2013 Commissioners Seminar

Port Governing Board Members & Port Commissioners

Westin Beach Resort, Fort Lauderdale, FL *June 4, 2013*

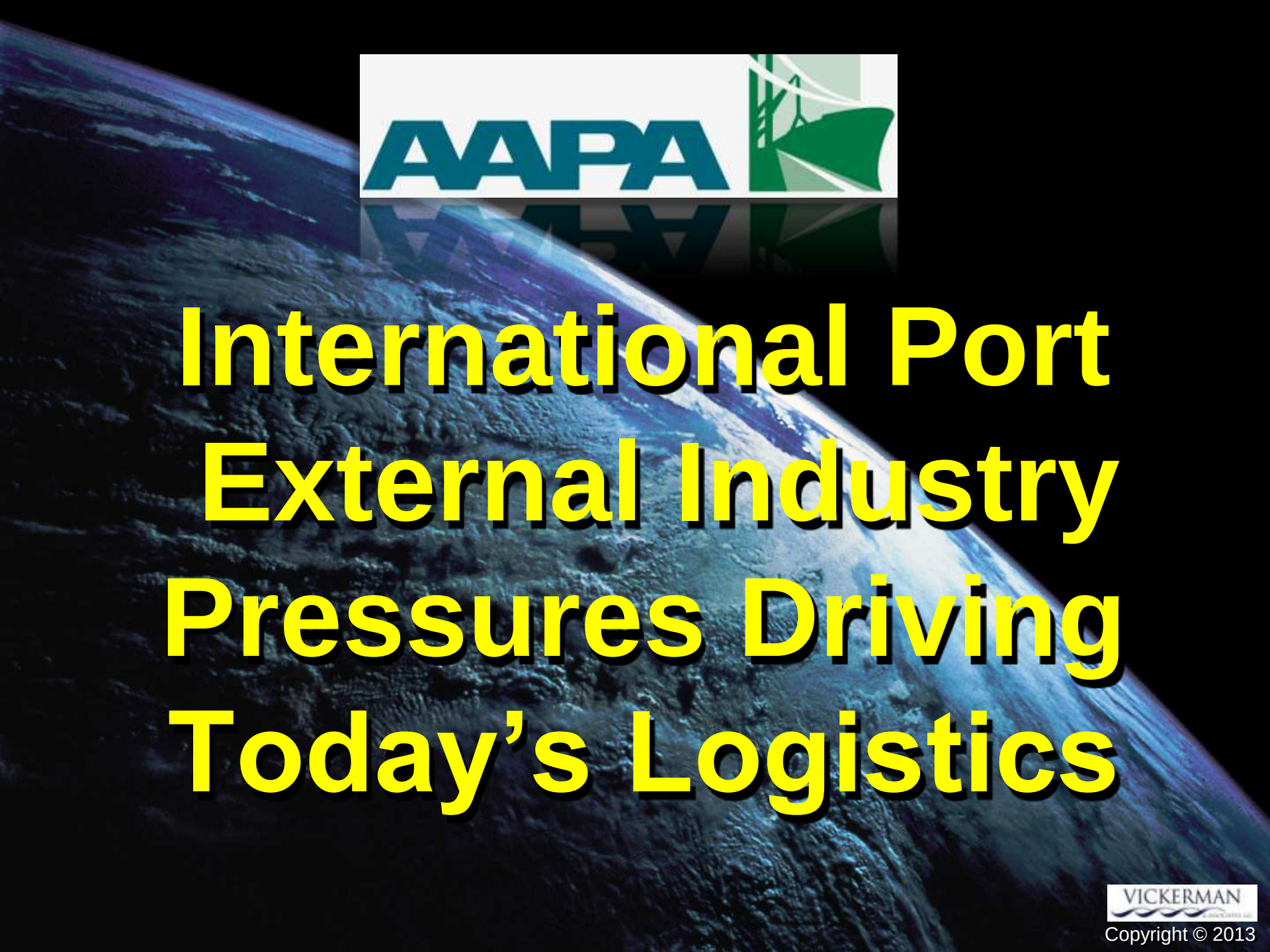
Planning Your Port's Role in an Uncertain Future

Presented By

M. John Vickerman

VICKERMAN & ASSOCIATES, LLC

Williamsburg, Virginia



International Port External Industry Pressures Driving Today's Logistics

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More than 98% of everything we consume, wear, eat, drive and construct is brought to us via ships through the North American port system.

Relationship Between US Trade and US Prosperity – 1930 to 2005

(US Trade & Gross Domestic Product - $ Billions)

Source: USDOT Based on USDOC Data

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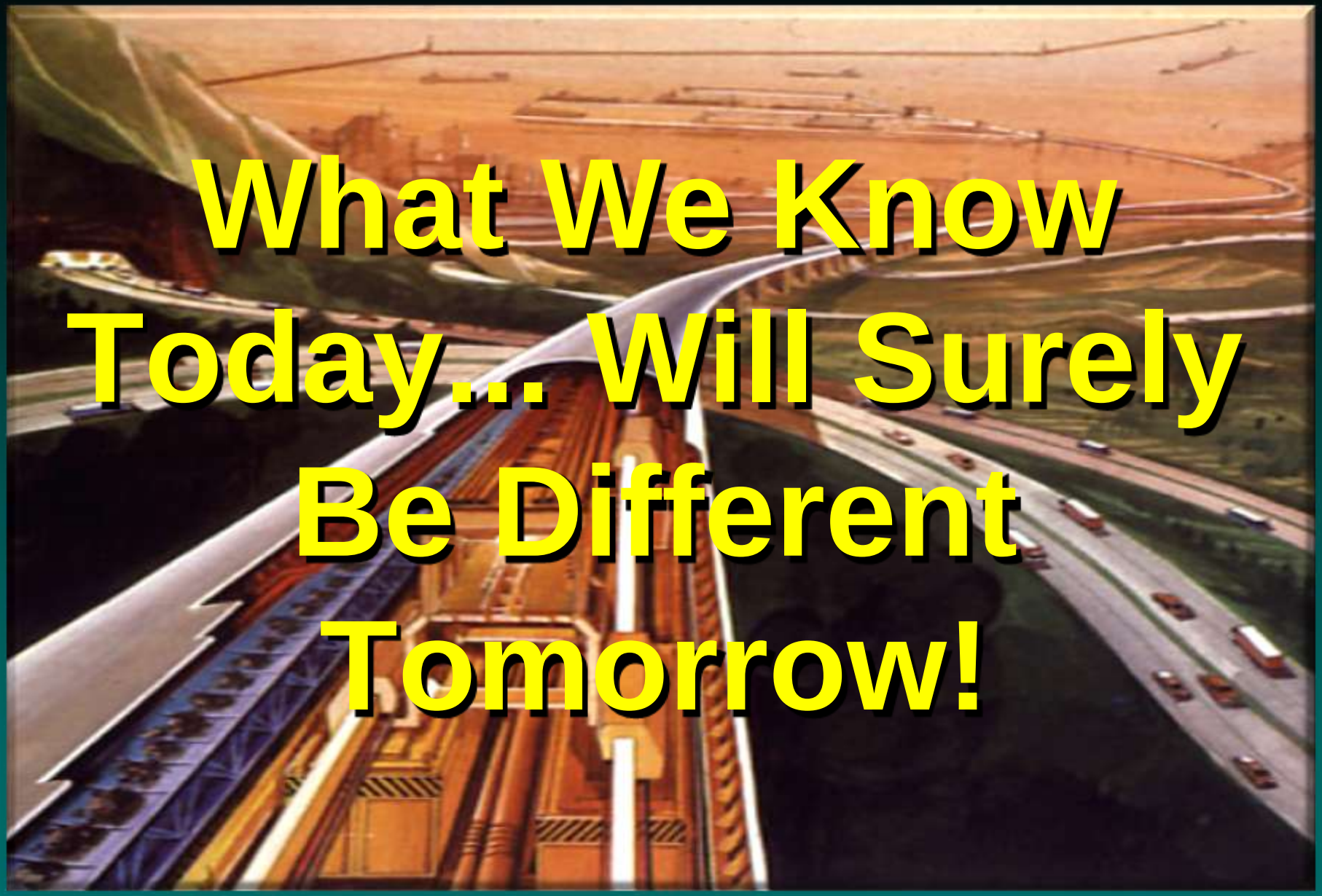
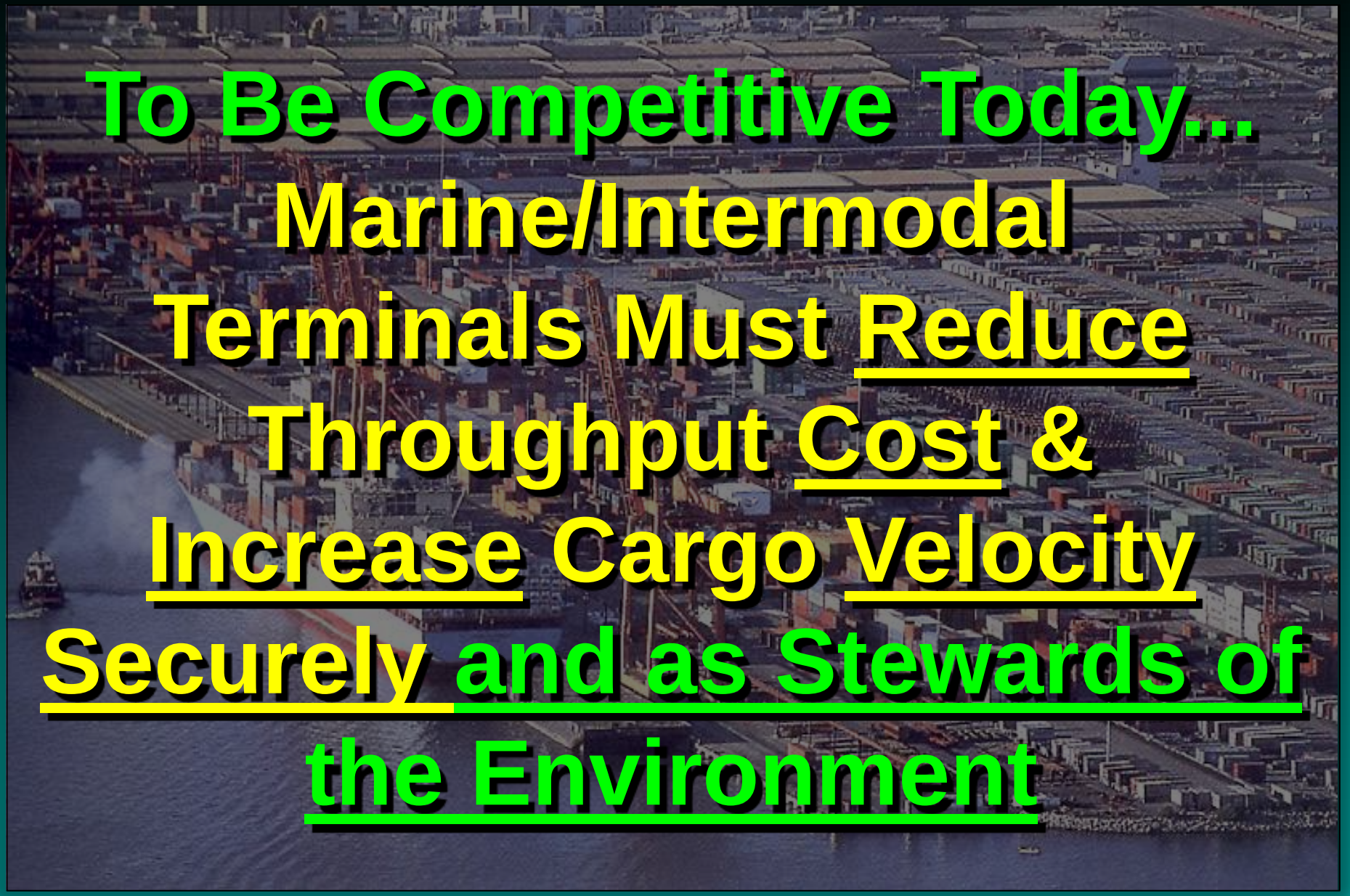
Vessel Cargo Handling Circa 1955

Cargo Handling Circa 2010

US Navy Fast Frigate Circa 2045





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Current North American Port Capital Spending

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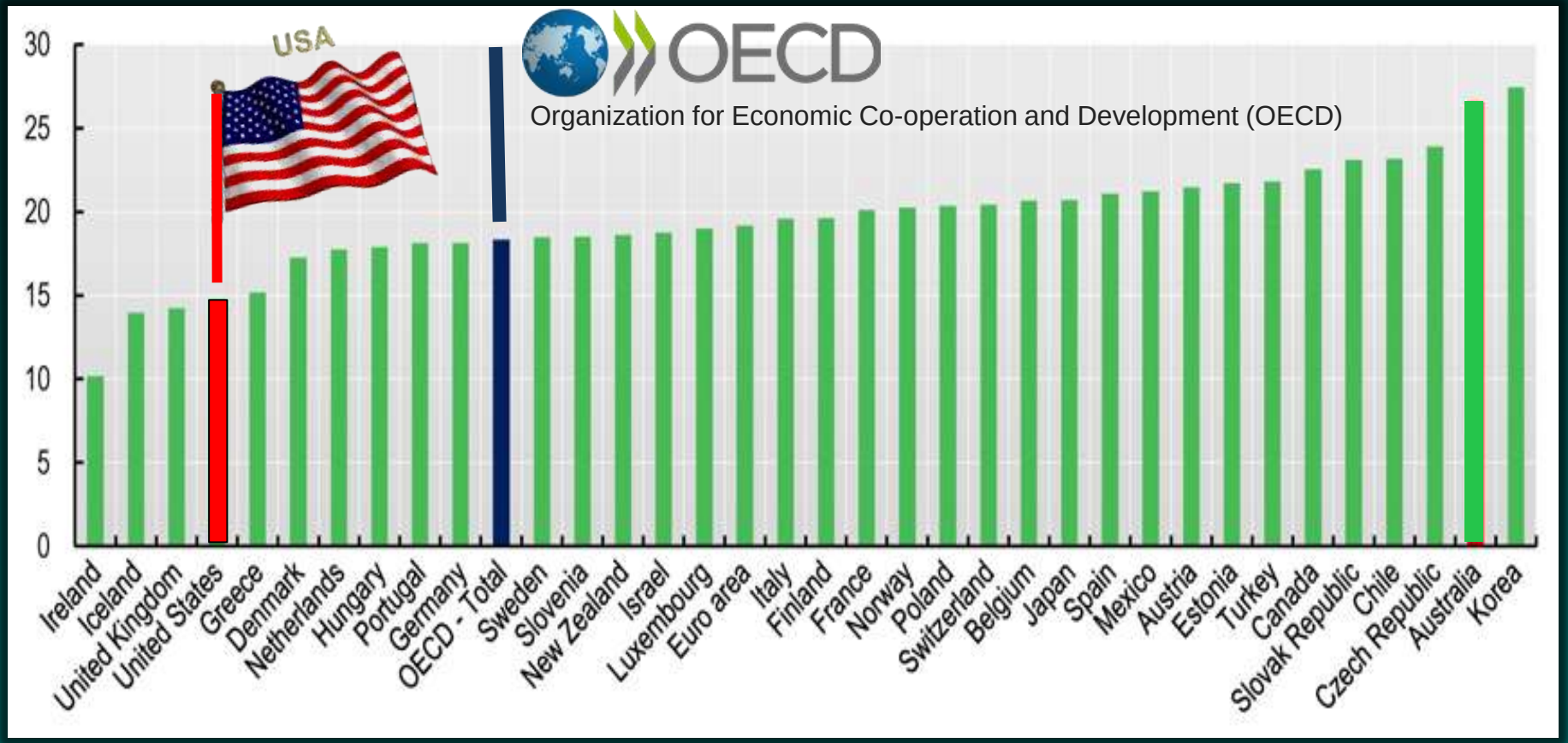
2011 International Gross Fixed Capital Formation as a Percent of GDP

(*US is 32nd in the World - Below OECD Nations*)



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2013 REPORT CARD for America's INFRASTRUCTURE

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

AMERICA'S GPA:

D+

ASCE 2013 Report Card for America's Infrastructure

ESTIMATED INVESTMENT NEEDED BY 2020:

$3.6 TRILLION

Ports: C

Railroads: C+

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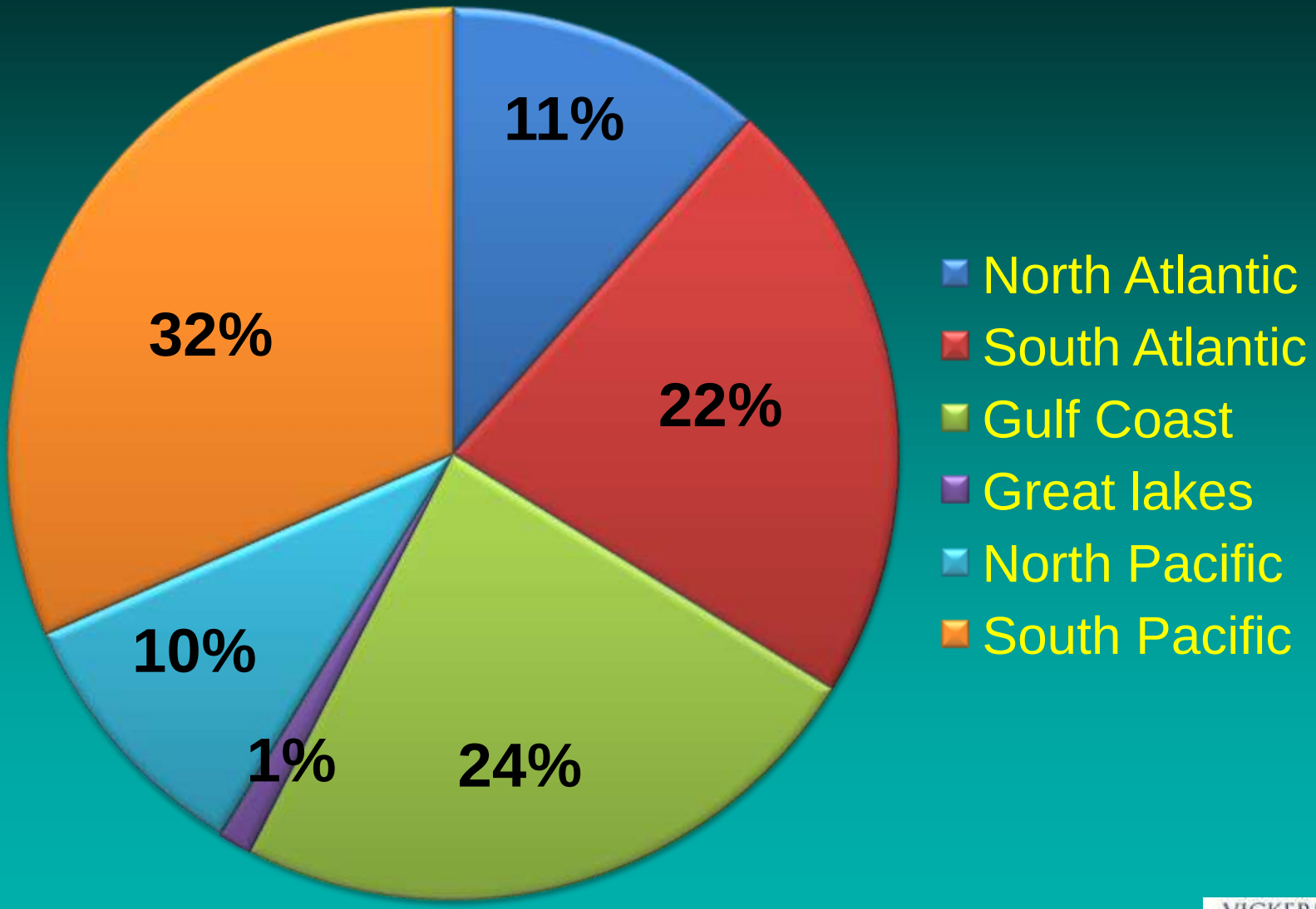
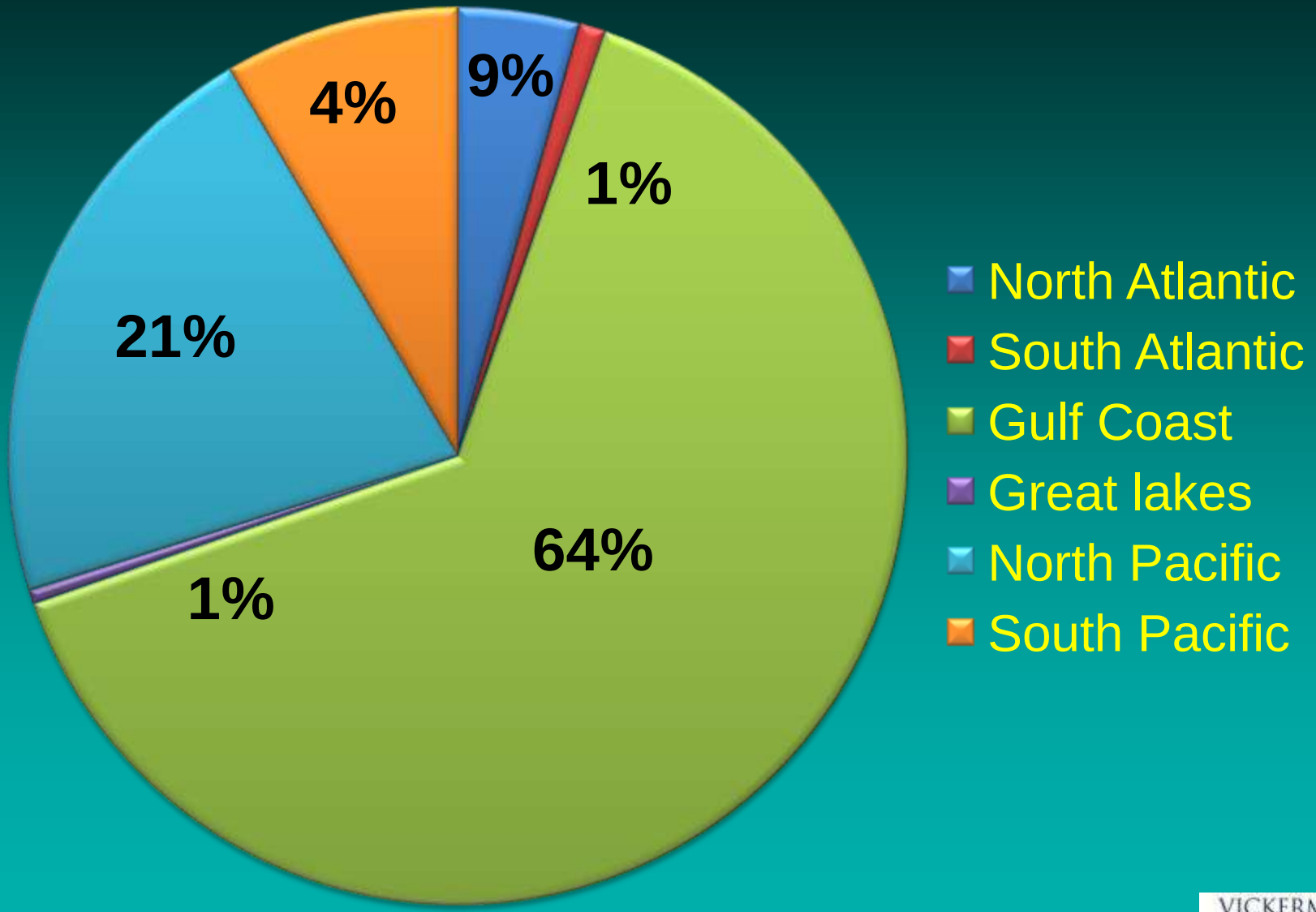
$18.3 billion *US Public Ports* Port Capital Expenditures - 2017



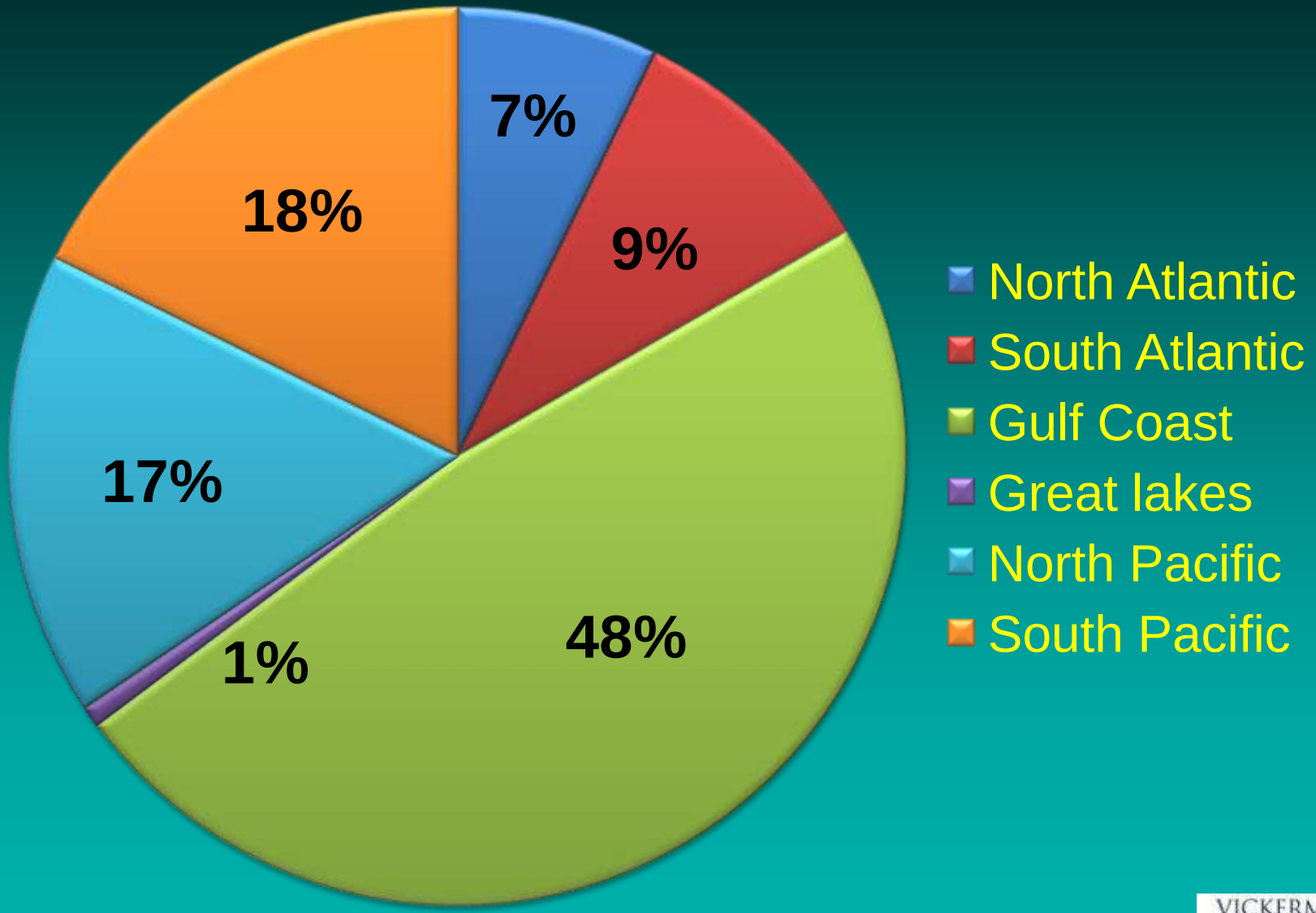
Source: AAPA News Release June 2012 – AAPA Member Survey

$27.6 billion *Private Sector* Port Capital Expenditures - 2017



Source: AAPA News Release June 2012 – AAPA Member Survey

$46 billion *Public + Private* Port Capital Expenditures - 2017



Source: AAPA News Release June 2012 – AAPA Member Survey

Who Owns & Controls Today's Cargo?

