Executive Management Conference for Latin America and the Caribbean

February 12, 2007 Miami, Florida

"Tools to Lead and Manage Competitive Ports"

Global Maritime Logistics & Port Operating Trends

Macroeconomic Situation

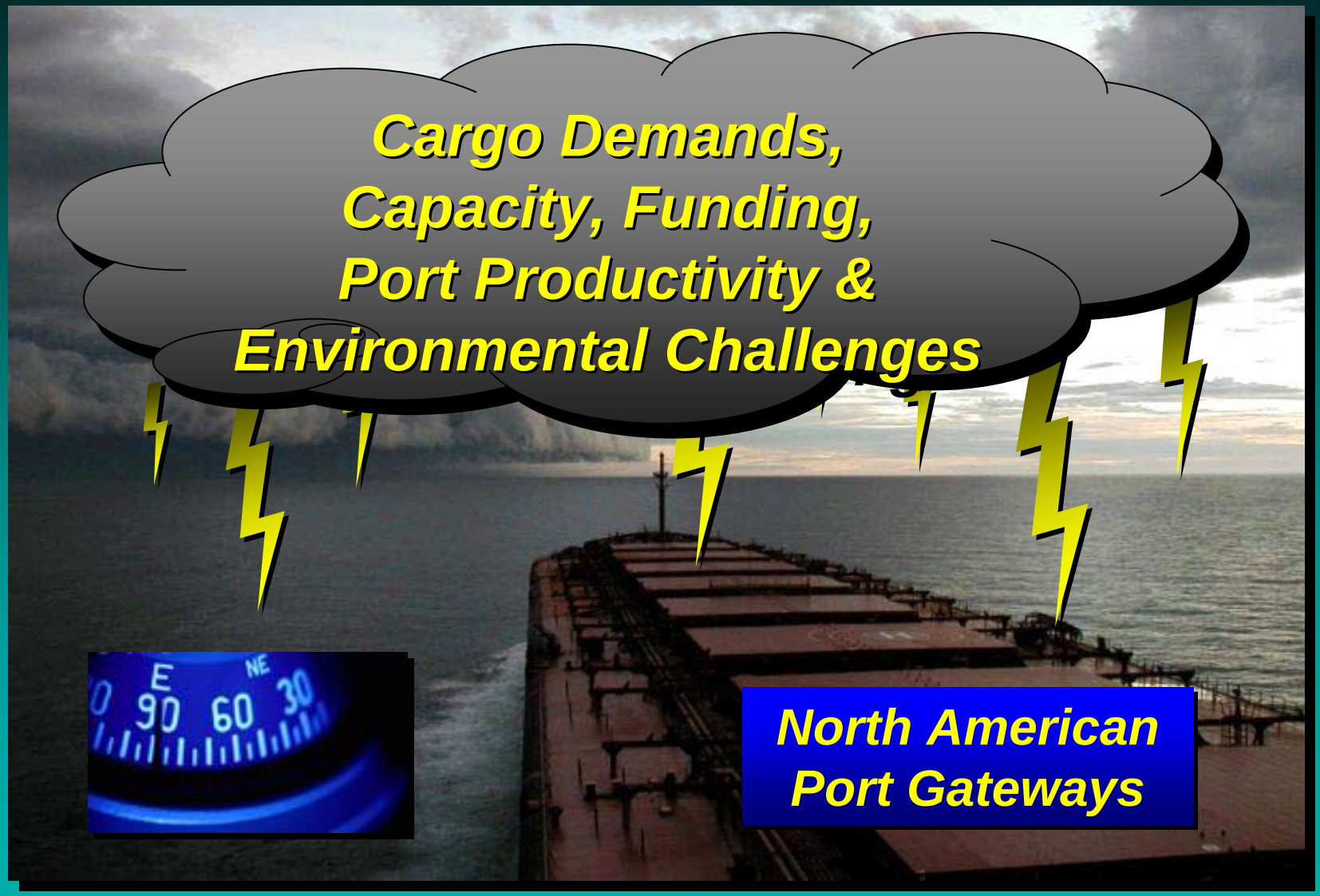
John Vickerman

Norfolk, Virginia

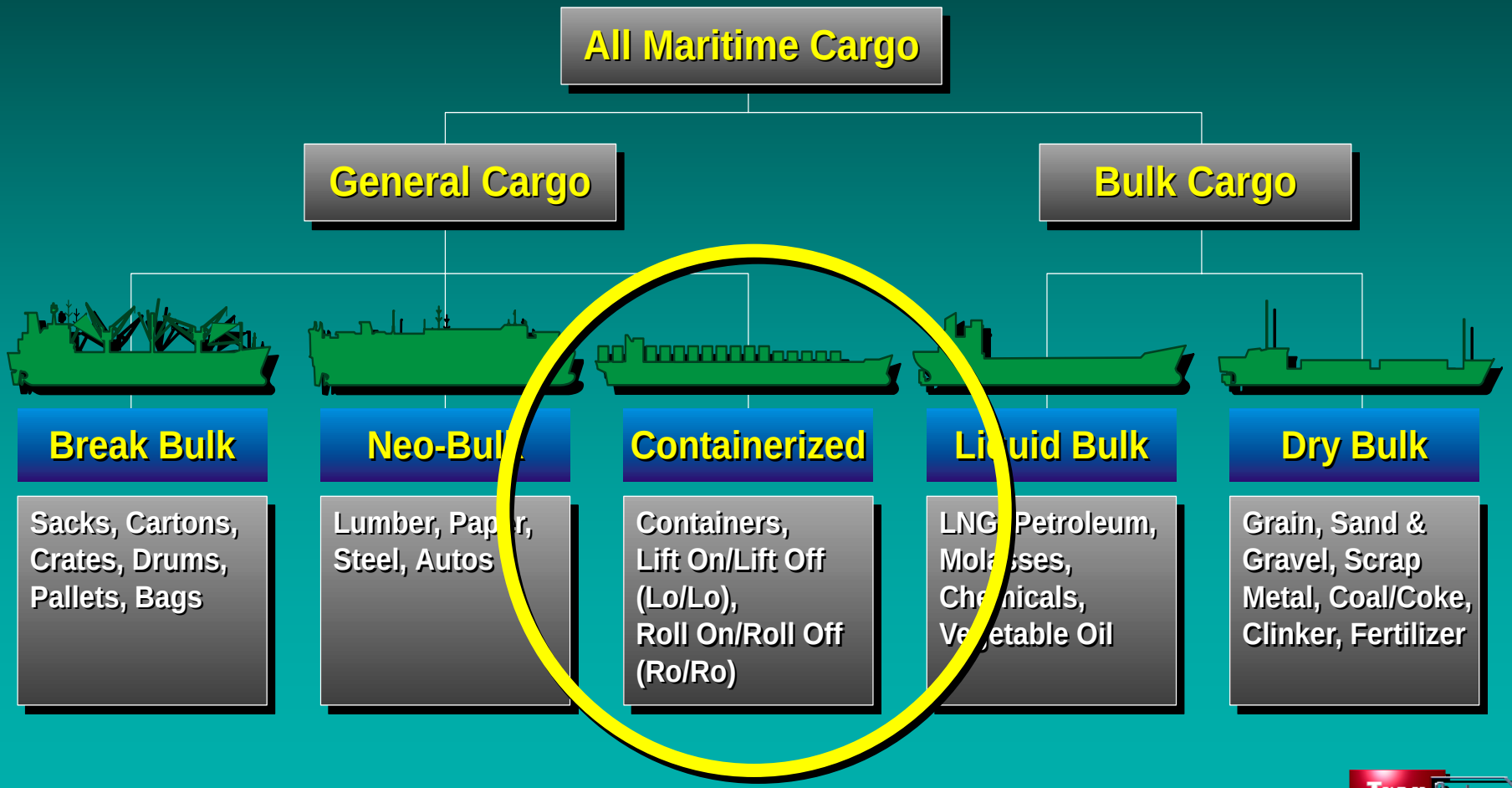
"Tools to Lead and Manage Competitive Ports"

Port & Intermodal External Industry Pressures

Global Trade: Current Course & Direction?

