

Global Logistics Update Q3, 2021

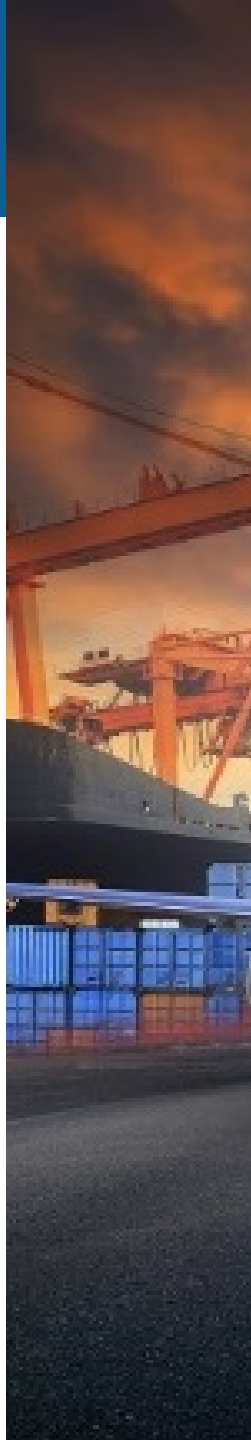


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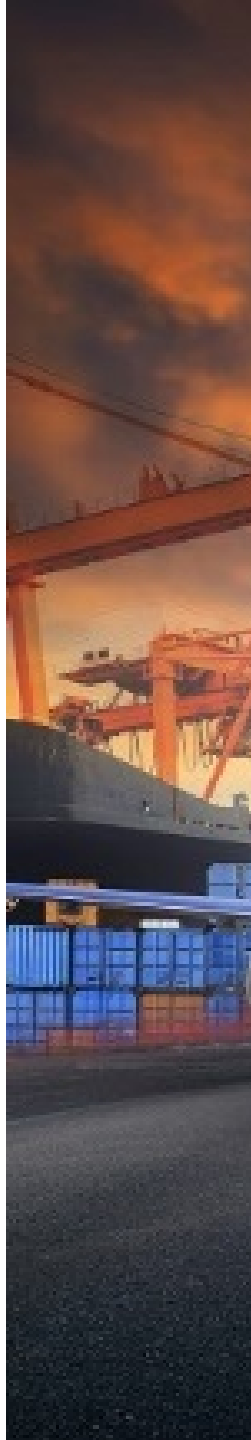


Agenda/Discussion

- COVID-induced disruptions to the global supply chain
- Supply chain overview, demand shifts
- Trade Routes, Ports, Inland Ports and Airports
- E-commerce, the great disruptor
- Change agents and other challenges



Predictability left the supply chain in 2020.

