SUPPLY CHAIN CONFERENCE

Connect. Transform. Deliver.

April 30 - May 2, 2017
Paradise Point Resort & Spa
San Diego, CA
Navigating the Road Ahead: insights from CSCMP’s State of Logistics Report

May 1, 2017

Rick Blasgen, President & CEO
Council of Supply Chain Management Professionals (CSCMP)

Sean Monahan, Partner
A.T. Kearney
A Professional Association: Evolution and Relevancy

SCOPE, SCALE, IMPACT

National Council of Physical Distribution Management

Council of Logistics Management

Council of Supply Chain Management Professionals
CSCMP – What You can Experience!

- EDUCATION
- CAREER RESOURCES
- CONNECTIONS
- NETWORKING
- RESEARCH
Join us in Atlanta, Georgia for CSCMP’s 2017 Annual Conference, September 24-27

3000+ SCM professionals under one roof

120+ hours educational content

25+ hours dedicated networking

Register today! cscmpconference.org
CSCMP’s Evolving Role

Goal

✓ Connect, Educate and Develop the world’s Supply Chain Professionals!

✓ Supply Chain Concierge Service

✓ Join the Community – visit CSCMP.org!
Meet A.T. Kearney

- 90 year history
- Diverse global management consulting firm
- Known for Operations expertise, but full service – Digital Transformation; Strategy; Leadership, Change & Organization

Industry Expertise:
- Aerospace & Defense
- Automotive
- Chemicals
- Comms, Media, & Technology
- Consumer Products & Retail
- Financial Institutions
- Health
- Metals & Mining
- Oil & Gas
- Private Equity
- Public Sector
- Transportation, Travel, & Infrastructure
- Utilities
Our objectives today…

■ Share key insights from last year’s report and preview of perspectives from the 2017 report

■ Challenges on the road ahead
  • Infrastructure
  • Ecommerce
  • Digital disruption
State of Logistics Report is a collaborative effort …

I  Focused economic analysis

II Interviews with logistics industry leaders

III Logistics industry context and point of view

IV Trends and deep dives: global trends, sector trends, regulation, technology
US Business Logistics Costs totaled $1.4 Trillion in 2015

Source: CSCMP’s 27th Annual State of Logistics Report, A.T. Kearney
As a percentage of GDP, USBLC declined 6 basis points to 7.85%
Motor Carrier and Inventory are the major drivers of U.S. Logistics Costs

U.S. Business Logistics Costs – 2015

$ billion

1,408

Source: CSCMP’s 27th Annual State of Logistics Report, A.T. Kearney
U.S. benefits from a highly efficient logistics system

U.S.
7.9% GDP

Asia 17% GDP
China 18% GDP
Europe 13% GDP
India 13% GDP
Japan 11% GDP
Mexico 14% GDP

Economy
• Higher Output – GDP
• Better use of resources
• Multi-use Infrastructure

Businesses
• Market Access
• Market Integration
• Cost Efficiency

Consumers
• More Goods and Services
• Wider Availability
• Lower Prices/Income
U.S. supply chain leverages an infrastructure of tremendous proportion

- 8.4 million lane miles
- 46,6320 Interstate highway miles
- 599,766 road bridges
- 140,000 miles of rail
- 360 commercial sea and river ports
- 9,627 miles of inland waterways

Source: U.S. Department of Commerce
However, despite importance to U.S. Economy, that infrastructure is at risk

### 2017 Infrastructure Report Card – Key Logistics Categories ($ billions)

<table>
<thead>
<tr>
<th>Grade</th>
<th>D</th>
<th>C+</th>
<th>B</th>
<th>D</th>
<th>C+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs (→ 2025)</td>
<td>$2,042</td>
<td>$1,541</td>
<td>$37</td>
<td>$1,101</td>
<td>$29</td>
</tr>
<tr>
<td>Funding</td>
<td>$941</td>
<td>$124</td>
<td>$22</td>
<td>$1,145 Funding Gap</td>
<td></td>
</tr>
</tbody>
</table>

Source: American Society of Civil Engineers 2017 Infrastructure Report Card, A.T. Kearney
Online is growing rapidly at 15% CAGR and the Food & Bev category is underpenetrated

**Growing Rapidly**

- Online growing 3X faster than traditional B&M channel
- From 2012 to 2016, ecommerce grew from 5.4% to 8.1% of retail sales

**Impacting Major Categories**

- Online penetration is growing for all categories
- Current penetration is low for Food & Bev, however is forecasted to have a sales growth rate of 16% CAGR

**No Signs of Slowing Down**

- Online growing 3X faster than traditional B&M channel
- From 2012 to 2016, ecommerce grew from 5.4% to 8.1% of retail sales

**Widespread Adoption**

- All cohorts buying online (boomers, millennial) and penetration is growing for all categories

Source: Statista, Euromonitor 2017, United States Census Bureau, A.T. Kearney analysis
Accelerated growth in Food & Bev as consumers focus on convenience and price