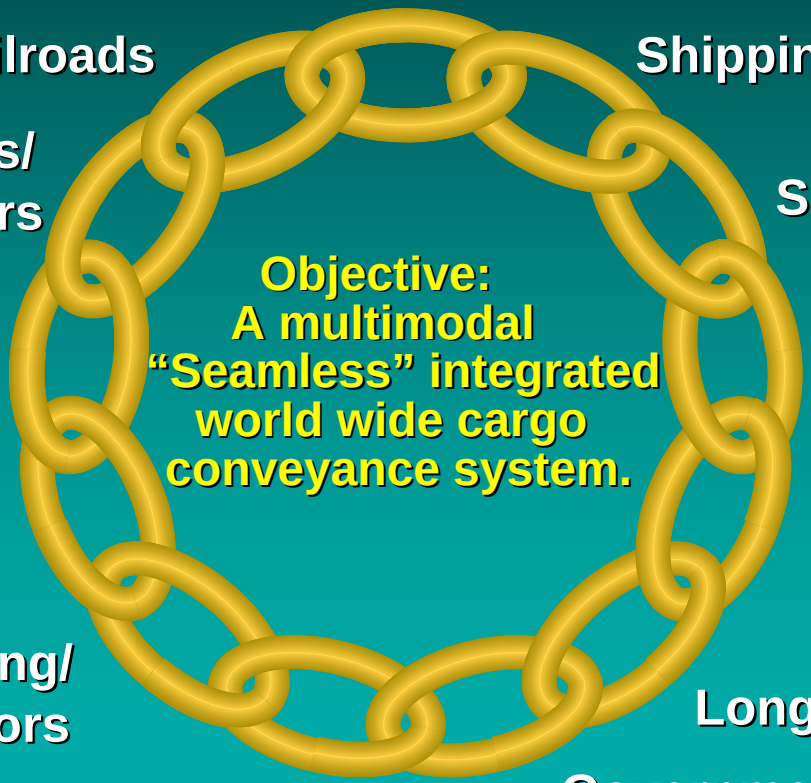


Functional Classification of Global Maritime Cargoes

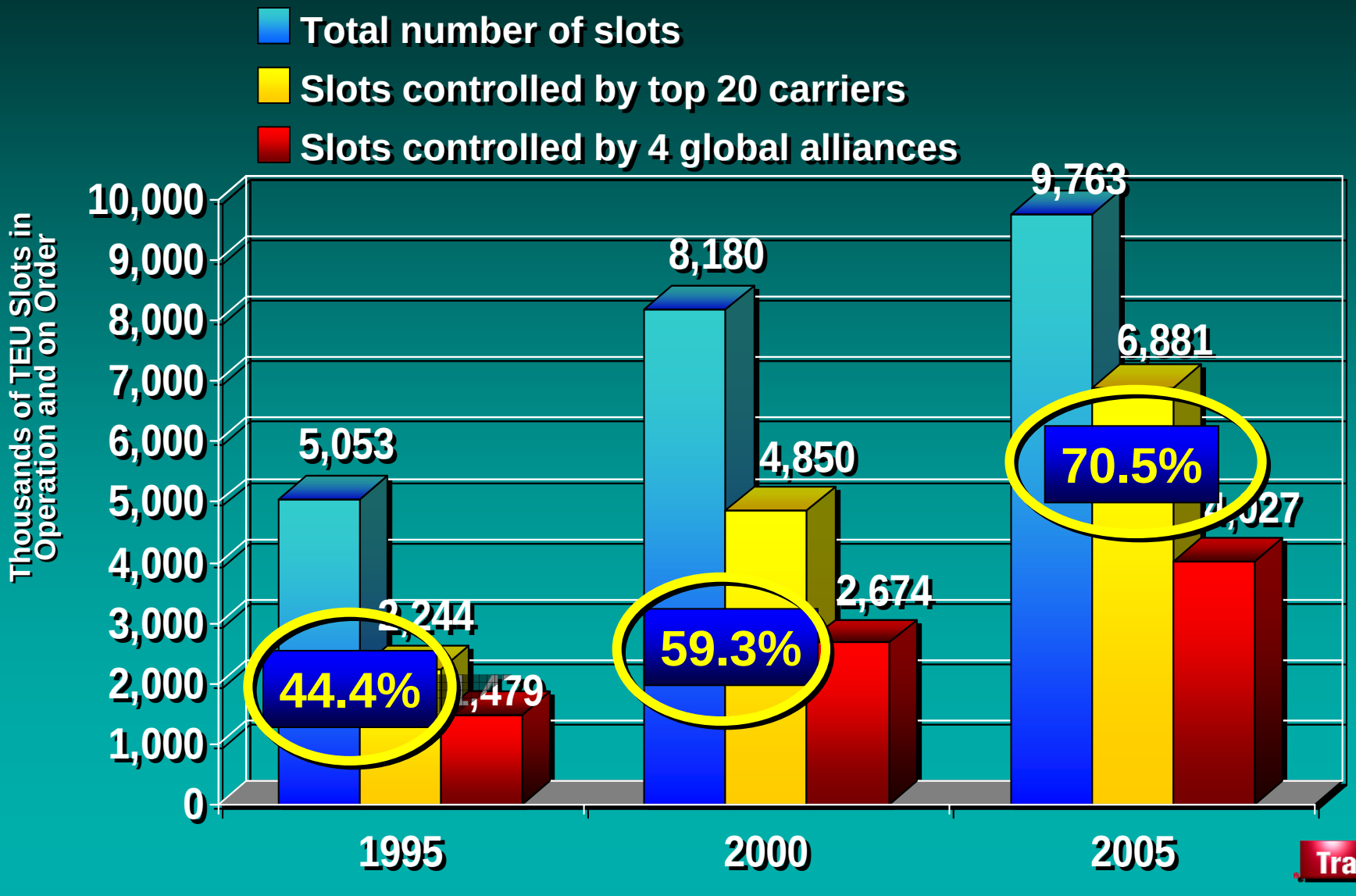


The "Port"

One of the Many Diverse Constituencies in the Cargo Transportation Logistics Chain



The Global Container Industry Continues to Consolidate…

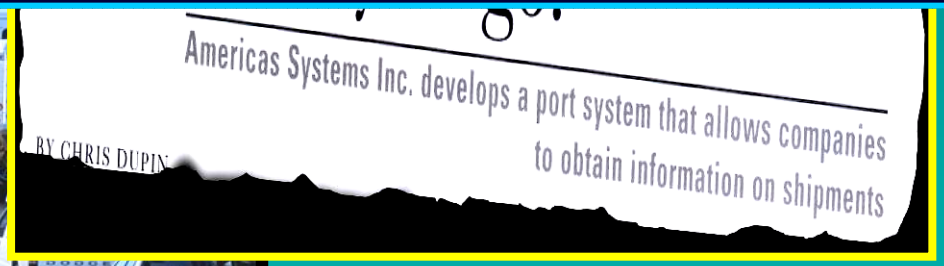


The North American Freight Paradox:

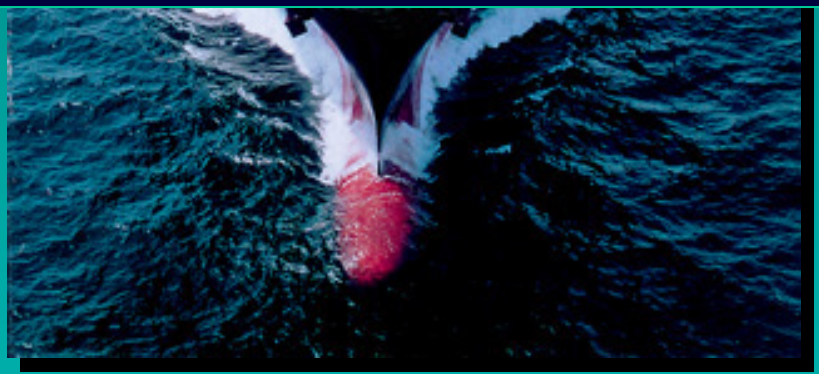
The Nation's Ports and Their Intermodal Linkages are Experiencing the *"Best of Times and the Worst of Times"* in Terms of Growth and Demands on Capacity

At <u>Current Productivity</u> and <u>Growth Levels</u> by 2020 North American Ports & Their Associated Intermodal Systems Will Be Severely Congested.