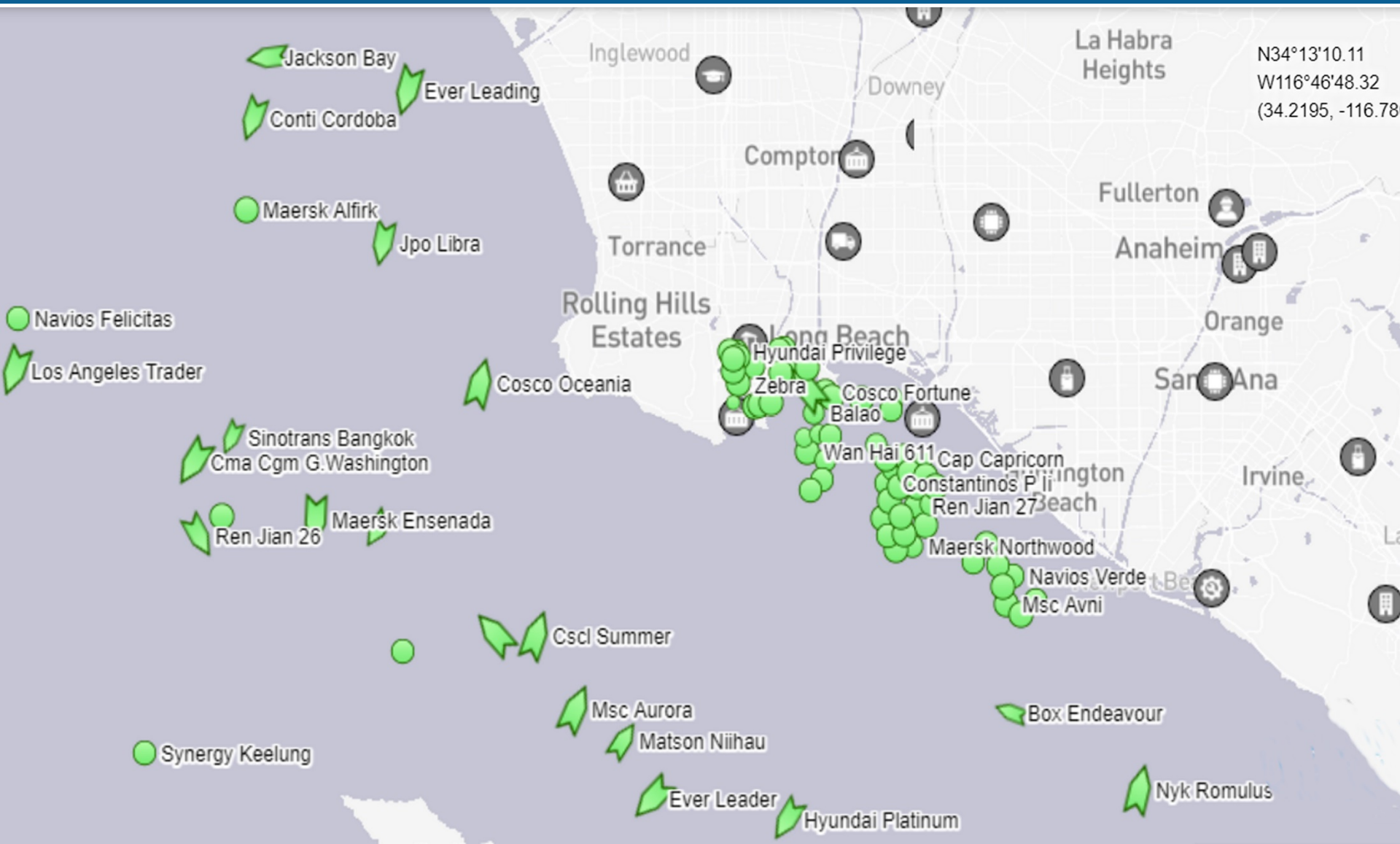


Chaos in the Global Supply Chain

- **Ocean:** bookings, blank sailings and port congestion and record volumes, e-commerce, safety stock and re-shoring and chassis availability all impact this sector and drive Industrial RE growth
- **Rail:** congestion at ports-record dwell time, embargos placed certain major trade lanes, gateway transfer points cause shut down of hubs in Chicago, diverting cargo to Canada
- **Trucking:** driver shortages, shorter-length hauls, last mile deliveries and higher rates for TL, LTL and spot rates
- **Air Cargo:** demand, price highest ever, lack of passenger capacity, double global e-commerce by 2024, consolidation of forwarders and freighters cannot keep up with demand

Current Ships off the coast of LA/LB

432,909 TEU's



Southern California Dwell Times Increase

Dwell Time

The percentage of imported containers at the ports of Los Angeles and Long Beach waiting onshore longer than five days for handling has soared since last year.

