



U.S. Ports and Supply Chain Dynamics Update

Presented by:

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President



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Summary

Today's remarks can be summed up in two words!

UNCERTAINTY

INFORMATION

Agenda

- ✓ West, Gulf, and East Coast Ports Goods Movement
- ✓ BCOs and Ocean Carriers' Port Selection Criteria
- ✓ Supply Chain Dynamics Impact on Warehousing
- ✓ State of California AB 32 Legislation

WCL Consulting - Perspective

Extensive Experience Across the Supply Chain

Manufacturers / Retailers



Transportation / Logistics



Warehousing / Distribution

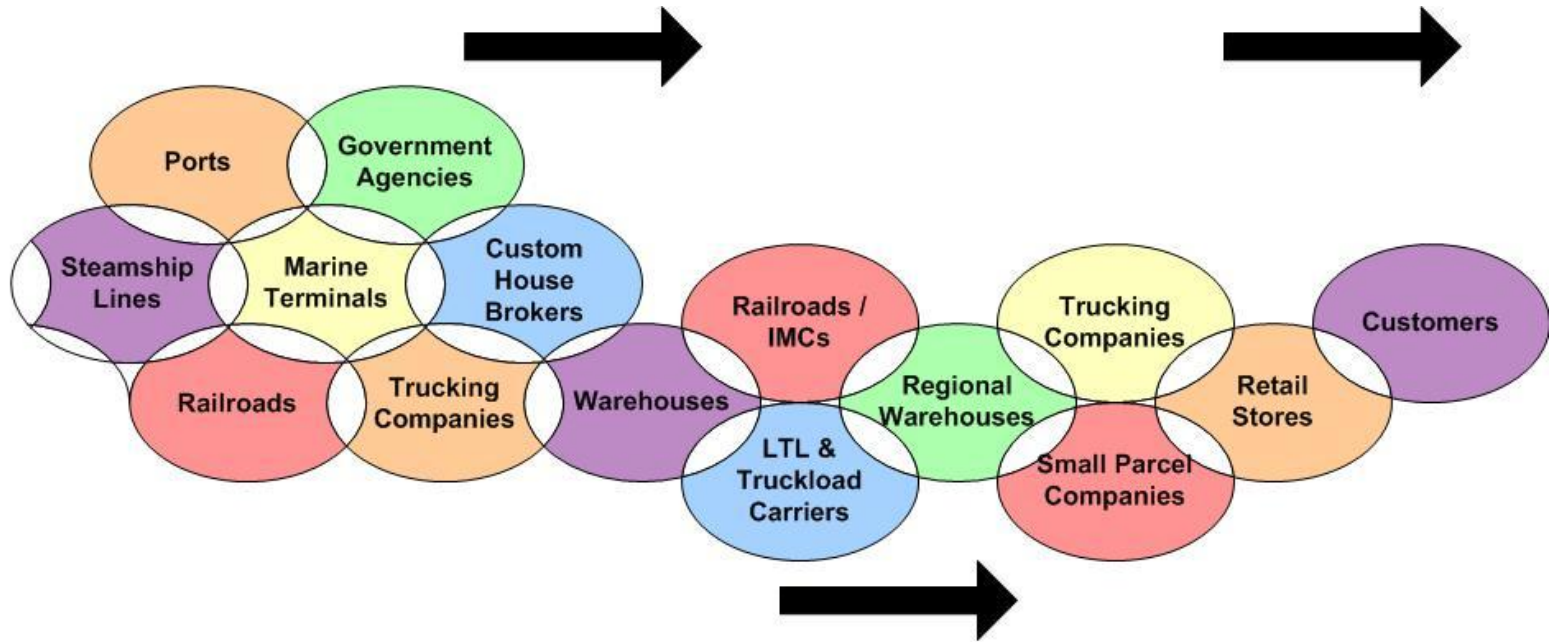


Public Agencies



Major US Container Ports

A Port of Entry Solution not just a Port Solution



BCOs and Ocean Carriers' Port Selection Criteria

Indicators of the Winning Ports

BCOs' Criteria

1. Reliability
2. Transit Time
3. Transportation Cost
4. Capacity Constraints
5. Flexibility

Ocean Carriers' Criteria

1. Port Facilities
2. Rail & Truck Connectivity
3. Port Fees
4. Reliability of Port/Terminal Services
5. Specific Importer Requests