- The "***Shipper***" or "***Beneficial Cargo Owner***" ***(BCO)***
- **BCO** = **Importer of record**, the entity that physically takes possession of cargo at destination and **does not act as a third party** in the movement of such goods
- The person or company who is usually the **supplier or owner of commodities shipped**.

The Speed of Shipper – BCO Decisions Today:

E-Commerce Tools Speed Trade Decisions Instantly:

- **Freight Planning and Optimization** - Electronic Tender Management Tools: Rapidly gather & analyze multiple freight logistics bids instantly.
- **Data Visibility** - Shipment data is available electronically via the Web or Desktop E-tools, in real-time or close to it.

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Cargo Will Flow "*Downhill*" to the "*Lowest Cost - Best Service Levels*"

(Total Logistics Costs From Origin to Destination)

More Competitive Regions will End up with the Cargo

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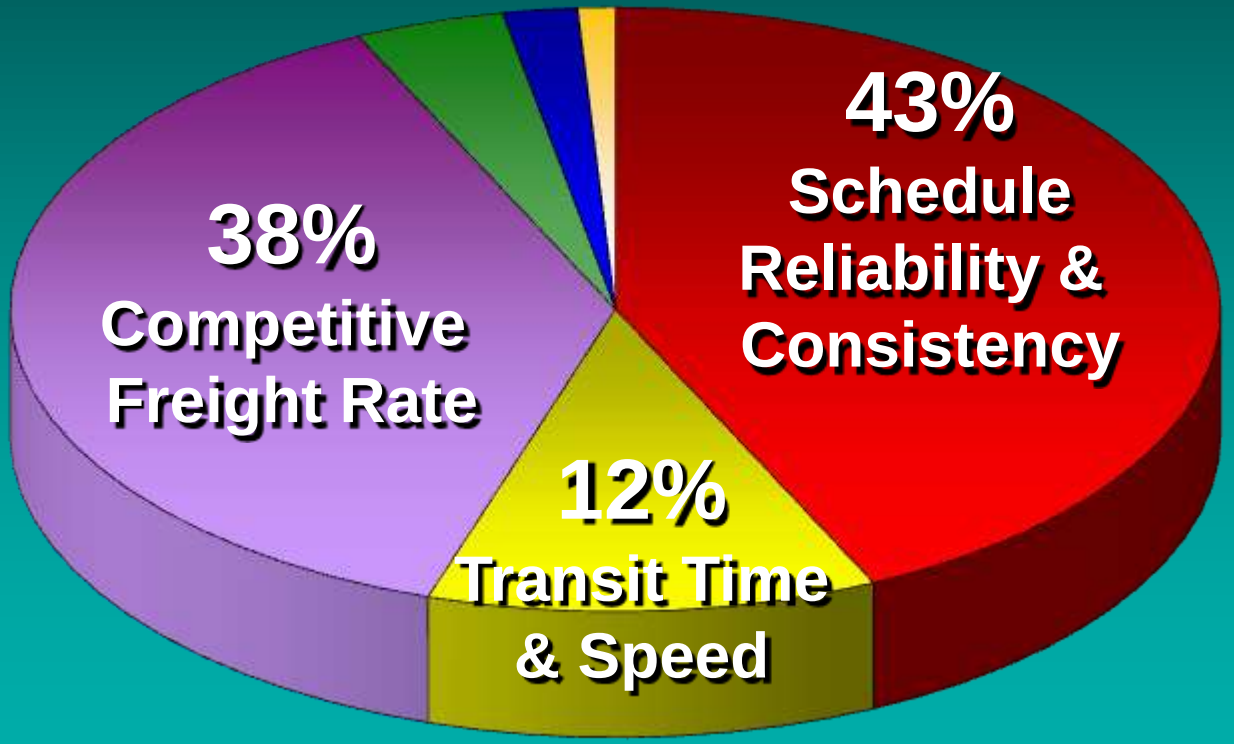
Poll of the Top 1000 "Blue Chip" Multinational Shipper Priorities



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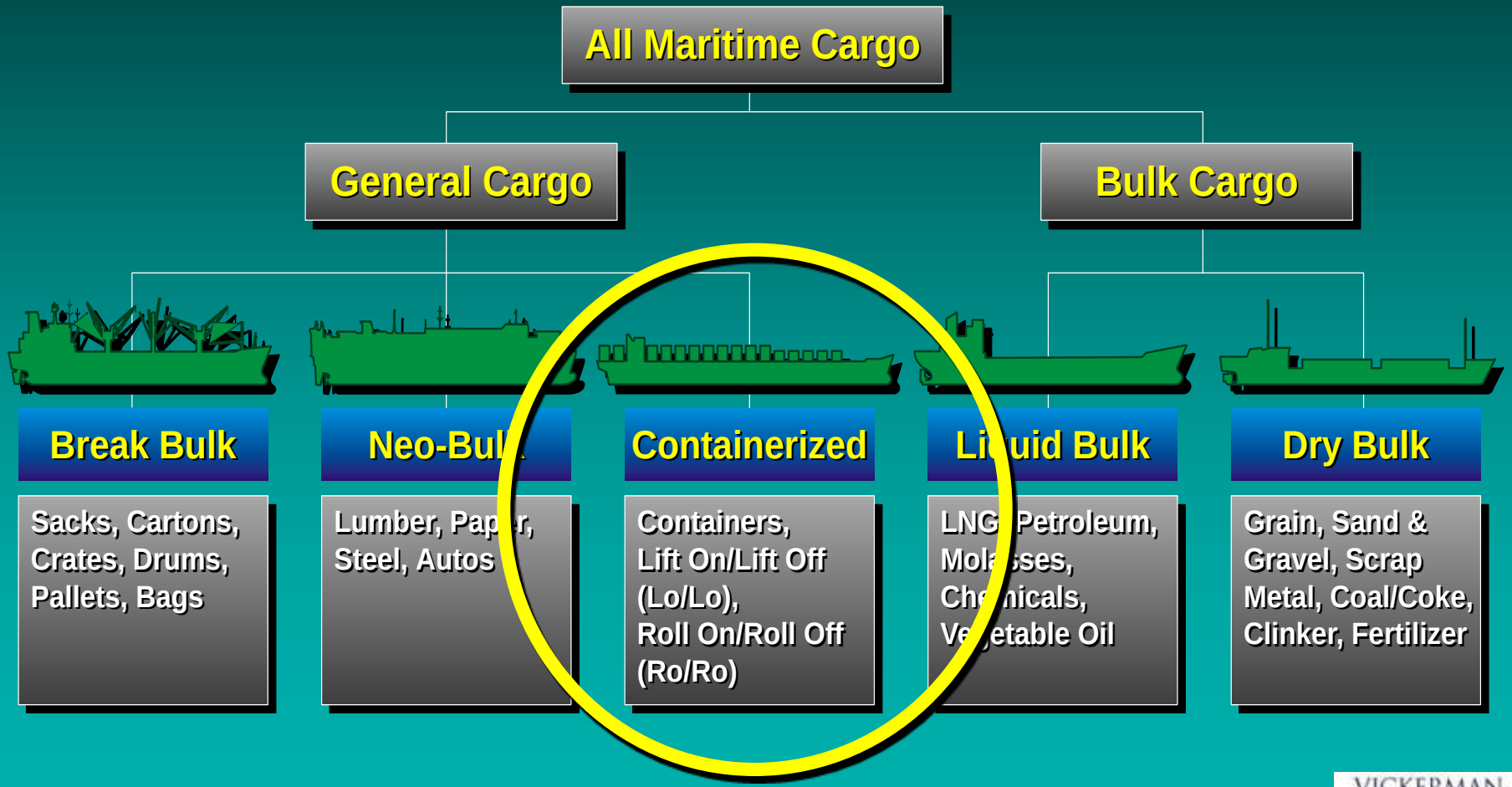
Today's Logistics Truth:

"The customer wants more and is willing to pay less for it."

Functional Classification of Global Maritime Cargoes



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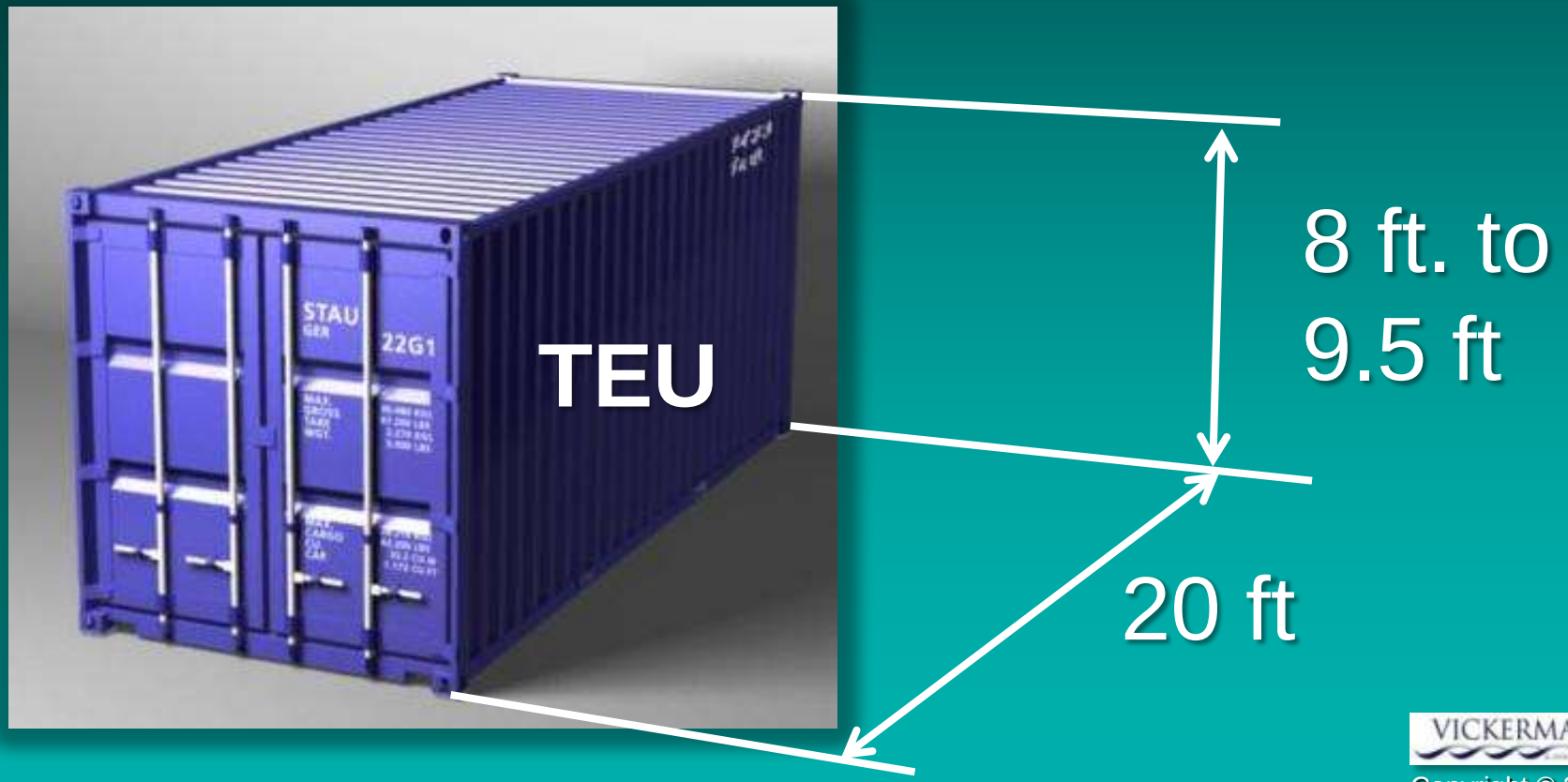
The TEU (Twenty Foot Equivalent Unit)

"The Port & Container Shipping Unit of Measure"

1 TEU = One 20 ft. ISO Container

1 FEU = 2 TEUs = One 40 ft. Container



What is the Value of a Single Container Load?

(Example 40 ft. Container, FEU)

					Example Value $
	=	1,890 Cases	@	$25.50/Case	=	$48,195
	=	432,000 Packs	@	$4.00/Pack	=	$1,728,000
	=	10,000 Pairs	@	$30/pair	=	$300,000
	=	315 20” TVs	@	$299/TV	=	$94,185

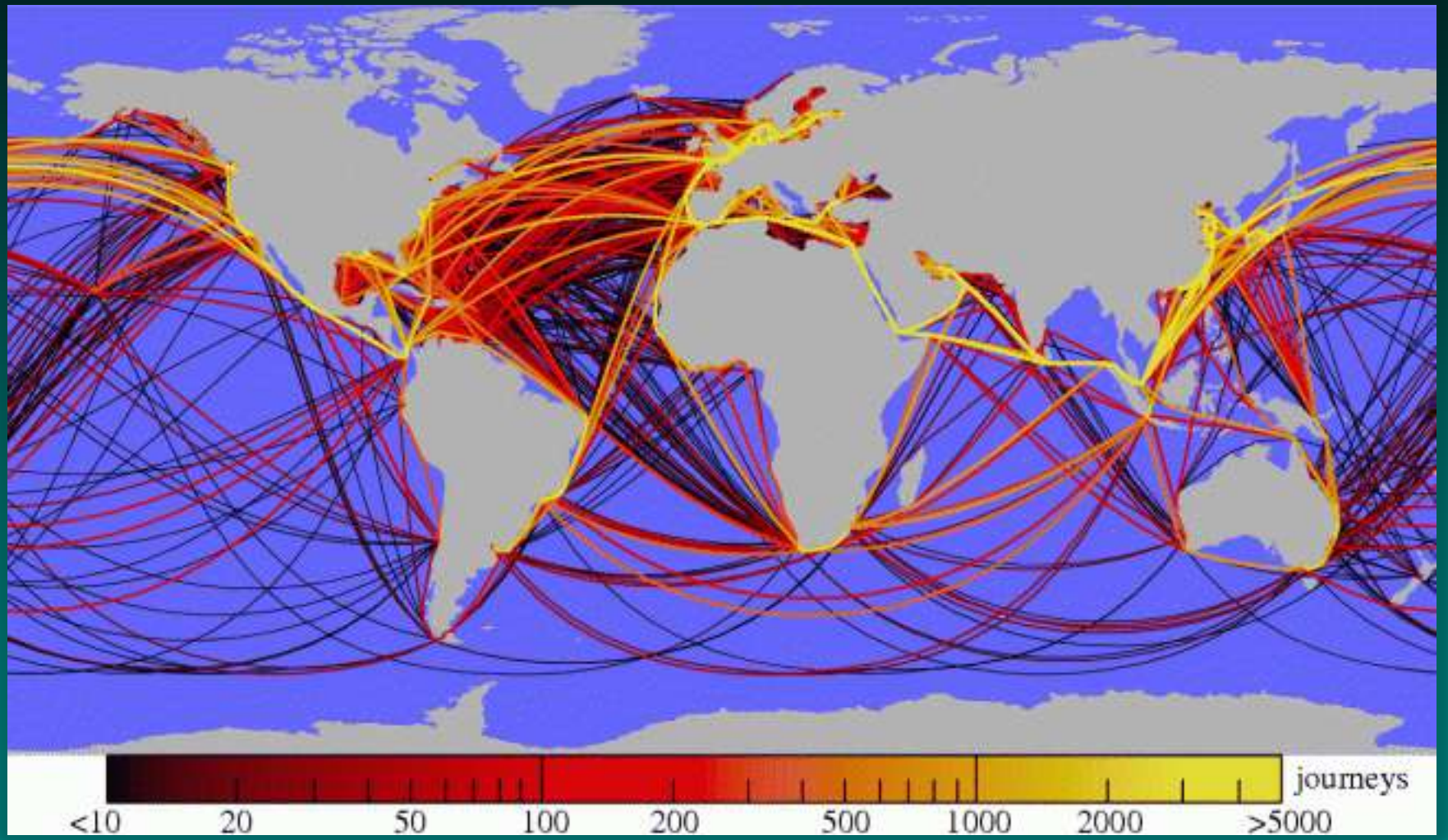
Source: Virginia Port Authority

International Maritime Cargo Demand Trends

Global Shipping Routes Plotted by AIS GPS

2010 Busiest Routes:

(1) Panama Canal, (2) Suez Canal, (3) Shanghai Port



Source: Wired Science January 2010 Journal of the Royal Society: Interface

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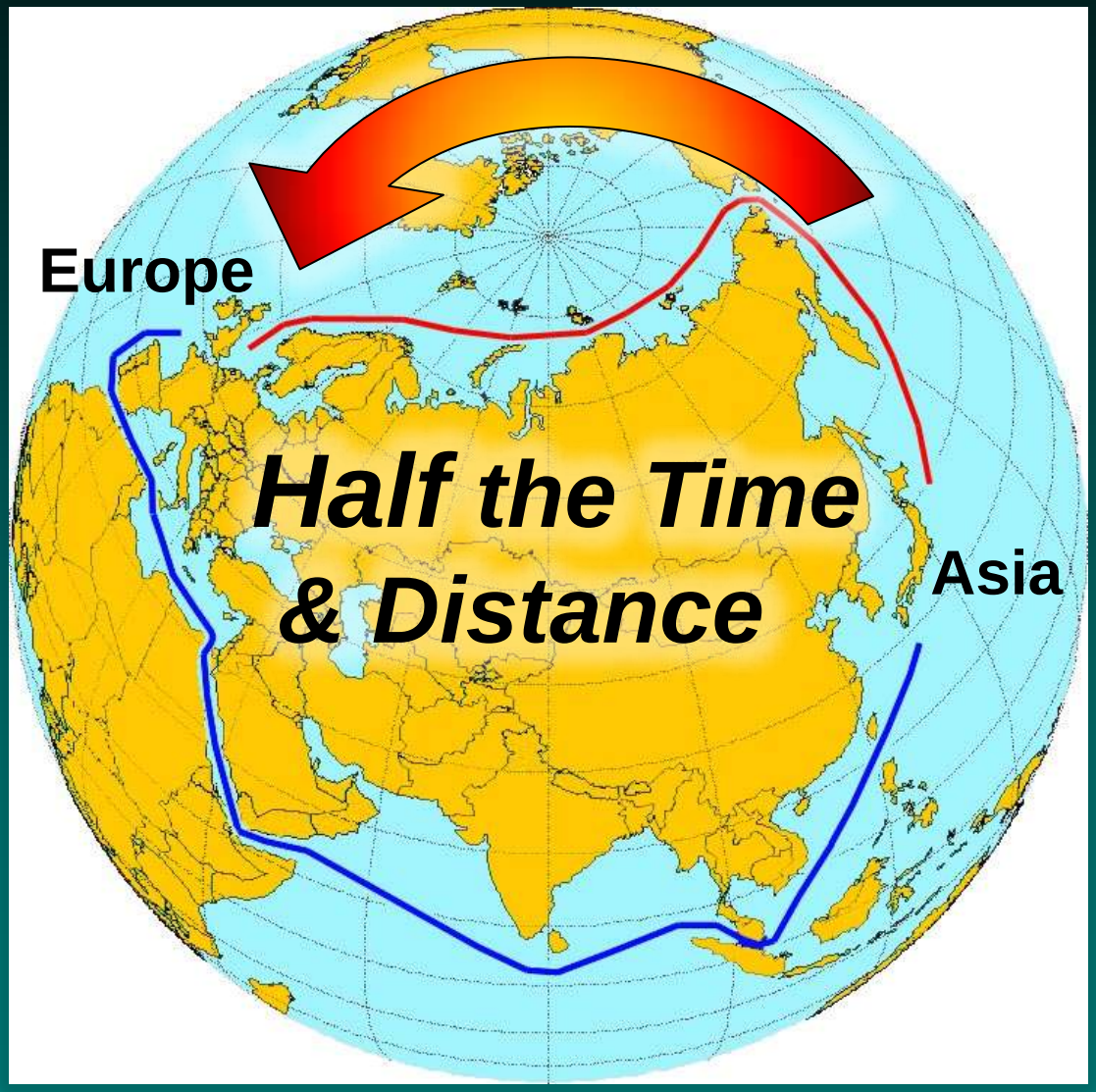
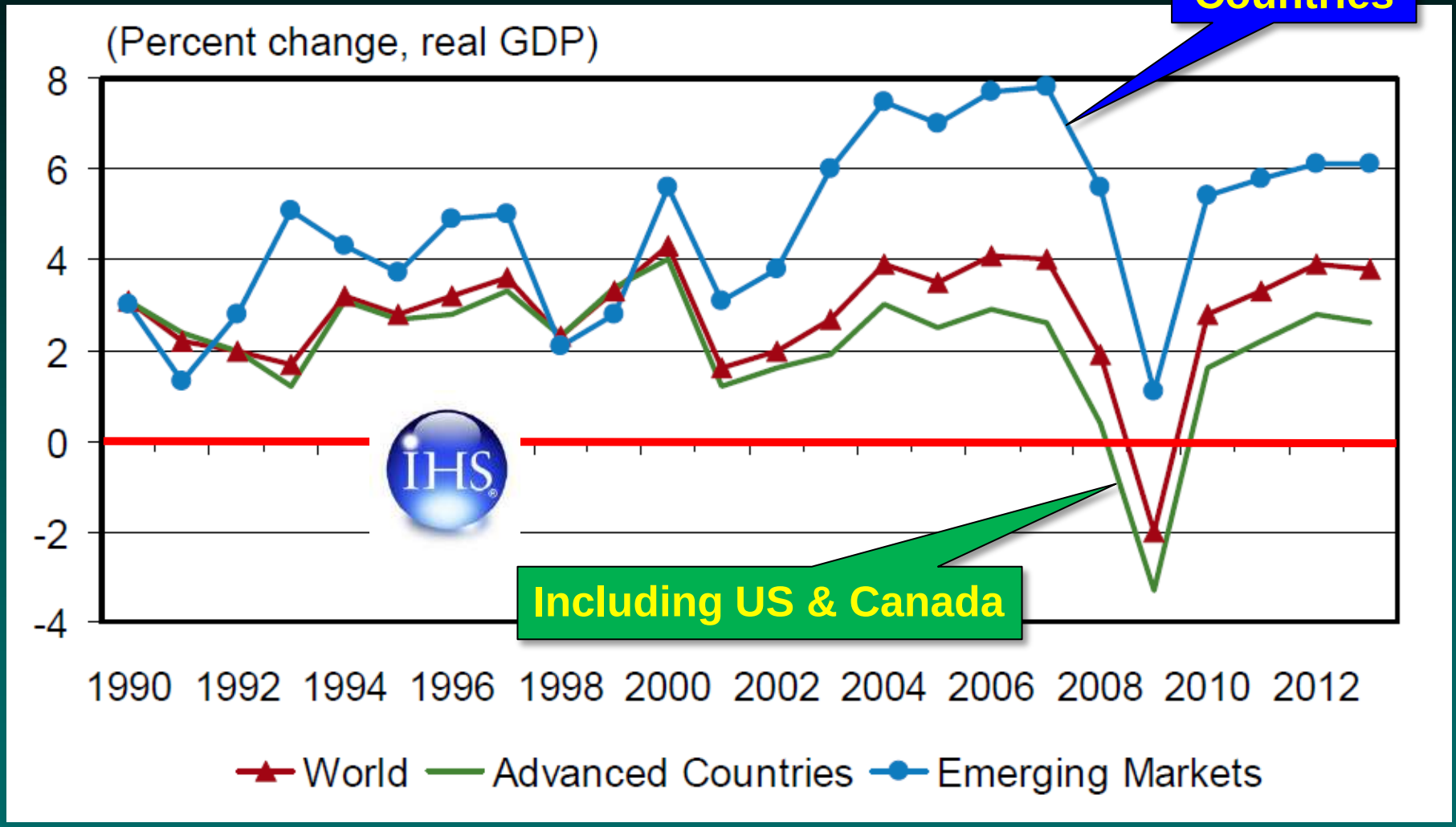
Shorter – Faster Arctic Ocean Route

2+ Months A Year Using Convoys

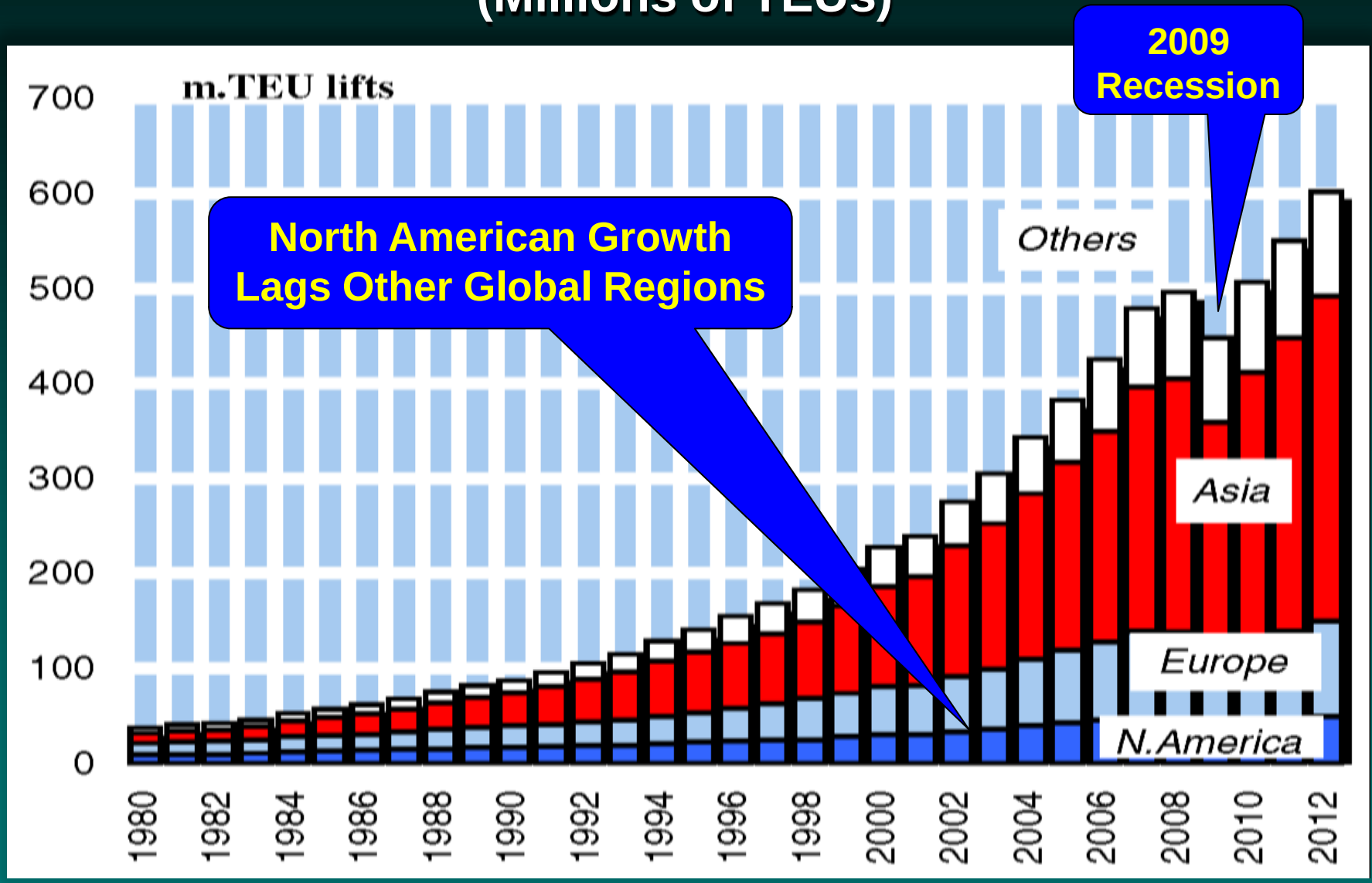


Emerging Markets Lead the Global Recovery



Source: IHS Global Insight – World Trade Service

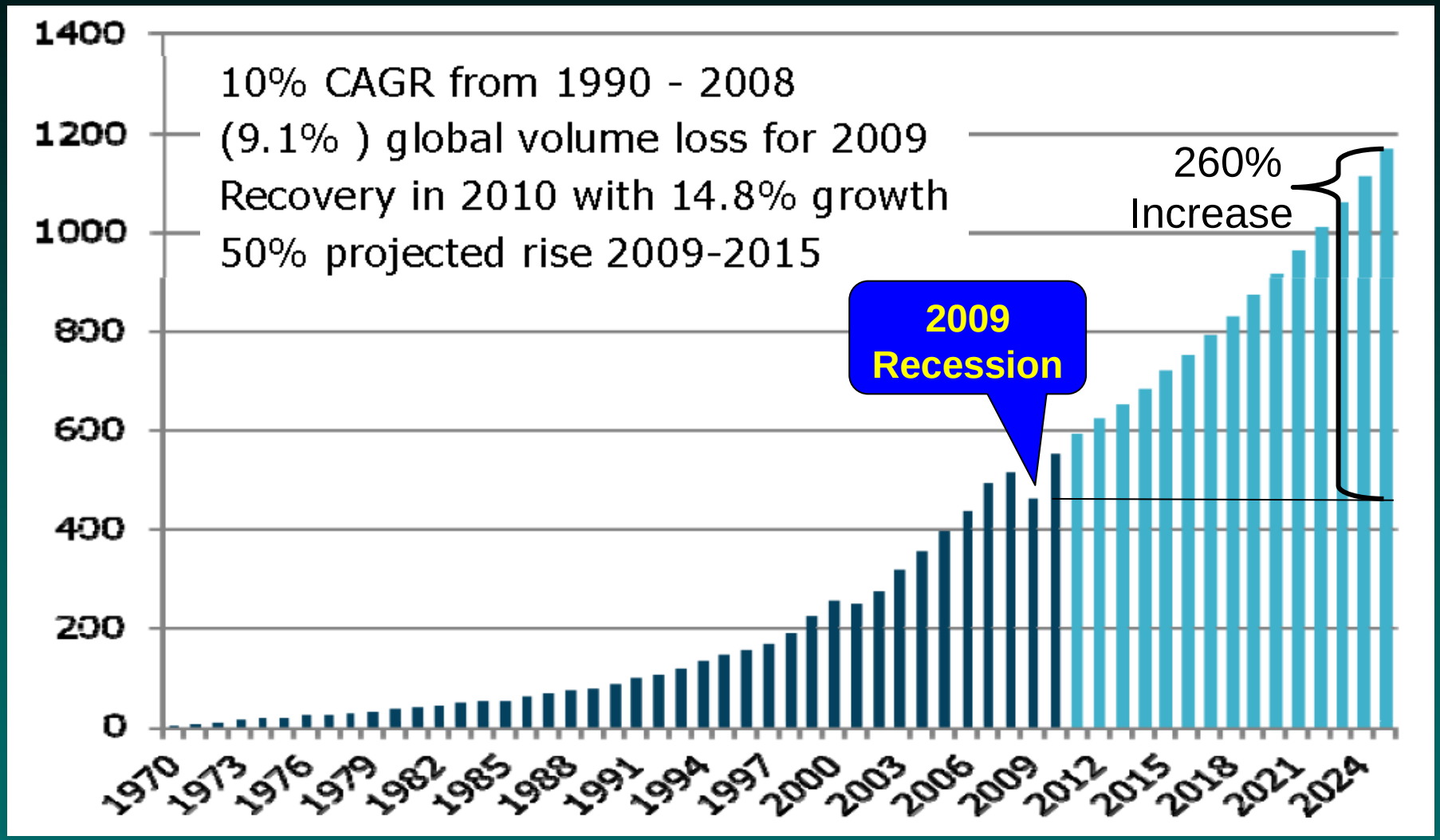
Historical Global Container Market Demand
(Millions of TEUs)