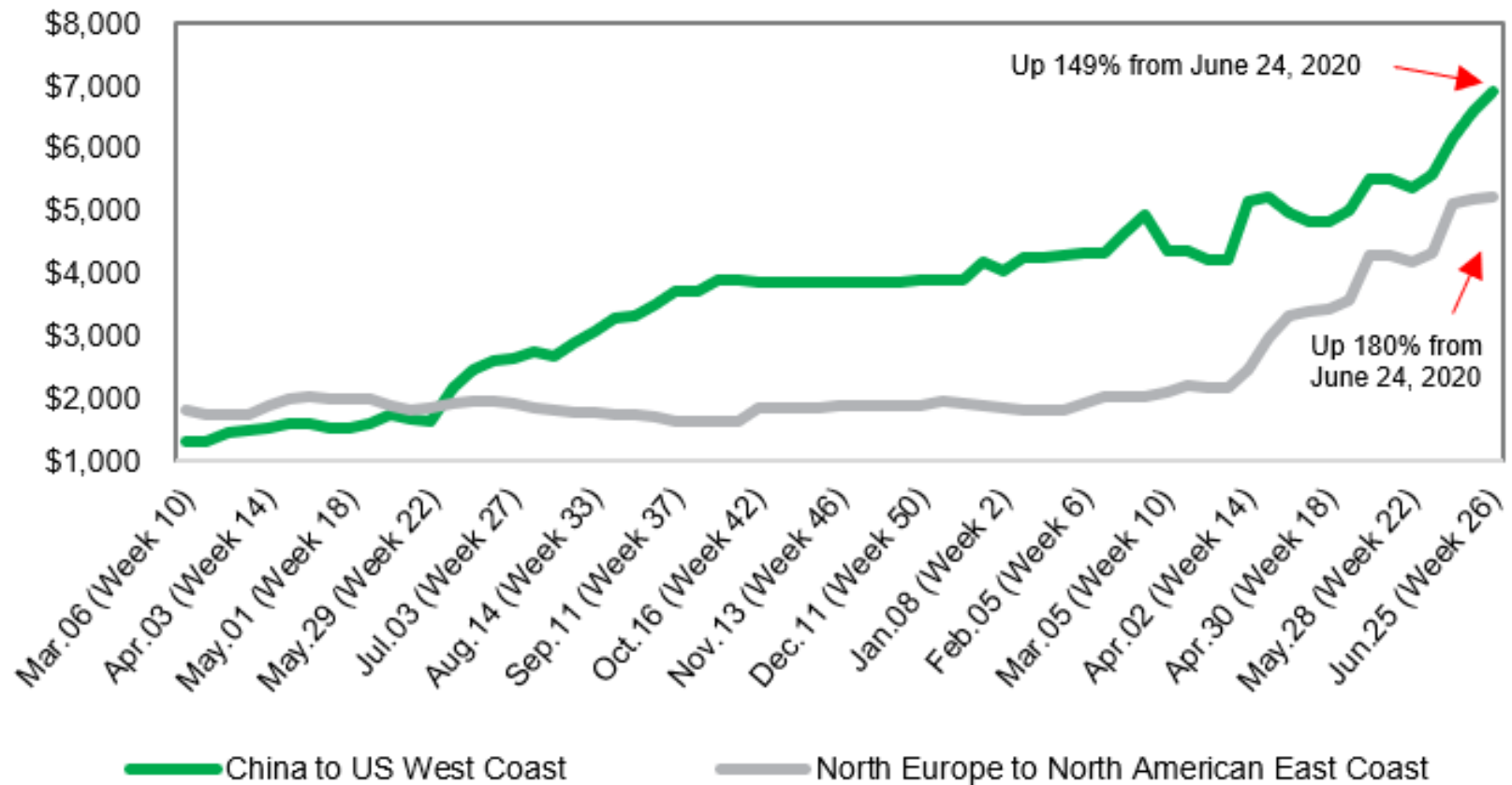
Monthly share



Source: Pacific Merchant Shipping Association

US inbound container spot rates accelerate into summer

Trans-Pacific, trans-Atlantic spot rates per 40-foot container



Source: Freightos

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Journal of Commerce, September 7, 2021: *Container moves from Asia to US West Coast spot rate can exceed **\$30,000.00 USD** per move plus demurrage, detention, fuel surcharge fees and longer transit times*

Supply Chain Issues

- Union Pacific Railroad (UP) halted all international intermodal service from the West Coast ports of Los Angeles, Long Beach, Oakland, and Tacoma to its Global IV intermodal terminal in Joliet, IL.
 - Could last up to seven days beginning July 18
 - An emergency measure designed to get thousands of stacked ocean containers to their cargo owners
- The railroad said it was necessary to relieve the “significant congestion at our inland intermodal terminals, most notably in Chicago.” 3,000 containers



Industrial Demands Post COVID

- Safety stock growth of 5% in Industrial will result in 750M/SF to 1B/SF additional space (Colliers International)
- Global cold chain expansions, 75 M/SF up to 100M/SF to meet demand for on-line groceries (CBRE Research Group)
- Global e-commerce demand up to 1 Billion SF to support distribution, fulfillment, last mile 2022-2025.

Example: Supply Chain for stuff you use can be very complex and very international

Hot Tub Production Center in Utah:

- 500 workers assemble the parts to create one hot tub
- 1,850 parts make one specific hot tub model
- It now takes up to 6 weeks from order to delivery, pre-CV 19 was two weeks lead time
- Parts come from 7 countries and from 14 states
- Parts travel 887,776 miles to make one hot tub

Source, Wall Street Journal, August 26, 2021 (*Why is the supply chain so snarled, we explain with a hot tub*)



