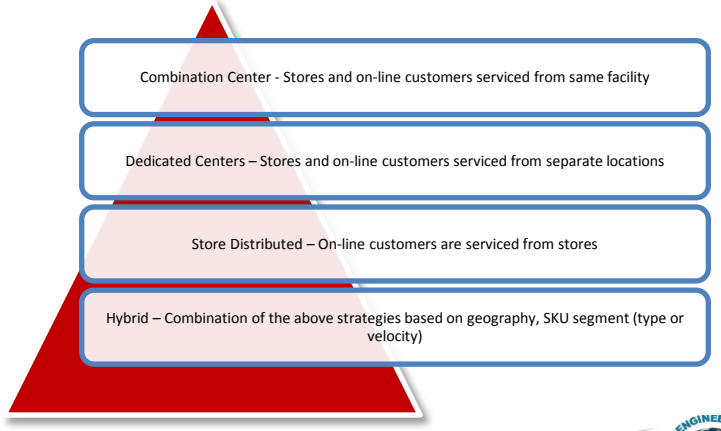
- Single vs. Multiple locations – Strategy complexion that can apply to any of the identified network types

Multiple Locations

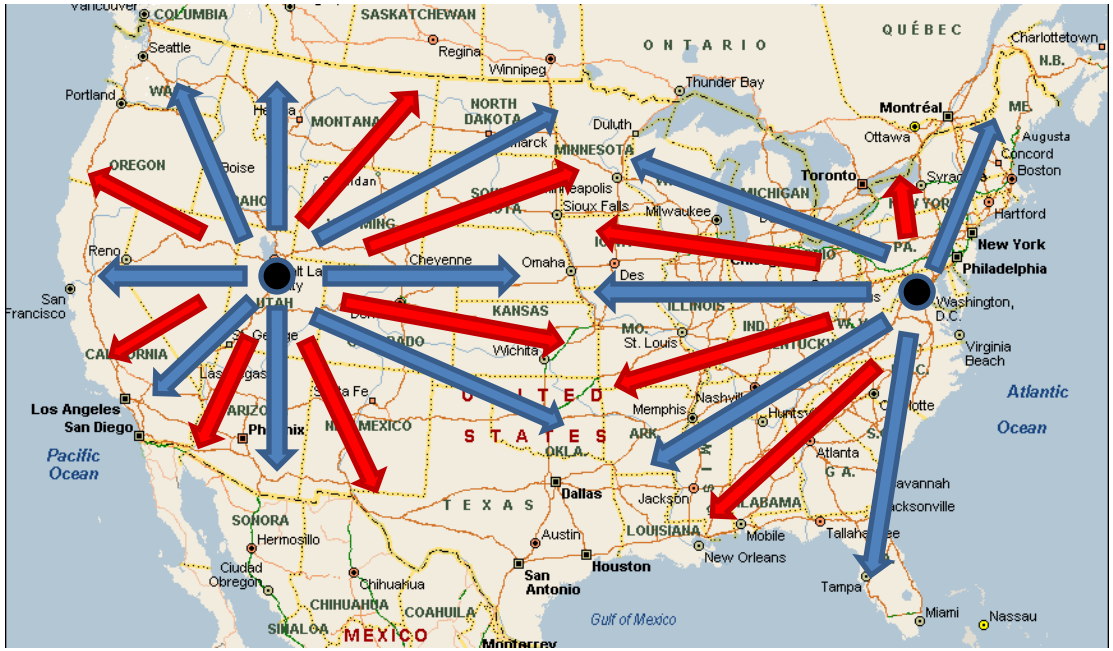








Combination Center(s)