Source: Drewry Shipping Consultants

2025 World Container Port Market Demand

(Millions of TEUs)



Source: Drewry Shipping Consultants October 2011

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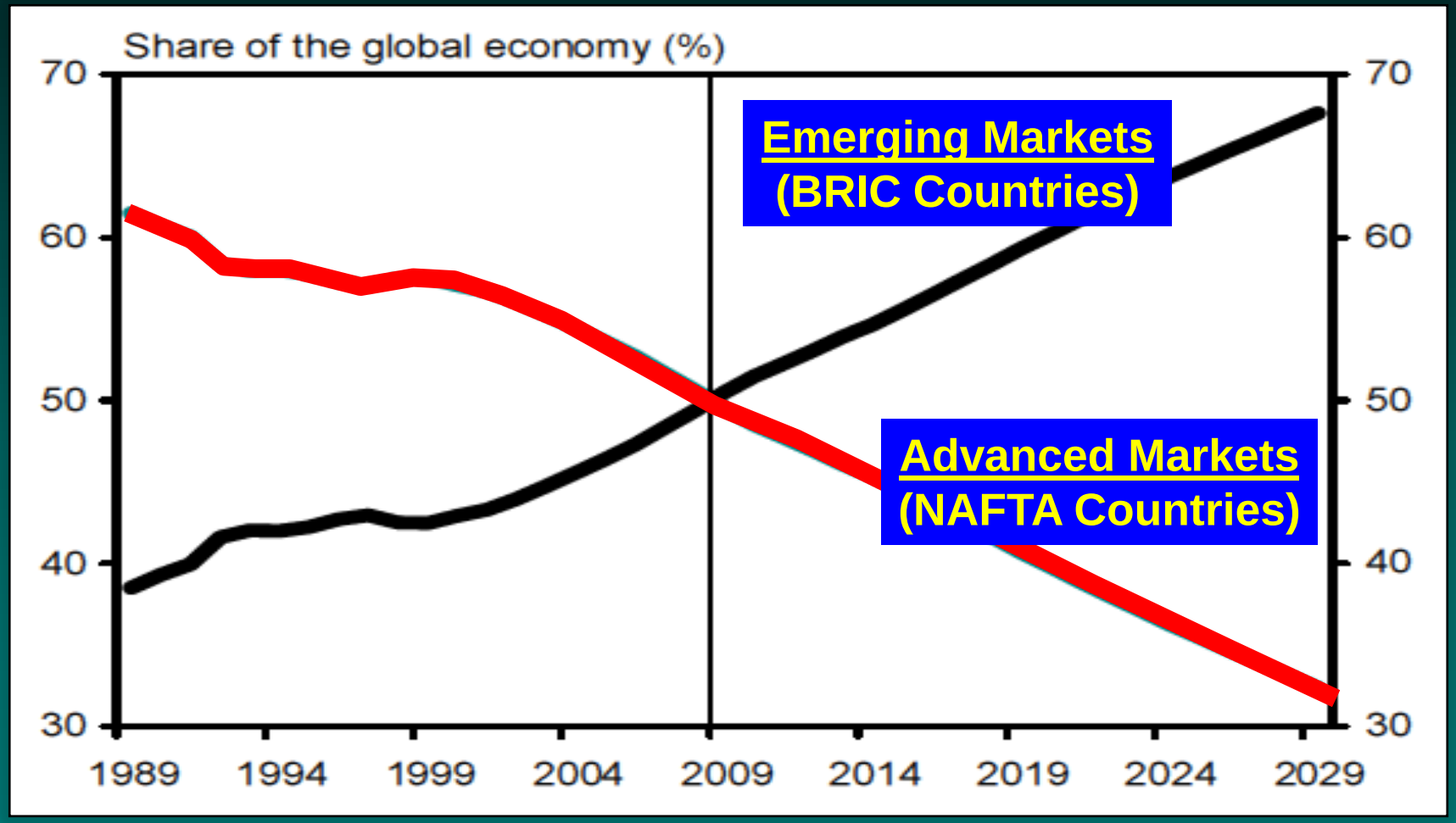
A Turning Point in Global Economic History

The Advanced Economies Will Decline From 2/3 share of the Global Economy to a 1/3 Global Share. The Global Economy Will See Higher Average Pace of Growth in the Future…



Source: IMF - Forecast by TD Economics, December 2009

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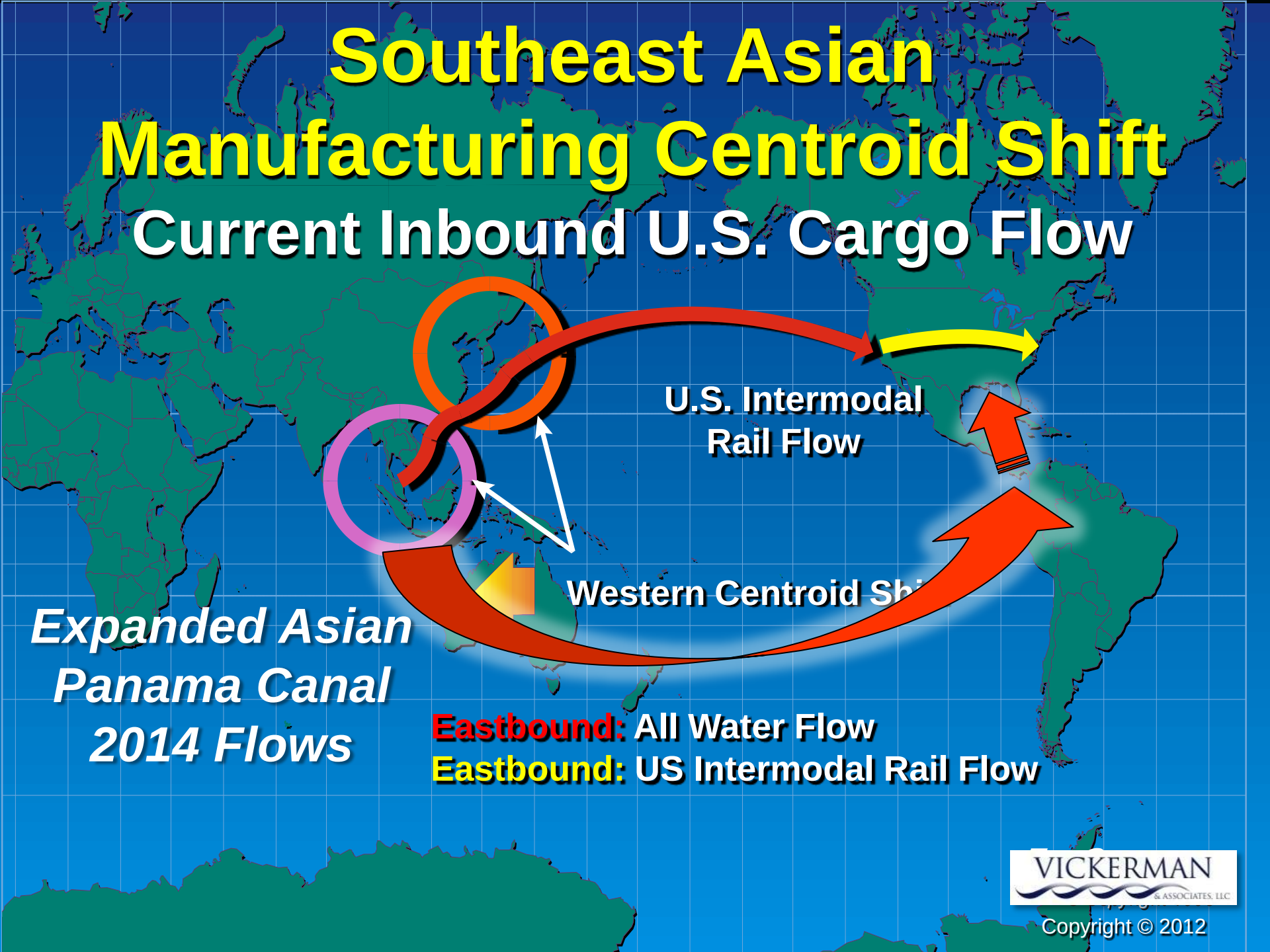
Southeast Asian Manufacturing Centroid Shift

Current Inbound U.S. Cargo Flow



Expanded Asian Panama Canal 2014 Flows

Eastbound: All Water Flow
Eastbound: US Intermodal Rail Flow

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Southeast Asian Manufacturing Centroid Shift

Cu Flow

U.S. In
Rail Fl

With Manufacturing Centroid Shifts Into Vietnam and/or India, The North American East Coast will See Dramatically More Westbound Suez Traffic

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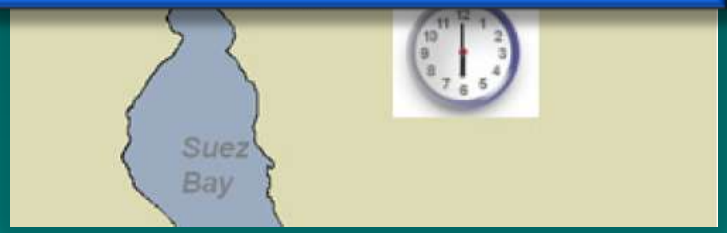
Suez Canal Container Vessel Convoy Traffic

(Ships Currently Transit the Suez Canal in 3 Daily Convoys)

2015 Suez Canal Pricing Strategy:

The Suez Canal has an opportunity to competitively alter global shipping patterns by undercutting 2015 Panama Canal new pricing strategy.



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The Growing Asian Import Trade Challenge

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Container Transhipment World Records

Of the 10 busiest ports in the world in 2011, Nine are in Asia; of the top 10, Six are on the Chinese mainland

The Port of Shanghai is No. 1, and The Port of Singapore is No.2

These Two Ports are Larger Than All North American Ports Combined

Global Container Port Throughput *Growth Rate* (11 Main Ports 2008 to 2012)

Port	1Q 2012 TEU	Growth 1Q12/10	2011 TEU	Growth 11/10
Shanghai	7,570,000	4.0%	31,739,900	9.2%
Singapore	7,536,900	6.6%	29,937,700	5.3%
Hong Kong	5,616,000	2.7%	24,384,000	2.9%
Shenzhen	5,025,900	-1.2%	22,578,275	0.3%
Busan	4,097,000	9.8%	16,184,706	14.0%
Ningbo	3,787,100	11.9%	14,686,200	11.7%
Qingdao	3,513,300	9.6%	13,020,000	8.9%
Guangzhou	3,247,300	12.1%	14,400,000	13.4%
LA/LB	3,181,424	0.6%	14,001,602	-0.7%
Rotterdam	2,780,439	-3.9%	11,876,921	6.5%
Tianjin	2,774,700	5.1%	11,500,000	14.1%
Total 11 Ports	49,130,063	5.0%	204,309,304	7.0%

Source: Alphaliner Newsletter Volume 2012 Issue 17

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China-US: Twin Engines of the World

Population:
US: 314 million
China: 1,344 million
(1/5 World)

The number of Chinese children in elementary school is equivalent to the total US population.

Shanghai International Shipping Center

Yangshan Deep Port & Logistics Park

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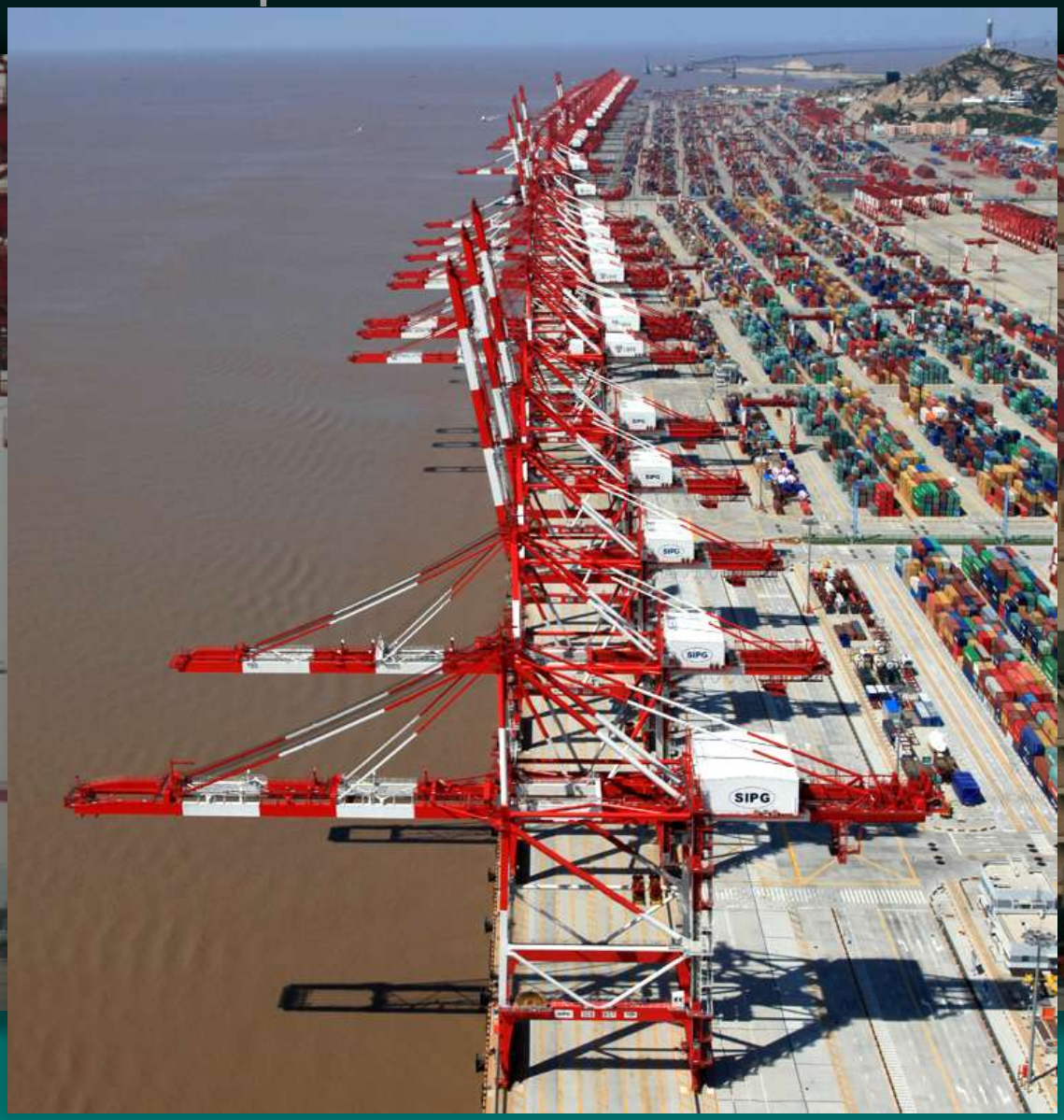
Shanghai International Shipping Center

Yangshan Deep Port - 20 Mile Bridge Access

Shanghai Yangshan Deep-Water Harbour

Yangshan Deep Port – 54 Berths East China Sea



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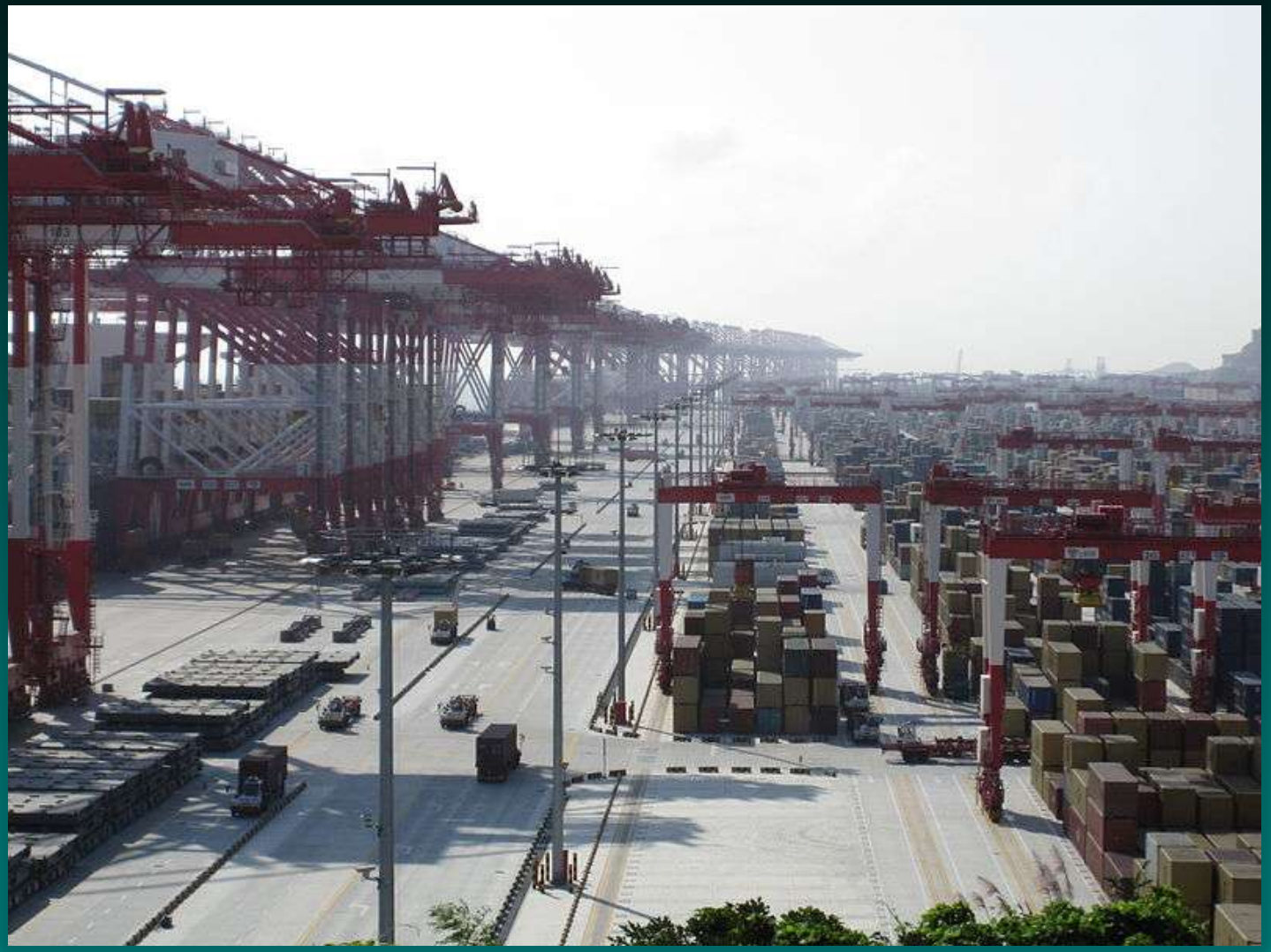
Shanghai International Shipping Center

Yangshan Deep Port & Logistics Park



Shanghai Port Set a 2011 Record by Handling over 30 million TEUs

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New Emerging Economic Global Drivers

(BRIC → ASEAN 2014)

+ India

Huge Population Growth Over Next Decade
Top 10 countries to add 422 million people by 2020

Country	2010	2020	Nominal Change	% Change
India	1,173,108,018	1,326,093,247	152,985,229	13.0%
China	1,330,141,295	1,384,545,220	54,403,925	4.1%
Ethiopia	88,013,491	120,420,018	32,406,527	36.8%
USA	310,232,863	341,386,665	31,153,802	10.0%
Nigeria	152,217,341	182,344,492	30,127,151	19.8%
Pakistan	177,276,594	204,274,257	26,997,663	15.2%
Congo	70,916,439	95,605,489	24,689,050	34.8%
Indonesia	242,968,342	267,532,450	24,564,108	10.1%
Bangladesh	158,065,841	180,753,264	22,687,423	14.4%
Brazil	201,103,330	222,607,506	21,504,176	10.7%

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Asian Hourly Wage Rates in US Dollars

	2008	2009	2010*	2011*	2012*	2013*	2014*	2015*
CHINA	1.56	1.63	1.83	2.16	2.51	2.90	3.2[illegible]	3.66
HONG KONG	7.24	7.27	7.42	7.64	7.95	8.27	8.68	9.11
INDIA	0.50	0.49	0.53	0.57	0.61	0.66	0.7[illegible]	0.78
INDONESIA	0.51	0.51	0.59	0.67	0.77	0.88	0.9[illegible]	1.08
JAPAN	24.30	26.23	22.59	21.70	20.41	19.81	19.51	18.73
SOUTH KOREA	13.21	11.27	13.31	14.54	16.49	18.70	20.91	23.38
MALAYSIA	2.99	2.80	2.97	3.18	3.38	3.58	3.80	4.03
PHILIPPINES	1.65	1.59	1.67	1.77	1.87	1.99	2.11	2.24
SINGAPORE	13.18	12.86	13.18	13.85	14.69	15.59	16.53	17.54
TAIWAN	7.24	6.56	6.95	7.19	7.50	7.85	8.19	8.52
THAILAND	1.08	1.06	1.04	1.08	1.19	1.27	1.35	1.42
VIETNAM	0.81	0.86	0.87	0.89	0.97	1.03	1.07	1.10

Source: JOC, IMA Asia – Asia Forecasts 2010

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By 2015/16, the ASEAN Economic Community Will Form a *Single Regional Common Market* with *One Manufacturing Base*

ASEAN BUSINESS & INVESTMENT SUMMIT 2012 PHNOM PENH CAMBODIA

In 2011, U.S. exports to ASEAN nations broke records – exceeding $76 billion for the first time

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Association of Southeast Asia Nations (ASEAN)

2015 ASEAN CONNECTIVITY

47 Seaports Will Be Built Across ASEAN by 2015/16

The Rise of the Asean Economies

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Ho Chi Minh City Regional New Port Container Terminal Development

(12 Port Terminals in 14 years)

VIETNAM – Has Become the <u>Apparel Distribution Capital</u> of the World – The "Apparel Shipper"

VIETNAM - Ho Chi Minh City, (Saigon)
Bitexco Financial Tower

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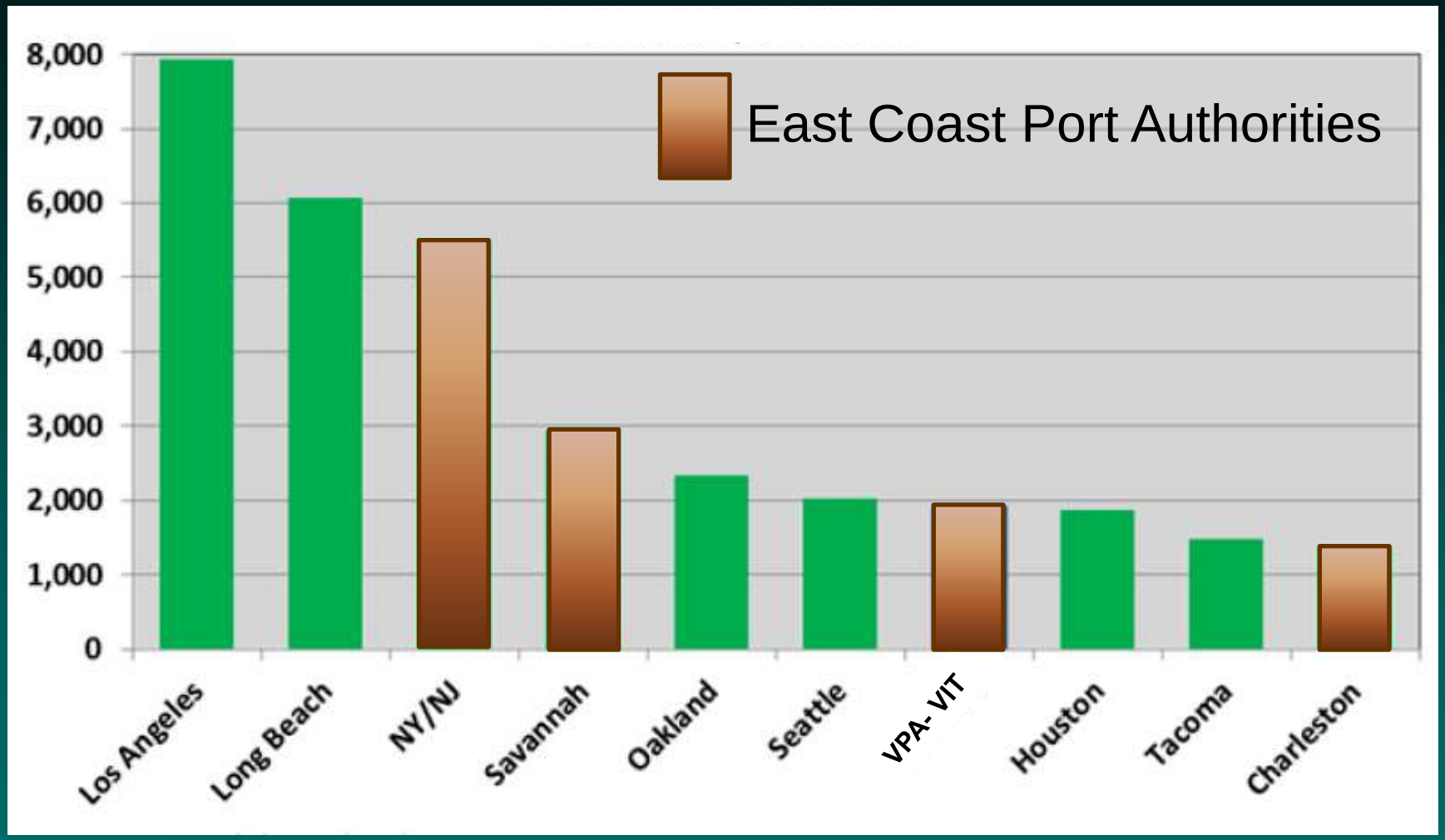
North American Cargo Demand Trends