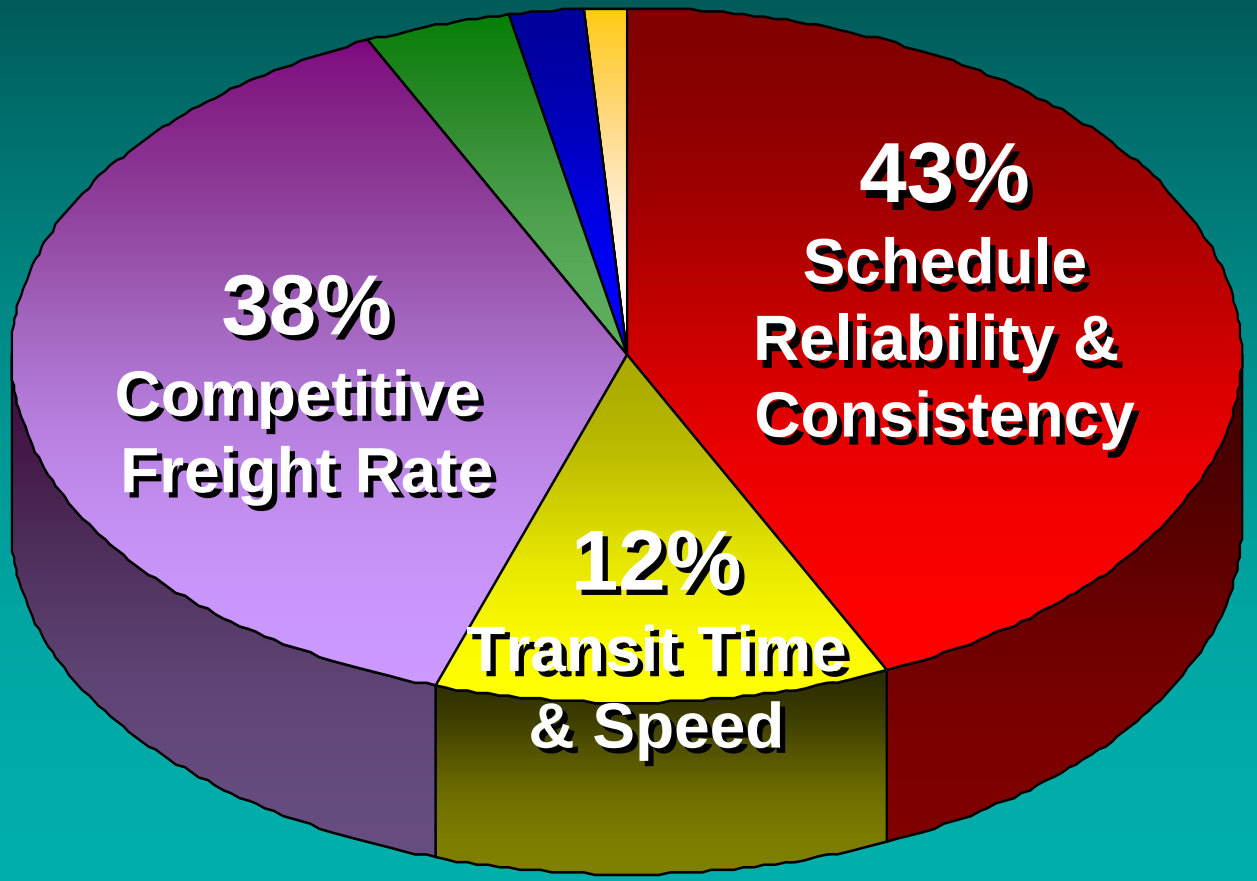
In Today's Supply Chain Congestion Can't be an Excuse…



We do not have an "intermodal system" as such. Rather we have an aggregation of multiple, private and public modes, each of which are "stove-piped" within their own individual areas of interest with little or no true cross communication and collaboration.



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



Today's Logistics Truth:

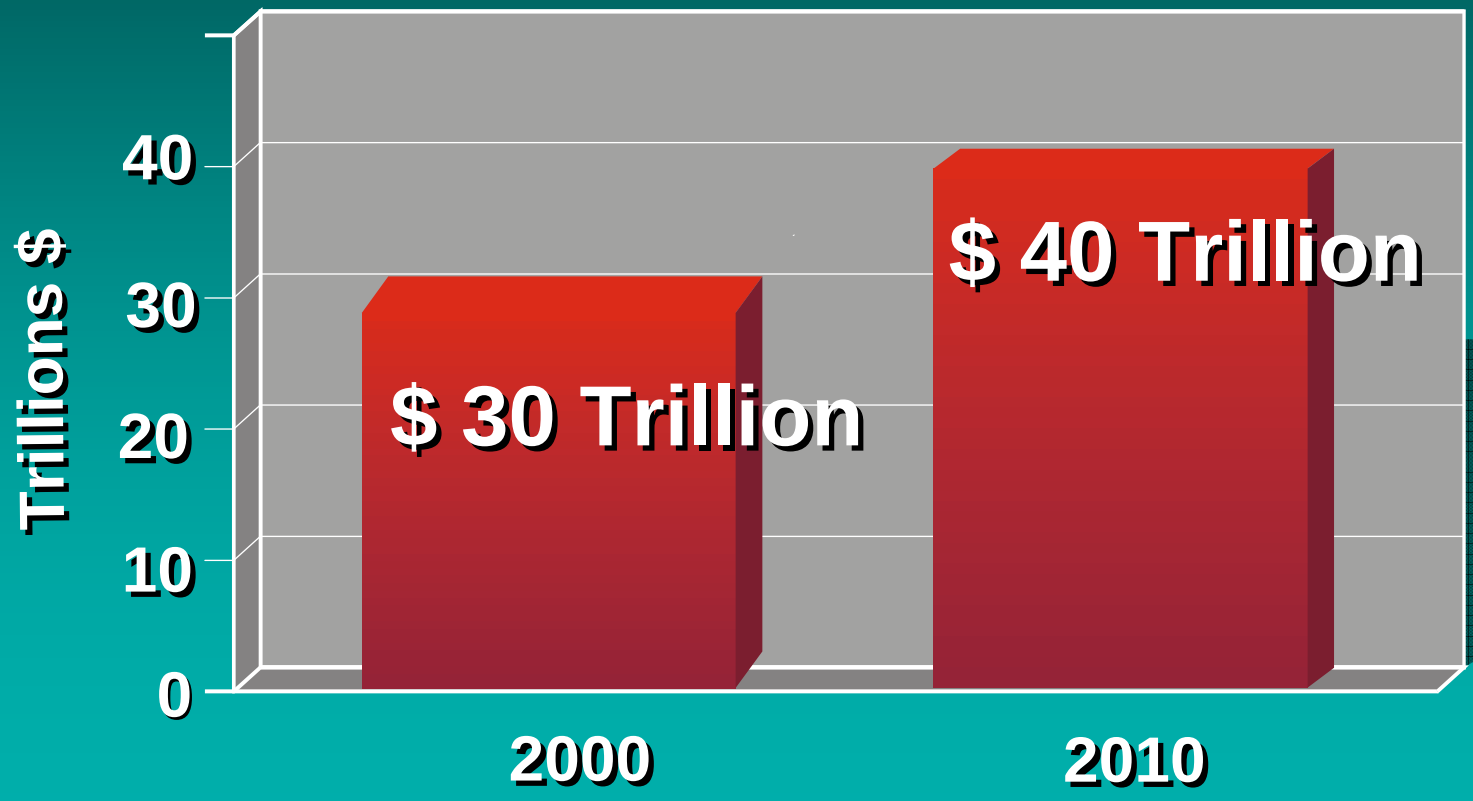
"The customer wants more and is willing to pay less for it."