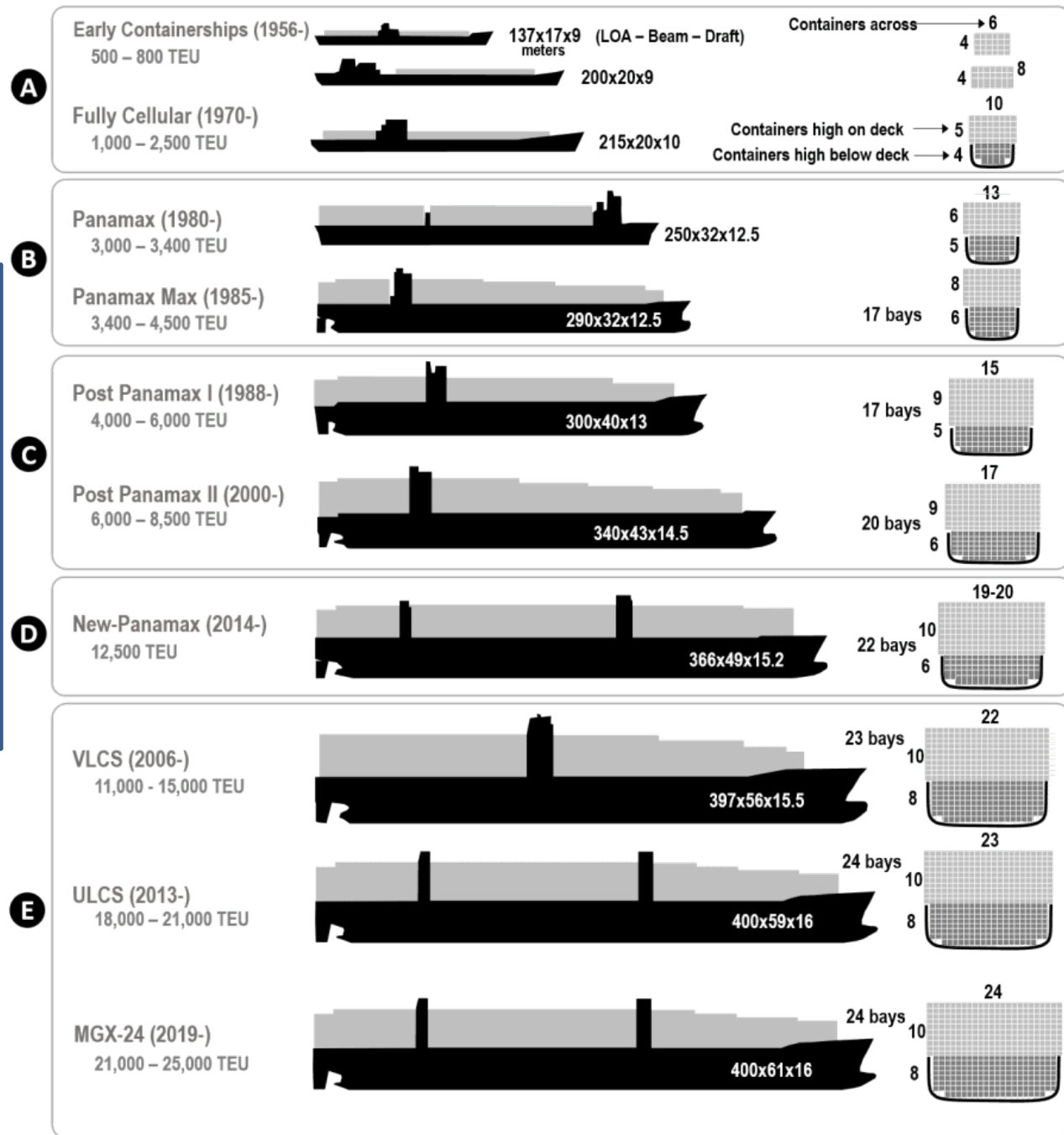
Global Trade Overview

www.imsw.com

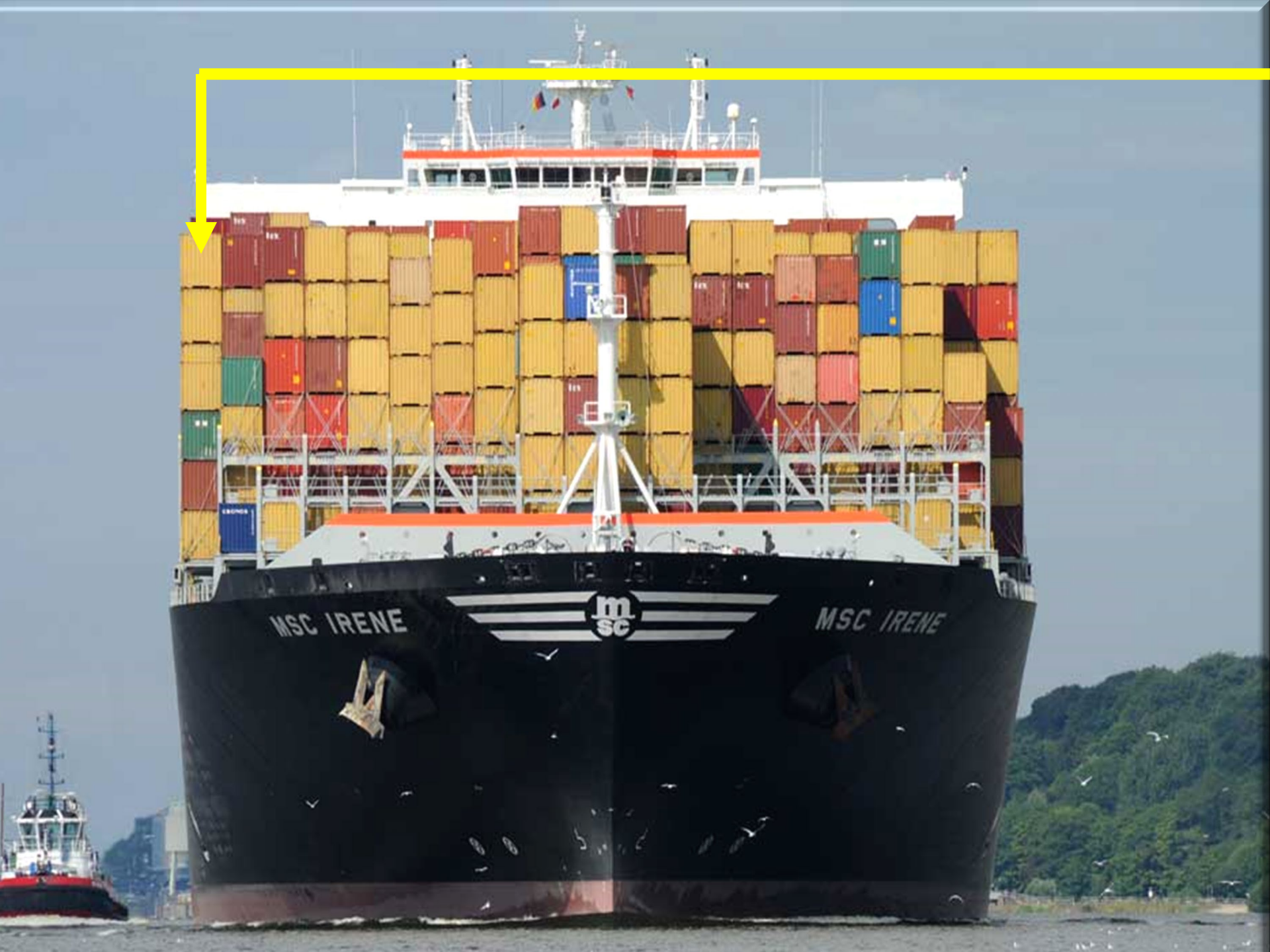
Foreign Trade Zone, Logistics and Supply Chain Consulting



26,000 TEU's loaded
on a short chassis +
truck stretches 354
miles







World Port Statistics

TEU/Metric Tons