Year over year online channel usage

<table>
<thead>
<tr>
<th>US Online Channel Forecast</th>
<th>Key Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grocery (fresh)</td>
<td>Merging channels – shop anytime, anywhere</td>
</tr>
<tr>
<td></td>
<td>Hassle-free – no commuting, crowds, auto-replenishment</td>
</tr>
<tr>
<td></td>
<td>Click-and-collect service becomes commonly offered</td>
</tr>
<tr>
<td>Food &amp; Bev (packaged)</td>
<td>Instant comparison of price and promotion across retailers</td>
</tr>
<tr>
<td>Pet food &amp; supplies</td>
<td>Free shipping as a source of attraction</td>
</tr>
<tr>
<td>Baby food &amp; products</td>
<td>Provides an opportunity to expand product offering e.g., “endless-aisle”</td>
</tr>
<tr>
<td>Auto parts</td>
<td>Promotional and specialty item access</td>
</tr>
<tr>
<td>Home improvement items</td>
<td></td>
</tr>
<tr>
<td>Sporting goods</td>
<td></td>
</tr>
<tr>
<td>Home furnishings</td>
<td></td>
</tr>
</tbody>
</table>

Source: AlphaWise, Morgan Stanley Research
Challenge for grocery is unfavourable ship-margin economics for Food & Bev low price-point items

Ship-Margin Economics – Example DTC Fulfilment Unit Economics

Traditional Fulfillment

CPG Producer

CPG DC

Transportation

Retailer DC

Transportation

Retail Store Handling

Home

Cost per Case

CPG

Retailer

Total

$0.75

$0.25

$0.75

$0.35

$0.60

$2.75

“Traditional” Online Order Fulfillment

CPG Pick

CPG Direct to Consumer Fulfillment

Transportation

Home

Cost per Case

CPG

Retailer

Total

$4.50

$9.00

$14.50

$13.50

$13.50

$13.50

Source: A.T. Kearney Experience
On the cusp of a new era: Industry disruptors

Logistics industry disruptors

Technology adoption
- Autonomous vehicles, IoT
- Artificial intelligence
- "Uberization"
- 3D printing
- Big data
- Alternative fuels

Macroeconomic trends
- Globalization
- Volatile commodity prices
- Climate disruption
- Urbanization

Consumer requirements
- "Want it now"
- Personalization
- Millennial preferences
- Omnichannel shopping
- Aging consumer needs

Operational constraints
- Free trade agreements
- Environmental legislation
- Safety requirements
- Resource availability

Key Disruptors
- Technology adoption: pace and breakthrough nature of technological innovation
- Operational constraints: regulations and resource scarcity will influence the ability to perform transportation and logistics activities

Note: IoT is the Internet of Things.
Sources: CSCMP, A.T. Kearney
Long-term View – Four Possible Scenarios

Unconstrained Operations

Middle of the Road
Technology capabilities improve incrementally. Customers have a few more choices, but no distinctive competitor emerges. Regulators are business-friendly and rational.

Crusin’ Down the Highway
Widespread and far-reaching tech adoption leads to a new paradigm: capital and technological expertise reframe the industry.

Incremental Technology Adoption

Constrained Operations

Dead End Street
Regulators are inflexible and hinder the entrepreneurial spirit and technological advancement. Cost of regulatory compliance shakes out supply markets. Great expectations remain unmet.

Stop Signs & Red Lights
Fierce operational constraints in a regulated, low-growth environment. Due to regulations, only the strongest and most easily adoptable technologies flourish.

Source: CSCMP, A.T. Kearney
Autonomous driving will be the next breakthrough in trucking efficiency

Disruptive force: Autonomous driving

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Today</td>
<td>No automation but warning functions (e.g. collision warning)</td>
</tr>
<tr>
<td>Partial assist</td>
<td>Automation of single functions (e.g. emergency braking)</td>
</tr>
<tr>
<td>Connected assist</td>
<td>Automation of connected functions (e.g. lane change assist)</td>
</tr>
<tr>
<td>Highway pilot</td>
<td>Partial self-driving on highways (no permanent driver supervision required)</td>
</tr>
<tr>
<td>Autonomous Delivery Hwy.</td>
<td>Self-driving on highways (autonomous hub-to-hub incl. platooning)</td>
</tr>
<tr>
<td>Autonomous Delivery Urban</td>
<td>Self-driving on highways and urban (autonomous hub-to-hub and last mile)</td>
</tr>
</tbody>
</table>

Source: A.T. Kearney
OEMs increasingly see trucks as mobile, connected data centers

With its real-time information, the connected truck boosts logistics performance

- **NO MORE WAITING TIME**
  All information transmitted digitally in advance (e.g. toll)

- **NO MORE EMPTY RUNS**
  Ride sharing platforms for cargo

- **NO MORE TRAFFIC JAMS**
  Real-time data from infrastructure & vehicles

Source: Daimler Trucks
Thank You

Rick Blasgen, CSCMP
Phone: +1 630.645.3458
Email: rblasgen@cscmp.org
Twitter: @RBlasgen

Sean Monahan, A.T. Kearney
Cell: +1 212.365.4941
Email: sean.monahan@atkearney.com
Twitter: @SeanTMonahan