THE DEMAND ECONOMY:

THE CHANGING WORLD OF RETAIL & THE IMPACT ON SUPPLY CHAIN STRATEGY & INDUSTRIAL REQUIREMENTS
## TOP 12 SUPPLY CHAIN TRENDS: THE “DIRTY DOZEN”

<table>
<thead>
<tr>
<th>Transportation &amp; Oil Price Rising</th>
<th>Near-Shoring</th>
<th>Larger Space</th>
<th>Interest in Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing Labor Challenges</td>
<td>Rising E-commerce</td>
<td>More Containerized Imports</td>
<td>Trade with South America</td>
</tr>
<tr>
<td>Increases in Inventory Levels</td>
<td>More Intermodal</td>
<td>Expansion of the Panama Canal</td>
<td>Increasing 3PL Adoption</td>
</tr>
</tbody>
</table>
RETAIL AT A CROSSROADS
FIVE RETAIL TRENDS AFFECTING INDUSTRIAL

1. Urbanization
2. Globalization
3. Omnichannel retailing
4. Mass customization
5. Enhanced customer service
URBANIZATION
URBANIZATION
Key Issues - Retail

RETAIL

1. People are moving back to the cities
2. Living spaces are smaller
3. Retailers are seeking new markets and customers

RESULT
Retailers are adjusting their footprints
URBANIZATION

The Reverse Donut

RETURN OF THE POPULATION TO THE URBAN CORE WILL AFFECT STORE FORMATS

ATLANTA, GA—PERCENTAGE POPULATION GROWTH 2000-2010

Source: Nielsen PrimeLocation Web
URBANIZATION
New Brick & Mortar Store Formats

RETAILERS ARE CREATING NEW FORMAT STORES
AND CHASING NEW CUSTOMER SEGMENTS
URBANIZATION
Key Issues - Industrial

INDUSTRIAL

1. DCs may be in the “wrong” place today, i.e. too far out, on average

2. Transportation route miles, congestion, equipment, timing challenges all driving up delivery costs, logistics costs per piece

3. Urban labor challenges, fit AND costs
Preferred Industrial Labor Locations

Preferred Industrial Labor Is Generally Concentrated Further From Urban Demand
URBANIZATION

Greater Atlanta Area
MANAGING THE LABOR FORCE….NOT EASY

Education attainment levels are rising

11.3%  30.9%
1970  2012

Percent of persons 25+ attaining a HS diploma and a 4 year undergraduate degree

The wage premium for those with college degrees has leapt 40 percent since 1983.

<table>
<thead>
<tr>
<th>DRIVER</th>
<th>ISSUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aging</td>
<td>Large scale retirement of Baby Boomers and not enough GenXers, Gen Y to replace experience</td>
</tr>
<tr>
<td>Employee Market</td>
<td>People are more selective of their field and employer, and there is an employee shortage in many industries</td>
</tr>
<tr>
<td>Turnover</td>
<td>Tenure rates are crashing. In 1954, the average tenure of an employee with their employer was 19 years. Projected at 18 months in 2015</td>
</tr>
<tr>
<td>Generational Change</td>
<td>Where to attract new workers and how to manage culture is changing</td>
</tr>
<tr>
<td>Urbanization</td>
<td>Popularity of urban living, movement away from industrial occupations</td>
</tr>
<tr>
<td>Flat World</td>
<td>People are THE biggest strategic differentiator between competitors</td>
</tr>
</tbody>
</table>
URBANIZATION

One Answer: Automation

Automation Orders Up 34% In 2012

Mini-load

Carousel

KIVA

Vertical Lift Module
Too Far From Demand? Less Freight Scale Elevates The Penalty
Transportation is already LEAN

Linehaul Revenue Per Mile

Rail Revenue Per Ton/mile

1980 2008
GLOBALIZATION
GLOBALIZATION
Cross Continental Retailer Expansion
GLOBALIZATION

Key Issues - Industrial

INDUSTRIAL

1. Transportation costs across long distances
2. Regional sourcing & manufacturing biases
3. Lack of investments in logistics infrastructure in new markets
GLOBALIZATION

FUEL COSTS: Not just a domestic issue
GLOBALIZATION
Limited Infrastructure Exists Now
OMNICHANNEL RETAILING
OMNICHANNEL RETAILING
Virtual Shopping: Key Issues

RETAIL

1. TECHNOLOGY is becoming a bigger part of our lives as consumers
2. SOCIAL MEDIA is creating a new approach to retail stores
3. LOCAL MERCHANTS are adapting with custom offerings and higher customer service levels
OMNICHANNEL RETAILING

Internet Sales Growth

E-Commerce Sales as Percent of Total Retail Sales

Share of internet and catalog sales in the U.S. is accelerating, now 25% of GAFO

NOTE: Q4 SALES

SOURCE: U.S. CENSUS BUREAU, CUSHMAN & WAKEFIELD RESEARCH
HOW WE BUY
Sales Performance By Channel, 2008 through 2012

Source: Cushman & Wakefield Research
OMNICHANNEL RETAILING
Convergence Of Clicks & Bricks

Evolving multi-channel dynamics increase the importance of a cohesive omni-channel strategy

- QR CODE-DRIVEN VIRTUAL SUPERMARKETS (South Korea Subway Stations)
- AMAZON.COM STORE
- POP-UP STORE
OMNICHANNEL RETAILING

Key Issues For Industrial

INDUSTRIAL

1. Eaches level fulfillment, higher handling costs per piece, vs. store replenishment

2. Inventory availability and visibility across multiple channels (systems and working capital)

3. Parcel share rising, loss of freight scale, drives up costs, transportation costs per piece
OMNICHANNEL RETAILING
Higher Service Levels, In More Locations

Will explode inventory requirements. Higher service levels use more inventory. Number of DCs drives inventory as well.....Inventory is needed in every SKU/location combo.