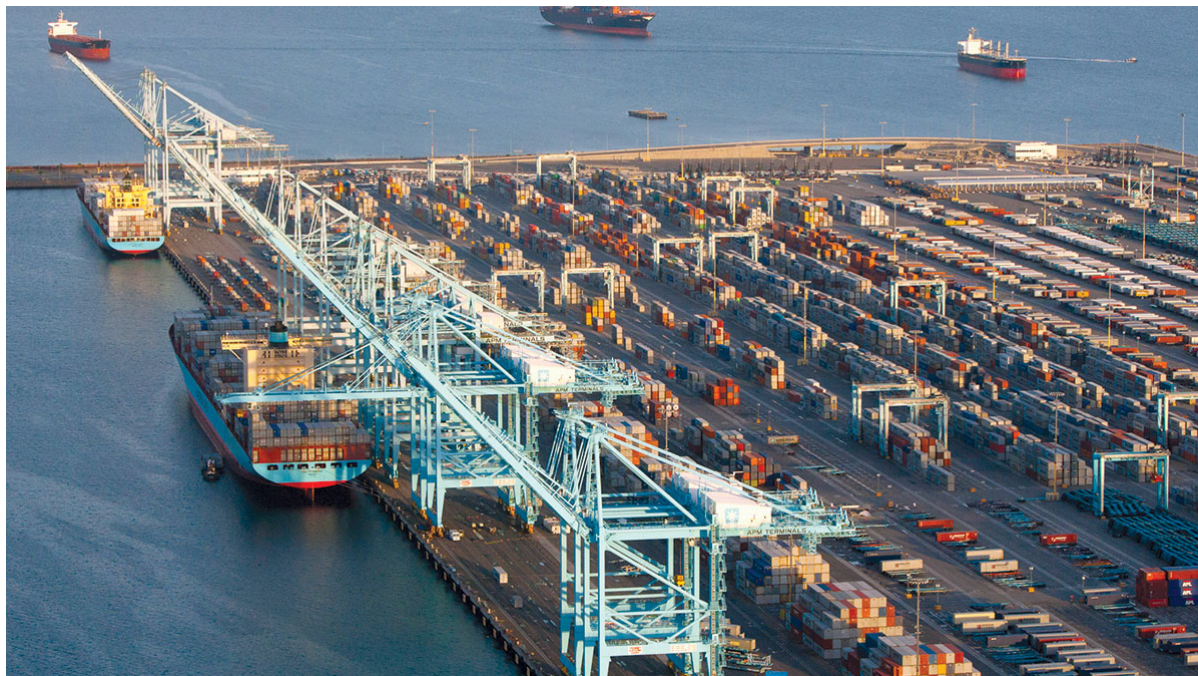
- World Port TEU Top 25 Rank
 - China has 9 ports
 - US has 3 ports
 - - Los Angeles (19)
 - - Long Beach (20)
 - - New York/New Jersey (23)
- World Port Metric Ton Top 25 Rank
 - China has 12 ports
 - US has 2 ports
 - - South Louisiana (12)
 - - Houston (13)