"Tools to Lead and Manage Competitive Ports"

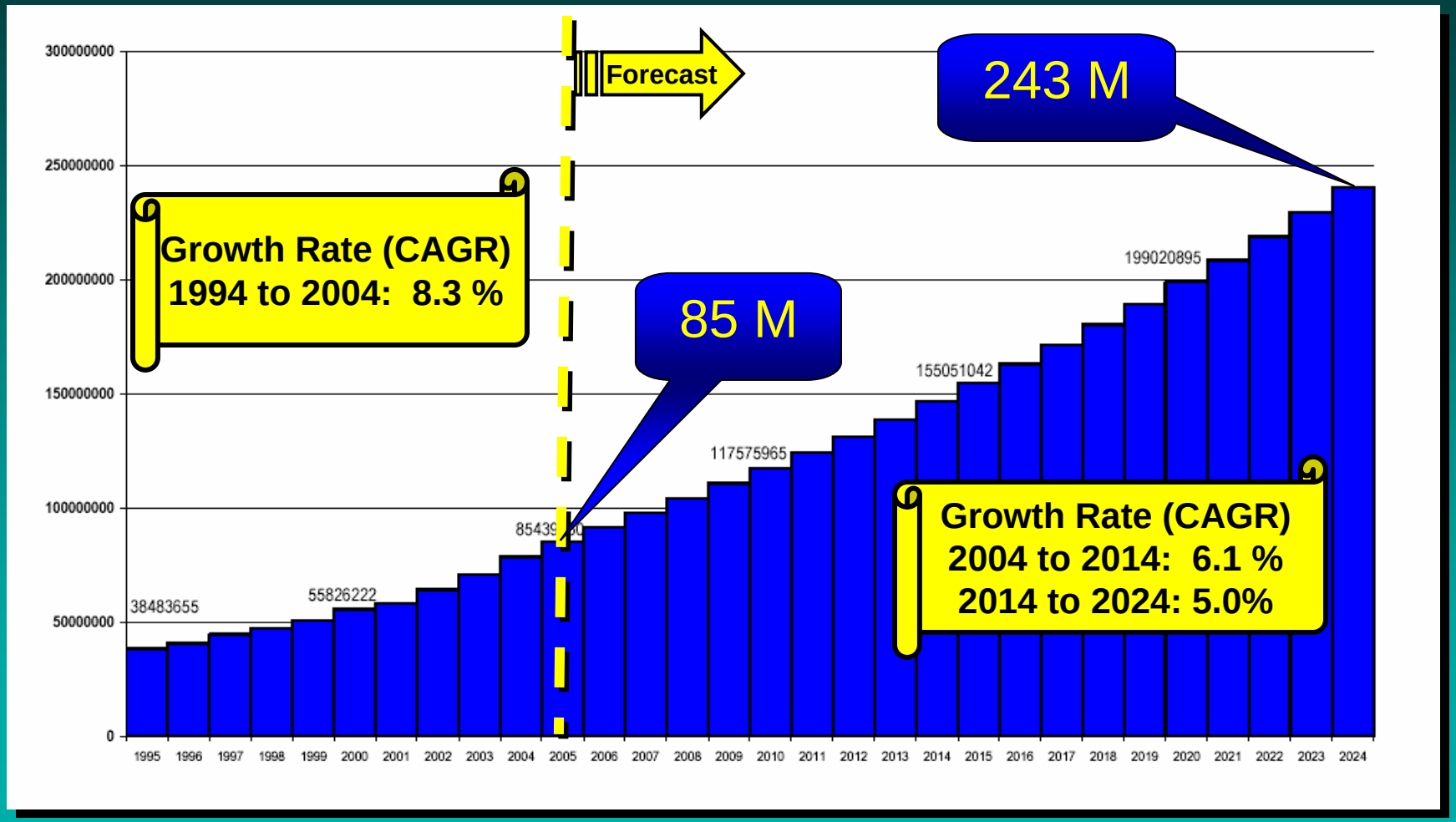
International Maritime Cargo Demand Trends

World Bank's 2010 "Global Economic Prospects"