(Dé jà vu Experience)

2011 Top 10 US Port Container Volume

(1,000s of TEUS)



Source: AAPA 2011 North American Container Traffic – Port Rankings

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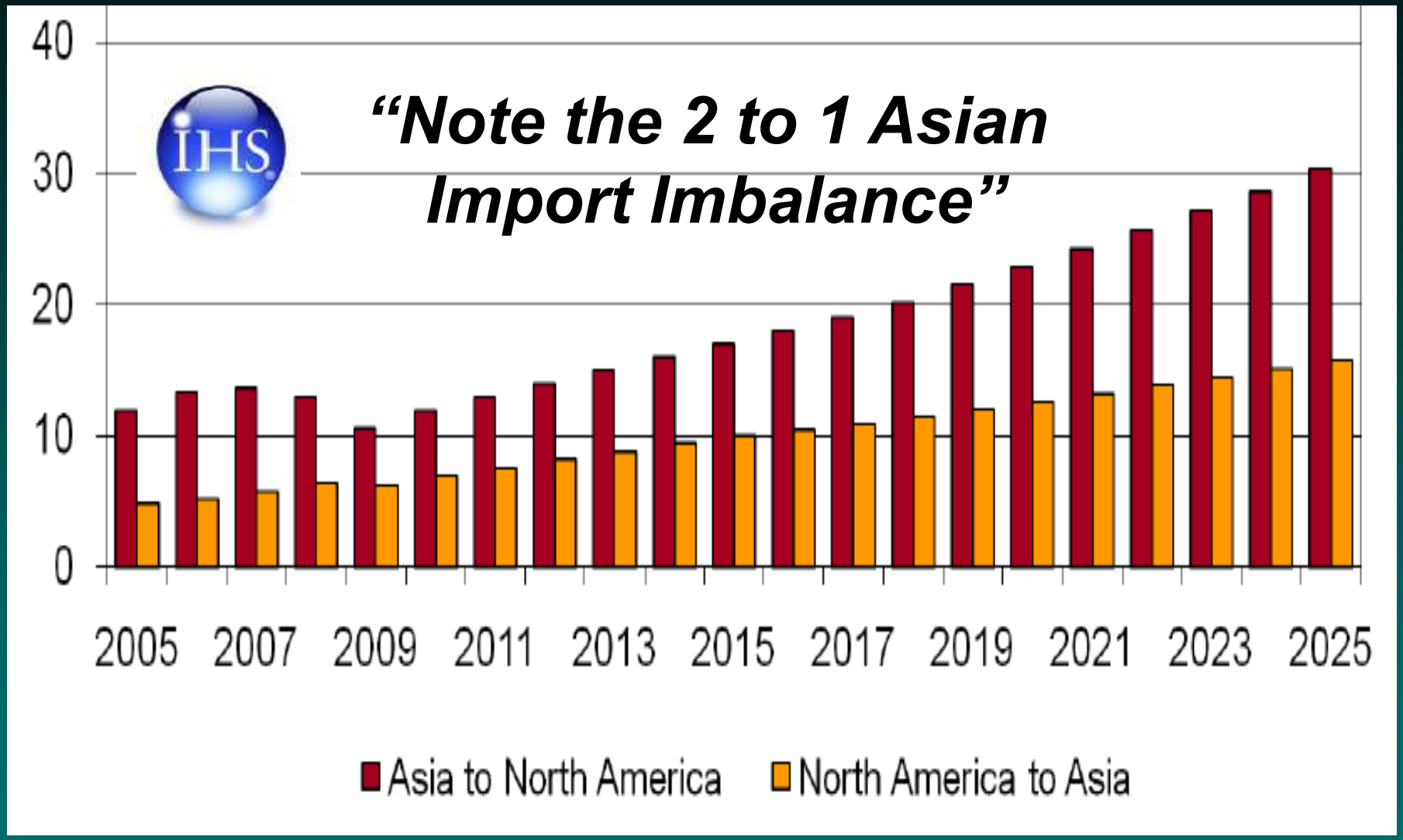
Transpacific Container Trade Recovery

(Millions of TEUs)



Source: IHS – Global Insight -The Global Outlook – October 14, 2010

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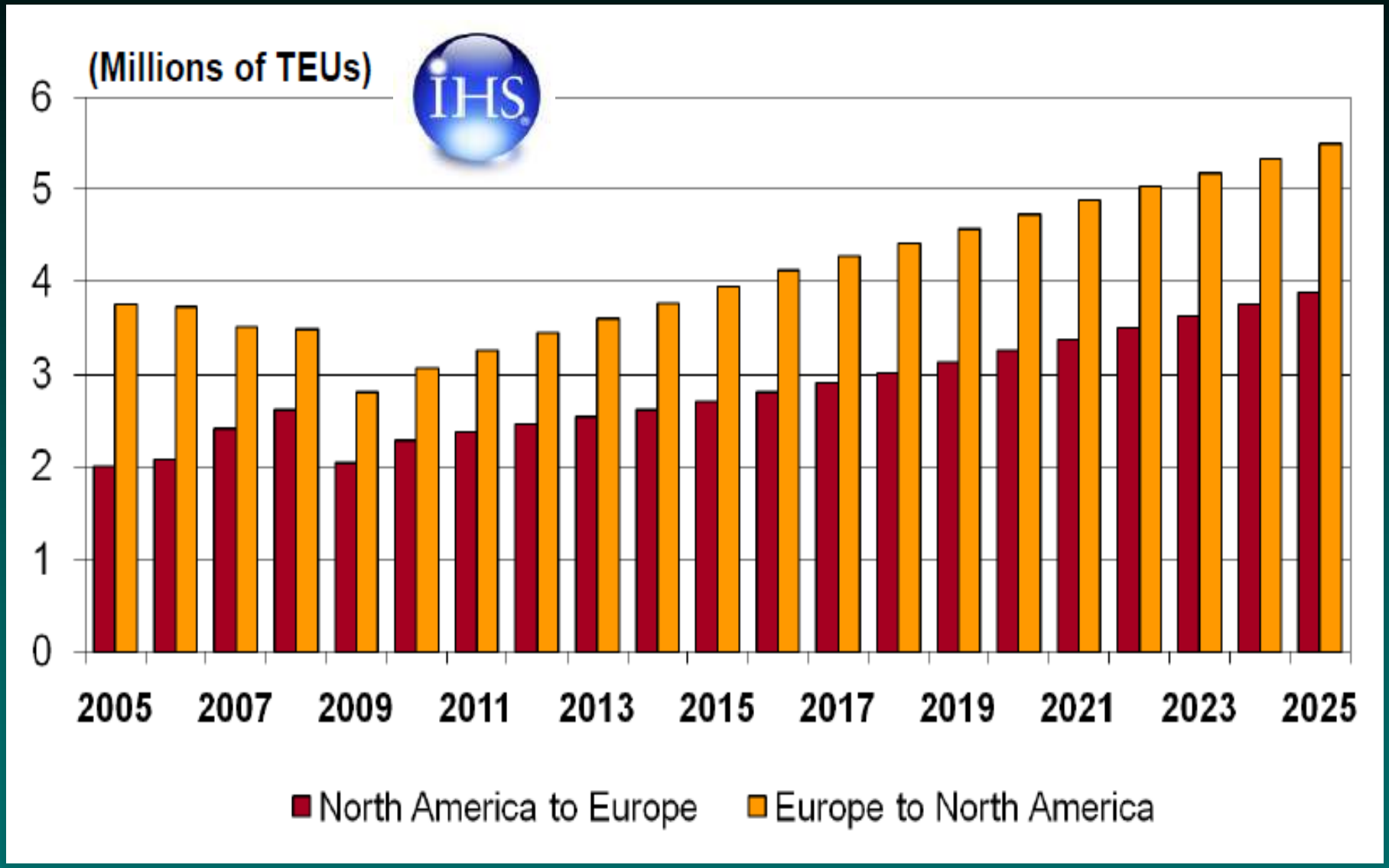
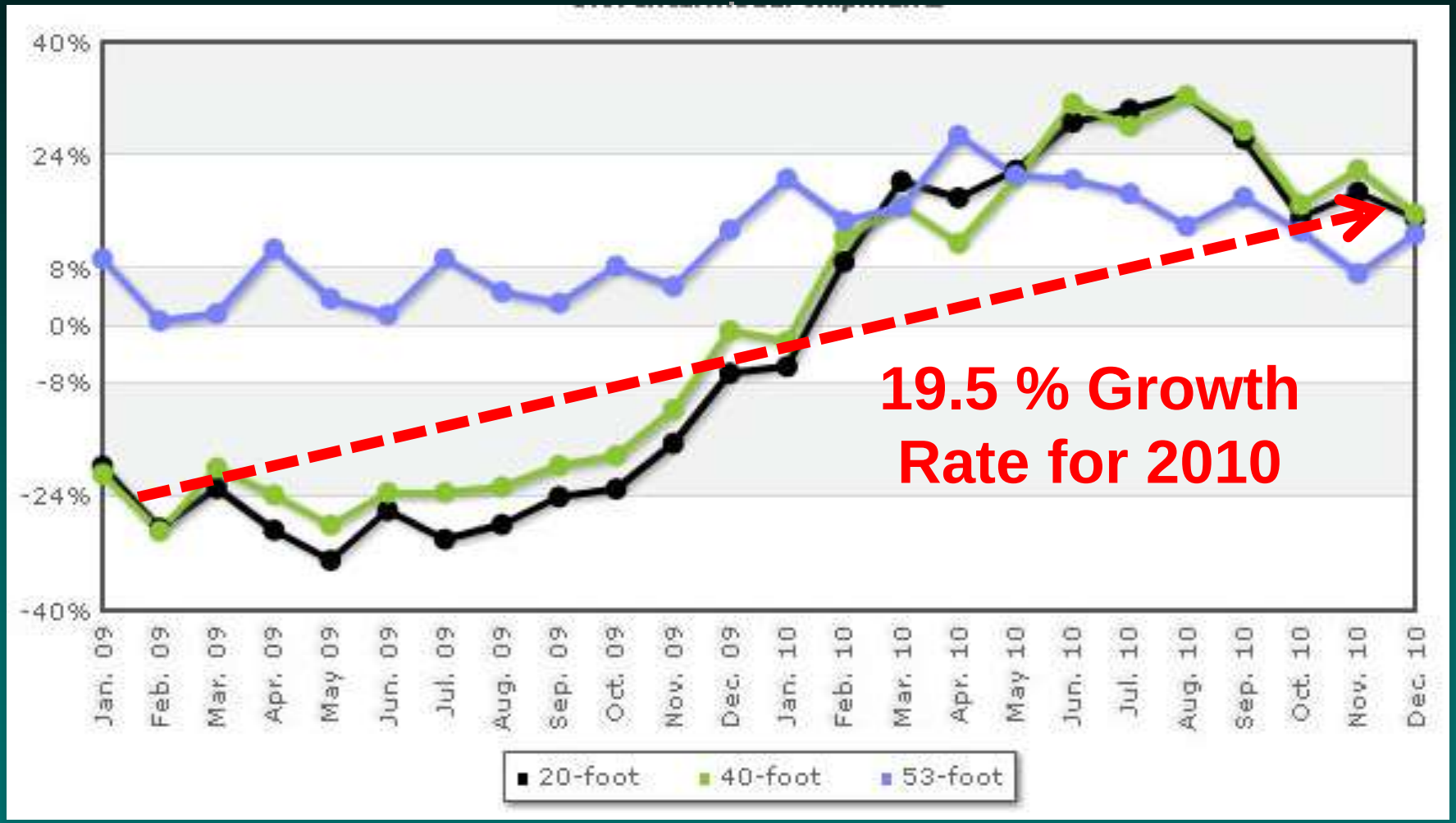
Transatlantic Container Trade Recovery



Source: IHS – Global Insight -The Global Outlook – October 14, 2010

2010 US Intermodal Rail Shipments

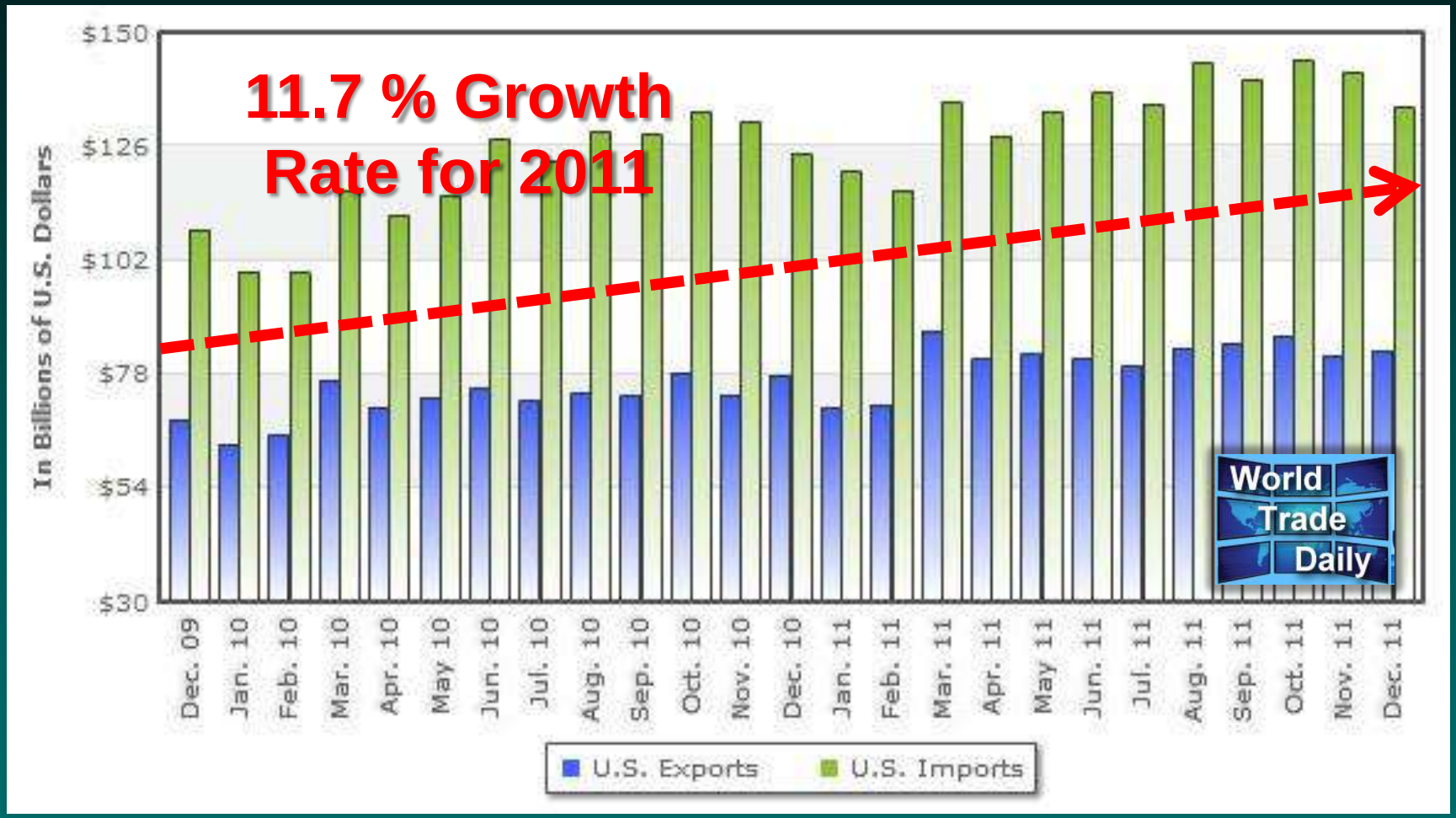
In calendar 2010, 40-footers led year-over-year growth at 19.5 percent, followed by 20-footers at 19 percent and 53-footers, 16.2 percent.



Source: Intermodal Association of North America, 2012

2011 US Manufactured Goods

U.S. Manufacturered goods trade increased 11.7 percent year-over-year during calendar 2011, with exports up 11.3 percent and imports, 11.8 percent.



Source: US Department of Commerce, US Census Bureau, Foreign Trade Div

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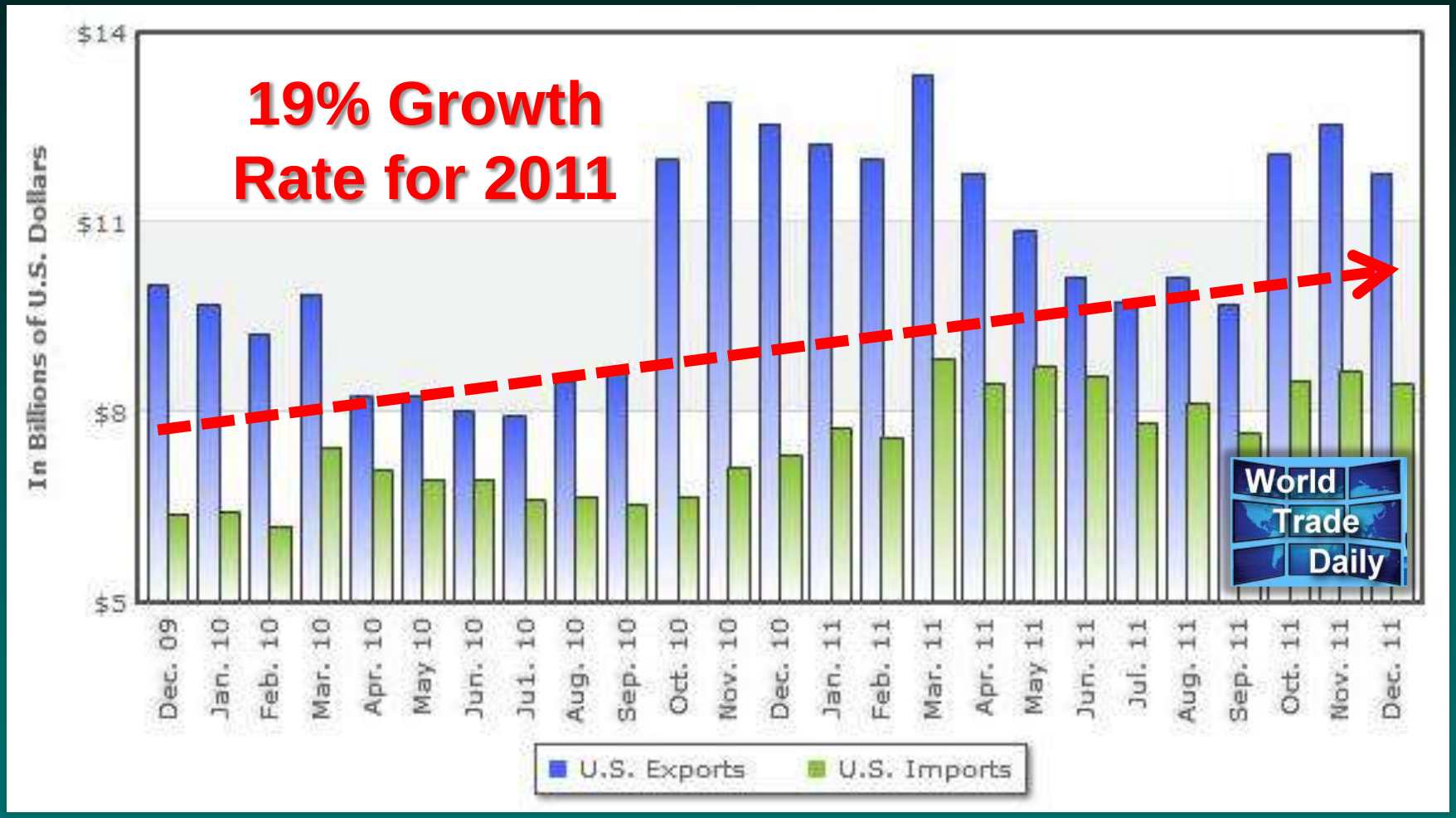
2011 US Agricultural Commodities

U.S. agricultural commodities trade increased 19 percent year-over-year during calendar 2011, with exports up 17.7 percent and imports, 20.9 percent.



Source: US Department of Commerce, US Census Bureau, Foreign Trade Div

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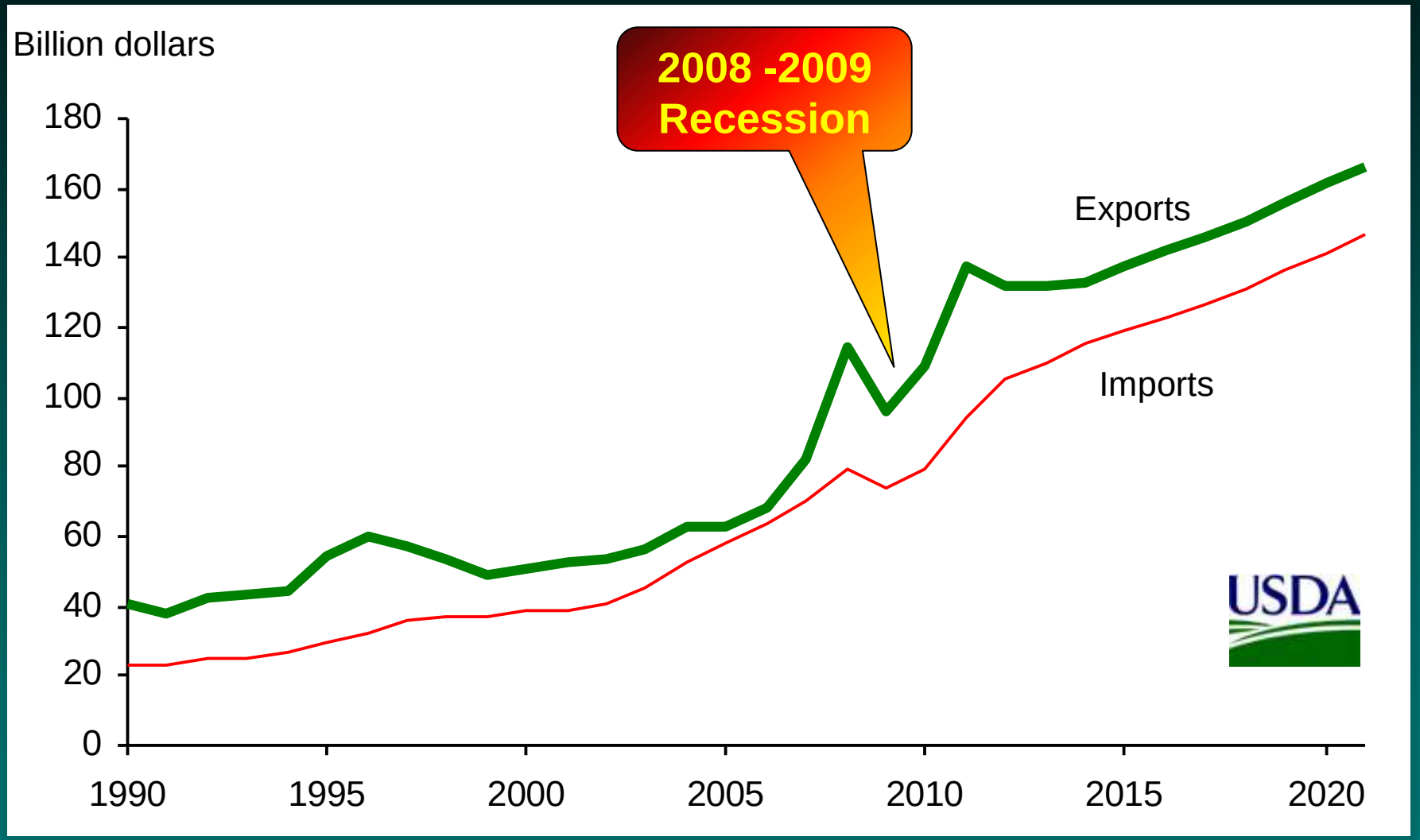
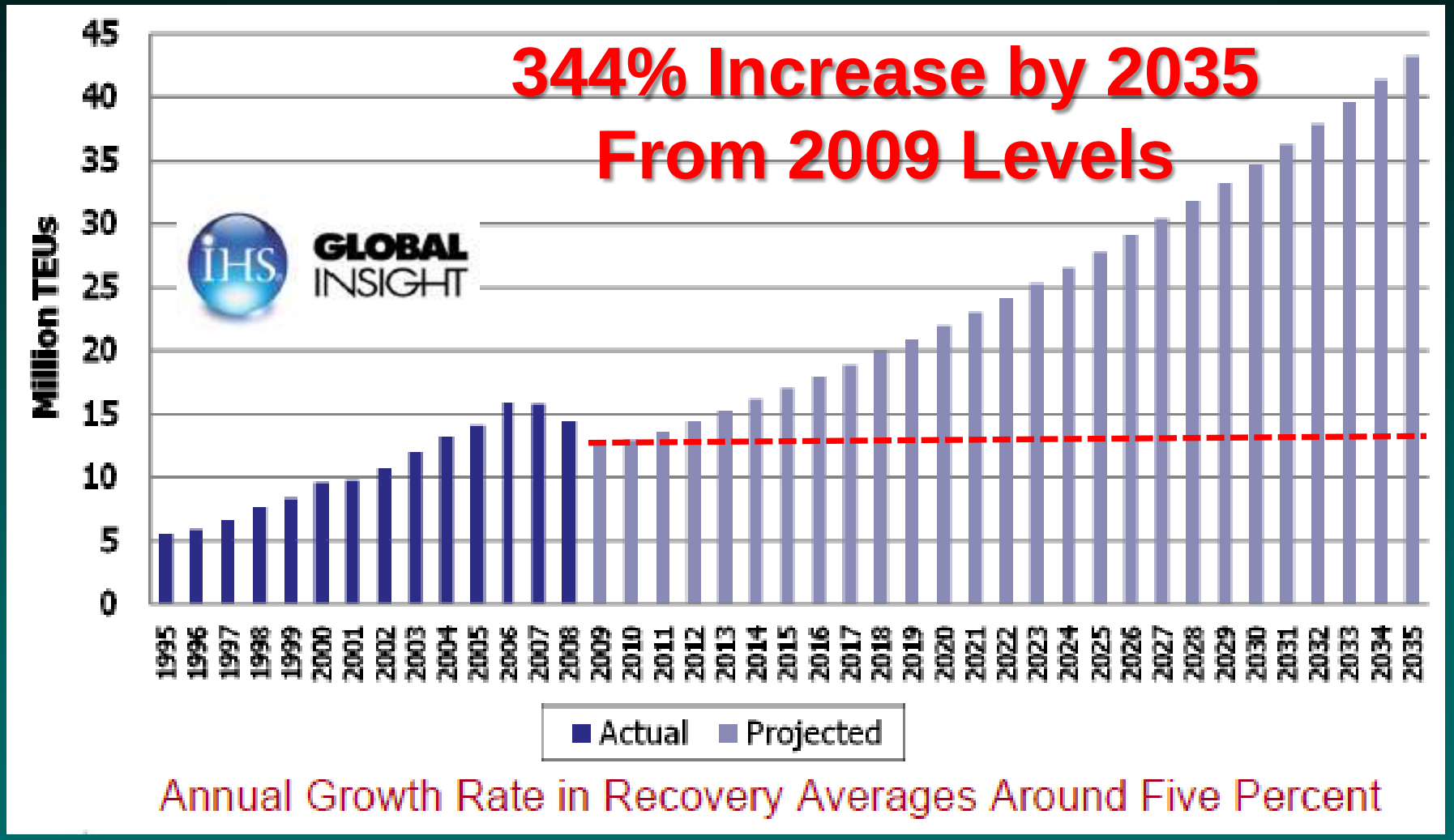
US Agricultural Trade Value Forecast