2020 US Port Ranking By Total TEU

Port of Entry	2020 TEU Volume	2021 Est. 20 Million
LA/LB	17,326,711	3.9 Million
NY/NJ	7,585,819	
Savannah	4,682,255	
Seattle/Tacoma	3,320,379	
Houston	2,989,347	
Norfolk	2,813,415	
Charleston	2,461,279	
Oakland	2,309,996	
Vancouver, BC	3,500,000	

West Coast Ports



West Coast Ports:

- LA/Long Beach
- SeaTac
- Oakland
- Prince Rupert
- Vancouver

Gulf Coast Ports



Gulf Coast Ports:

- Houston
- Corpus Christi
- New Orleans
- Mobile
- Freeport
- Plaquemines

East Coast Ports



SCPA Hugh Leatherman Terminal Construction

June 2020

Phase 1 open Q2 2021 / Phase 1 estimated cost \$1 billion / Completion estimated 2033.



East Cost Ports:

- NYNJ
- Norfolk
- Charleston
- Savannah
- Jacksonville
- Miami
- Halifax

Inland Ports

Knowing Where the “Boxes” are Coming into the Ports or Airports Won’t Help Us.....

- Until we know where the box (container) or boxes (parcels) **STOP!**
- The real value prop in all of this logistics business, is in knowing where the goods will get off the “global conveyor belt” and put into an **INDUSTRIAL BUILDING** or delivered to a **HOME**.
- *This is why “logistics matters” and why investors and developers pay attention to supply chains*

Inland Port/Logistics Center

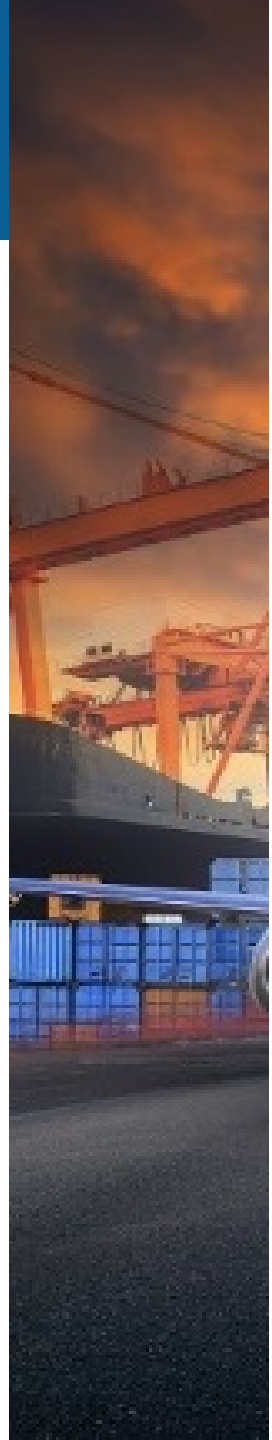
An Inland Port is a location where organized economic development activity occurs and where these activities produce efficiencies for the users who occupy space or use logistics services.



Inland Ports are governed and created by RRs.

Inland Ports are Growing!

- **Top Inland Ports:** Chicago, Memphis, Atlanta, DFW (Alliance)(South Dallas) Houston, KC,
- **Next Tier:**
- VA: Richmond, Front Royal, Lehigh, Columbus, Greensboro and Rocky Mount
- SC: Greer, Dillon, Vance
- GA: Cordele, Chatsworth, Atlanta
- OH: Columbus, Rickenbacker
- **Emerging:**
- Phoenix, Salt Lake City, Denver