World Output will Increase 33% in 10 years

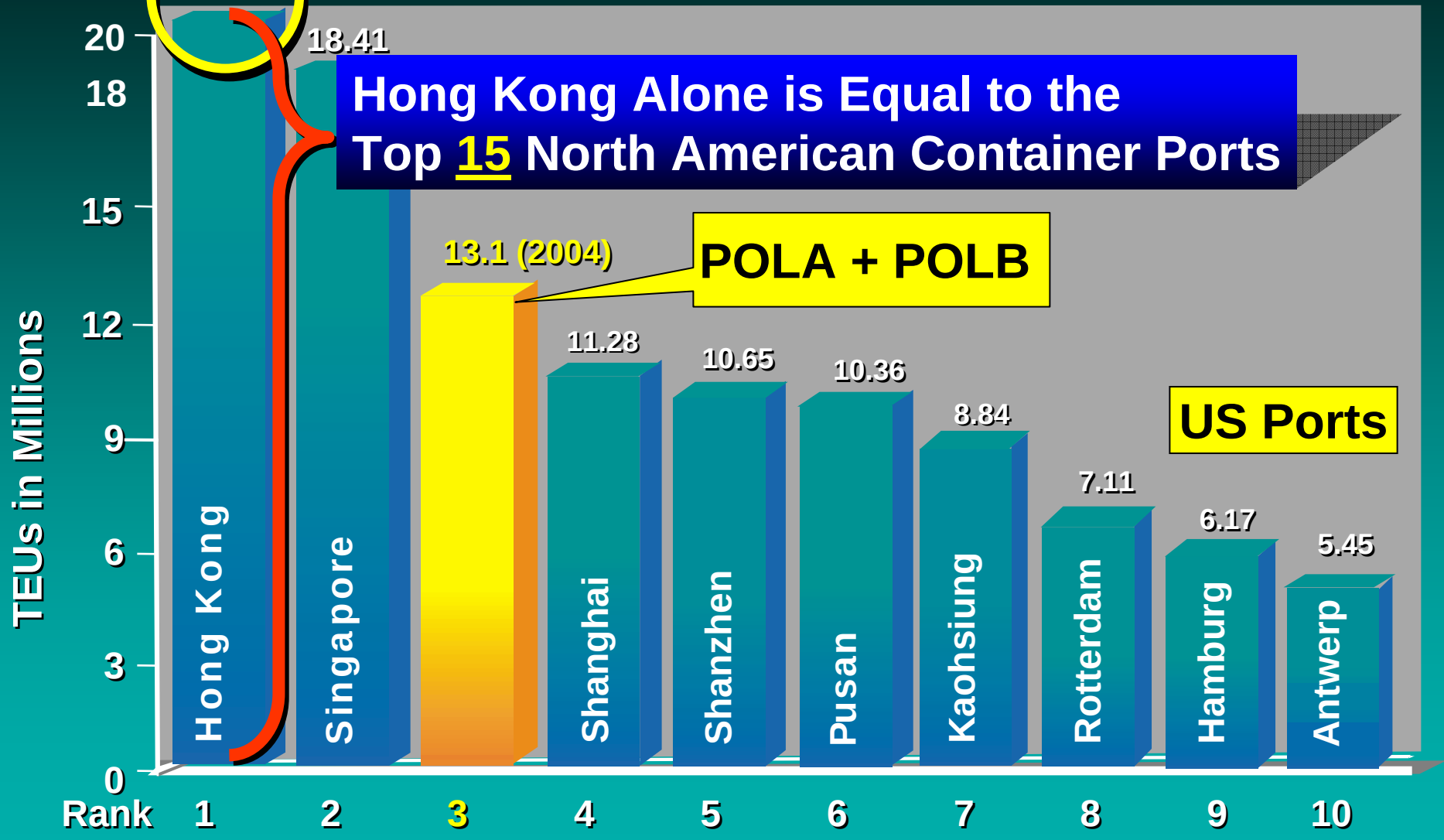


World Container Forecast to 2024 in TEUs
(186% Increase in Next 20 Years)



Source: Global Insight, 2004

2003 World Container Gateways
"The World's Top 10 Port Gateways"



Source: Port Engineering Management, Vol. 22- Issue 6 - December 2004

Global Market Economic Shifts (Country GDP Rank)

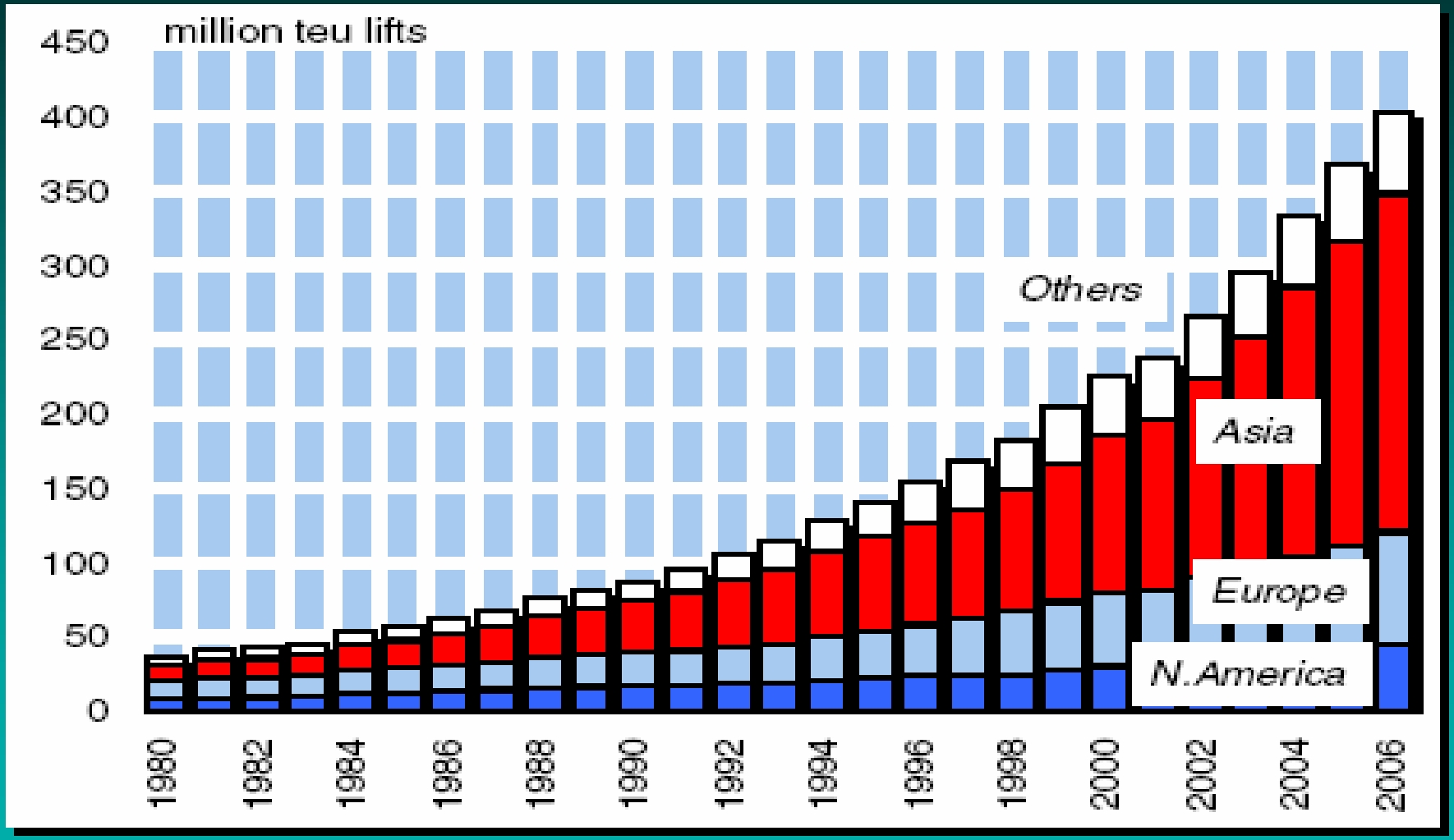
	2000	2010	2020	2030	2040	2050	
#1	USA	USA	USA	USA	USA	CHINA	#1
	Japan	Japan	CHINA	CHINA	CHINA	USA	#2
	Germany	Germany	Japan	Japan	INDIA	INDIA	#3
	UK	UK	Germany	INDIA	Japan	Japan	
	France	CHINA	UK	Russia	Russia	Brazil	#5
	Italy	France	INDIA	UK	Brazil	Russia	
#7	CHINA	Italy	France	Germany	UK	UK	
#8	Brazil	INDIA	Russia	France	Germany	Germany	
#9	INDIA	Russia	Italy	Brazil	France	France	
	Russia	Brazil	Brazil	Italy	Italy	Italy	

Source: Global Insight, 2005

"Tools to Lead and Manage Competitive Ports"