Source: USDA Economic Research Service - USDA Agricultural Projections to 2021

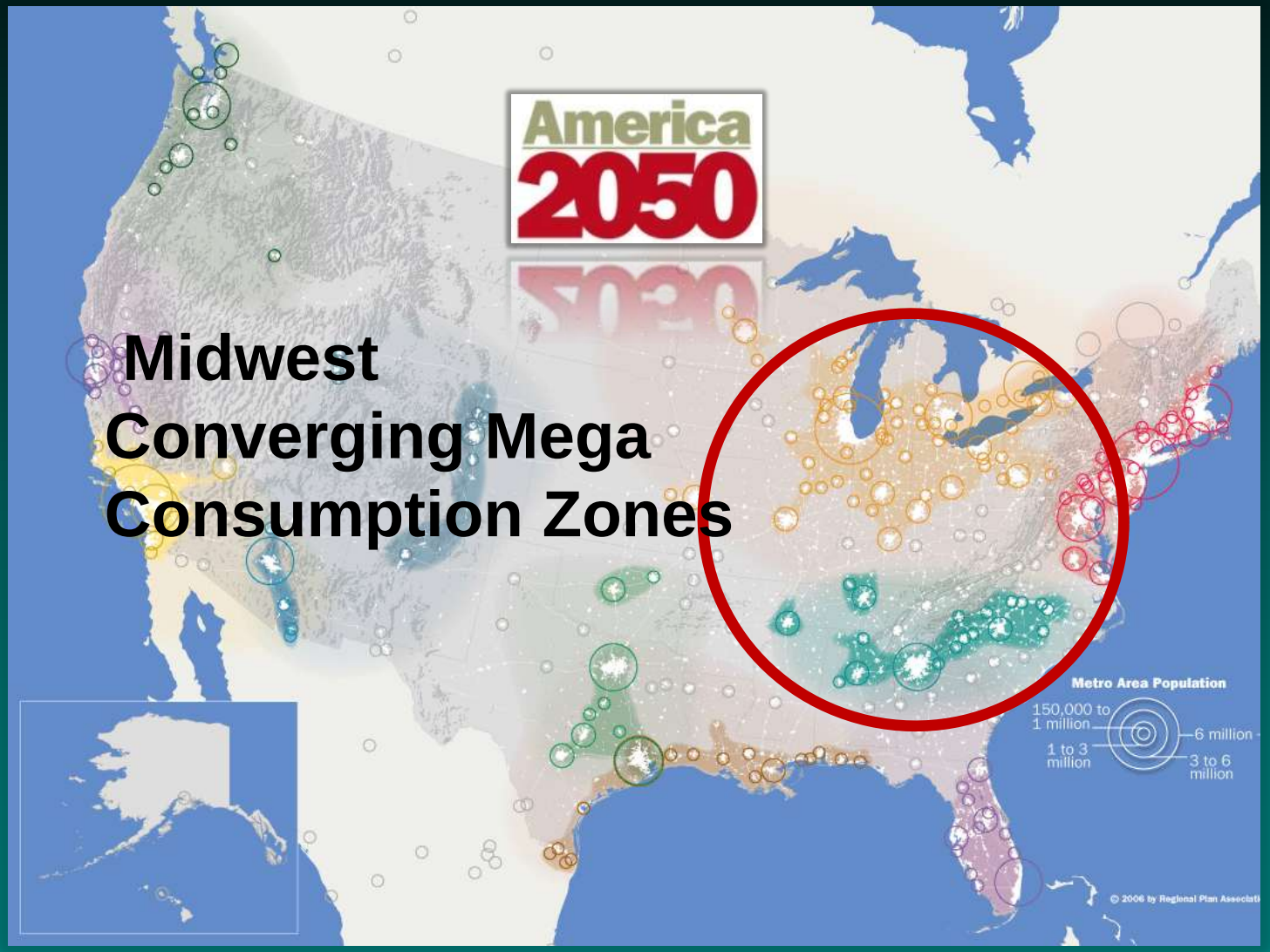
San Pedro Bay (POLA +POLB) Container Volume Forecast



Source: IHS Global Insight 2010 Forecast

North American Emerging Mega-Regions

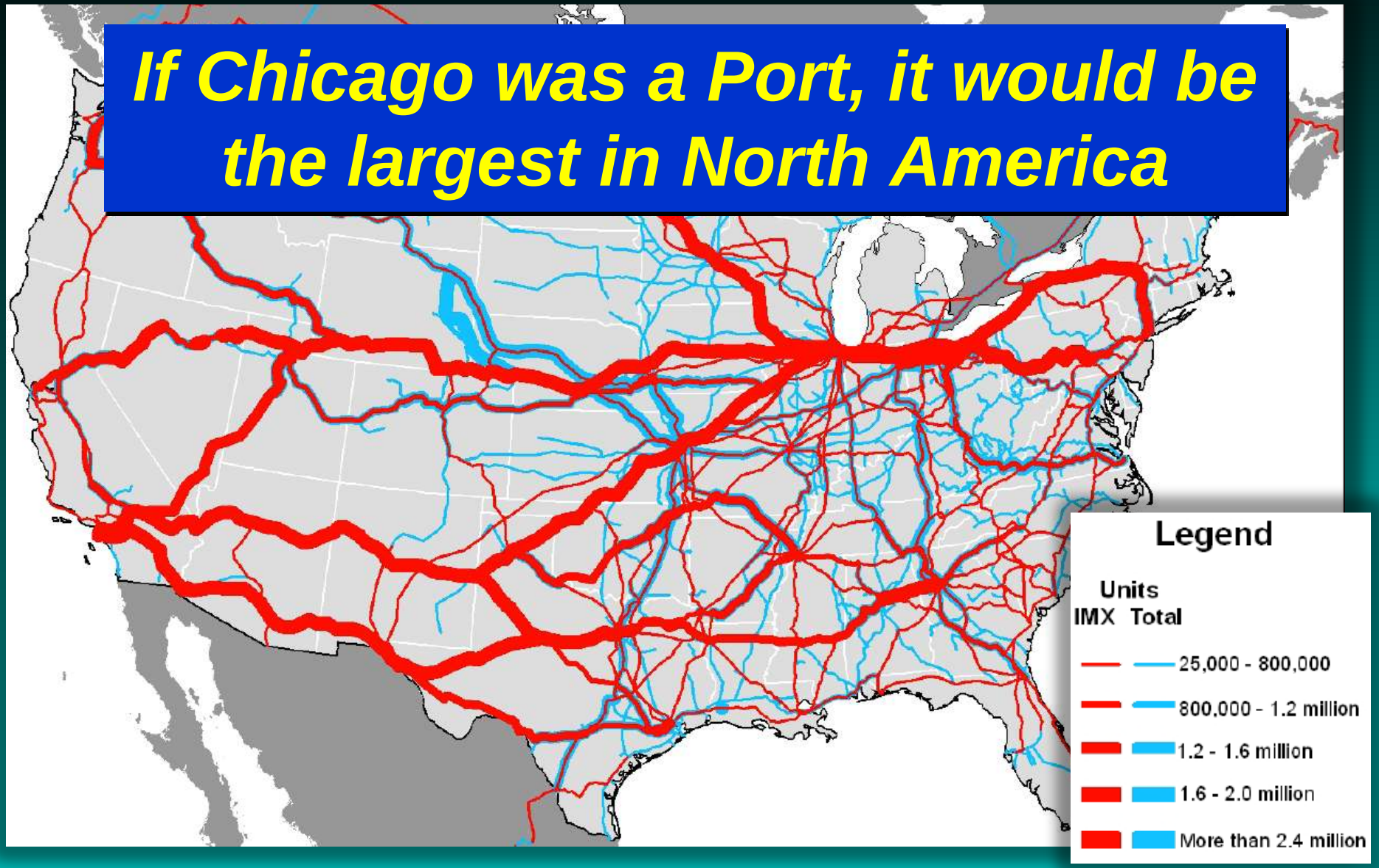
Future US Growth Areas



Source: America 2050 Prospects - Regional Plan Association

2035 Intermodal Rail Car Volumes

If Chicago was a Port, it would be the largest in North America



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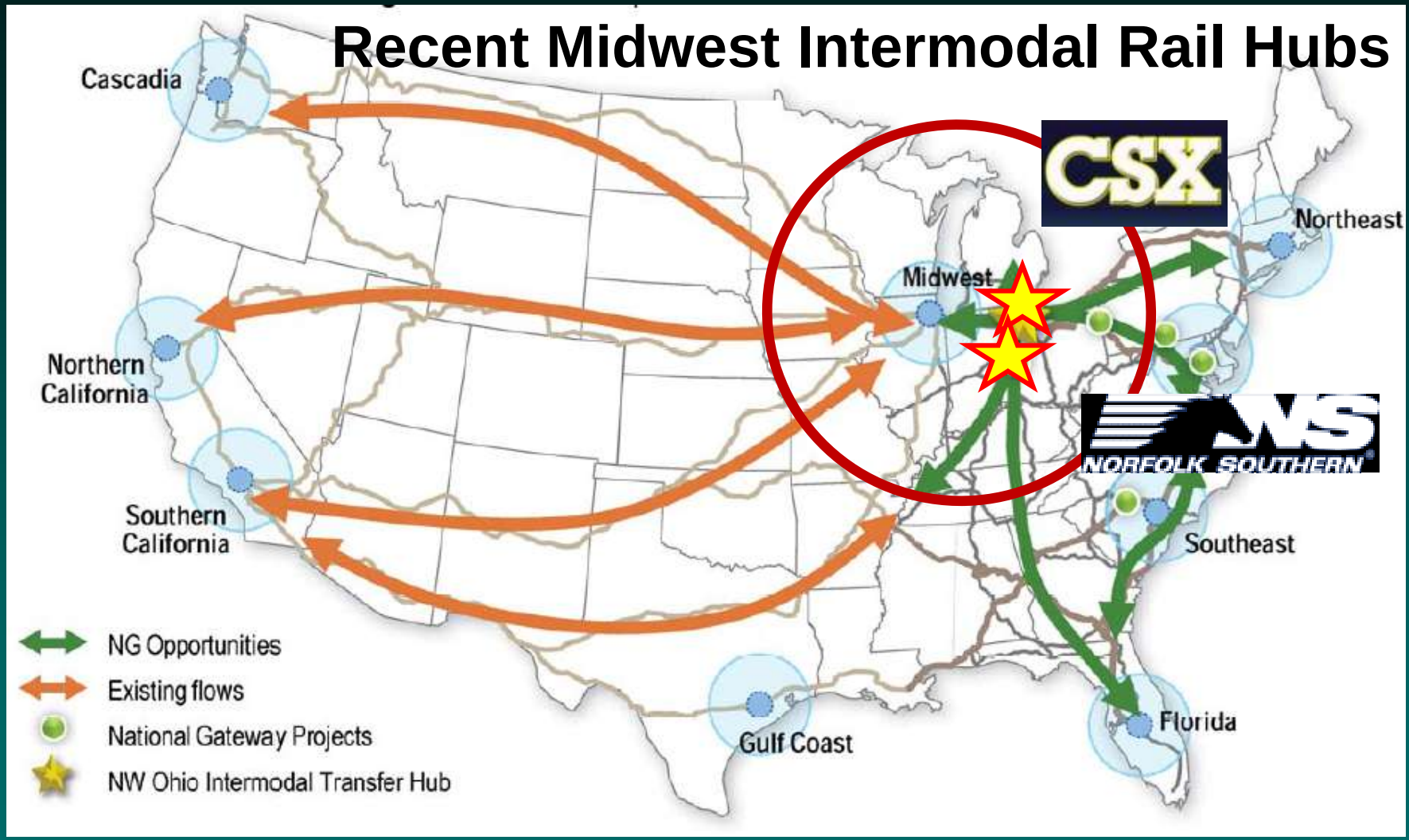
CSX & NS National Expansion of Integrated Intermodal Rail Logistics Centers



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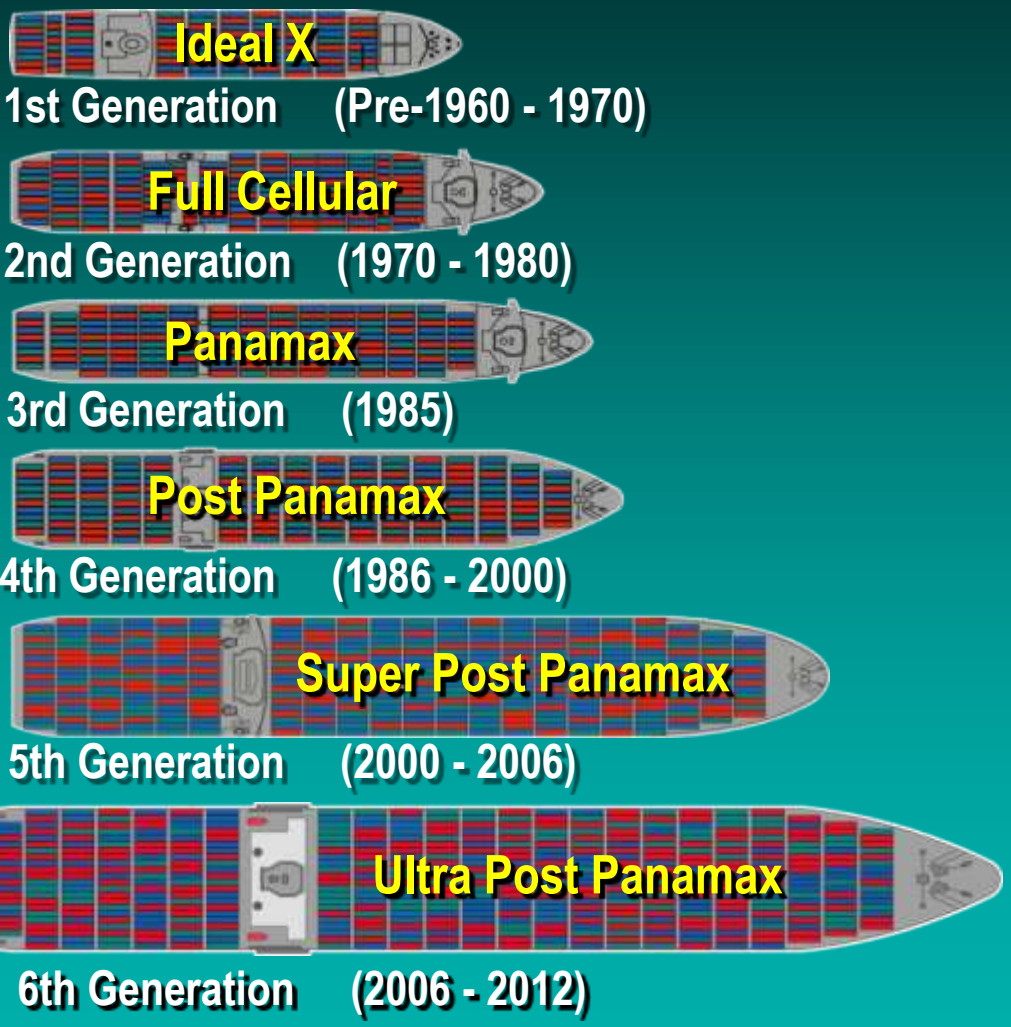
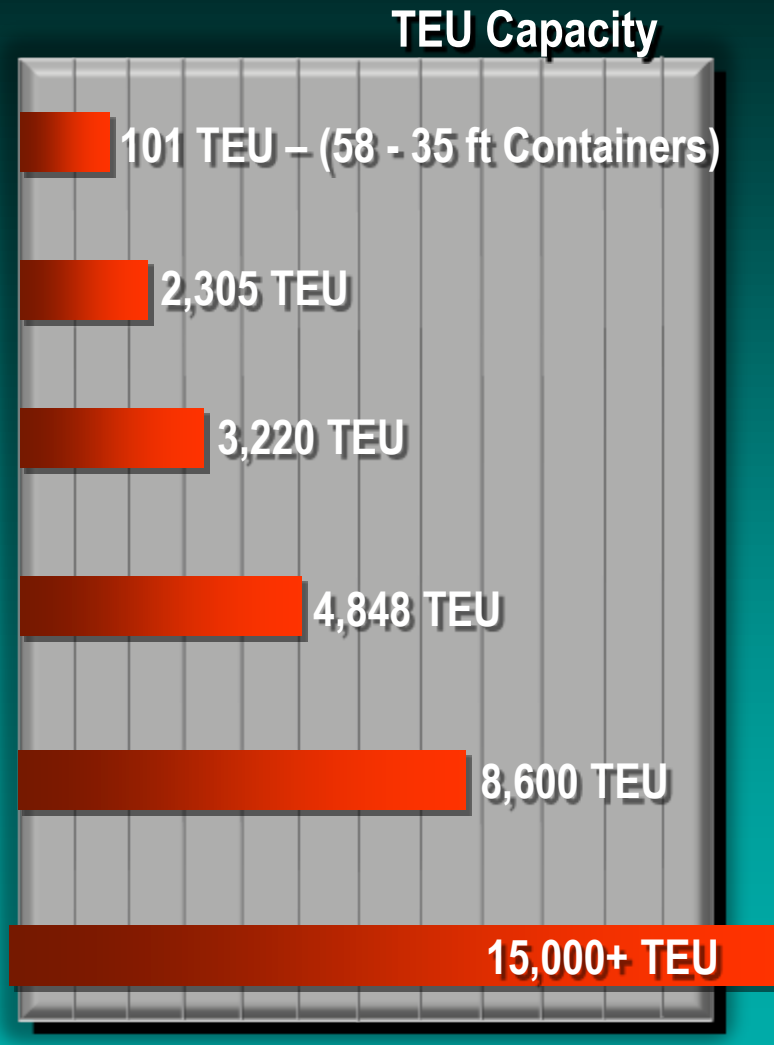
Maritime Vessel Technology Trends


April 26, 1956
58 Modified 35-foot Truck Containers
The deck of the *Ideal X* at Port Newark preparing for the historical sailing of the world's first containership
April 2006:
50 Year Anniversary of the Container
In 1955 Malcolm McLean, sold McLean Trucking, and secured a bank loan of US$42 million to build the world's first container ship.

World Container Ship Evolution





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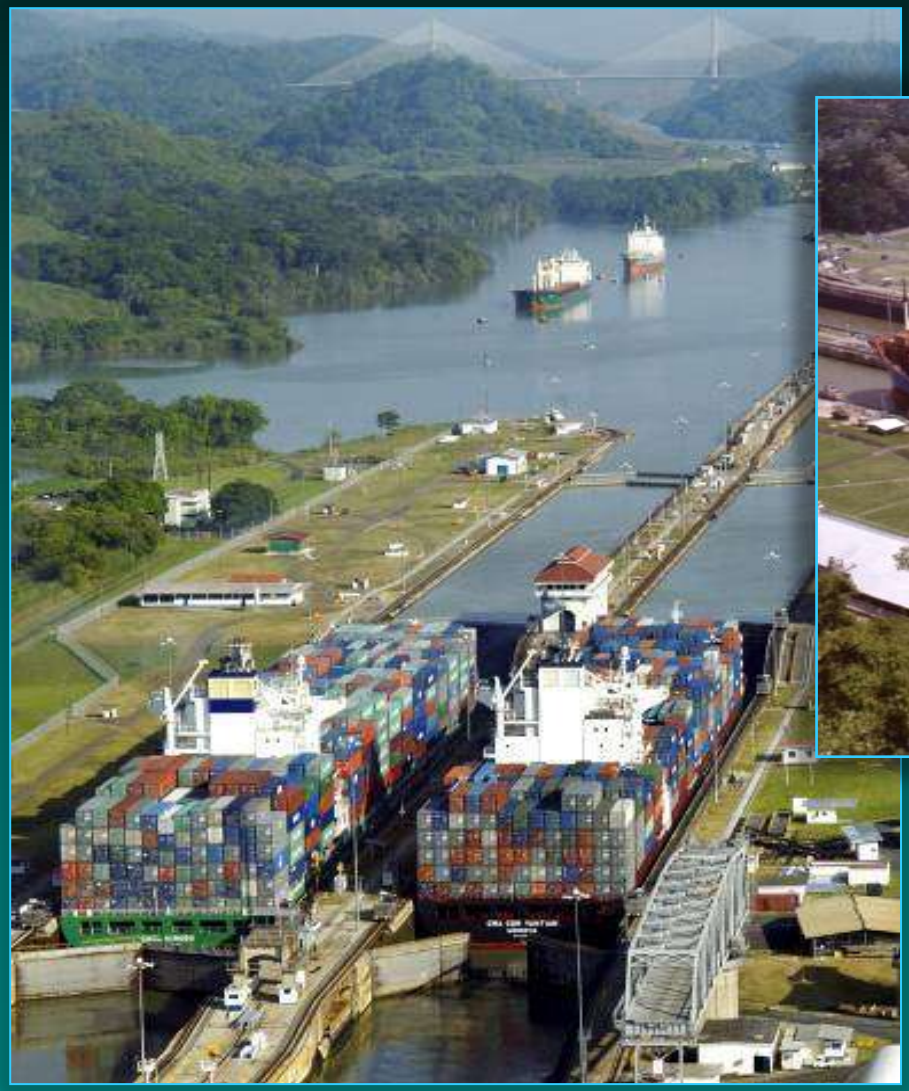
Madison Maersk (3,928 TEUs) in the Panama Canal

(Current Max Panamax Vessel Approx. 4,800 TEUs)



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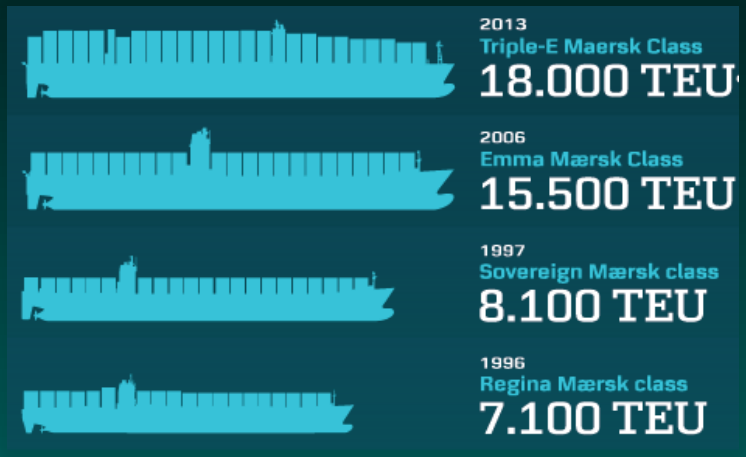
*Maersk's New 30 Vessels (ordered) are **4** Times the Current Size of the Panama Canal & **1.5** times the Size of the Expanded Panama Canal*

MAERSK LINE, LIMITED

February 2011: A.P. Moller-Maersk Orders 30 – 18,000 TEU Container Vessels "*Largest in the World*"

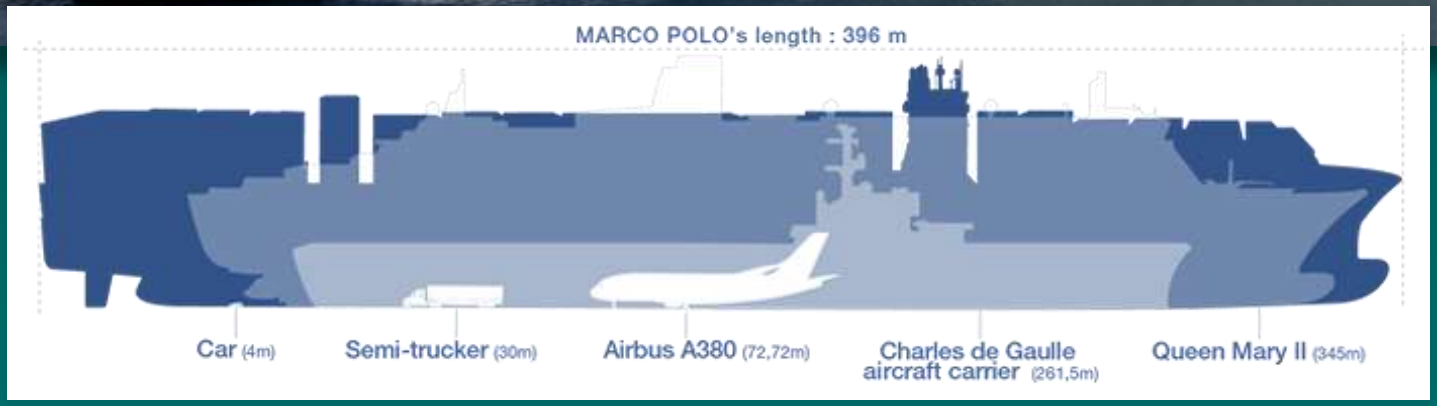


23 Containers Wide – 9 Tiers Above the Hatch

VICKERMAN

CMA-CGM's Marco Polo – 16,020 TEUs

Built by Daewoo Shipbuilding and Marine Engineering (DSME) in South Korea – January 2013



, 396 metres in length, 54 metres in width, and boasts a draft of 16 metres

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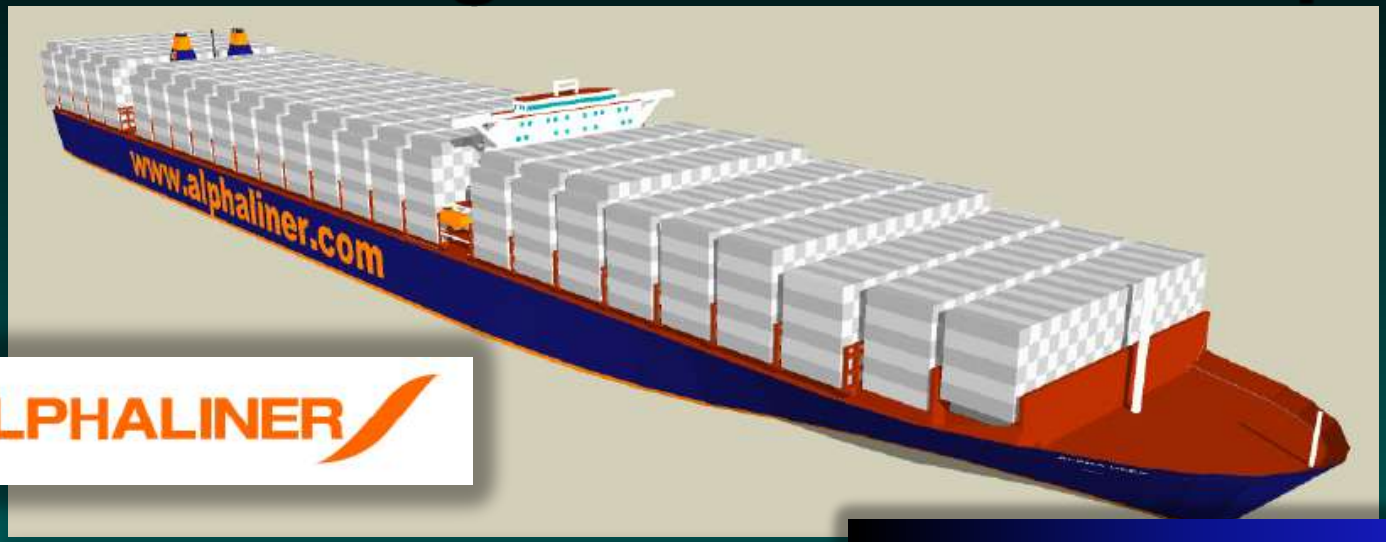
CMA-CGM's Marco Polo – 16,020 TEUs