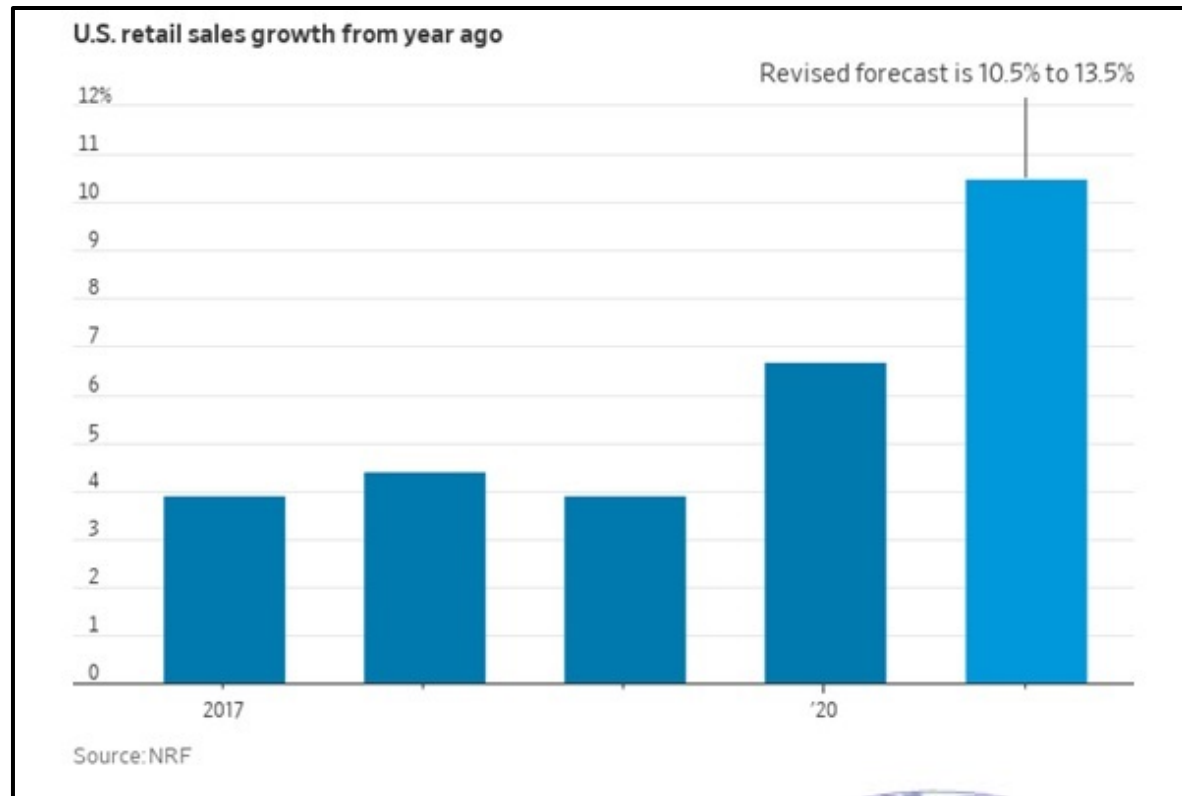


E-Commerce

Retail and E-Commerce

- The National Retail Federation sharply raised its sales forecast in June, predicting growth of 10.5% to 13.5% for 2021. The group expects non-store and online sales to grow as much as 23% in 2021.

- Source: Wall Street Journal



Top Companies in China and the US, Ranked by Retail Ecommerce Sales, 2020 (billions)

China*

1. Alibaba

\$1,170.47

2. JD.com

\$357.74

3. Pinduoduo

\$218.54

4. Suning

\$36.35

5. vip.com

\$20.74

US**

1. Amazon

\$269.41

2. Walmart

\$41.01

3. eBay

\$31.65

4. Apple

\$24.83

5. The Home Depot

\$13.38

Source: eMarketer, May 2020

COVID and E-Industrial

- E-Marketer Research projects:
 - 933 billion in sales in 2021
 - 1.6 trillion in sales by end of 2025
- CBRE, David Egan, “each 1 billion in additional e-commerce sales equates to at least 1.25 million square feet of distribution space”

Sources, Black Creek, US Census, Statistica



Global or Local, or Both?

- Pitney Bowes Parcel Shipping Index:
 - Global parcel volume was 87 billion pieces in 2018
 - Parcel volume exceeded 100 billion pieces in 2020
 - Will reach 200 billion pieces by 2025
- Boeing: Global growth in e-commerce trade driven by international online retail activity will drive the demand for 2,480 new freighters



Alibaba and/or Amazon

- Bloomberg News on November 9, 2018: “Alibaba Group Holding is looking beyond borders to turn its annual Singles Day shopping celebration into a global phenomenon”
- Over half a billion people will visit Alibaba’s website, creating 1 billion packages will become a daily event in the future” -Daniel Zhang,CEO (3000 cargo flights to support Singles Day in 2020)
- ***Their 2020 Singles Day sales were \$74.1B. In comparison, Amazon’s Prime Day in 2021 generated \$11.1 B in sales.***

Cainiao

- Cainiao, Alibaba's logistics company has selected key cities for global hubs: Hangzhou, Dubai, Kuala Lumpur, Liege and Moscow.
- Building out a \$1.53 Billion high-tech, high-volume logistics center at Hong Kong International Airport with National Aviation Group and YTO Express, sort operations to start in 2022.
- Hubs are designed to support deliveries across China in 24 hours and globally within 72 hours.