<table>
<thead>
<tr>
<th>Input Parameters:</th>
<th>Current DB values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average demand</td>
<td>877.82 UN/Day</td>
</tr>
<tr>
<td>Average order frequency</td>
<td>23.977 Lines/Day</td>
</tr>
<tr>
<td>Demand variability</td>
<td>0.844</td>
</tr>
<tr>
<td>Minimum reorder lot</td>
<td>UN</td>
</tr>
<tr>
<td>Incremental reorder lot</td>
<td>UN</td>
</tr>
<tr>
<td>Minimum reorder interval</td>
<td>7.086 Days</td>
</tr>
<tr>
<td>Minimum lead-time</td>
<td>5.006 Days</td>
</tr>
<tr>
<td>Average delay</td>
<td>0.360 Days</td>
</tr>
<tr>
<td>Review period</td>
<td>0 Days</td>
</tr>
<tr>
<td>Minimum service level</td>
<td>50.96%</td>
</tr>
<tr>
<td>Control policy type</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output parameters:</th>
<th>Current DB values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target service level</td>
<td>34.7</td>
</tr>
<tr>
<td>Order-up-to level</td>
<td>12.954 Days</td>
</tr>
<tr>
<td>Reorder level</td>
<td>9.954 Days</td>
</tr>
<tr>
<td>Safety stock</td>
<td>1.936 Days</td>
</tr>
<tr>
<td>Data range</td>
<td>0 - 20 Stock [Months]</td>
</tr>
<tr>
<td>Stock [Months]</td>
<td>0.5, 1, 1.5, 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Working parameters:</th>
<th>Not on DB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service level [over bound]</td>
<td>9.0000 %</td>
</tr>
<tr>
<td>Effective minimum lot (per):</td>
<td>2.906 Days</td>
</tr>
<tr>
<td>Effective minimum lot (typ):</td>
<td>4.027 UN</td>
</tr>
<tr>
<td>Average reorder interval</td>
<td>7.7054 Days</td>
</tr>
<tr>
<td>Adjusted lead-time</td>
<td>3.946 Days</td>
</tr>
<tr>
<td>Adjusted Average Delay</td>
<td>0.672 Days</td>
</tr>
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Square Root Rule:
If a company needs 100M of inventory to meet needs, and they move from a 2 to a 6 DC model, inventory requirements go up 73%
MASS CUSTOMIZATION
Social media is becoming fully integrated with in-store marketing

**PERCENTAGE WEBSITE TRAFFIC FROM FACEBOOK**

<table>
<thead>
<tr>
<th>SELECT LUXURY RETAILERS</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burberry</td>
<td>0%</td>
<td>30%</td>
</tr>
<tr>
<td>Dolce &amp; Gabbana</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Tiffany &amp; Co.</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Swarovski</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Chanel</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Louis Vuitton</td>
<td>0%</td>
<td>0%</td>
</tr>
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**RELATIVE SIZE OF AUDIENCE – FACEBOOK “LIKES”**

- Burberry – 12.4 M
- Chanel – 6.5 M
- NY Yankees – 5.4 M
- NYT – 2.1 M
- Vogue – 2.8 M

Source: Cushman & Wakefield Research, ComScore, Social Essentials UK, L2Thinktank, Burberryplc.com
MASS CUSTOMIZATION

Key Issues

INDUSTRIAL

1. More investments in Value Added Services (VAS), people and technologies, leading to more VAS space, more VAS labor

2. For high VAS SKUs, some postponement strategies
CUSTOMER SERVICE
CUSTOMER SERVICE

Salespeople are the New Luxury
The competition between retailers to offer the most convenience for customers with an anytime, anywhere shopping mentality has led to extended hours, seamless cross-channel experiences and more shipping options such as buying online and picking up in a store.

But the gamble some retailers are taking with same-day delivery may not pan out, say several retail supply chain experts.

- Hayley Malcolm, “Retailers Gamble on Same Day Delivery”, USA TODAY
CUSTOMER SERVICE

Key Issues

INDUSTRIAL

1. Transportation route miles, congestion, equipment, timing challenges driving up delivery costs, costs per piece

2. Urban labor challenges

3. Delivery truck model requires scale and density of orders to manage costs

4. Daily replenishment of higher velocity SKU
CITY ROUTE DELIVERY CHALLENGES
At Night?
STEM MILES AND ROUTE MILES MATTER
Order Scale is a Must-have in Delivery Operations
e-com dedicated distribution centers

1 Tracy, CA and Robbinsville, NJ are 2014 openings
2 Currently in market for facilities in Stockton, CA (or Reno NV), Chicago, IL, Dallas, TX and Reno, NV. Signed LOI for facility in Bethlehem, PA, lease pending.
3 Savannah, GA facility is partially dedicated to Target.com fulfillment
## Possible Impacts on Industrial Valuations

| + | Space in developing economies |
|  | Space w 3PL tenants |
|  | Smaller space near cities |
|  | Larger space with good fundamentals and high cube |
|  | Single loaded buildings |
|  | Multitenancy |

– Facilities further from urban centers, esp. smaller ones  
– Low ceiling, older space which impede automation  
– Industrial markets w labor (real or reputed) challenges  
– Space with limited cube and cubic flexibility
WHAT DOES THE FUTURE LOOK LIKE?

One Idea…

Mega Centers

Automated Case & Piece Handling Facilities Around Mega Centers

Manufacturers/Ports

Replenishment (Flow Through) Automated DC in proximity to Population centers

Non-Fossil Fuel Powered Store Delivery Vehicles
Thank you!