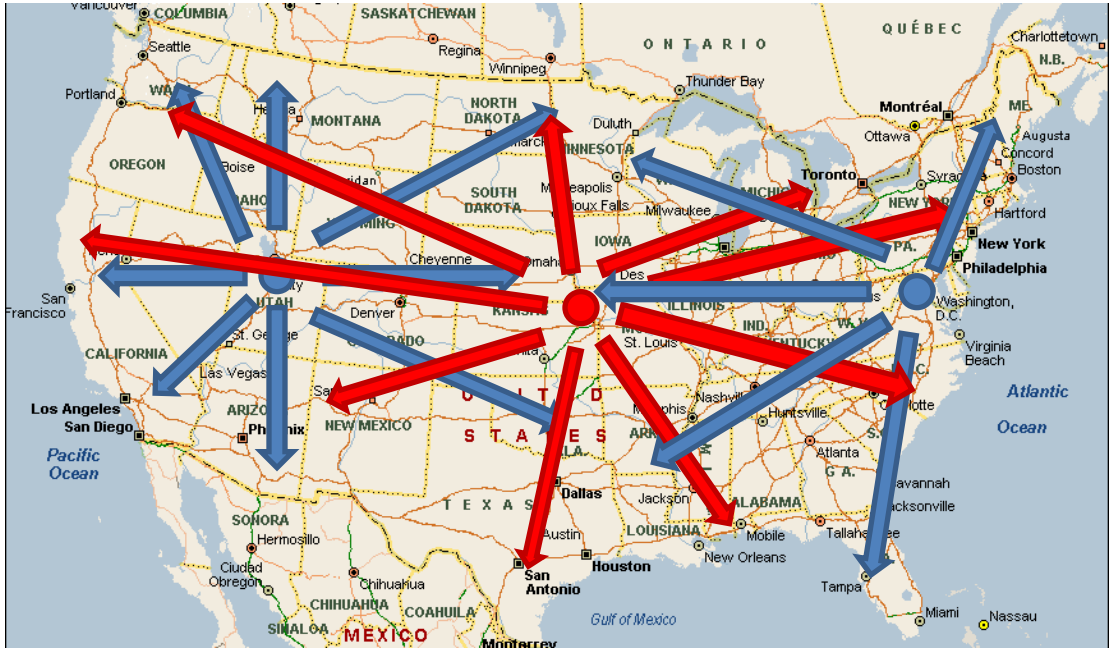
- Stores and on-line customers are serviced from same facility
- This can be a single facility or multiple facilities (as shown to the left)
- Service areas (store and direct to consumer can overlap)

- Reduces the cycle time to on line customers vs supporting a fewer number of dedicated fulfillment centers
- If the operation's size is appropriate this approach can reduce cost to serve e-com customers as compared to separate facilities by allowing for economies of scale when combining shop replenishment and e-com distribution
- Inventory allocation by channel must be defined. Depending upon strategy inventory penalty can be avoided.
- If separate inventories are maintained with a combination facility for shop replenishment and e-commerce channels, then there will be an inventory increment for multiple location stocking

Store service

Direct to consumer

Dedicated Center(s)



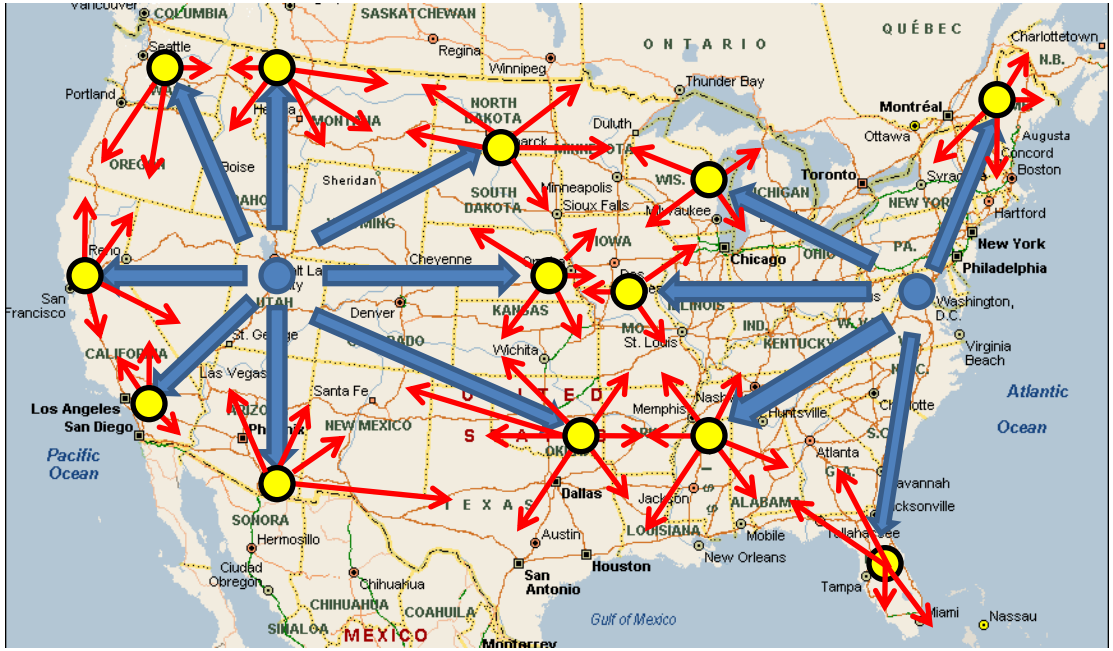
- Stores and on-line customers serviced from dedicated facilities for each channel
- Can be a single facility or multiple facilities. Number of each can be developed independently (as shown to the left)
- Service areas (store and direct to consumer can overlap)