HONDA



Look Smart. Payless.™

SONY



Major US Container Ports

Today shippers have more options

Prince Rupert



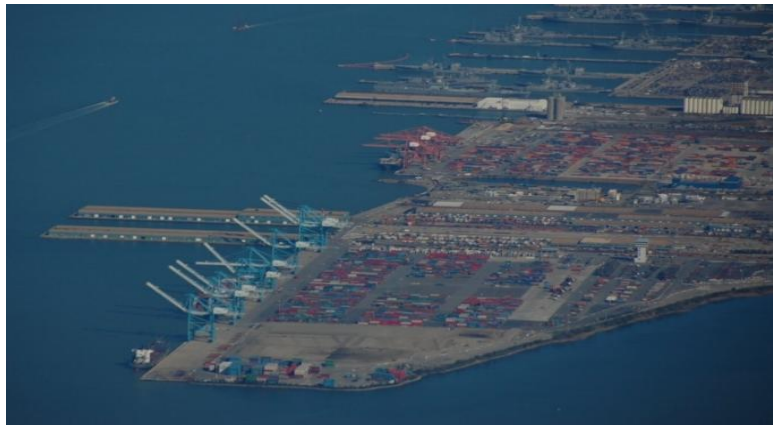
Port of Savannah



Joliet, IL



Port of Norfolk



Major US Container Ports

Container Port Volumes 2010

	Port	Container Volume (2010)	% of Total
1	Los Angeles	7,831,902	22.4%
2	Long Beach	6,263,499	17.9%
3	NY/NJ	5,292,025	15.2%
4	Savannah	2,826,170	8.1%
5	Oakland	2,330,214	6.7%
6	Seattle	2,133,548	6.1%
7	Hampton Roads	1,895,017	5.2%
8	Houston	1,812,268	5.2%
9	Tacoma	1,455,466	4.2%
10	Charleston	1,364,504	3.9%
11	Jacksonville	857,374	2.5%
12	Miami	847,249	2.4%
	TOTAL	34,909,236	