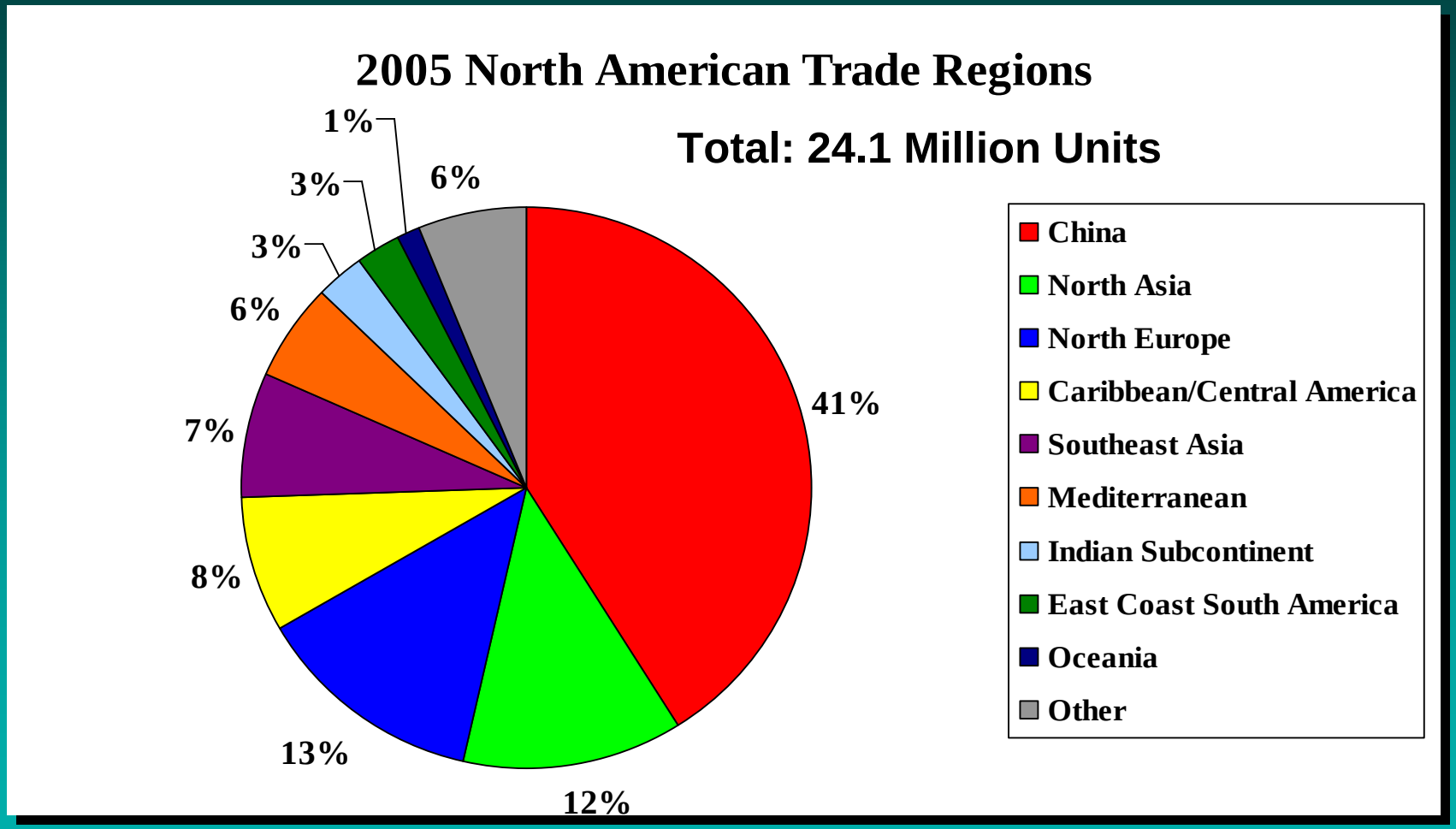
The Growing Asian Import Trade Challenge

Global Interdependent Economics Have Resulted in a Major Product Sourcing Shift to Asia



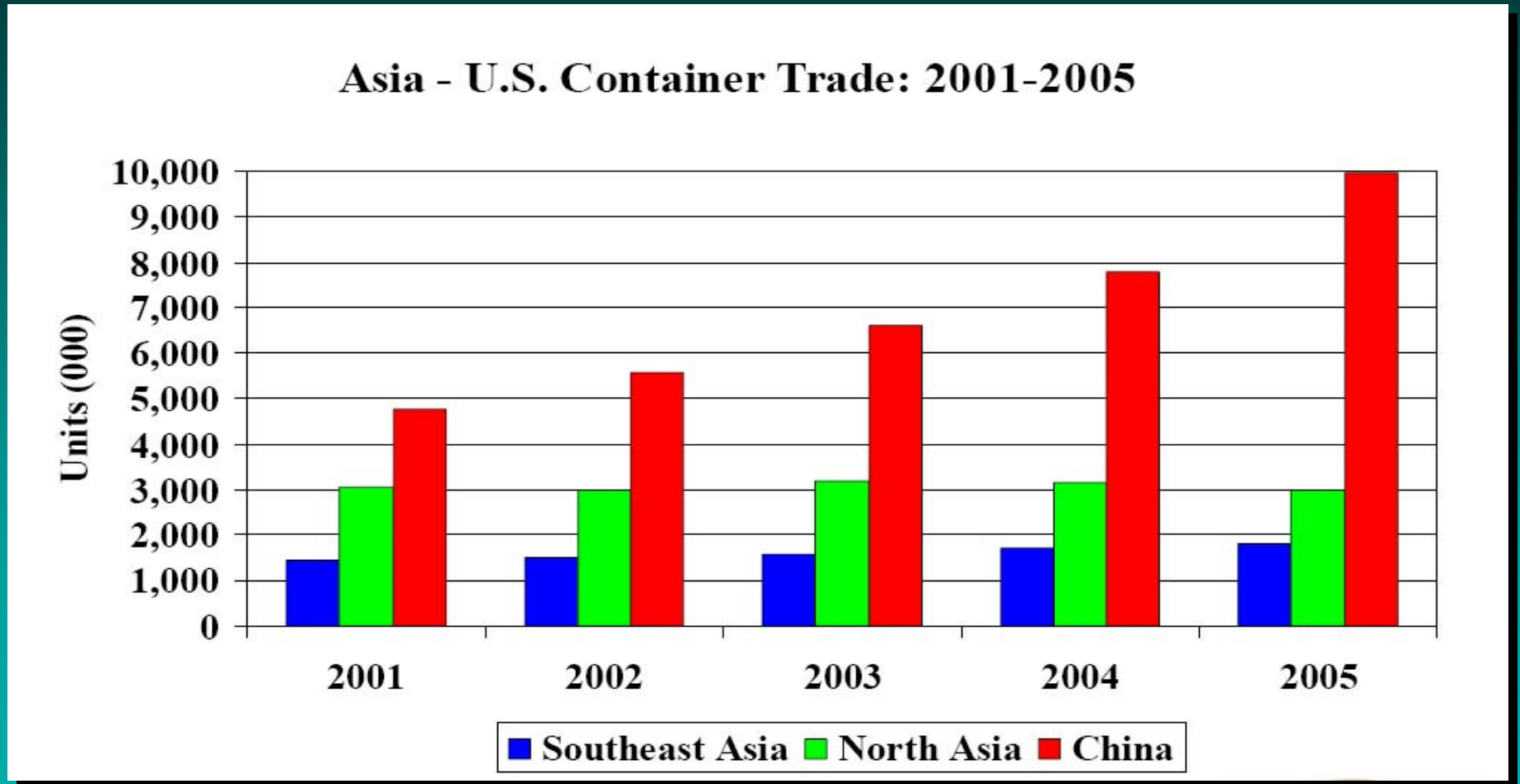
Source: Clarkson Research Studies

Today, more than 60% of all North American container trade is with Asia. European container flows have held steady (19% market share).



Source: PIERS; Port Reported Throughput; Norbridge Analysis

Last 5 Years Asia- US Container Trade Increased 12% CAGR and China Accounted for 95% of the Increase