- Multiple Direct to Consumer locations reduces cycle time to on line customers
- Often developed when store replenishment facilities are already fully utilized (generally in a network with multiple store servicing DCs)
- If operation size is appropriate can reduce cost to serve e-com customers as compared to combination facilities. Enough volume for pick and pack leverages a technology investment to reduce labor, throughput and/or order cycle time
- Inventory allocation by channel (store vs e-com) must be defined
- Inventory increment for multiple location stocking compared to a combination center **with shared inventory**

Store service

Direct to consumer

Store Distributed



- This network type allows for direct to consumer customers to be serviced from stores
- The servicing store is selected based on inventory availability and proximity to the customer
- Service areas overlap extensively based on where inventory is available

- Extensive store locations reduces transportation cycle time to on line customers (if cut off time for parcel pick up is not unusually early)
- Generally used at lower volumes of e-com demand (with a few pioneering exceptions)
- Inventory visibility by store is critical
- Usually implemented with no negative inventory impact (inventory is not stocked at the stores solely for direct to consumer business)

Store service

Direct to consumer

Store Locations

Store Processing Limitations

- Low volume limit per store
  - Labor “excess” is utilized
  - Additional labor assigned to stores to specifically to service e-com (assuming all stores are servicing candidates) quickly drives too high a labor component
- Accuracy and quality of the ‘fulfillment center’ labor at the store can be a challenge in some ways
  - Accurate picking (right item)
  - Finding the item (false out of stock)
  - Item quality (shop wearing)
- Store level inventory inaccuracy can create customer disappointment (false in stock at the time of order)
- Split shipments are common and this can impact some business’ customer experience
- Uncertainty of providing service levels as communicated on the website
  - Varied cut off times for various store locations
  - Store commitment to e-com service vs. in store customer

Store Level Fulfillment Strategy

- Pros
  - Proximity to the customer can be unparalleled
  - In stock position odds greatly increased
  - Can move stagnant store inventory cost effectively thus is a good approach to make slow stock directly available to as many customers as possible
  - Requires little infrastructure for a start up e-com operation
- Cons
  - Customer experience may suffer
    - Store staff executes picking and packing
    - Decentralized processes make consistency difficult
  - Split shipments often the norm
  - Freight charges to the customer can be difficult to calculate unless performed dynamically with recognition of customer location and geographic inventory availability

Multiple Fulfillment Centers

- Having multiple locations from which to fulfill direct to consumer orders (whether they are only fulfillment centers or cohabitate with store replenishment centers) offers the following advantages and disadvantages:
  - **Pros**
    - **Lower cycle time to customer**
    - **Passive business continuity support**
    - **Ability to balance volume at peak (may drive suboptimal freight cost or transit time service)**
    - **Can differentiate items by center**
      - **Parcel product in more central locations**
      - **"Freight" or home delivery product (appliances, furniture) can be inventoried closer to customers**
  - **Cons**
    - **Multiple inventories to manage**
      - **Potential inventory increment required**
      - **Dealing with out of stock positions at the optimal FC**
      - **Split shipment option/dilemma**
    - **Economies of scale require greater total volume to be realized over multiple facilities. Ensure you are not spending more to process product by spreading it over multiple facilities.**

Single Fulfillment Center

- Having a single location from which to fulfill direct to consumer order (whether it is only a fulfillment center or cohabitate with store replenishment centers) offers the following advantages and disadvantages:
  - **Pros**
    - **Greatest concentration of volume to leverage economies of scale or technology investment**
    - **Inventory benefit of single location**
      - **Lower inventory level**
      - **No complexity for in and out of stock conditions**
      - **Unified shipment for all in stock items**
  - **Cons**
    - **Generally longer cycle time to customer than multiple locations (assuming the same freight costs)**
    - **Single point of failure for service interruption**
    - **Size can become unmanageable**
      - **Staffing of large demand FC's at seasonal peak can be very challenging**
      - **Capital investment to meet single location demand *may* be unjustifiable in high volume environments (as compared to a second location)**