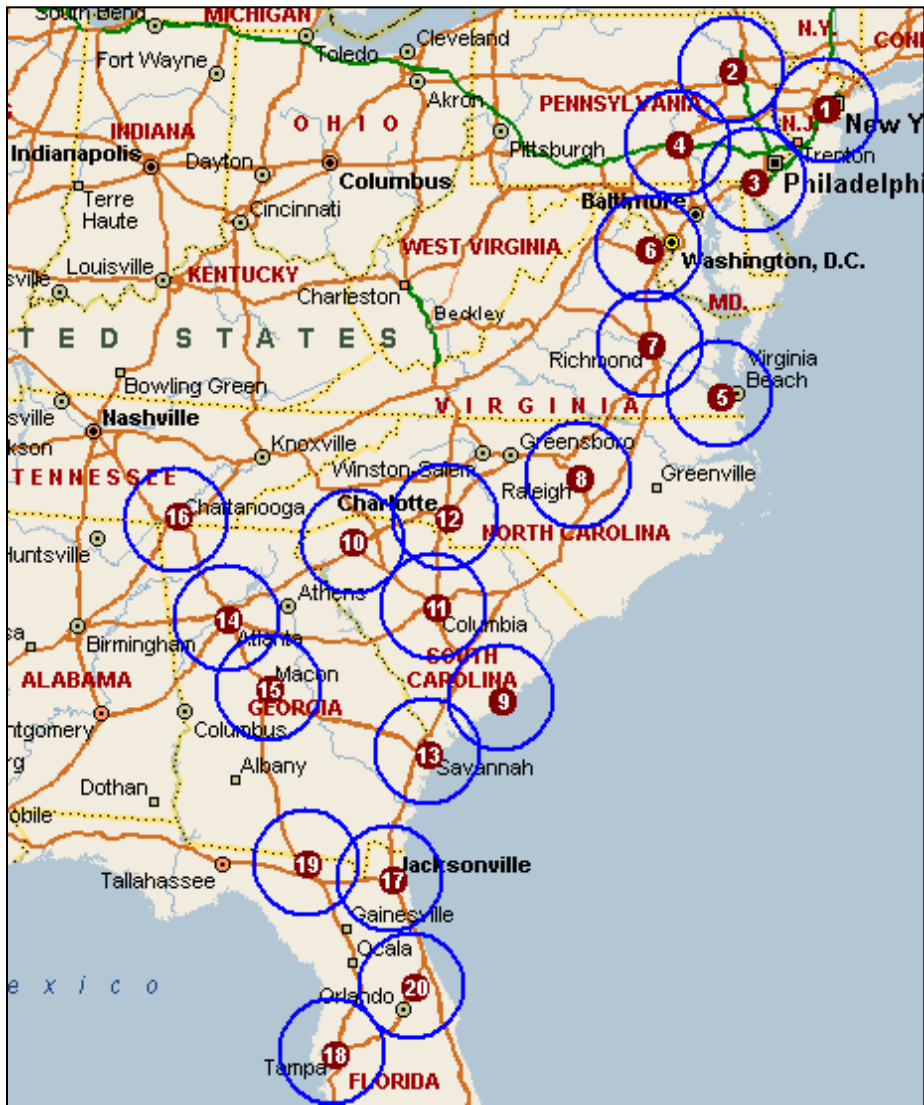


Major US Container Ports

Identifying Warehousing Paths of Growth

SAMPLE

PORT Cities	Beyond Cities
1. New York/New Jersey	2. Wilkes-Barre, PA
	3. Harrisburg, PA
	4. Wilmington, DE
5. Norfolk, VA	6. Richmond, VA
	7. Centreville, VA (Front Royal, Washington DC)
	8. Chapel Hill, NC (Raleigh, Durham, Greensboro)
9. Charleston, SC	10. Greenville, SC
	11. Columbia, SC
	12. Charlotte, NC
13. Savannah, GA	14. Macon, GA
	15. Atlanta, GA
	16. Chattanooga, TN
17. Jacksonville, FL	18. Tampa, FL
	19. Jasper, FL (Valdosta)
	20. Deltona, FL (Orlando)



Major US Container Ports

Identifying Warehousing Paths of Growth

1. Throughput & Productivity
2. Forecast & Capacity
3. Development & Expansion
4. Port Access
5. Ocean Carrier Service
6. Port Trade
7. Railway Infrastructure
8. Intermodal Rail Access
9. Intermodal Rail Service
10. Intermodal Freight Volume
11. Truckload Carrier Service
12. LTL Carrier Service
13. Small Parcel Carrier Service
14. Truck Freight Volume
15. Highway Infrastructure
16. Traffic Congestion
17. Labor
18. Cost of Living
19. Quality of Life
20. Market Access
21. Operating Costs
22. Incentives