A Quick Look at Air Cargo

- Historically, 94% of the world's cargo moves on the ocean, 6% moves as air cargo
- About 60% +/- of the 6% of the total air cargo volumes moves in the “belly hold” of a passenger airliner
- Global passenger services stopped in early 2020 with fleets grounded worldwide, the 60% of Capacity disappeared almost overnight
- Global e-commerce is driving demand for additional lift, yet the freighter fleet for air cargo is limited and traditional airports (LAX, ORD, JFK, ATL and MIA) are congested and carriers are looking to use alternative airports
- **A 1% shift in mode, from ocean to air drives a 16% increase in overall air cargo**
- **In 2020, e-retail sales accounted for 18% of retail worldwide, it is expected to reach 21.8% by 2024 (statistica)**

E-commerce's Challenge for Air Cargo

The challenge is in finding a location:

- With less/no congestion
- With mature transportation system
- 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?



Alternative Gateway Options for Cargo Growth Developing Due to Congestion at Traditional Gateways such as JFK, ORD, LAX, MIA and DFW/ATL/HOU



Columbus (LCK)

Chicago Rockford (RFD)

Indianapolis, IN (IND)

Pittsburgh, PA (PIT)

Cincinnati, OH (CVG)

Greenville, SC (GSP)

Huntsville, AL (HSV)

Mesa Gateway (AZA)

Salt Lake City (SLC)

Ontario/March CA?

AMAZON'S NETWORK

Atlanta, Anchorage, **Alliance**, Austin, Baltimore, Charlotte, Dallas, Lehigh Valley, **Cincinnati**, Denver, Hartford, Honolulu, Maui, **Newark**, Kona, Houston, **Lakeland**, Miami, Minneapolis, New Orleans, JFK, Ontario CA, Phoenix, Portland, Richmond, Riverside, Rockford, Sacramento, San Juan, St. Louis, San Antonio, **San Bernardino** **(2021)**, Seattle, Stockton, Wilmington OH, Tampa
Hubs in **Red**,



Amazon in the EU: Leipzig (Hub), Cologne, Katowice, London, Madrid, Milan

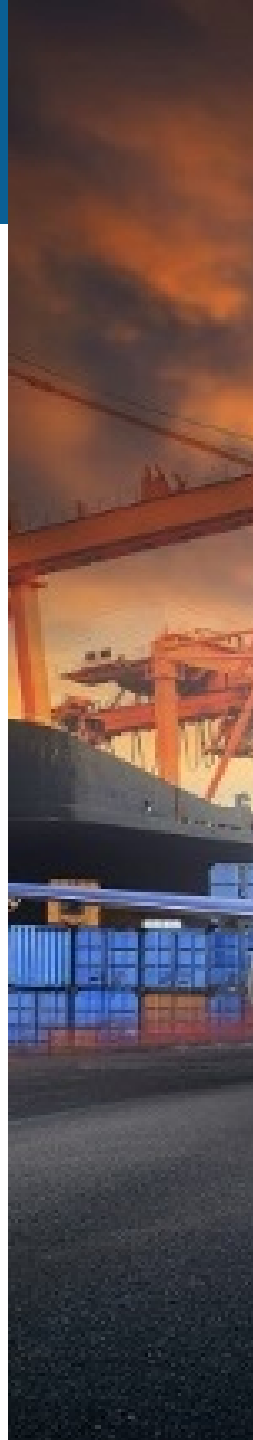
New Disruptors

The Next Disruptor – International E-Com

- For the Journal of Commerce Outlook in 2019 submission: *“in the years ahead, e-commerce volumes will create growth opportunities for the air cargo industry, and that growth will alter trade patterns forever”*
- E-commerce is and will continue to be a disruptor and a game changer in retail, supply chain systems, ports and airports and industrial real estate
- Section 321, Type 86 impact on international e-commerce still developing
- Since 2012, Amazon has developed 938 active facilities, 302,600,369 SF as of 9/2021 AND 441 more facilities planned, another 145 /SF to be added. Walmart store SF is 702,684,014 SF plus 143.9 M/SF DC footprint

Disruptors and Changers

- Section 321 impact on E-Commerce
- Globalization of E-Commerce
- Dynamic growth of the Cold Chain.
- Impact of wearables, robots, automation on manufacturing and supply chains
- Autonomy, drones and platooning
- Blockchain, ELDs, TEU Tracking Devices will bring visibility back into the supply chain, this will positively impact predictability



Hottest Untapped Industrial Markets

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Foreign Trade Zone, Logistics and Supply Chain Consulting



Existing but HOT Markets, not tapped out yet.

- Phoenix – West Valley (Buckeye, Goodyear, Glendale, New 202, Mesa)
- Houston – South and Southeast.
- Columbus OH
- Central Valley CA



Thank You !

Questions?

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