E-COMMERCE
INDUSTRIAL REAL ESTATE OUTLOOK 2018

Presented by:
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CEO of IMS Worldwide, Inc.
U.S. E-Commerce Retail Sales Forecast 2014-2018 Update 2017

Total US E-commerce Sales $B

- 2014: $304.1
- 2015: $341.8
- 2016: $372.5
- 2017: $409.8
- 2018: $448.5

Growth Rates:
- 2014: 6.4%
- 2015: 7.26%
- 2016: 7.52%
- 2017: 8.50%
- 2018: 9.25%

Growth Rate for 2018: 10.50%
E-Commerce Statistics

• According to Forrester, in Q4 of 2017, U.S. e-commerce sales will rise by 9.3% annually over the next five years to $523 billion.

• CBRE published a recent report noting that e-commerce requires three times as much space as other warehouse uses.
  • Every $1 billion in new e-commerce sales requires 1.25 million sq. ft. of additional space.
  • Given the forecast for growth, this translates to demand for 80 million sq. ft. of new warehouse space by 2020.
<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Ecommerce Sales, billions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Amazon</td>
<td>$196.75</td>
</tr>
<tr>
<td>2</td>
<td>eBay</td>
<td>$30.66</td>
</tr>
<tr>
<td>3</td>
<td>Walmart</td>
<td>$16.21</td>
</tr>
<tr>
<td>4</td>
<td>Apple</td>
<td>$16.20</td>
</tr>
<tr>
<td>5</td>
<td>Home Depot</td>
<td>$6.77</td>
</tr>
<tr>
<td>6</td>
<td>Best Buy</td>
<td>$6.29</td>
</tr>
<tr>
<td>7</td>
<td>Macy’s</td>
<td>$5.36</td>
</tr>
<tr>
<td>8</td>
<td>Costco</td>
<td>$4.08</td>
</tr>
<tr>
<td>9</td>
<td>QVC</td>
<td>$3.31</td>
</tr>
<tr>
<td>10</td>
<td>Wayfair</td>
<td>$4.23</td>
</tr>
</tbody>
</table>

Source: eMarketer, September 2017
E-commerce as a percent of retail
• In Q4 2017: 9.1%
• In Q4 2016: 8.2%
Source: US Department of Commerce

Amazon percent of US e-commerce:
• In 2017: 43.5%
• In 2016: 38.1%
Source: eMarketer

US E-commerce sales increased 16.0% in 2017
Source: Internet Retailer
<table>
<thead>
<tr>
<th>Retailer</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon</td>
<td>25%</td>
</tr>
<tr>
<td>eBay</td>
<td>18%</td>
</tr>
<tr>
<td>Alibaba/AliExpress</td>
<td>14%</td>
</tr>
<tr>
<td>Wish.com</td>
<td>8%</td>
</tr>
<tr>
<td>Zalando</td>
<td>2%</td>
</tr>
<tr>
<td>Asos</td>
<td>1%</td>
</tr>
<tr>
<td>Apple</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>31%</td>
</tr>
</tbody>
</table>

Note: ages 16+ who have digitally purchased goods in the past 3 months and made a cross-border digital purchase in the past year
E-Commerce Impact On Industrial

• By 2020, the US will sell 486 Billion of goods to the world in cross border e-commerce

• By 2020, the US will buy 140 Billion of goods from overseas in cross border e-commerce

• This will require 160 NEW e-commerce logistics centers of 800,000 SF size to be built in the top urban markets

• Another 110 NEW or re-purposed facilities of 75,000-100,000 SF sites are necessary to support local delivery in key urban markets

• THIS IS THE DEFINITION OF LAST MILE......

Tompkins, April, 2016

www.imsw.com
Foreign Trade Zone, Logistics and Supply Chain Consulting
Four Building Types in Two Dimensions
Service Level & Urbanization
E-commerce’s Effect on Air Cargo Growth

• E-commerce is a future growth driver for the air cargo industry, as online shopping boosts demand for parcel delivery services worldwide.

• On aggregation, the industry’s parcel volume more than doubled over the last decade, growing at a rate far above economic growth.

- IATA

• The global air cargo market is growing on the back drop of the growing global e-commerce market.

• Online retailers rely on the air cargo service providers because of the speedy delivery they offer.

- Technavio

www.imsw.com
Foreign Trade Zone, Logistics and Supply Chain Consulting
Worldwide Air Freight 2007 - 2018 in Million Metric Tons

Source Data: IATA

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Foreign Trade Zone, Logistics and Supply Chain Consulting
E-commerce’s Effect on Air Cargo Growth

The Challenge is in finding a location:

• With less congestion
• With mature transportation
• That has a reach to population
• Where high-volume single-package transactions can be processed for automated expedited processing and delivery
• Most Ready, likely Airports for this?
E-commerce Impact

• Traditional freight forwarder gateway airports are at JFK, ORD, MIA, LAX and DFW/ATL

• Alternative Airports that make “Cargo Sense”
  • Chicago Rockford International Airport (RFD)
  • Rickenbacker International (LCK)
  • Indianapolis, IN (IND)
  • Pittsburgh, PA (PIT)
  • Cincinnati, OH (CVG)
  • Greenville, SC (GSP)
  • Huntsville, AL (HSV)
  • Philadelphia, PA (PHL)
  • Mesa Gateway (AZA)
  • March AFB, CA
  • Houston (IAH)
Alternative Gateway Options for Cargo Growth

Chicago Rockford International Airport (RFD)
Rickenbacker International (LCK)
Indianapolis, IN (IND)
Pittsburgh, PA (PIT)
Cincinnati, OH (CVG)
Greenville, SC (GSP)
Huntsville, AL (HSV)
Philadelphia, PA (PHL)
Mesa Gateway (AZA)
March AFB, CA
Houston (IAH)

SHOULD OPA-LOCKA MAKE IT ONTO THIS LIST?
My Conclusions are these:

- E-Commerce is here to stay, and growing 5X faster than Retail Sales growth
- Global E-commerce is upon us.....Next Wave.
- Last-Mile facilities will be growing across the USA, but first in high density populations.
- Retailers are embracing the change now 100% but also working to improve the “experience” of shopping with them.
- Air Cargo Operations will finally grow to Tier 2 and Tier 3 Airports that meet requirements.