The New World Order in Containerized Ocean Shipping & SCO

Michael Christensen
Senior Executive Lead, Supply Chain Optimization
“The Internet of Things (IoT) is the network of physical objects or "things" embedded with electronics...experts estimate that the IoT will consist of almost 50 billion objects by 2020...” Wikipedia
“...it seems some shippers noticed they could adopt a different plan other than preparing for the peak season. So for 2015, they ordered earlier than normal, they spread the entry lanes, and they watched the carriers create a significant overcapacity situation. Rates declined...

“Is there a new norm emerging, not by the carriers but by customers who didn’t like peak seasons or the hoops they had to jump through for space and equipment? It sure looks like it to me. So now what? How does that change our world? Or does it?”
What’s the BIG deal??

Bigger Vessel Alliances, Bigger Ships
<table>
<thead>
<tr>
<th>Alliance</th>
<th>West Coast America</th>
<th>East Coast America</th>
<th>Asia-Europe</th>
<th>Asia-Mediterranean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2M</strong> Maersk and MSC</td>
<td>15%</td>
<td>17%</td>
<td>32%</td>
<td>39%</td>
</tr>
<tr>
<td><strong>CKYHE</strong> COSCO, K Line, Yang Ming, Hanjin and Evergreen</td>
<td>34%</td>
<td>30%</td>
<td>26%</td>
<td>20%</td>
</tr>
<tr>
<td><strong>G6</strong> APL, Hapag-Lloyd, Hyundai, MOL, NYK and OOCL</td>
<td>32%</td>
<td>36%</td>
<td>23%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Ocean Three</strong> China Shipping, CMA CGM and UASC</td>
<td>13%</td>
<td>13%</td>
<td>19%</td>
<td>17%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
<td>4%</td>
<td>0%</td>
<td>5%</td>
</tr>
</tbody>
</table>
Ocean Carrier Alliances
Driving the new realities of ocean shipping.
Ocean Carrier Alliances
Driving the new realities of ocean shipping.

G6
Hapag-Lloyd
APL
MOL

Ocean 3
CMA CGM
HANJIN
EVERGREEN

CKYHE
Hyundai

2M
MAERSK
MSC

Port of LONG BEACH
BIG SHIP READY?

Big ships are arriving, and even bigger ships are coming.
BIG SHIPS COMING ARE HERE

Of ships on order, more than half can’t pass through expanded Panama Canal.

56%
13,000 TEUs and bigger

Source: Alphaliner, April 2015
18,000 TEU
CMA CGM Benjamin Franklin
Alliances: With bigger ships, come more “colorful” loads
Supply Chain Optimization Elements & Status

**POLB SCO**
- Organizational
- Customers
- “Free Flow”
- Chassis

**“External” SCO**
- US Congress, FMC, USDOT
- CA: CalSTA/CalTrans, CARB
- Stakeholders

**Joint Port SCO**
- 12 months/40+ meetings
- Peel Piles, POP Website, Midnight P/O, KPIs/Data, turn times, cargo availability
- “Situational Awareness”

**Redefined Port Role**
- “Maturing” of SCO
- Benchmarking
- Data
- Carrot & Stick

Port of LONG BEACH
Congestion Cargo delayed for weeks Business diverted to other No. Am. ports

SUPPLY CHAIN OPTIMIZATION Joint Long Beach and L.A. initiatives to improve velocity
Supply Chain Optimization Task Force Relationships

Stakeholder Participants:
- Beneficial Cargo Owners
- Marine Terminal Operators
- Shipping Lines
- Motor Carriers
- Chassis Pool Operators
- Railroads
- Brokers & Freight Forwarders
- Warehousing & Dist. Centers
- Labor & Management
SCO Joint Ports Initiative

Supply Chain Optimization Task Force Relationships

Steering Committee

Working Groups:

- *Peak Season 2015*
- *Container Terminal*
  - *Chassis*
  - *Rail*
- *KPI & Data Solutions*

Work Products
SCO Joint Ports Initiative

Supply Chain Optimization Task Force Relationships

- Steering Committee
- Core Advisory Group
- Working Groups

- Work Products
- Status & feedback on process
- Inform
- Provide participants
- Status
SCO – In Progress

- Gate Operations/Turn Times
- “Peel-Off” Operations
- “Push” System
- KPIs
- Information Systems & Data
- Rail
- Chassis
Chassis “Pool of Pools”

Interoperable chassis fleet increasing availability
BETTING ON THE FUTURE
POLB leads No. Am. ports in capital spending

Millions of dollars in FY2015 capital budget
Source: Ports

<table>
<thead>
<tr>
<th>City</th>
<th>Capital Spending (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LONG BEACH</td>
<td>600</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>300</td>
</tr>
<tr>
<td>Houston</td>
<td>200</td>
</tr>
<tr>
<td>Seattle</td>
<td>100</td>
</tr>
<tr>
<td>New York/NJ</td>
<td>100</td>
</tr>
<tr>
<td>Tacoma</td>
<td>50</td>
</tr>
<tr>
<td>Oakland</td>
<td>25</td>
</tr>
<tr>
<td>Vancouve</td>
<td>10</td>
</tr>
</tbody>
</table>
Coming soon: **MIDDLE HARBOR**
No. Am.’s most advanced, automated terminal
BRIDGE REPLACEMENT

$1.5 billion, carries 15% of U.S. trade volume
What About Rail??
% Imports Shipped by Rail

- Off-dock: 38%
- Near-dock: 6%
- On-dock: 28%
Port Railroads

• Pacific Harbor Line (PHL Short-line)
• Class I Union Pacific Railroad
• Class I BNSF Railway
Best rail connections

BNSF and UP Intermodal Traffic Density Maps
BIG TRAINS ARE HERE
BNSF moves two-mile train from TTI terminal.
ON-DOCK RAIL EXPANSION
$1+ billion, doubling capacity this decade.
ON-DOCK RAIL
New Middle Harbor Terminal Rail Cranes.
THE FUTURE IS BRIGHT