Customer Service Communications

Inventory Availability

- Good – Feedback on item availability after order is placed
- Better – Feedback on item availability during order process
- Best – Feedback on item availability upon viewing the item
- Exceptional - Ability to request order upon availability, pre-order, and/or notification of item availability

Order Confirmation

- Good – Email confirmation of order placement, arrival range estimate (estimate also at time of order)
- Better – Email confirmation of order placement, processing, arrival date
- Best – Email confirmation of order placement, processing, shipped, arrival date
- Exceptional – Pre-order with price guarantee and automatic order drop upon receipt or cancellation after a predetermined waiting period. E-mail notification follows automatic activity

Order Transit Status

- Good – Email notification of shipped status date and expected arrival date
- Better – Email shipped status date, carrier ID and tracking number
- Best – Email shipped status date, carrier ID & tracking number, link to carrier site
- Exceptional – Additional email to customer actively communicating order delivery

Face to the Customer – Order Entry System Capabilities

The following capabilities are common in best in class direct to consumer businesses

- Inventory Visibility and Position
  - In stock position visibility is the rule
    - Customers can see if the item in their size is available (as well as all sizes for which it is available)
  - The system has an understanding of multiple site inventory locations and inventory availability by location (this does not mean the customer is necessarily aware of multiple locations while shopping)
  - Multi-line order with multiple in stock locations are identified for the customer upon the customer identifying their ship to location.
    - This is usually achieved through customer account log in
    - Options can also be communicated once a shipping address is obtained (when a client moves to check out)
    - “Tell us where you are” queries to identify state sales tax application, transit times, shipping charges and/or shipping options is common. (The tax issue will be become more common in the US in the future.)

Face to the Customer – Order Entry System Capabilities

The following capabilities are common in best in class direct to consumer businesses

- The customer can be offered the choice of receiving all their items in one shipment or in separate shipments
- They are also informed of differences in freight costs and expected arrival times if they select single or multiple shipments
- The ability to offer a single shipment is driven by the fulfillment center network, and the ability to move inventory between centers in a multiple center network
- There is a significant move towards free standard shipping all the time on all orders (Nordstrom, L.L. Bean, Zappos.com) as well as free standard shipping over certain order spends (Best Buy, Amazon “Super Saver Shipping”). Arrival dates are usually “received by” or between two dates.
- Some retailers (WalMart) will provide free shipping if the product is shipped to a store for pick up.
- If a customer desires expedited shipping (which they then pay for) arrival dates are then very specific single dates.

The more a customer is made aware of where their item is shipping from and how long it will take to receive their item, the better their experience. Fast is almost not as important as correctly communicating how long it will take to receive their item

Face to the Customer – Order Entry System Capabilities

- Notify me when available option
  - This allows the customer to invite additional communication from the e-com retailer to communicate when a desired item is available
  - Particularly useful for an item that is not a pre-sale item but an aged item that may only be available again due to a return
  - May require occasional updated communication to let the customer know you still do not have the item available, but have not forgotten about the customer's request. This allows for the retailer to:
    - Ensure the customer still desires the item and notifications
    - Offer similar items that the customer may want due to similarities to the item for which they have requested notification
- Automatically ship when available
  - Requires understanding of availability timing.
  - How long the customer will wait or wishes to wait can be ascertained though "cancel if not available by" request.
  - Alternately, continuous communication with the customer to ensure they still want the item while awaiting it is utilized.

Face to the Customer – Order Entry System Capabilities

Deployment Strategy for Pre-Sale - To understand the preferred strategy for product that is not yet available we must understand:

- What is most important to your customer?
  - Speed of delivery from time of order/product availability?
  - Cost of delivery?
  - Both?
- If speed is paramount, then multiple locations OR expedited freight (and additional cost) will be required.
- This does beg the question will the additional cost of multiple locations or expedited freight be justified through additional sales?

*No matter which you deem most important, accuracy of shipment arrival information (**saying what you will do, and doing what you say**) is by far the most important factor in creating a positive customer experience – **be it any type of on-line transaction***

3PL vs. Internal Distribution Strategy

- Initial forays into e-com may be best serviced by a 3PL partner with significant e-com experience if:
  - The growth timing/rate and ultimate size of the business is not known
  - The business has significant brick and mortar distribution capabilities, but the pick unit of measure for their store replenishment is not less than case pick to any significant measure
  - The in-house WMS capability is not sufficient for the finite picking, packing and shipping requirements of an e-commerce business
  - Volume is small enough to be handled as part of a multi-client facility and economies of scale can be afforded for low volumes
  - 3PLs may also be a viable option for ONLY a returns center if returns are not significant enough to drive the development of internal expertise in returns processing or an internal returns system is not readily available

Returns Strategy

Significant return levels will demand consideration be given locating where returns are received back from the customer. Considerations will differ depending on the number of fulfillment centers and the presence (or absence) of stores in the company's supply chain.

