The ever changing supply chain strategy

Tom Scorsune
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Domestic production – Circa 1950

[Map showing domestic production and regional distribution in the United States, including symbols for production and distribution nodes.]
Domestic production – Circa 1970

- S. Korea
- Japan
- Taiwan
- Hong Kong
- Los Angeles
- New York

Containerization
New Markets
Domestic Labor
Global production – Circa 2011

Longer Supply Chains
Global Manufacturing
Integrated Supply Chain
Future Challenges

• Environmental
• Port Security
• Port and Rail Infrastructure
• Owner Operator Capacity
Future Considerations

- Lazero Cárdenas
- Prince Rupert
- Inland Ports
- Panama Canal Expansion
Future network (by 2015)
Major U.S. ports
Share of imports (in Millions of TEU’s)

<table>
<thead>
<tr>
<th>Containers Handled</th>
<th>2009</th>
<th>2010</th>
<th>2009-2010 Growth</th>
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</thead>
<tbody>
<tr>
<td>Los Angeles/Long Beach</td>
<td>11,820</td>
<td>12,780</td>
<td>8.10%</td>
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<tr>
<td>New York/New Jersey</td>
<td>4,560</td>
<td>5,290</td>
<td>16.0%</td>
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<td>Seattle/Tacoma</td>
<td>3,129</td>
<td>3,588</td>
<td>14.6%</td>
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<tr>
<td>Savannah</td>
<td>2,356</td>
<td>2,825</td>
<td>19.90%</td>
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<td>Vancouver</td>
<td>2,150</td>
<td>2,510</td>
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<td>Oakland</td>
<td>2,050</td>
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<tr>
<td>Norfolk</td>
<td>1,745</td>
<td>1,895</td>
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<td>Houston</td>
<td>1,797</td>
<td>1,812</td>
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<td>Charleston</td>
<td>1,181</td>
<td>1,364</td>
<td>15.4%</td>
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<tr>
<td>Lazaro Cardenas</td>
<td>600</td>
<td>800</td>
<td>33.3%</td>
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2010 container volume at top U.S. ports
Current State Summary

• The economic recession has slowed freight volumes worldwide
• Although not currently an issue, congestion at LA/Long Beach, combined with the geographic constraints for growth, have made alternative ports and trade routes more attractive.
• Container ships are increasing in size to take advantage of cost savings provided by economies of scale.
• Panama Canal is opening up to accommodate larger ships
• The east and gulf coast ports are making infrastructure improvements in anticipation of long-term growth
Future Supply Chain Trends and Potential Impact

• Transportation represents one of the largest cost buckets – important to have *efficient and effective inbound* and outbound transportation

• Intermodal / rail options increasingly more attractive
  - Sustainability/cost benefits
  - Resiliency – risk mitigation

• Expansion of Panama Canal driving interest in east and gulf coast port locations
  - Closer proximity to U.S. population centers
  - Availability of less expensive land/facilities
  - Aggressive business and economic incentives

• Port diversification strategies more prevalent

• Trend to shorten supply chain – “near sourcing” (e.g., Mexico vs. China)

• Inland ports expected to increase in importance – Kansas City, Columbus, Chicago, etc.

• Availability of business & economic incentives, as well as labor issues, drive businesses to the southeast U.S.

• Increasing fuel costs will drive interest in “more/smaller” versus “fewer/larger”
The One Thing That Is Constant Is Change

• Supply chains are increasingly global and complex
• Historically focused on cost reduction, but leveraged as a competitive differentiator by companies such as Wal-Mart, P&G, Toyota
• Supply chain security and risk are rising sharply
• Supply chain management is increasingly viewed as a core competency (versus a “necessary evil”)
• Supply chain “network” must be evaluated on a regular basis
Case Study: Global Corporate Client
Original Supply Chain network
Post-Distribution Concept

Depart Origin

EDI 856 & 315

-10 Days

EDI 850 & 315

-72 HRS

Arrive Dest

0 HRS

-10 Days

-72 HRS

0 HRS
Post-distribution objectives

- Improve On-Time Efficiency from 46%
- Provide Floor Ready Distribution
- Replace Manual Process with Automated Transload Facility
- Provide Post Distribution Capability
- Track Shipments by Containers vs. Purchase Orders
- Maintain Flexibility to Provide Pre-Pack Distribution
- Provide UCC 128 Labels to the Store Level with ASN Capability
Post-Distribution Results

• On-time performance improved from 46% to 99%
• Audit accuracy greater than 99.9%
• Reduced lead time by 14 days
• Eliminated a DC resulting in $11M annual cost reductions
• Less obsolete stock
• Domestic time saving from store-ready products
• Ability to leverage cost savings of inter-modal versus over the road
Replenishment – Hybrid Concept

- Point of Sale Replenishment
- 3 Year Forecast, $300M USD Sales Increase
- Capital Investment of $300M USD
- Weekly Order Cycle
- Core Items - Expansion of Program to 40 Vendors
- RF Environment
- EDI Capabilities
- Random Reserve Storage Locations
- Zone Picking Efficiency
- Transload Process Integration
- Full Shipment Audit Functionality
<table>
<thead>
<tr>
<th>DC Location</th>
<th>Container Size</th>
<th>Container CBM</th>
<th>Container 53' Volume</th>
<th>IPI Rate</th>
<th>Present Total Costs</th>
<th>Drag from Port to NYK + CTF</th>
<th>Transload Rate</th>
<th>Port Rate</th>
<th>OTR Rate</th>
<th>Drag from Ramp/OTR to DC</th>
<th>Drag from Port to NYK + CTF</th>
<th>Transload Costs</th>
<th>Ocean Port Costs</th>
<th>Intermodal OTR</th>
<th>Proposed Total Costs</th>
<th>Savings</th>
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More than real estate…

…Understanding the *total operating cost* picture is critical to maximizing value

Transportation, inventory and labor typically account for 80% of the operating costs.

Real estate typically accounts for less than 5%.

Source: Herbert W. David & Company: Logistics Cost & Service Report
Thank You