Source: PIERS, Port Reported Throughput, Norbridge

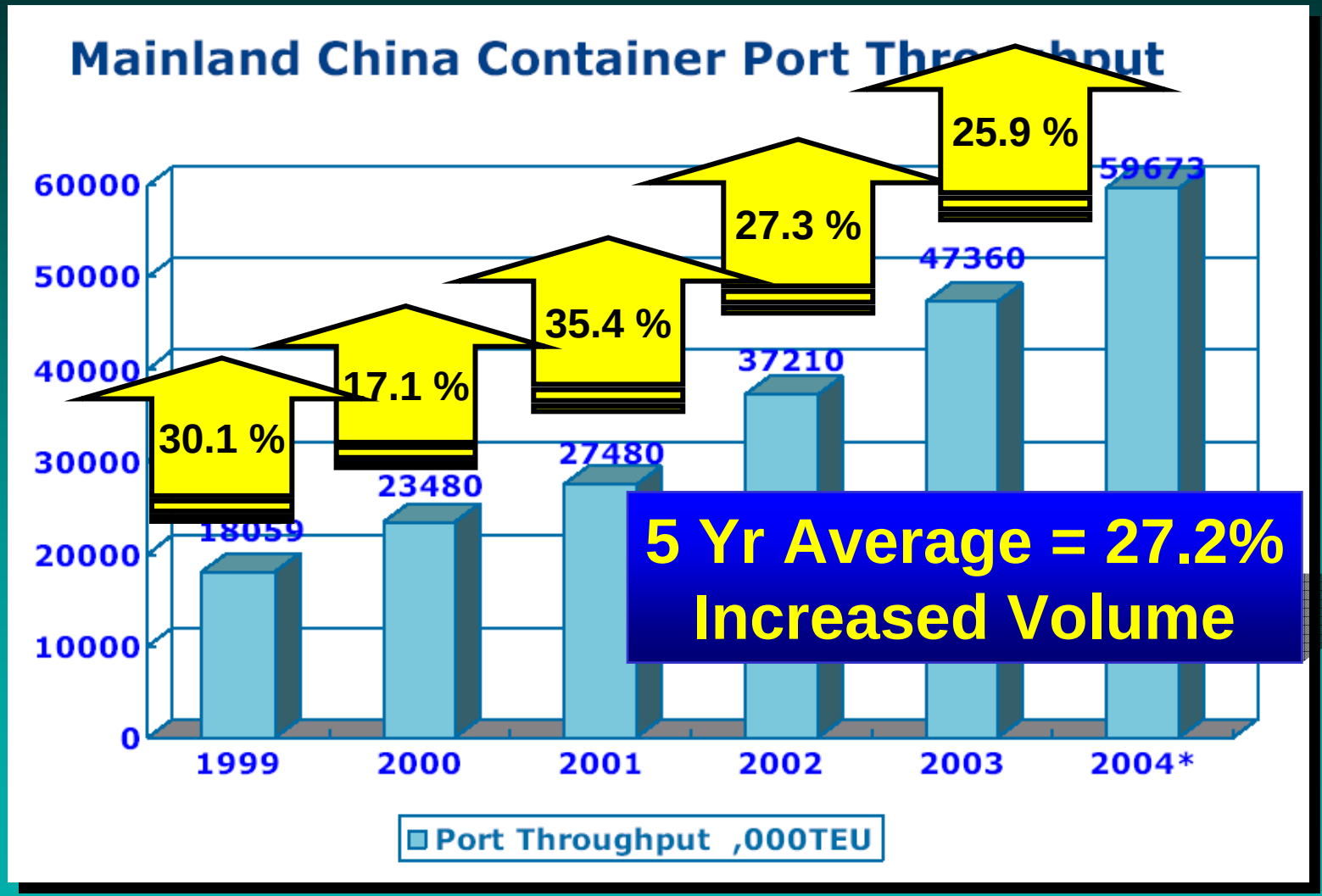
China-US: Twin Engines of the World

Population:
US: 298 million
China: 1,307 million
(1/5 World)

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

Mainland China Container Port Growth

(Compound Annual Growth Rates)



China's Ministry of Railways Signed a 5 year Cooperation Agreement with the US BNSF Railroad for Intermodal Rail Development

- Develop China's high volume efficient intermodal network
- $242 billion program to 2020
- On-dock & near-dock intermodal transfer yards at ports
- Ministry to build 18 mega-terminals with 7 at seaports,
  40 smaller Intermodal terminals