Built by Daewoo Shipbuilding and Marine Engineering (DSME) in South Korea – January 2013

21,000 TEU Ultra Large Twin Engine Container Ship - 2011



ALPHALINER

23 Containers Wide

Source: Alphaliner Newsletter Volume 2011 Issue 4

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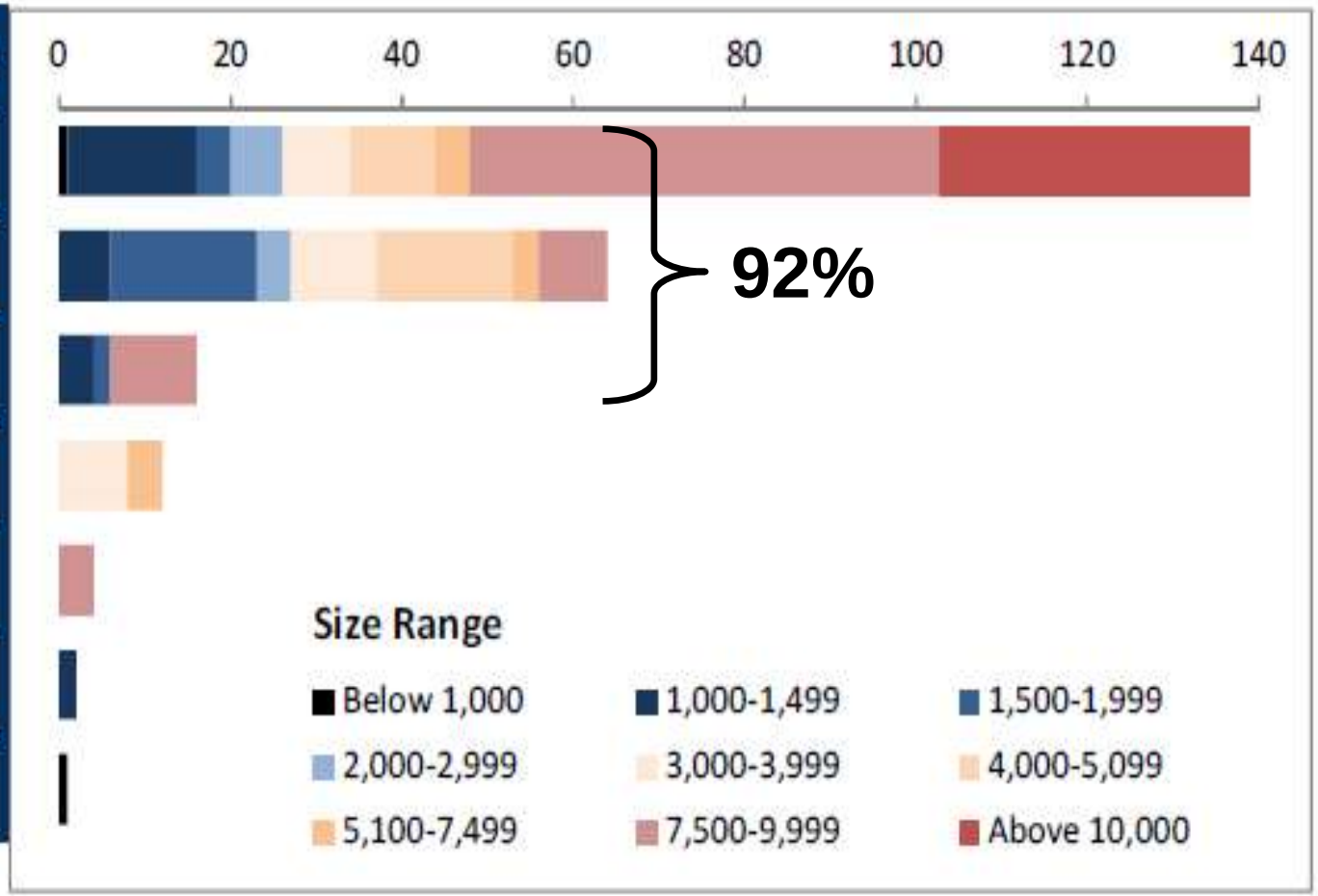
Containership Orders – Country of Build

(Orders Since January 2010)

Country	Units
S Korea	139
China	64
Taiwan	16
Philippines	12
Romania	4
Japan	2
Germany	1



Source: Alphaliner Newsletter Volume 2011 Issue 21

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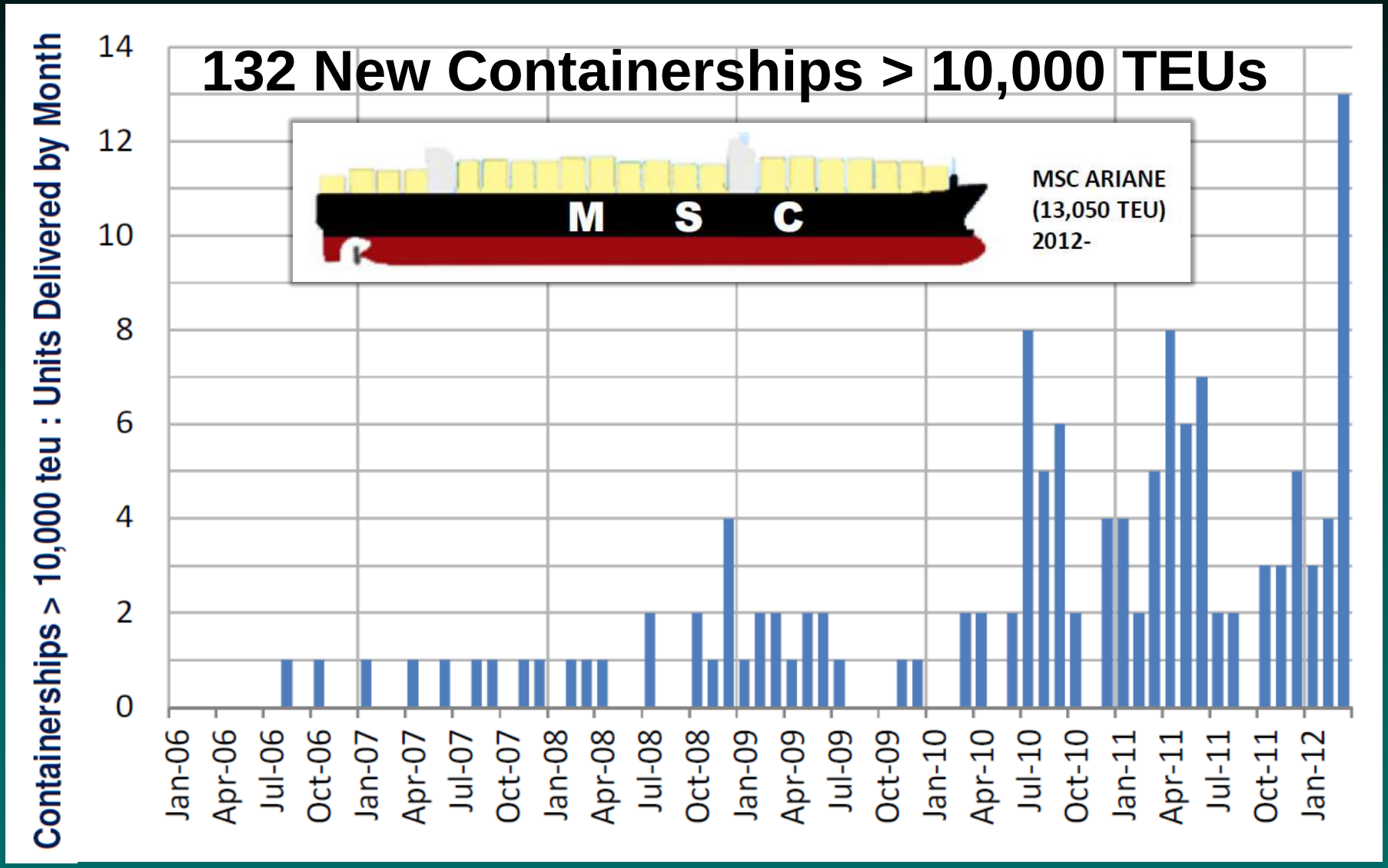
Record New Container Ship Delivery > 10,000 TEUs

(11 Vessels now 13,000 to 14,000 TEUs)



Source: Alphaliner Volume 2012 Issue 14

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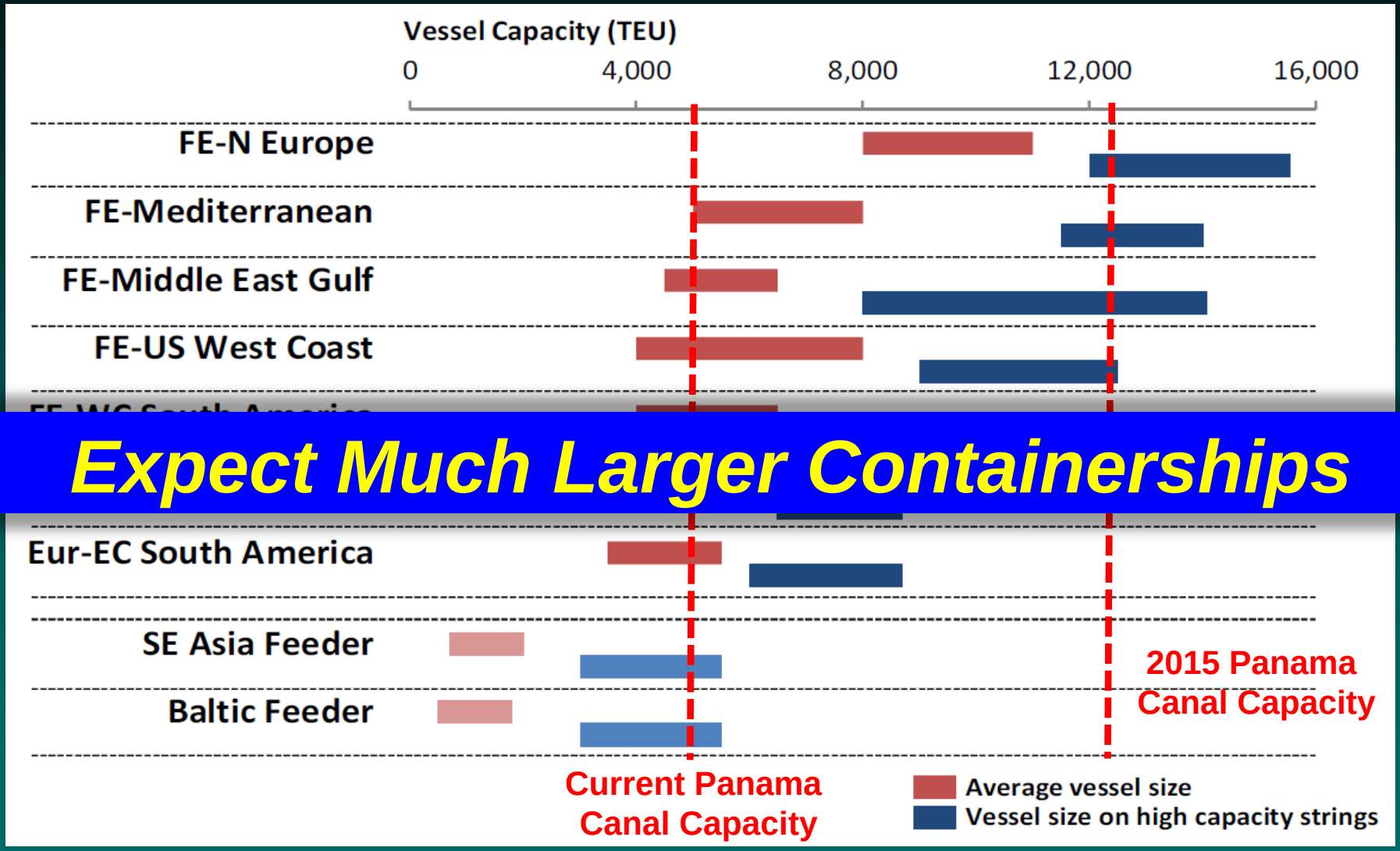
The Size of Container Ships to Come

(Average Containership sixe by Trade Route)



Expect Much Larger Containerships

Source: Alphaliner Volume 2012 Issue 14

Largest Container Vessel to Dock at a North American Port – March 21, 2012

MSC Fabiola (12,562 TEUs) at the Port of Oakland Built in Korea 2010

Length Overall (LOA): 366.08M - 1,201 Ft

Breadth: 48.2M – 158 Ft

Maximum water draft (fully loaded): 15.50M - 50.85 Ft

Deadweight Tonnage: 146,093 metric tons

25% Larger Than Any Other North American Vessel Call

Source: The Maritime Executive, LLC. – March 23, 2012

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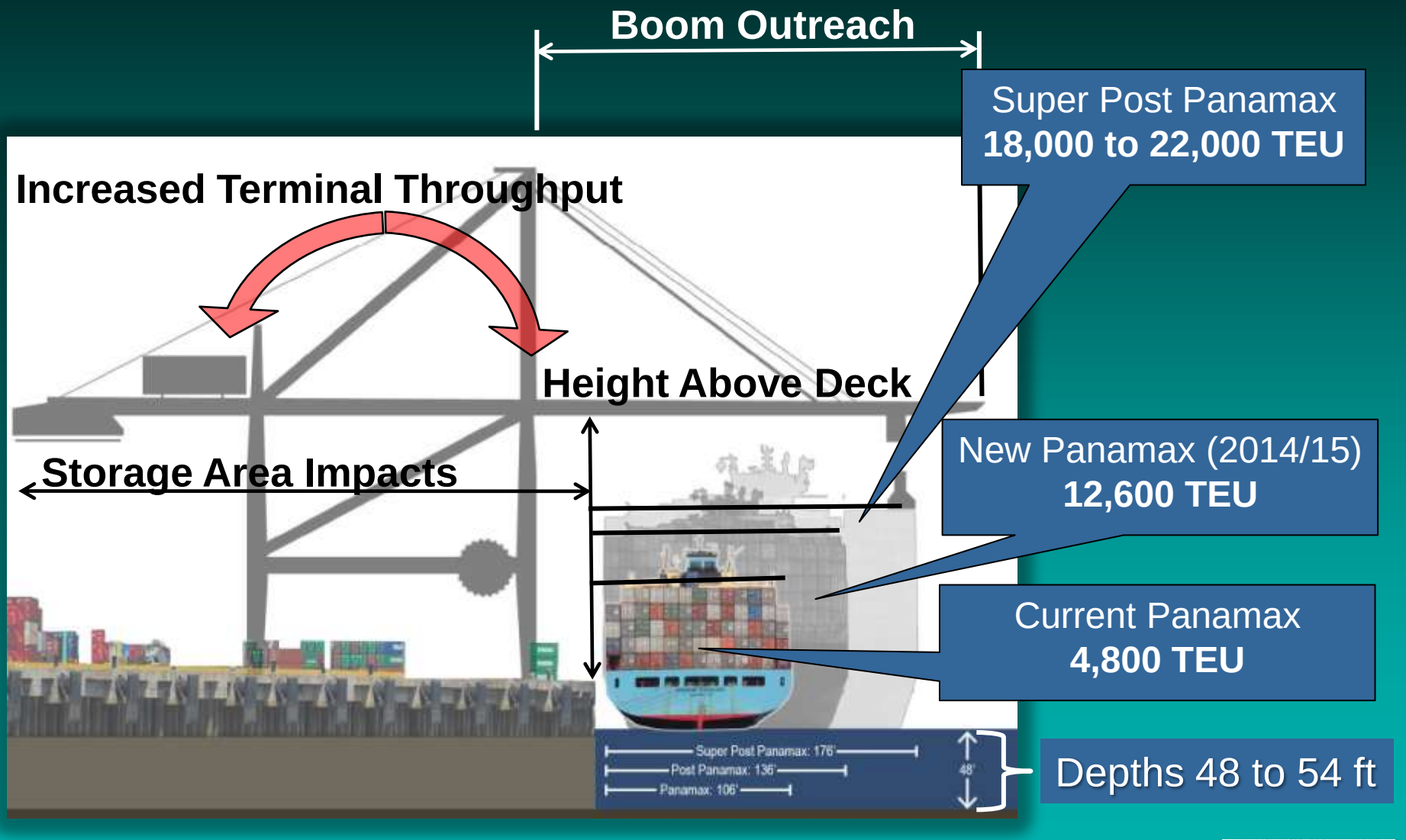
Vessel Size Expansion - Terminal Impacts

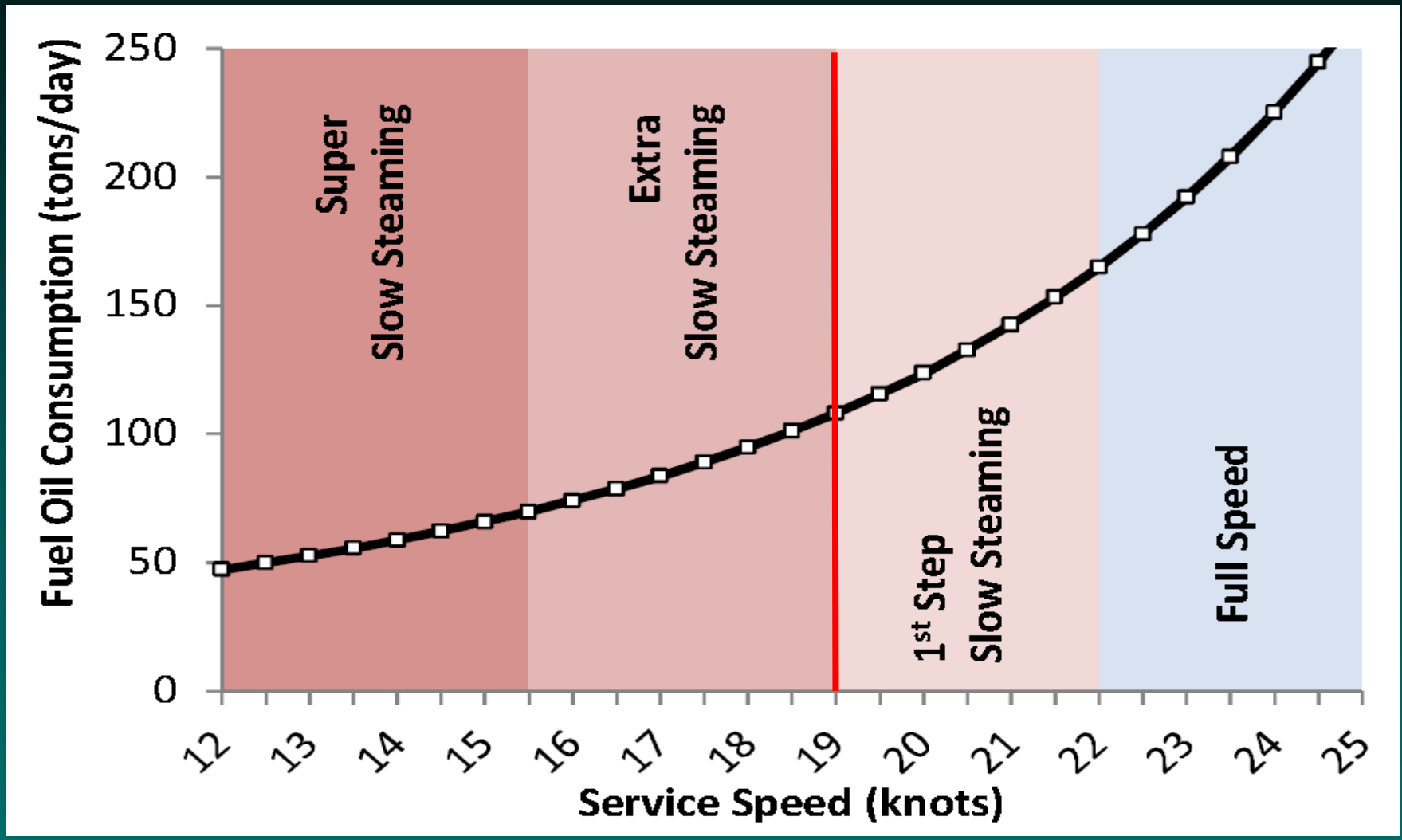
(Port Terminal Infrastructure & Equipment Geometry Impacts)



Source: Georgia Ports Authority and Vickerman & Associates

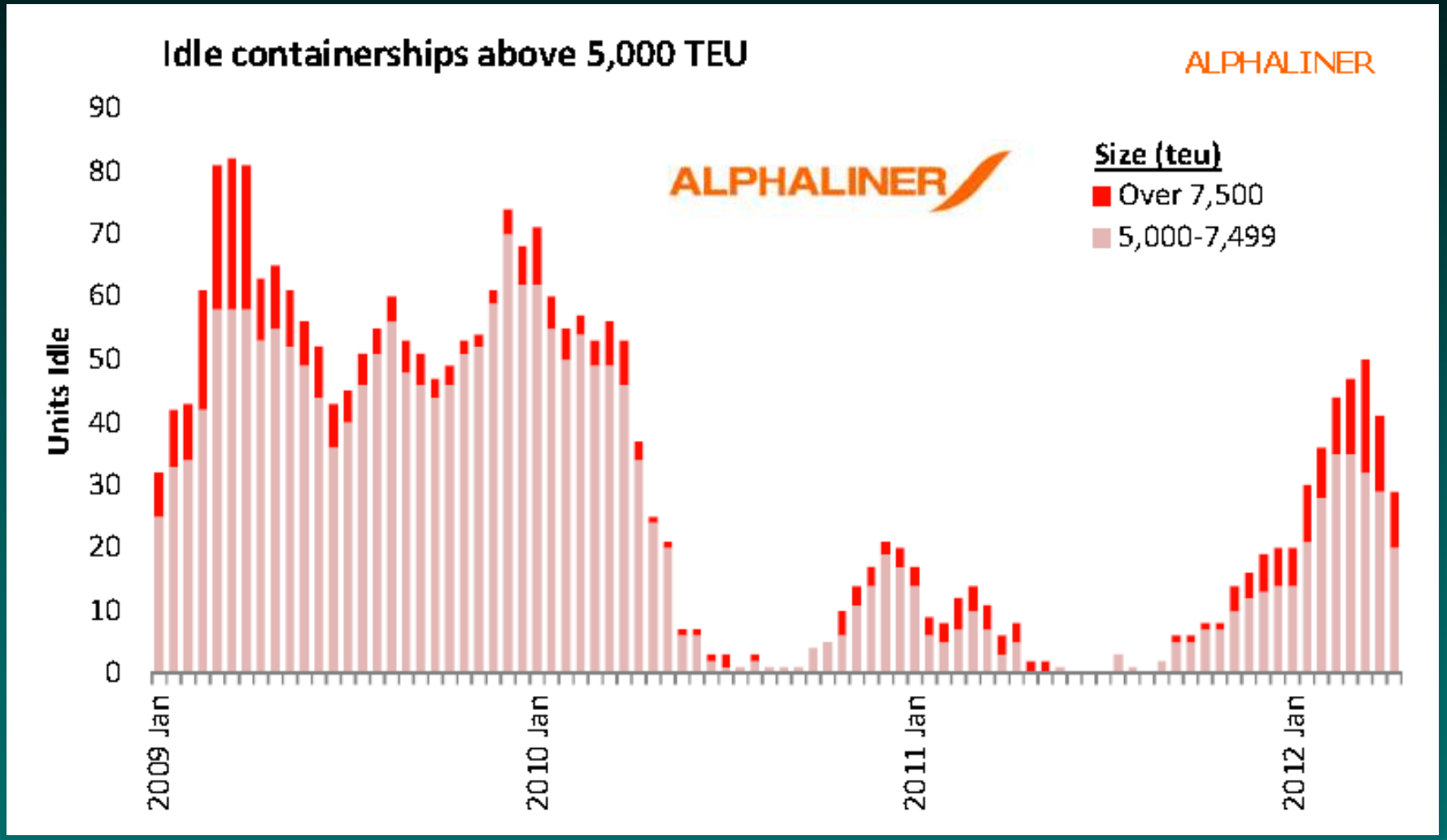
Slow Steaming & Fuel Oil Consumption

(8,500 TEU Vessels)



Source: Alphaliner Newsletter Volume 2012 Issue 14

Global Idle Containership Fleet 2009 to 2012 – Expected to Decrease 2013



Source: Alphaliner Newsletter Volume 2012 Issue 17

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NYK LOGISTICS & MEGACARRIER

Future Container Vessel: NYK Super Eco Ship

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NYK LOGISTICS & MEGACARRIER

Future Container Vessel: NYK Super Eco Ship

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MS Oasis of the Seas:

(6,360 passengers, 2,100 crew: 361m LOA, 66m wide, standing at a height of 72m)

MS Oasis of the Seas:

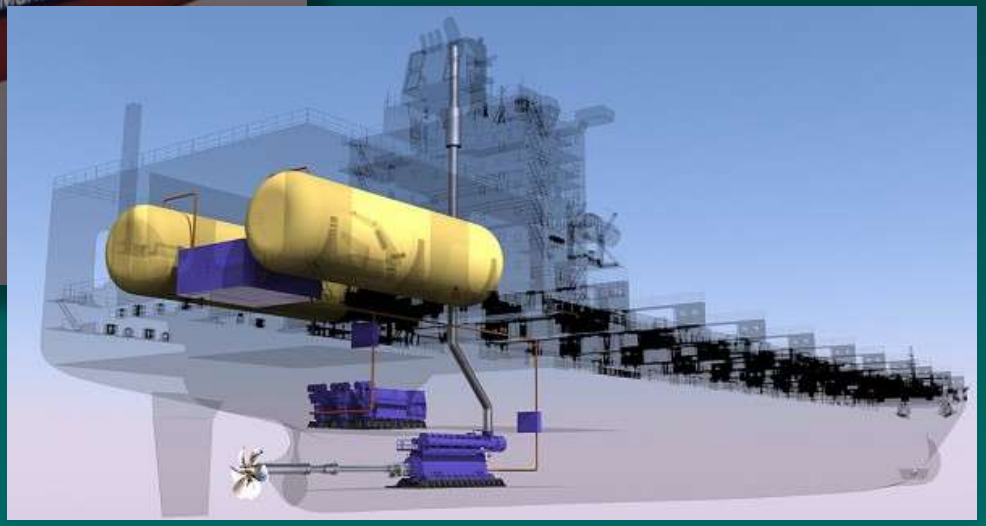
(6,360 passengers, 2,100 crew: 361m LOA, 66m wide, standing at a height of 72m)

TODAY: Viking Energy, an LNG-powered offshore supply boat – Courtesy of Eidesvik

TOTE Orders Two New LNG Powered Container Ships & Two RO/RO Conversions: Largest LNG Powered Ships in the World

These ships will be the largest ships in the world powered primarily by Liquefied Natural Gas (LNG).

TOTE Orders Two New LNG Powered Container Ships & Two RO/RO Conversions: Largest LNG Powered Ships in the World



Two 839-foot Orca-class vessels to liquefied natural gas-diesel dual fuel operation for Seattle-Alaska service and two 764-foot new-builds for the Florida-Puerto Rico trade

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Kawasaki Heavy Industries 9,000 TEU container ship Fuelled by LNG

A new type of LNG tank that provides more space for container cargo.