- Single Location Fulfillment operation – Return best processed back at the fulfillment location for return to stock availability
- Multiple Location Fulfillment operation – Decentralized Returns will decrease return freight if customers are directed to return product to the center closest to them
- Will the retailer pay return freight or the customer?
  - Clearly paying return freight will enhance the customers' experience but will drive toward a strategy to reduce return freight costs if possible by shipping back to the closest fulfillment in a multiple fulfillment center environment.
  - If the customer pays the freight (and the retailer does not perceive a negative sales impact by requiring this) then a single returns location may make more sense
- Single returns location maximizes returns processing efficiencies, but may, if restocked returns are high enough, create an inventory imbalance issue in multiple fulfillment center networks

Returns Strategy (continued)

- The pragmatics of providing shipping material and instructions must be addressed
  - During the on-line return authorization process best in class e-commerce merchants will provide a shipping label on line to the customer as part of the return authorization process.
  - This can be done for a prepaid label or merely an address label to be applied to the return package for a return parcel for which the customer is paying.
  - The exceptional e-commerce retailer, where possible, provides a return label with the outbound invoice as part of a multi-part form and can package soft goods in shipping bags that are reversible or reusable to serve as returns packaging
- Will the retailer allow on line purchases to be returned to a store?
  - This very likely increases the customer experience as the customer has more options (if this is allowed in addition to shipping it back to an appropriate location)
  - The potential downside is selling the product at the store level or dealing with product that may not be in a salable state at store level.
  - Upside is bringing the customer into one the retailers POS locations for further custom.

WMS Considerations

Any WMS considered for fulfillment operations should have the following characteristics or support the listed functional requirements.

- Proven in other direct to consumer applications (deep installed base)
- The ability to move orders from the order entry system to the warehouse process as desired will maximize responsive to customer demands
- The frequent downloads of orders must be balanced with enough time to create efficient batch sizes whenever necessary
  - Customers requirements for next day receipt can make this difficult
- Ability to reprioritize orders automatically as their process deadline or pick up cutoff time approaches is a best in class functionality
- A WMS that is proven to interface with or support the most common direct to consumer applications is preferred:
  - Order Batching Capability
  - RF/Voice picking interface capability
  - Parcel manifesting system compatibility
  - Solid pick line slotting functionality

WMS Considerations

- If the facility is to function as a store replenishment and direct to consumer facility, the WMS must be able to support both channels simultaneously, including:
  - Multiple pick types for a single SKU
  - Potential for inventory sharing between channels
- Any enterprise system (ERP) should provide orders to the WMS in logical ‘buckets’ or sequences to allow for more facile management work flow by the WMS
  - Expedited orders in a separate file
  - Other orders separated and batch for economies of scale
  - Export orders dropped in a separate file
- Frequency of downloads to the WMS should be sensitive to the nature of the order
  - Expedited Orders should be downloaded more frequently
  - Operators should be able to override any download frequency to expedite downloads on an as need basis

» Some WMS applications can perform the sorting and file segregation mentioned above, but not all. If the ERP application can support it you will not be ‘forced’ to ensure your WMS application supports it

Cross Border Considerations

Most North American e-com networks utilize one of three strategies for Canadian customer delivery:

- Direct international parcel delivery to Canadian customers. This assumes no product with U.S. to Canadian export or import restrictions is offered to the Canadian customer base.
- An exporter pool point for all Canadian orders. All daily orders are packaged for final customer delivery, shipped en mass to a freight forwarded at the border. The forwarder administers the export and delivery to the final Canadian customer. This partner may also provide Canadian labeling/language compliance if required.
- If enough product is sourced from the within Canada, or there is enough customer demand in Canada, or a need to service Canadian customer without any possible export delay, an internal Canadian fulfillment center may make sense.