Major US Container Ports

Identifying Warehousing Paths of Growth

Warehousing: Market Access

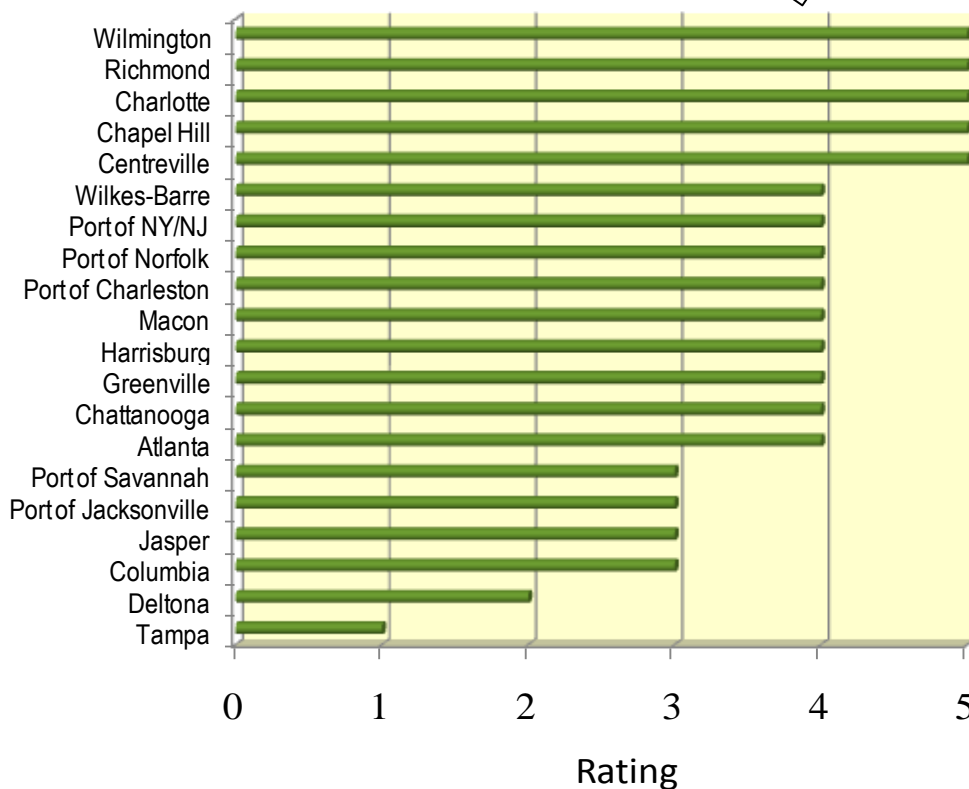
Sample

Top Areas:

- Wilmington
- Richmond
- Charlotte
- Chapel Hill
- Centreville

Factors:

- Local Market Access
 - Current Population
 - Projected Population
 - Population Growth
 - Commercial Business Establishments
- Next Day Market Access
 - Current Population
 - Projected Population
 - Population Growth
 - Commercial Business Establishments
- Distance to Major Markets



Major US Container Ports

Identifying Warehousing Paths of Growth

Sample

Railroads: Railway Infrastructure

- Top Areas:**
- Port of Savannah
 - Port of NY / NJ
 - Port of Norfolk
 - Port of Charleston
 - Harrisburg
 - Charlotte
 - Atlanta



Panama Canal U.S. Port Challenges

Panama Canal Expansion 2014 – Port Challenge



- **Increased Vessel Sizes**
 - Ability to Handle Large Vessels
 - New Port Infrastructure Requirements
- **Increased Vessel Capacities**
 - Ability To Handle Large Cargo Surges
 - Landside Capacity (Terminals, Rail, Truck)
- **Sufficient Cargo Base**
 - Ability to Fill Large Vessel Capacities
 - Large Population Base (Local & Inland)

Panama Canal U.S. Port Challenges

Panama Canal Expansion 2014 – Port Challenge

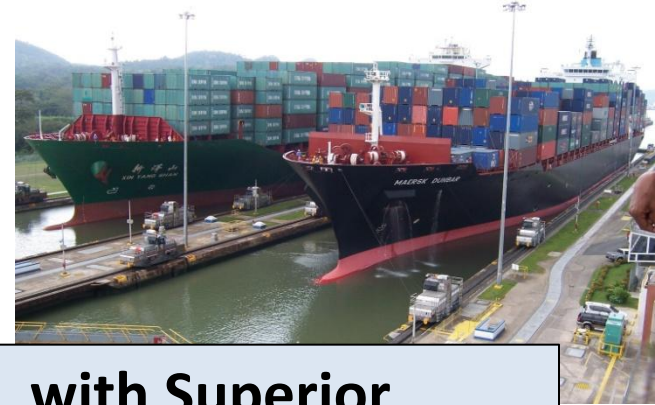
- **Post-Panamax Vessels**
 - New Infrastructure Requirements
 - Channel & Berth Depths
 - Height Clearances (Bridges)
 - Facilities & Equipment (Post-Panamax Cranes)