Germanischer Lloyd (GL) & IHI Marine United Inc. (IHIMU)

Concept Study 13,000 TEU Container Vessel Fuelled by LNG

The eFuture 13000C design (©IHIMU)

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LNG Vessel Bunkering: *North American Ports Are Not Prepared…*

Panama Canal Expansion: New Capacity

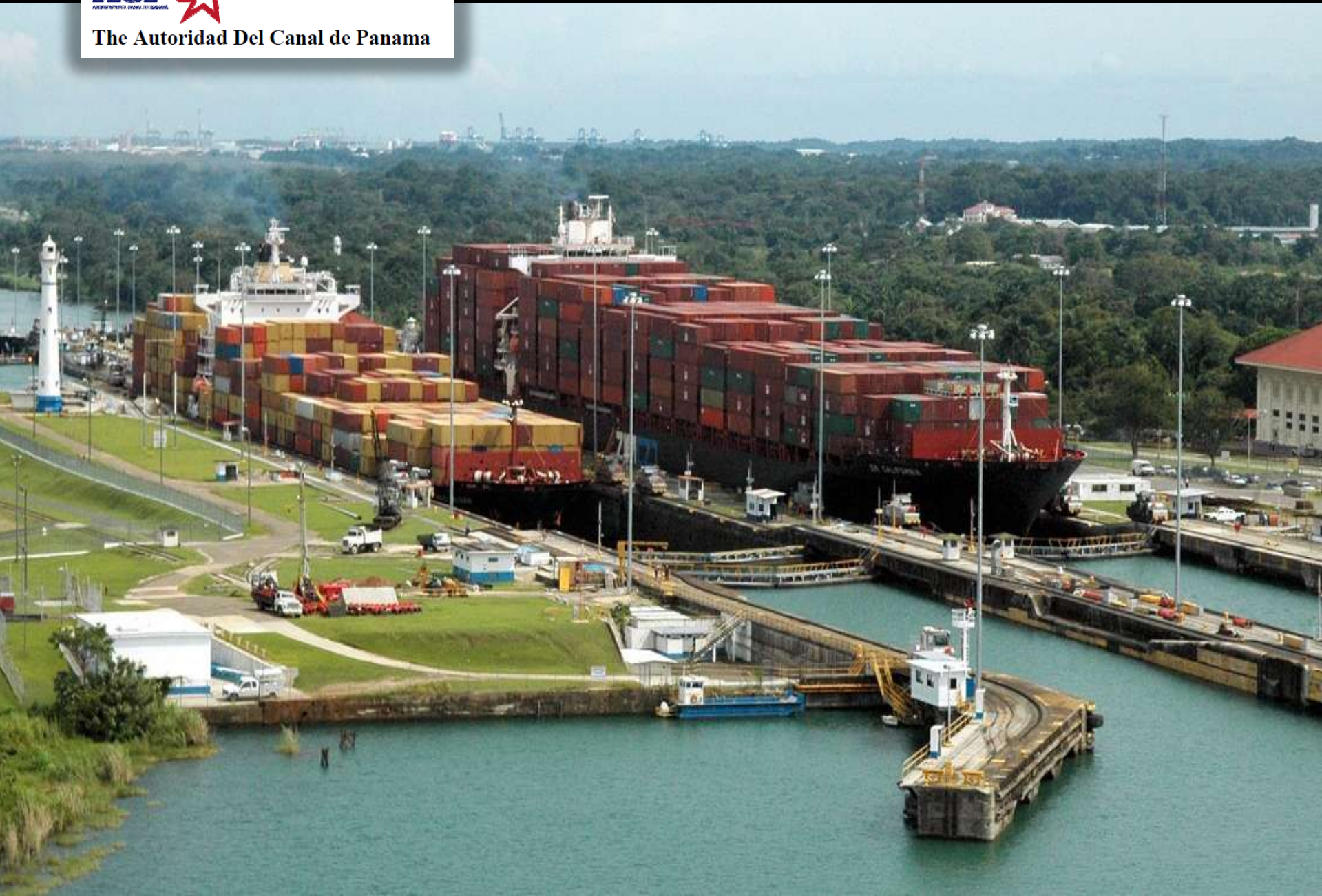
Panama Canal Historical Tonnage Traffic

Source: ACP Data

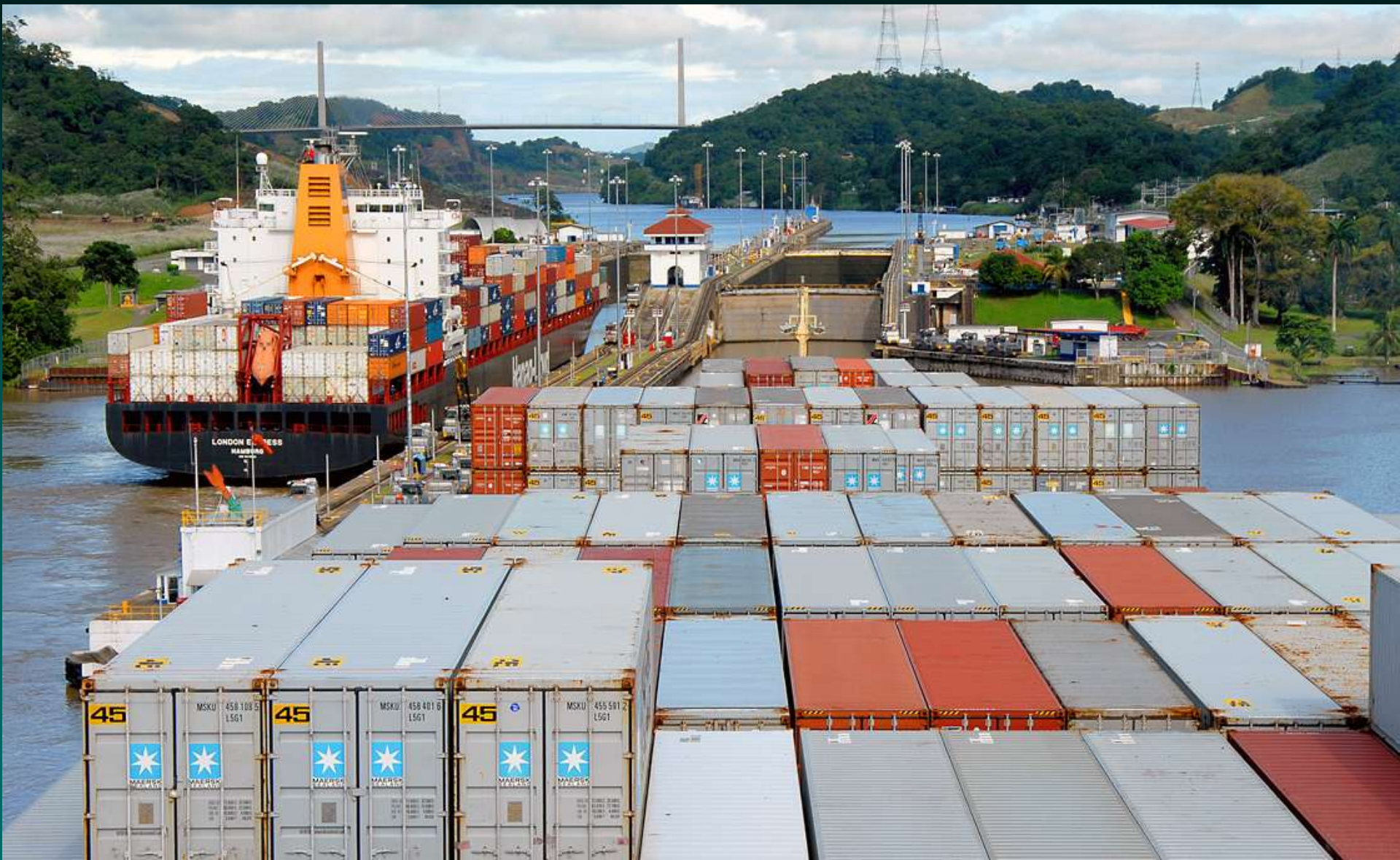
The Panama Canal Circa 1914

Panama Canal Today

The Autoridad Del Canal de Panama



Panama Canal Current Width: 13 Containers Across

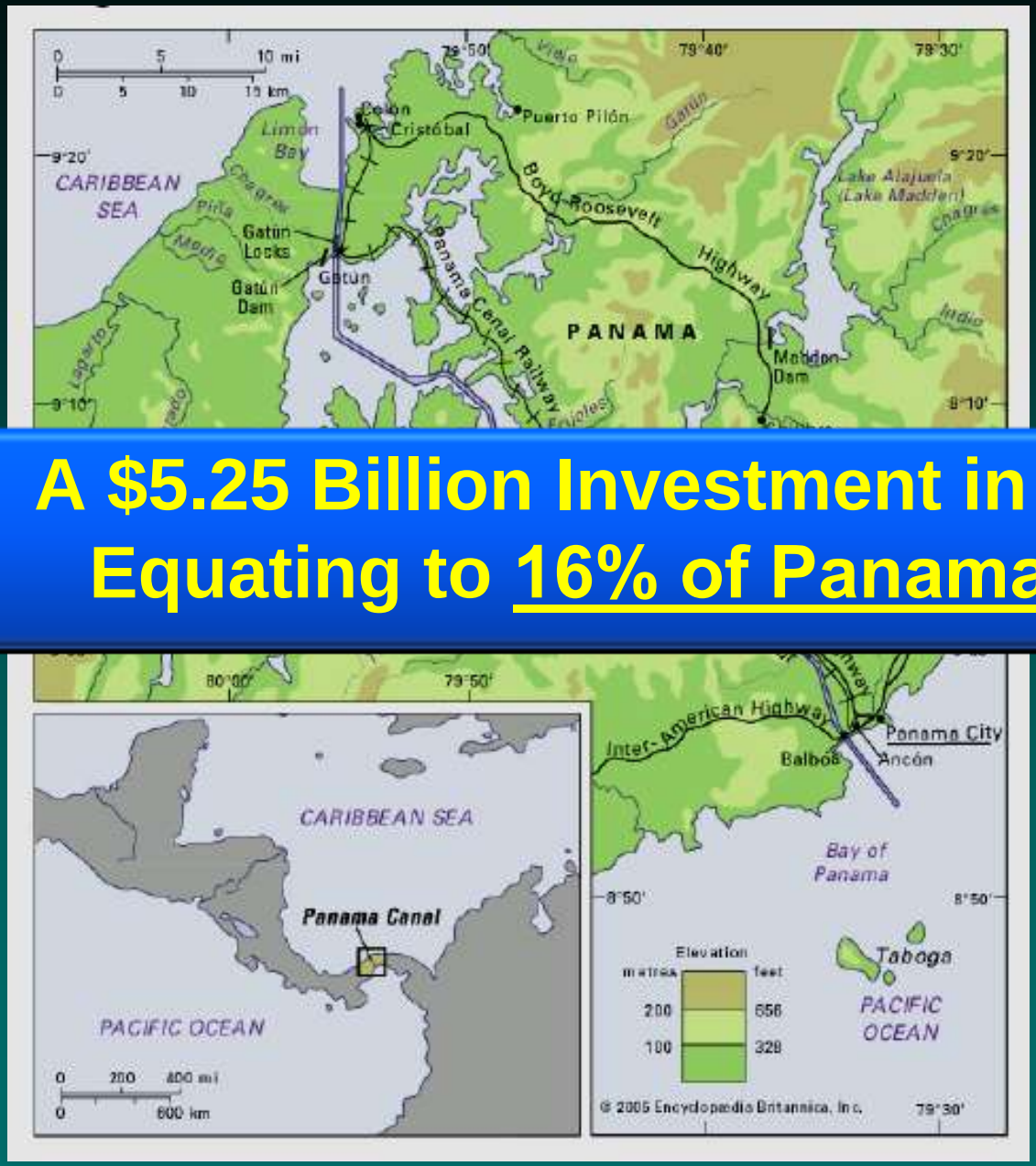


Post 2014 Panama Canal

The Autoridad Del Canal de Panama

Panama Canal Third Lane Expansion
Circa December 2014/January 2015

Panama Canal Expansion



The Autoridad Del Canal de Panama

More than **14,000 ships** a year pass through the **50 mile**

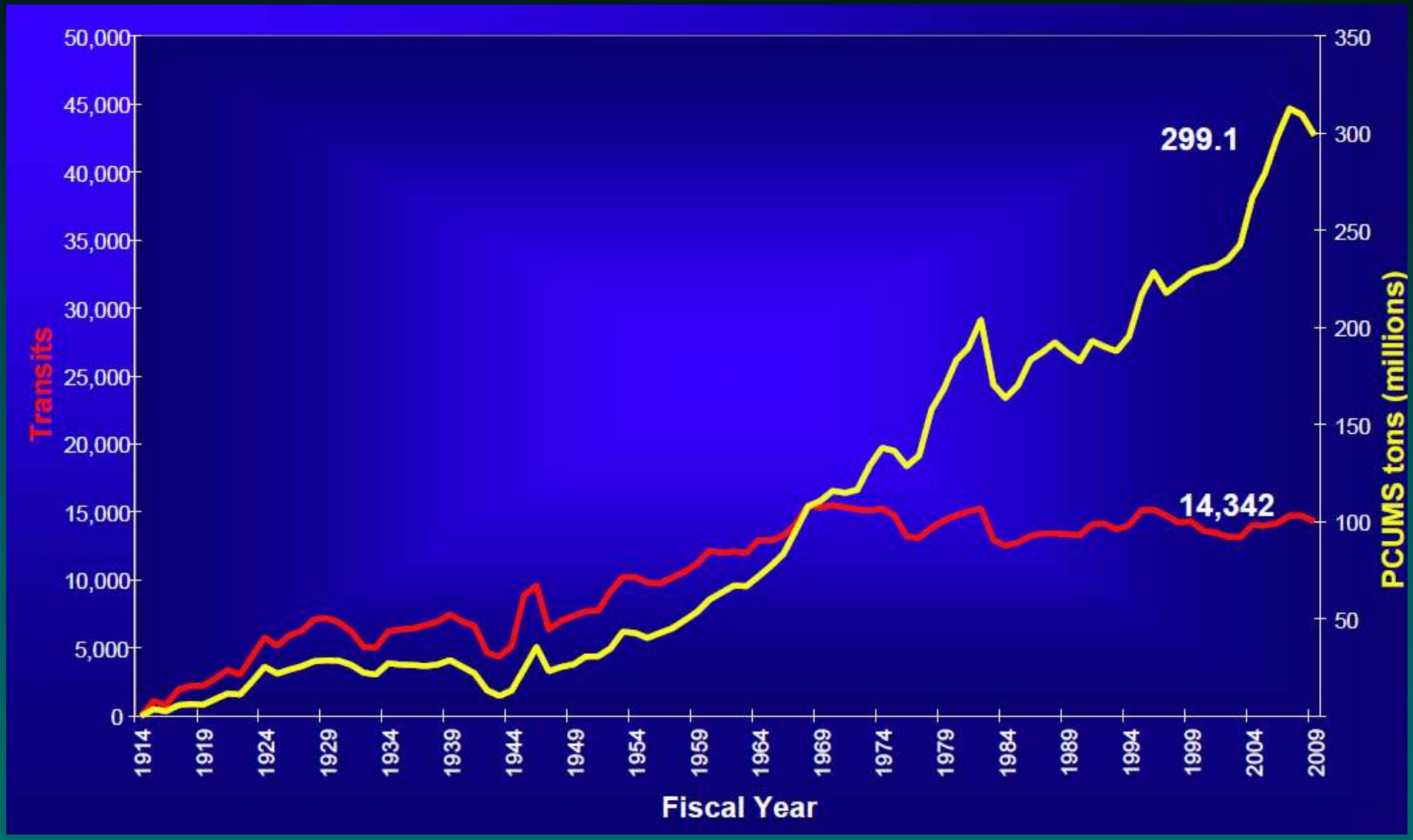
A $5.25 Billion Investment in a 3rd Set of Locks Equating to 16% of Panama's National GDP

Pacific Ocean & Caribbean Sea carrying **275 million tons of Cargo and $100 billion in container shipping**

Source: ACP Data

Panama Canal Transit & Tonnage Traffic

(Transits and PCUMS Tonnage 1914 to 2009)



Source: ACP Data

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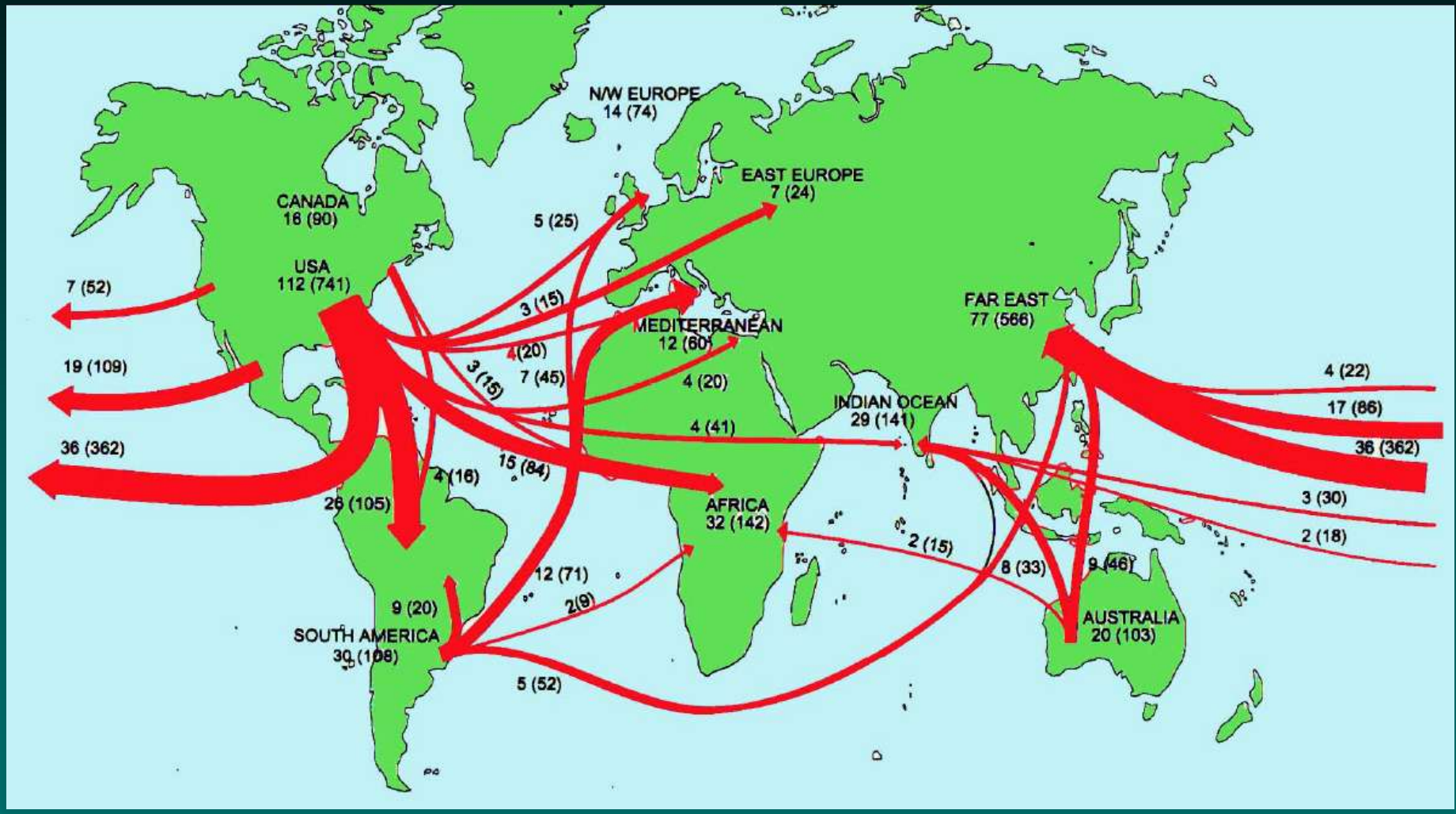
The Panama Canal is a Vital Link for US Grain Exports



Source: Fearnleys Research

A Larger Share of Other Vessels Will be Able to Transit the Canal - Fully Loaded

Crude Oil - 0% to 42%

LNG - 10% to 90%

Dry Bulk - 55% to 80%

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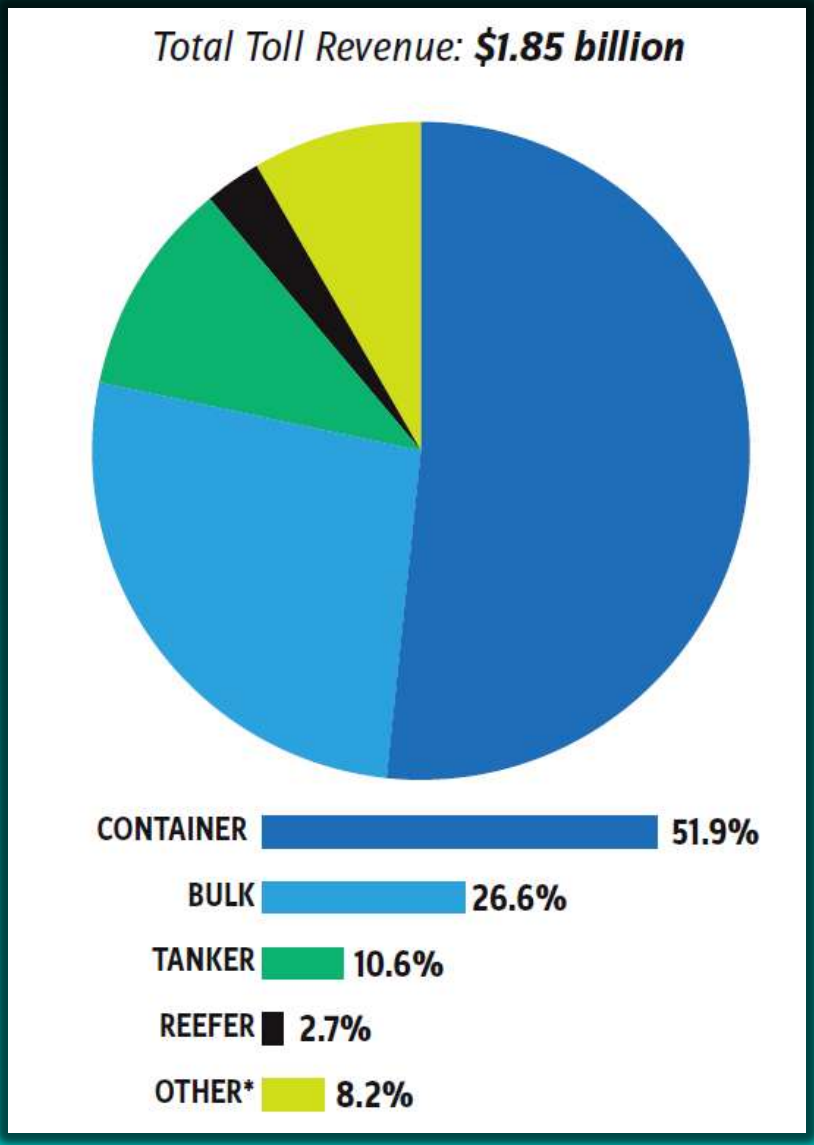
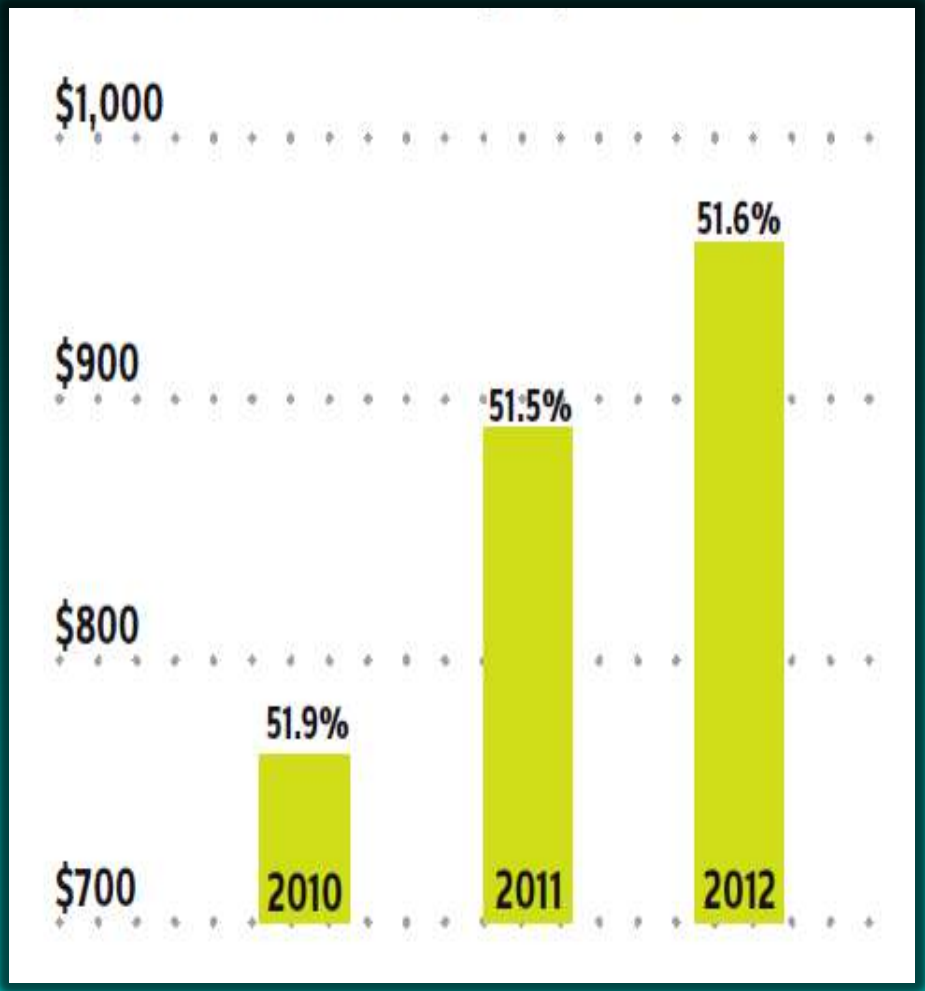
Panama Canal 2012 Tolls: Annual Revenue for Container Ships in US $ millions & % Canal Share





Source: Panama Canal Authority www.pancanal.com

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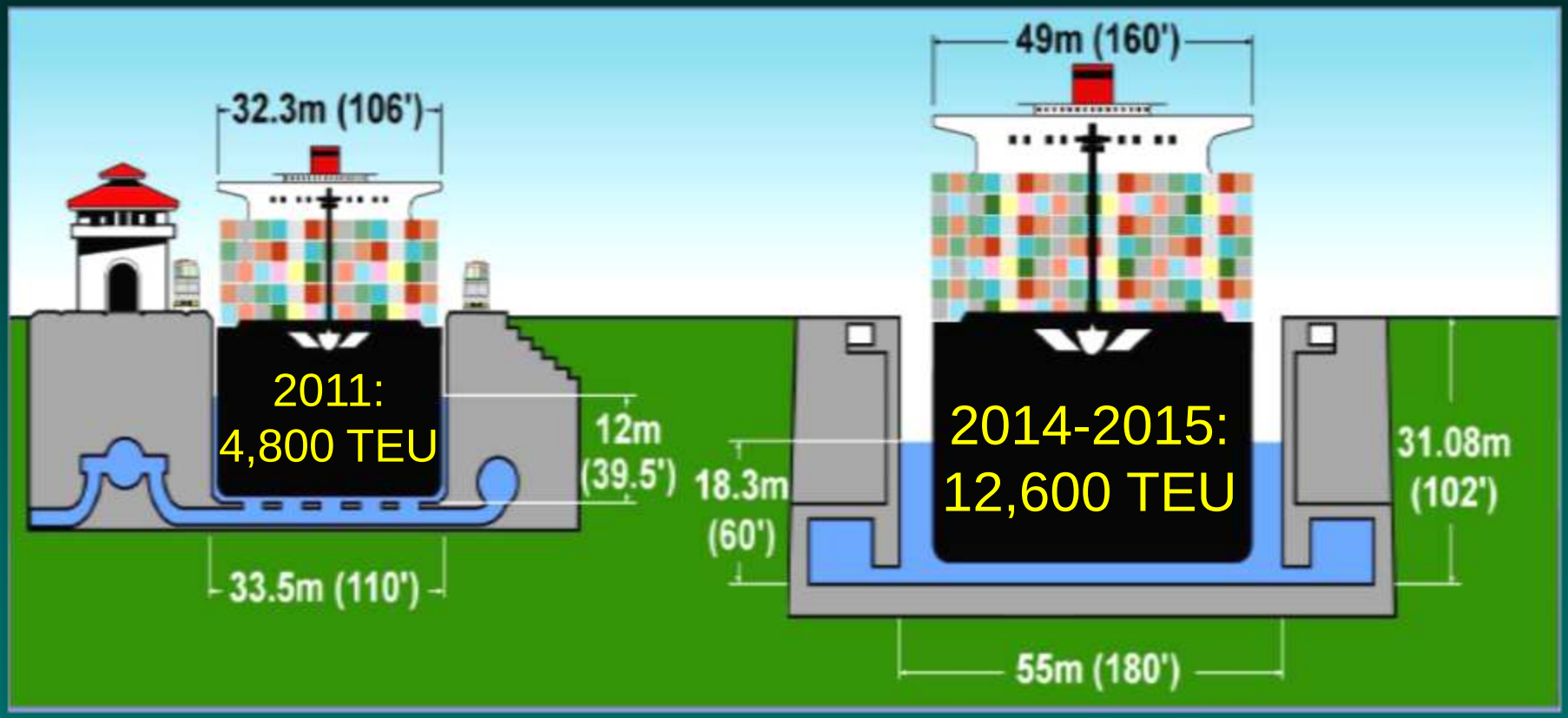
ACP
The Autoridad Del Canal de Panama