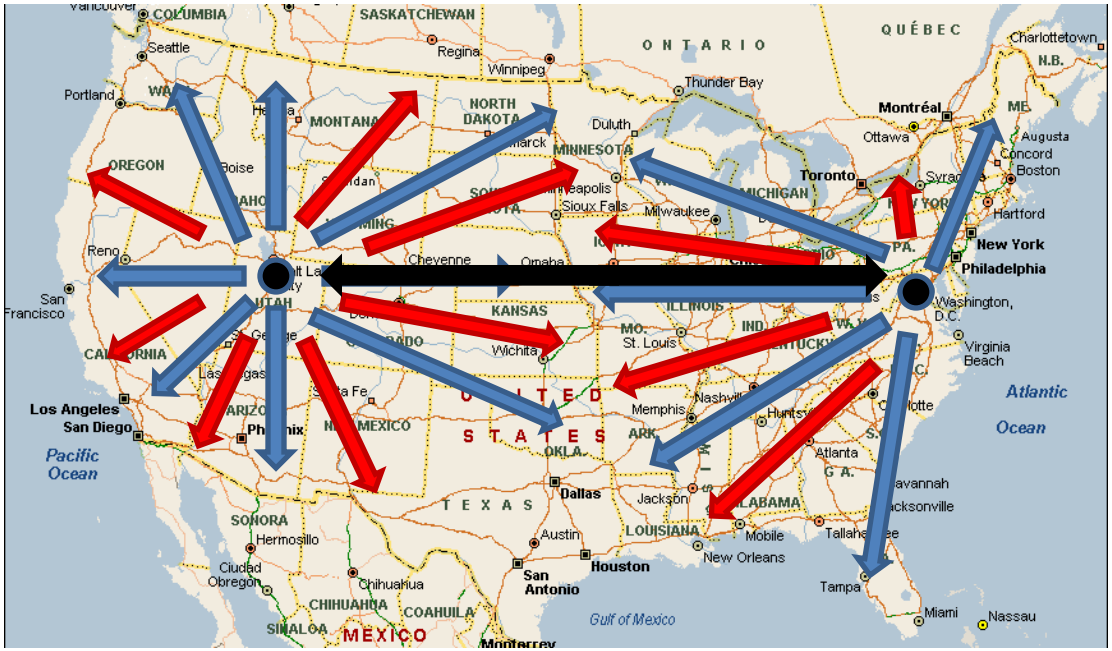
Operations shipping to countries south of the U.S. (Mexico, etc.) are more frequently serviced as a direct international shipment to customer. Freight costs are passed on either directly, or in some proportion to the incremental international freight, to the customer.

Forecasts

- Forecasts will dictate the initial distribution to stocking locations in a multi-facility network.
- This includes split between on-line sales and store sales for dual channel networks.
- Gross forecasts (eastern and western US, cold and warm weather markets) can be very effective in developing an initial differentiated ‘split’ or allocation of product to fulfillment centers
- Most multiple location e-commerce operators realize however that they may likely go out of stock in one of multiple locations. Rather than up inventory to avoid location shortages, many drive a varied decision making process:
  - Ship part of the order from a sub-optimal location if the customer will accept multiple cartons, or wishes as much of the order as quickly as possible.
  - Ship all of the order from the sub-optimal location if the customer wants all items at once as quickly as possible
  - Utilize periodic (i.e. weekly) inter-DC transfers to both rebalance inventory and move key items in to a facility to complete an order and ship it from the facility with the lowest freight costs (closest to the customer)
- The more accurate a retailer’s forecasts, the more finite action they will take up front. The less accurate the forecast, the more flexibility the best in class retail operation will build into their supply chain.

Pragmatic Network Examples

Pragmatic Combination Centers Specialty Retail



- Stores and on-line customers are serviced from same facilities
- Both store replenishment and e-com fulfillment require pick and pack operations
- Bi-weekly transfer shuttles between DCs to balance inventory serve as an option to drive single parcel order shipments