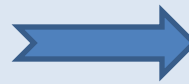
Port	Current Depth	Planned Depth
NY/NJ	45-50	50
Hampton Roads	50	55
Charleston	45	45+
Savannah	42	48
Jacksonville	40	45+
Miami	42	50
Houston	40-45	45

Panama Canal – Greatest Real Estate Growth

Panama Canal Expansion 2014



**Port Winners
(Greatest IRE Growth)**



**Ports with Superior
Logistics Capabilities**

- Preferred Port Logistics Capabilities:
 - Competitive Costs
 - Adequate Labor Supply
 - Business-Friendly Environment
 - Robust IRE Market
 - World-Class Logistics Infrastructure
 - Security & Sustainability Systems



West Coast Ports - Comparison

SoCal Ports Rank Superior on Key Metrics



Port	Major Infrastructure Projects	Channel Depth	Post-Panamax Cranes	On-Dock Rail Infrastructure (Total Length of Working Track)	Port Hinterland Population (within 350 miles radius)
Los Angeles	5 / \$1.5 b	55	64	60,600'	32.7 mil
Long Beach	4 / \$3.6 b	55	66	127,059'	33.4 mil
Oakland	4 / \$492 m	50	30	0	25.3
Tacoma	1 / \$30 m	51	19	40,408'	10.9
Seattle	3 / \$85 m	50	18	32,940'	10.5

Supply Chain Dynamics Impact on Warehousing

Supply Chain Strategies' Impact on Warehousing

Shippers & Warehouse Tenants' World

1. Facing a great deal of uncertainty
2. Focus on reducing supply chain risks
3. Continued focus on cost reductions and operating efficiencies
4. Warehouse network flexibility becoming more critical
5. Goal to increase goods movement velocity



Impact on Warehouse Decisions

- Warehouse locations with strong logistics profiles are better able to deal with: concerns of uncertainty, risk factors and demand for flexibility.
- Facilities with cross-dock capabilities and good dock to trailer spot ratios (3-1 ratios minimum) will continue to be in greater demand.

State of California AB32 Legislation

California's Global Warming Solution

- California Global Warming Solution Act 2006
 - AB32 established first-in-world regulatory and market mechanism to achieve real, quantifiable, cost-effective reductions in GHG.
 - California is the first state to formally approve a comprehensive GHG plan that is required under statute and involves every sector of the economy.
 - AB32 requires California Air Resources Board (CARB) to:
 - Develop regulations to reduce statewide GHG emissions to:
 - 2000 levels by 2010
 - 1990 levels by 2020 – 25% reduction
 - 80% by 2050

State of California AB32 Legislation

Logistics in a Carbon Constrained World!

- Emissions from freight:
 - Direct emissions of logistics are generated by the use of fuel in trucks, light commercial vehicles, rail, coastal shipping, international ships and airplanes. Another source of direct freight emissions are from air conditioning and refrigeration units used in vehicles, warehouses and distribution centers
 - Indirect freight emissions include those associated with electricity use in warehouses, distribution centers and corporate facilities such as office buildings.
 - Regulations will apply to both intra-state and inter-state truck operations.
 - In terms of warehouse operations forklifts will come under new GHG legislation.

Summary

Increasing **information** in a world of **uncertainty**

The goods movement world will continue to operate with the new normal, UNCERTAINTY.



It is time for industrial real estate professionals to use logistics profile **INFORMATION** to make more successful investment & development decisions.



Thank You

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Specializing in helping industrial real estate professionals use logistics information to make better strategic and tactical decisions.