Panama Canal Third Lane Expansion Capabilities



Source: ACP Expansion Project

The New Post Panamax Capacity Favors All - Water Service Routes with the Following Vessel Characteristics:

- Vessel Capacity: **9,000 to 10,000 TEUs**
- Vessel Draft: **46 to 50 feet** (tropical fresh water)
- Required Port Channel Depths: **50 to 54 feet**
- LOA: **1,000 to 1,200 feet**
- Beam: **140 to 160 feet**

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The Container Ship Colombo Express (8750 TEU)

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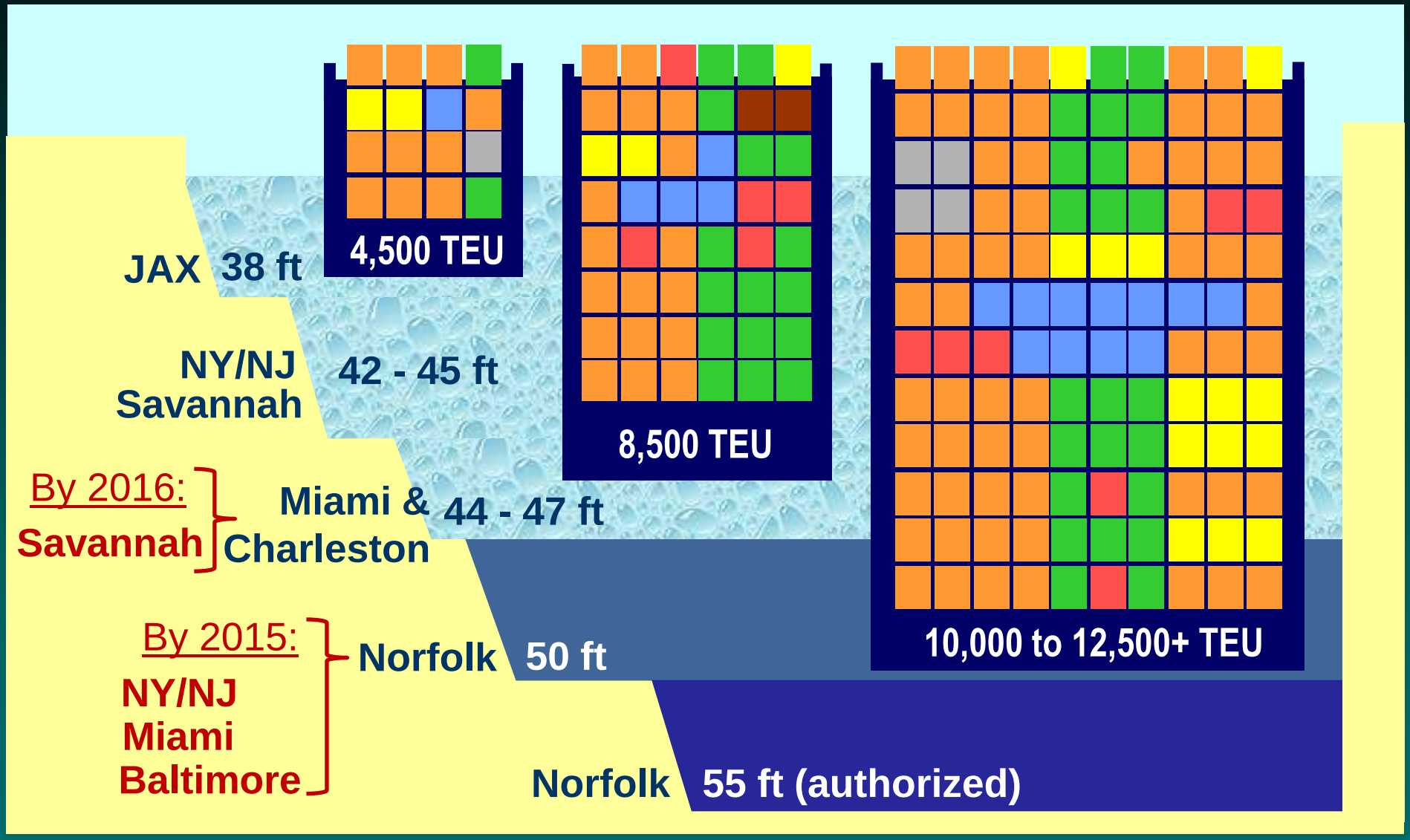
Today Only The Port of Virginia Can Handle The New 2015 Panamax Vessels Fully Loaded



Source: Virginia Port Authority (VPA) October 2011

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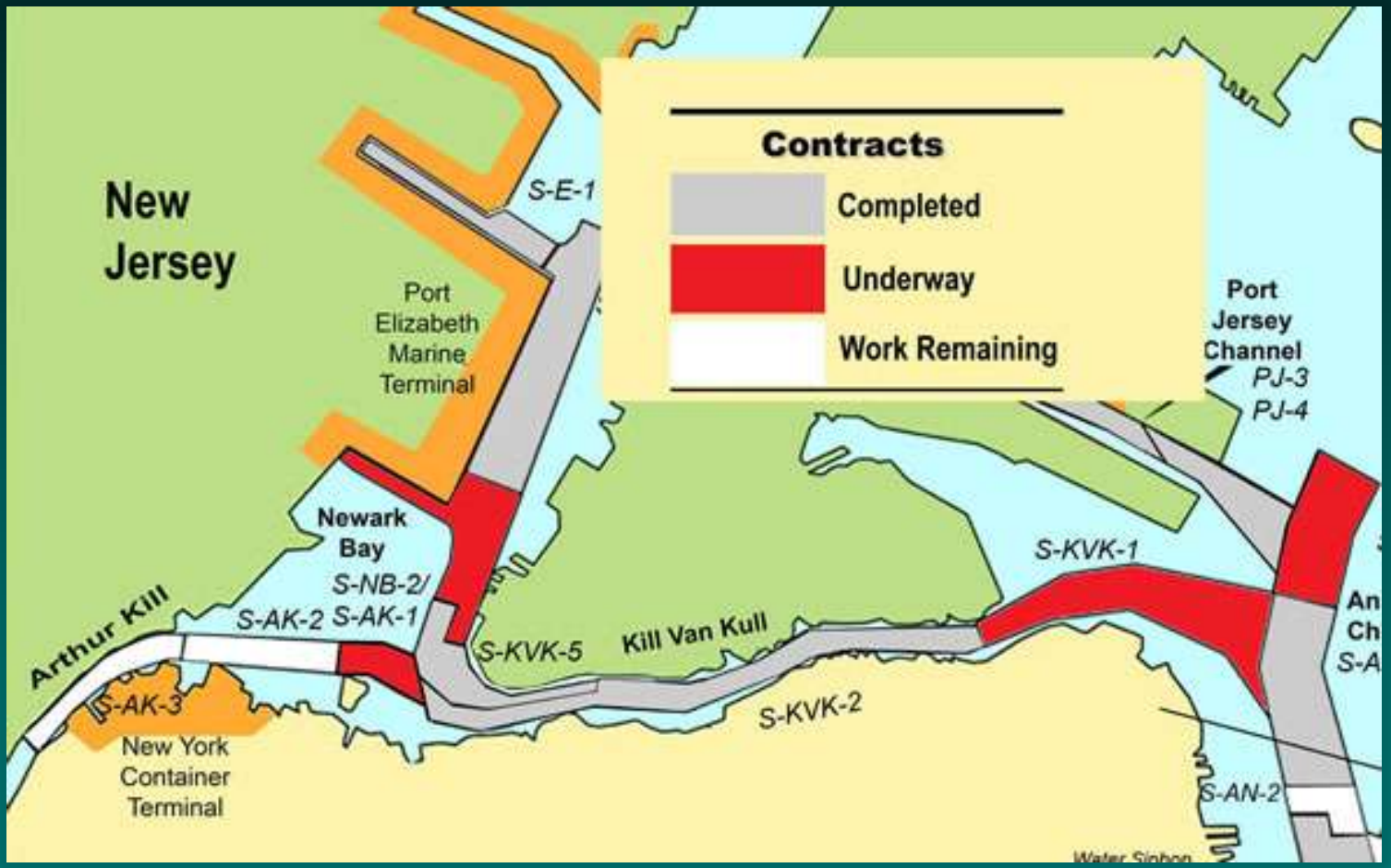
Port Authority of New York & New Jersey Entrance Channel & Harbor Dredging Program

($1.6 Billion Program, Completion December 2014)

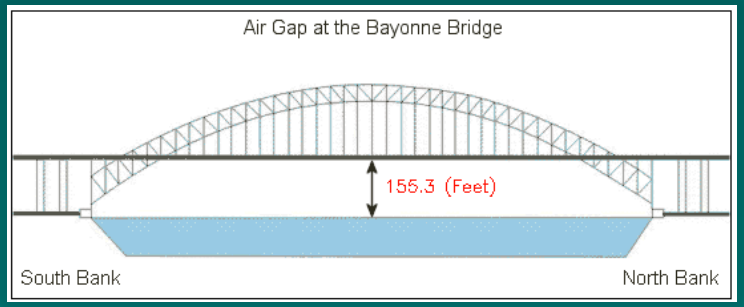


Raising of the Bayonne Bridge

(Estimated at $1 billion)

Future Clearance: 214 ft

Current Clearance: 155.3 ft



Emerging New Caribbean Transhipment Center

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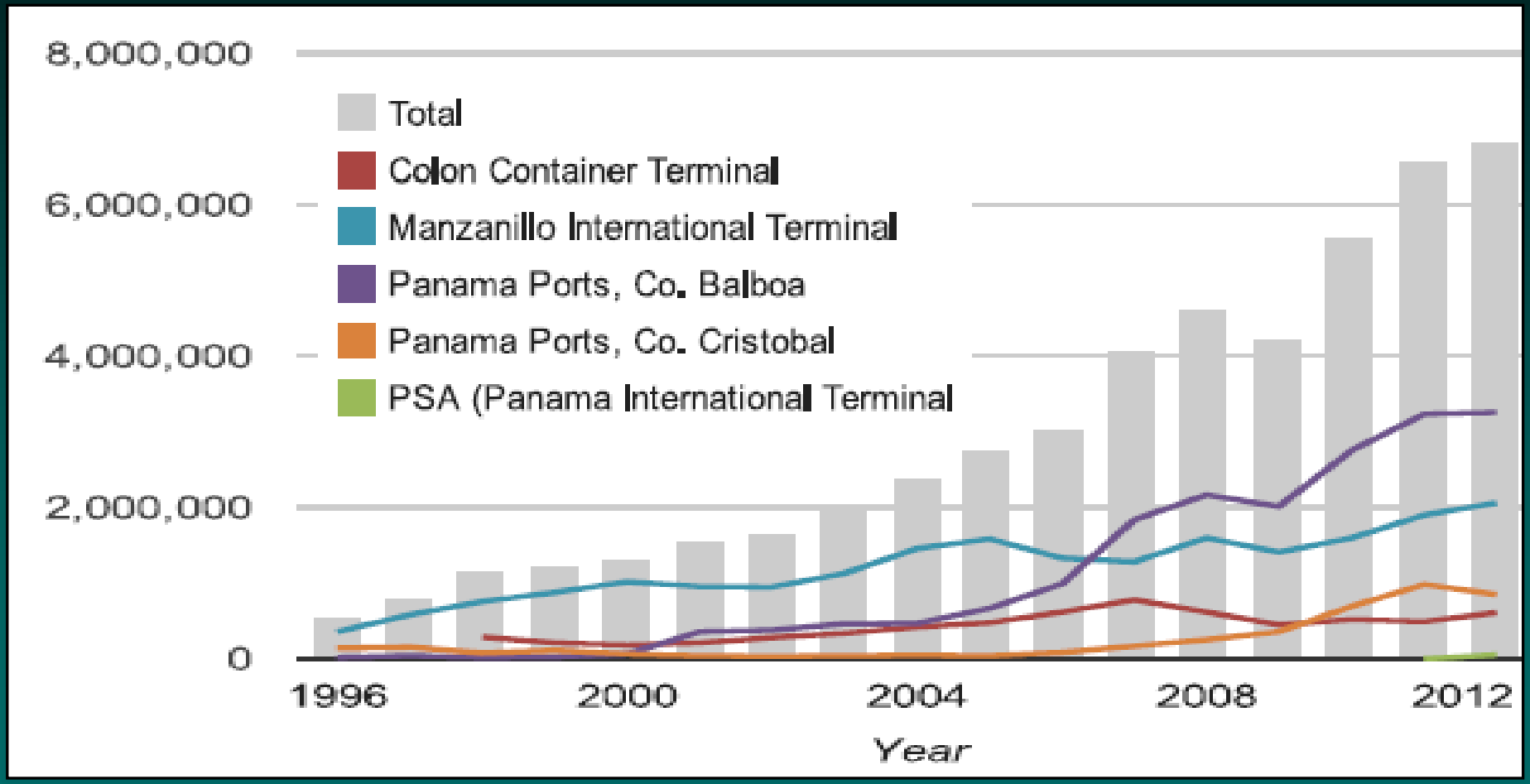
Yearly Container Movement through the Panama Ports



Non-Transit Panama Canal "Feeder Services"
May Be the Real Boom from the Canal Expansion

Weekly Through Transits

Feeder Services – No Transit

Source: ACP and Compare , 2008 Data

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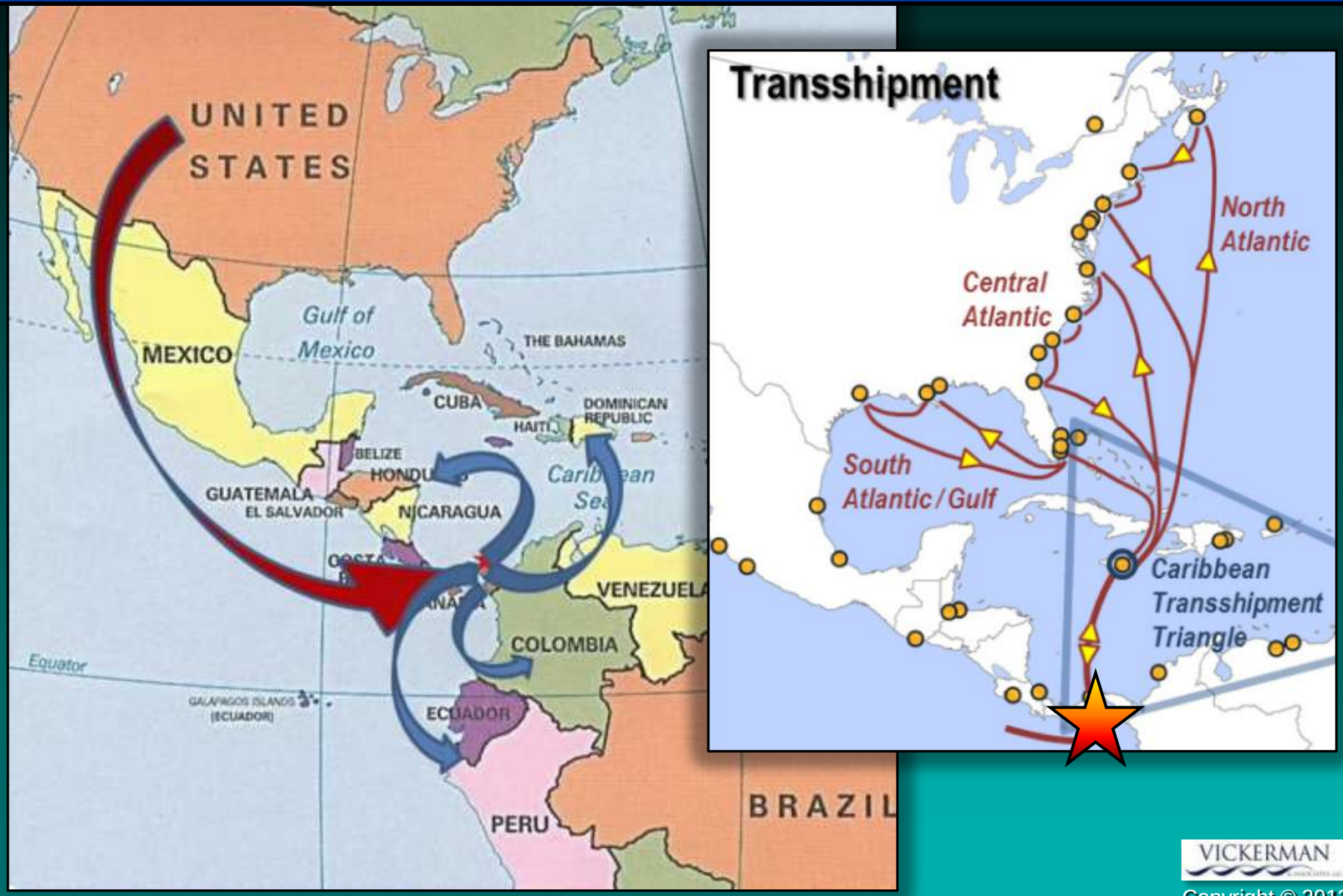
The Panama Canal Expansion Will Move the Caribbean Transhipment Center Point to Panama



Panama Canal Future Transit Revenues & Canal Alternatives

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Typical Container Vessel Service Route

Asia to USEC: Weekly Service with 8 - 4,320 TEU Vessels Generating 104 Yearly Transits and $150 million in Annual Canal Transit Fees

Source: ACP Data

2025 Summary of Canal's Financial Results

(To 2025 In Millions of Dollars – Annual Fees)

Summary of the Expanded Canal's Financial Results			
Financial Results[1]	**Year 2005**	**Year 2025**	**Annual average growth rate**
PCUMS Tons[2]	279	508	3.0%
Transit Revenue	1,033	6,101	8.9%
Other Revenues	92	125	1.5%
Total Revenues	**1,209**	**6,227**	**8.5%**
Operating Costs	444	1,016	4.2%
Fee per Net Ton[3]	218	668	6.5%
Public Services Fees[3]	2	2	0.0%
Depreciation	61	231	6.8%
Net Income	**704**	**4,310**	**11.6%**

546% Increase

890% Increase

Source: ACP Financial Data

Alternative "Dry Canal" Proposals to Counteract Anticipated Canal Fees/Costs

APM Terminals announced $1 billion Container Port in Costa Rica

China's proposal: 136-mile "dry canal" (Pacific Port of Buenaventura & Atlantic Coast Port of Cartagena in Colombia.

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Panama Canal Vessel Deployments Will Determine New US Logistics Patterns

The Distance to New Orleans and Savannah Via the Panama Canal

A Competitive & Robust Landside Access to the Gateway Port's Inland Market will be a Key Success Factor!

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The Primary North American Competitor to the Panama Canal is the Class I Rail Intermodal System

(Potential Increased Service Offerings and System Capacity)

Source: USDOT Maritime Administration (MARAD) 2009

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Post 2015 Expanded Canal: Predicting the Future Impacts for the US East & Gulf Coasts?

IF:

- ✓ *West Coast Ports & Rail become/remain congested…*
- ✓ *East Coast Ports Accommodate the big ships…*
- ✓ *Canal Cost Remains Price Competitive with Suez…*
- ✓ *Cargo Trade Volumes Continue to Increase…*
- ✓ *Canal's infrastructure keeps pace with Growth…*

Then:

- ✓ **Global Carriers will route as much traffic via the expanded Panama Canal as it can handle…**

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Post 2015 Expanded Canal: Predicting the Future Impacts for the US East & Gulf Coasts?

IF:

- ✓ *Panama Canal Tolls are Set to Maximize Revenue and not Container Volumes…*
- ✓ *East Coast Ports Can't Accommodate the big ships – Channel Draft & Terminal Impacts…*
- ✓ *Class I Railroads Exert Their "Pricing Flexibility"…*
- ✓ *All-Water Time is not competitive for High Value Time Sensitive Intermodal Landbridge Cargo…*

Then:

- ✓ **The Panama Canal Market Shift to the East and Gulf Coast May Not Occur at All!**

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Inland Ports: Defined – A Convergence of Logistic Trends

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Inland Ports Defined

A Convergence of Logistics Trends

Short Sea Shipping Technology

Intermodal Rail

Logistics

Automation

Distribution Center

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Emerging Major Inland Port Logistics Centers

Throughput Capacities in Millions of TEUs

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BNSF Logistics Park, Joliet. IL

A New Model For Freight Logistics Centers

Wal-Mart's New 3.4 million SF (78 acres under roof) Import Distribution Center

The Cost of This Import Distribution Center was Paid for by the Savings in Truck Drayage Between the Warehouse & the Intermodal Rail Terminal

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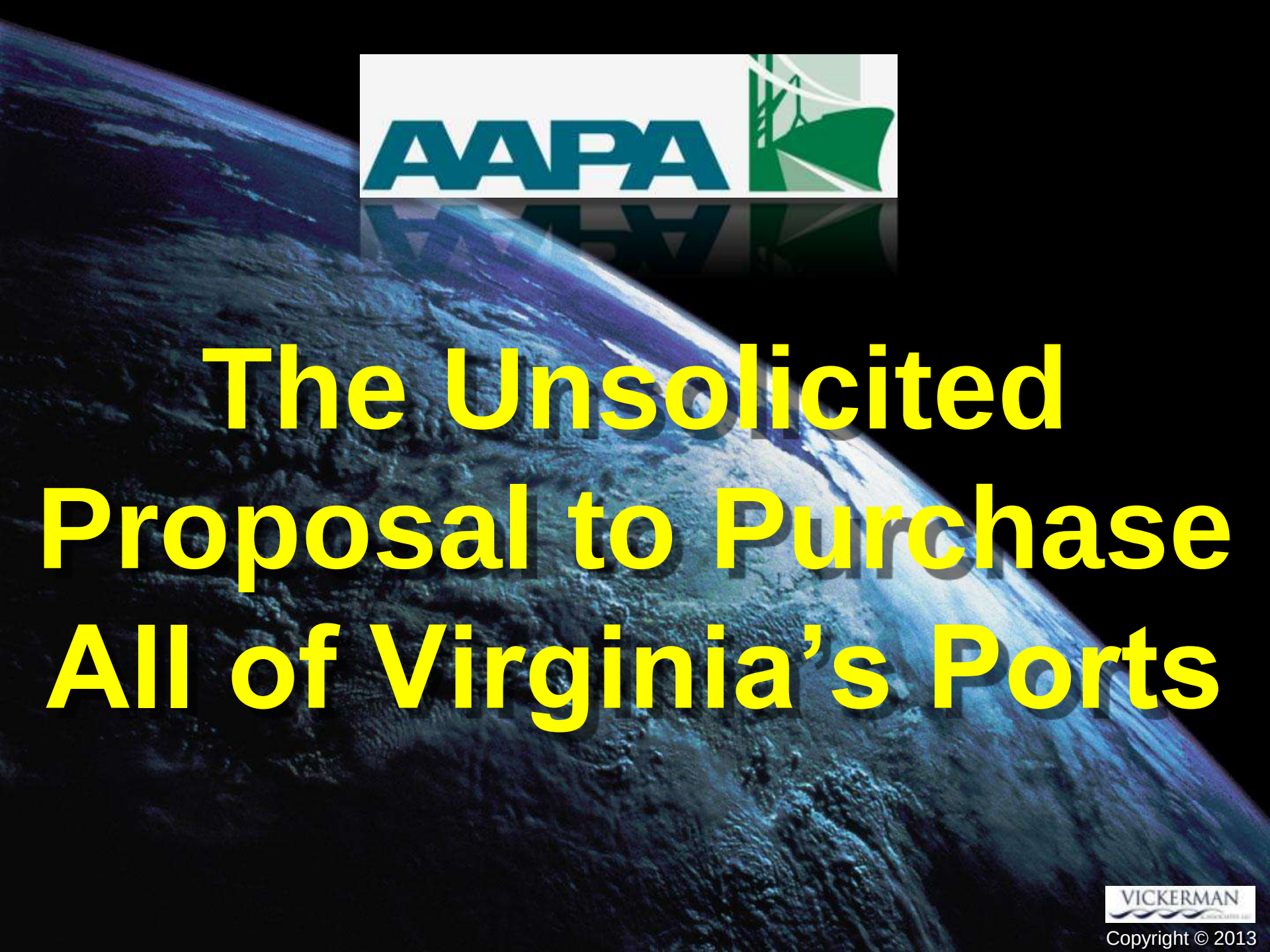
The Inland Port:
"With Integrated JIT Delivery:
The Inland Port Can Greatly
Increase a Regions Freight
System Capacity"



The Unsolicited Proposal to Purchase All of Virginia's Ports

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VIT – APMT "Comparison of Business Terms Study"

In April 2012, **APMT submitted an Unsolicited Conceptual Proposal** to the Commonwealth of Virginia via the 1995 Virginia Public-Private Transportation Act (PPTA) to purchase all of the Port of Virginia's port terminal operations for **$4 billion over a 48 year period**.

For the First Time in North America, Should a Private Ocean Carrier Control All of a Public Port Authority's Facilities and Assets?

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APM Terminals Operates 10 Major Container Terminals within US Port Authorities

(5 Terminals on the East Coast)

Americas

1	Port Elizabeth, New Jersey, USA
2	Americas Regional Office Portsmouth, Virginia, USA
3	Portsmouth, Virginia, USA (Leased to VA Port Authority)
4	Charlotte, North Carolina, USA
5	Charleston, South Carolina, USA (Stevedoring)
6	Jacksonville, Florida, USA
7	Miami, Florida, USA
8	Mobile, Alabama, USA
9	Houston, Texas, USA
10	Los Angeles, California, USA
11	Tacoma, Washington, USA

Major Container Terminal Operation

Source: APMT Data

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JLARC
JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

REPORT TO THE
GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA

Special Report: Review of Recent Reports on the Virginia Port Authority's Operations

REPORT DOCUMENT NO. 8 (2013)
COMMONWEALTH OF VIRGINIA
RICHMOND

JANUARY 2013

JLARC
JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

THE PORT OF VIRGINIA

Virginia International Terminals, Inc.

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Consider the Airport Comparison:

If Delta Airlines, the largest airline in the world, operated all the operations and gates at the Richmond Airport, what would United, US Air, American, Jet Blue, and Air Canada do? What would be the impact to competitor flights and services at the airport?

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Thank You

VICKERMAN & ASSOCIATES, LLC