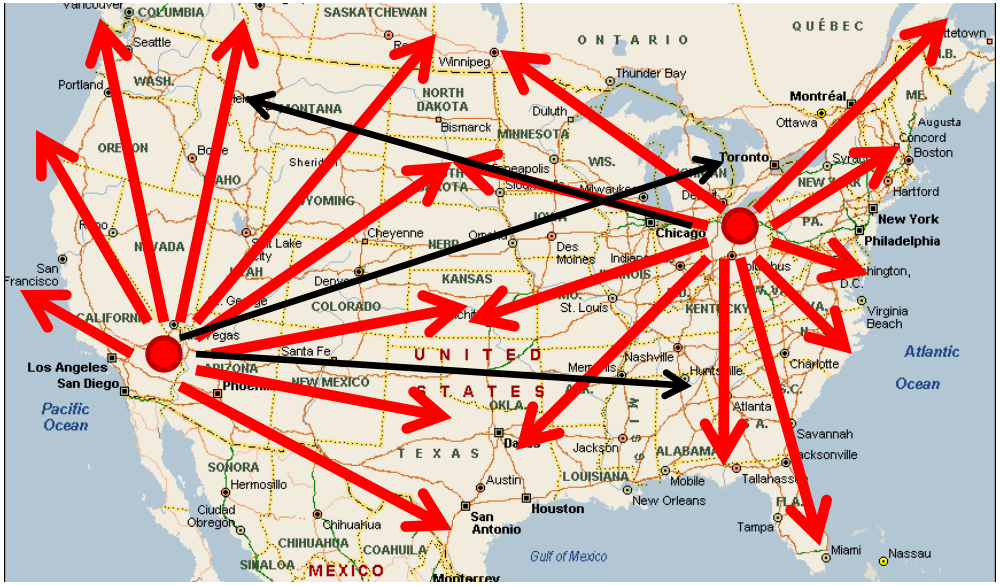
- **A good mix of minimized cycle time to the customer, operating costs advantages and minimal inventory penalty drives this network**
- Order volume is low enough, and inventory cube is small enough that the direct to consumer channel does not really demand its own facility
- Like order processing operations (pick and pack for both stores and e-com) allows for processing economies

Store service

Direct to consumer

Transfer Shuttle

Pragmatic Dedicated Centers Garment Retail



- Stores and on-line customers serviced from dedicated facilities for each channel
- Multiple e-com locations serve customers by geography as shown on map to the left (Retailer's store DCs not shown illustrative simplicity)
- Service areas for customers can overlap

- **This network was driven by the size of the D2C and Store DC network demands. Demand was too large for the channels to effectively be in the same building, and D2C demand eventually drove the need for a second fulfillment center**
- Inventory location is an issue. A decision making tool addresses the alternatives to supplying the customer when all items are not in stock in the same DC by comparing the options below
  - Ship two packages
  - Ship one package from the suboptimal facility
  - Ship the out of stock item from one facility to the other and ship a single order to the customer
- The decision making can be influenced by customer preference (They want one package)

Direct to consumer Out of service area direct to consumer

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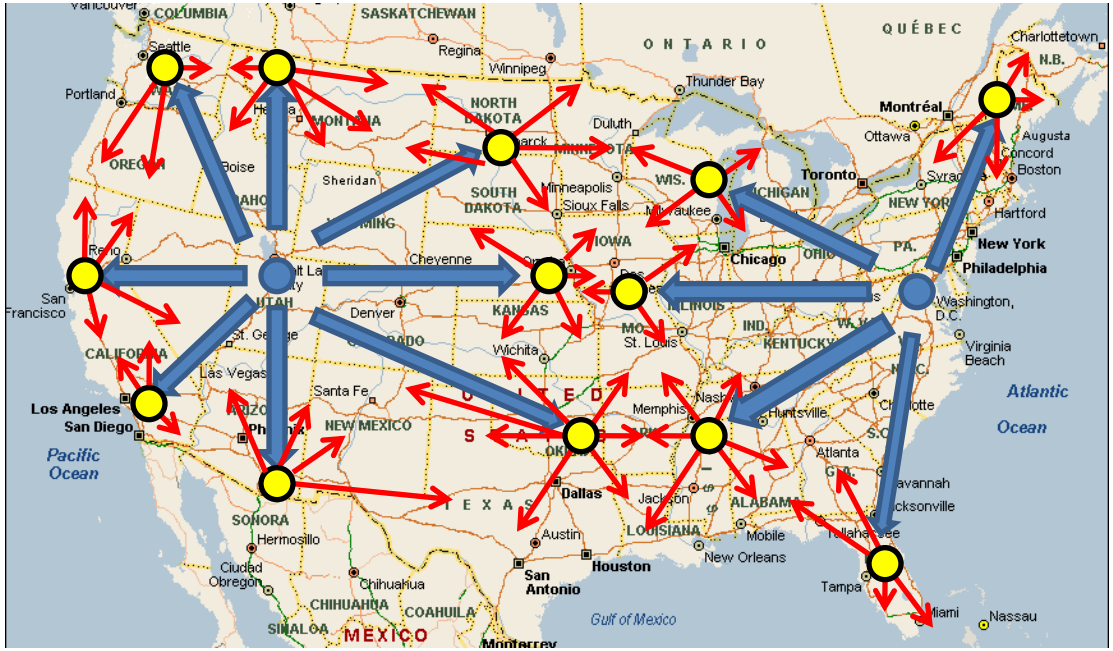
Pragmatic Dedicated Centers Office Supply

- Numerous dedicated direct to consumer and business to business centers
- Map is illustrative only, there are over 30 such centers
- Multiple e-com locations serve customer by geography as shown on map to the left

- **Speed to the customer is paramount above all other considerations**
- Allowing a customer to place their order even one hour later for next day delivery is considered a significant competitive advantage for this specialty direct to consumer retail channel
- While overall volume is significant (over 500,000 orders per day on a light day across the network) no one facility processes more than 5% of the broken pack volume.

→ Direct to consumer

Pragmatic Store Distributed Specialty Retailer



- This network allows for direct to consumer customers to be serviced from stores
- The servicing store is selected based on inventory availability and proximity to the customer
- Service areas overlap extensively based on where inventory is available

- **Allowing maximum customer access to even the smallest of inventory quantities is the main strategy driver in this case**
- There are lower volumes of e-com demand
- Inventory visibility by store is critical and focused on to ensure product is truly available
- Did not increase inventory at the store level (inventory is not stocked at the stores solely for direct to consumer business)

Store service

Direct to consumer

Store Locations

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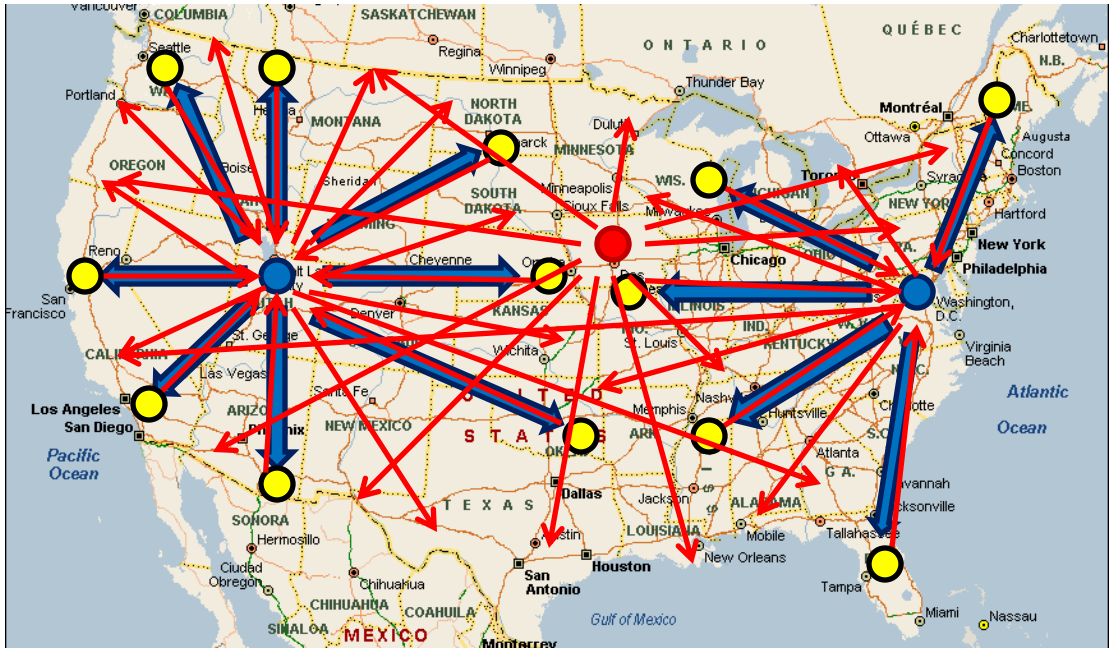
Store/e-com DC Hybrid



- This network is a hybrid utilizing all three network types
  - One direct to consumer facility
  - Multiple DC store replenishment centers
  - Hundred plus stores
- Consumer orders can be shipped from the D2C
- If not available in the D2C facility and available at ANY store product is sourced from the store
- The servicing store selected based on inventory availability and proximity to the customer
- Service areas overlap extensively based on where inventory is available

- **Allowing maximum customer access to even the smallest of inventory quantities while ensuring the customer receives the absolute maximum in customer service is the main strategy driver in this case**
- This type of network has been combined with free standard shipping on every order to drive maximum customer satisfaction and lowered bar for transit time on standard shipping

Store service

Direct to consumer

Store Locations

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Questions?

For More Information:

Speaker email: bjensen@stonge.com

Website: www.stonge.com

Or visit MODEX 2016 Booth 2921