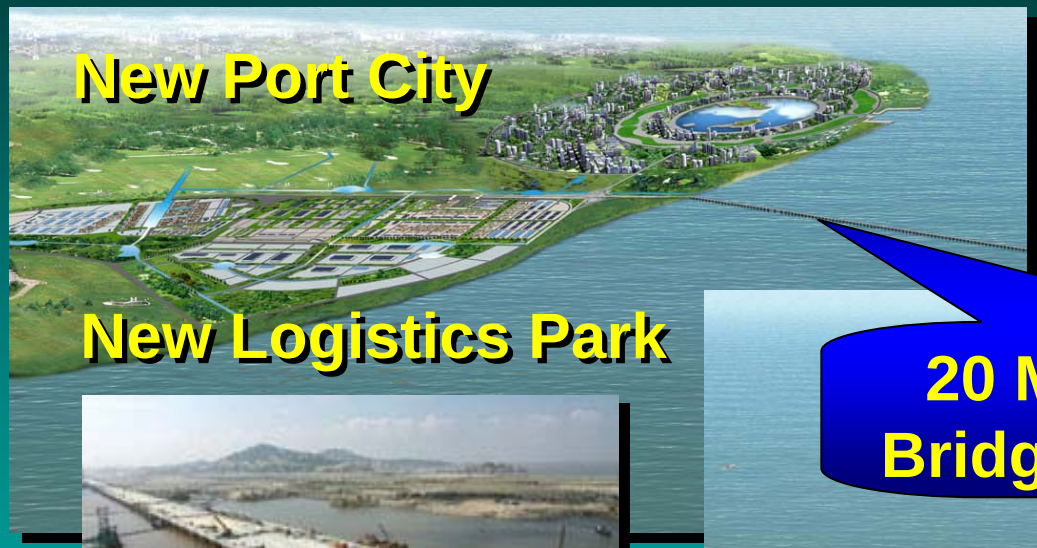
铁路

BNSF

Burlington Northern Santa Fe Railway

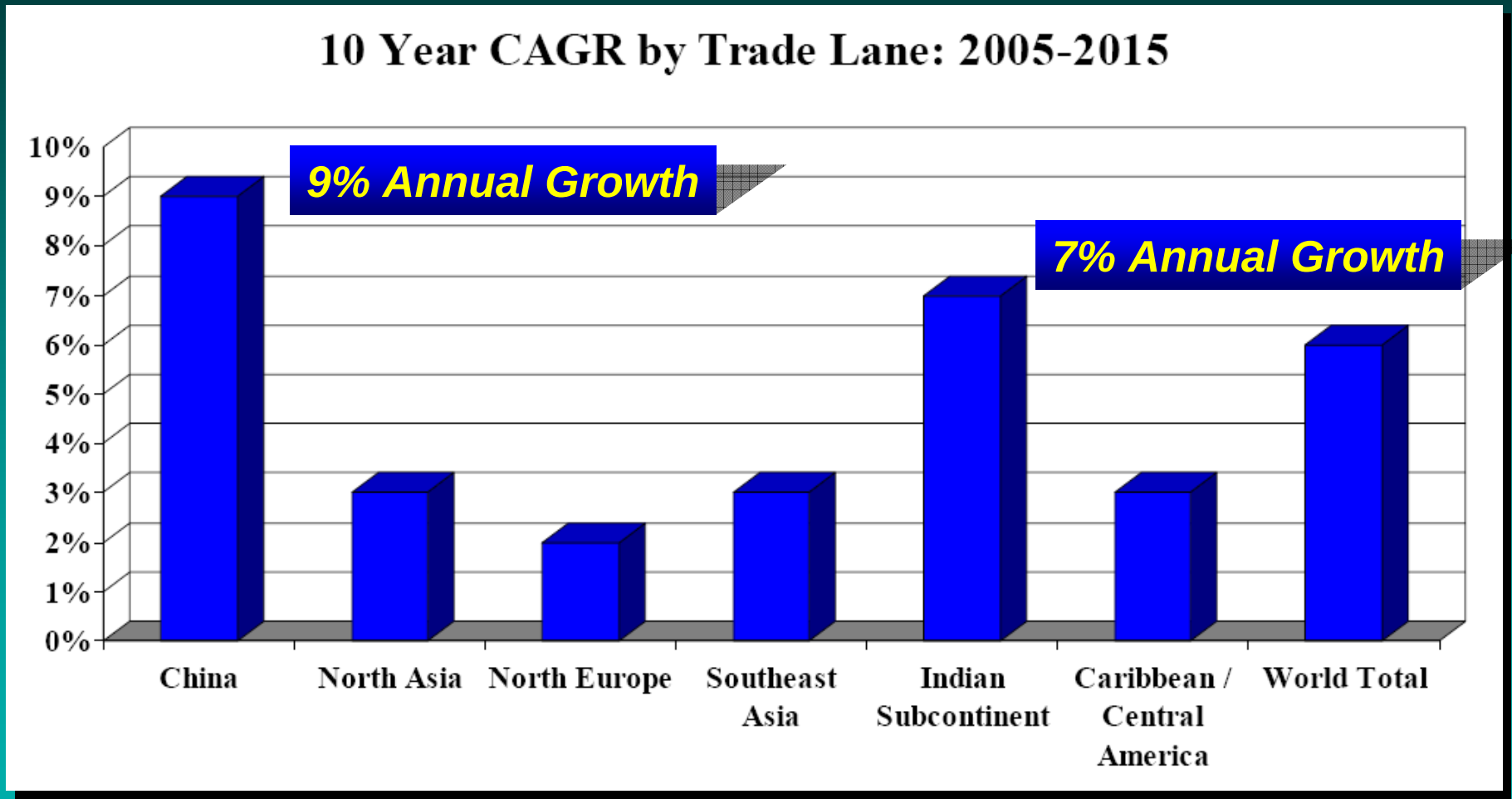
Shanghai International Shipping Center

Yangshan Deep Port & Logistics Park



20 Mile New Port Access Bridge Constructed in 3 yrs

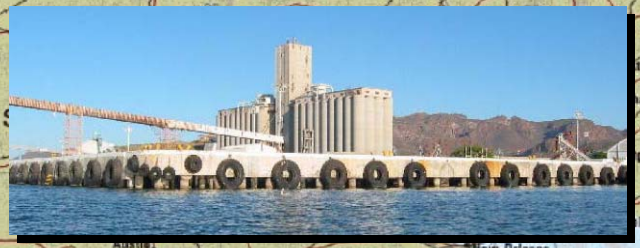
To 2015 China & India Are Projected To Continue To Drive North American Container Trade



Source: Global Insight, Norbridge

Emerging New Mexican Intermodal Gateways & Corridors – Nearly 4 Million TEUs

Guaymus
1.0 mil TEU



Punta Colonet
1 mil TEU Throughput

HPH

Lazaro Cardenas
Phase I - 700K TEU
Fut. Phase - 2.0 mil TEU

Tran Systems

Marine Terminals Corporation (MTC) with partners Evergreen, Yang Ming, Hanjin, and China Shipping Announce Plan for a 1 Million TEU, $1Billion Greenfield Port Development at Punta Colonet Harbor, Baja Peninsula

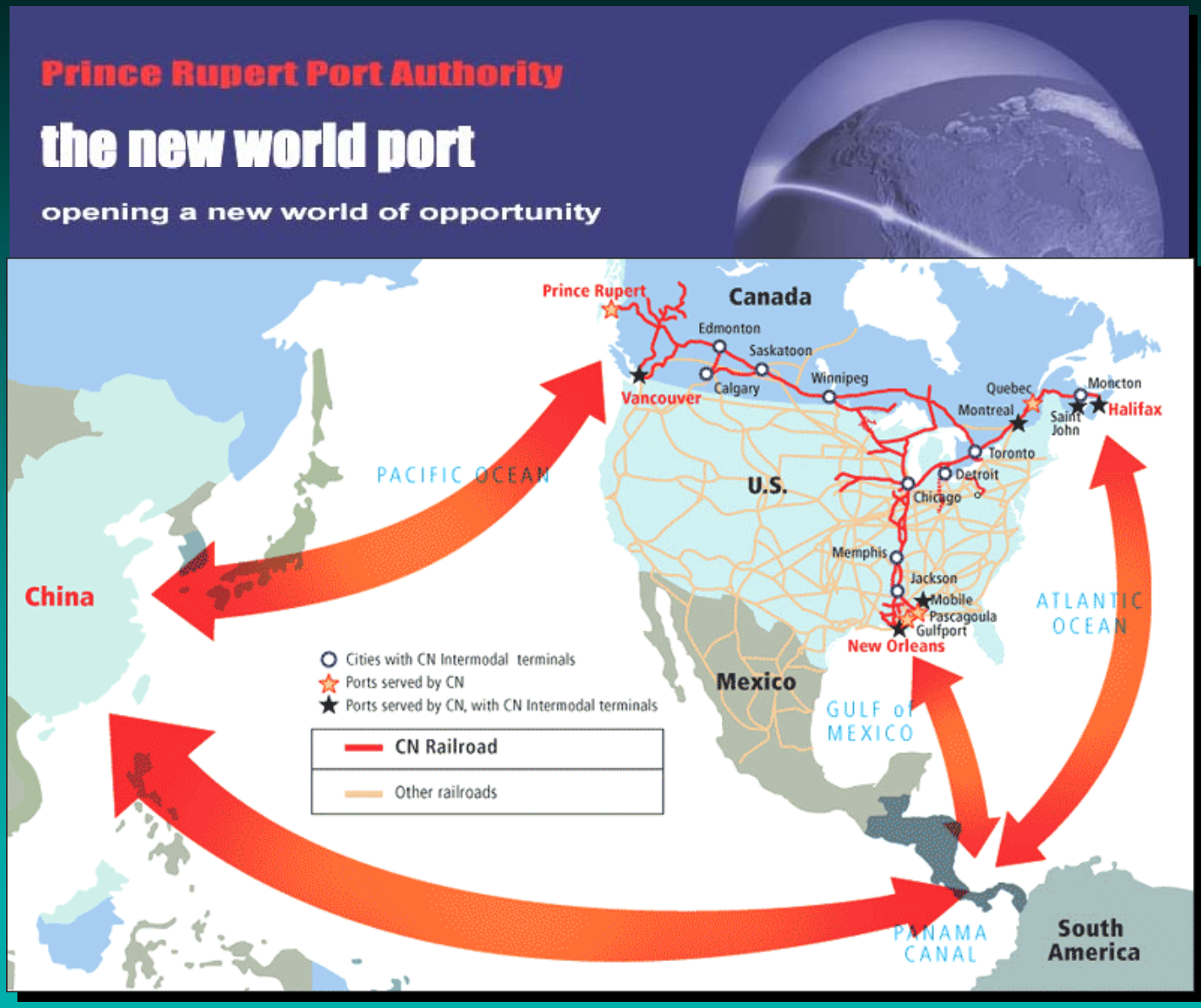
MTC HOLDINGS

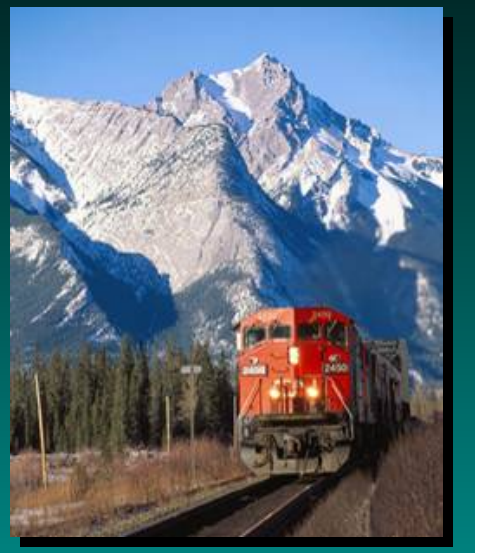
Foreign-flag lines to build Mexican port to service Southern California

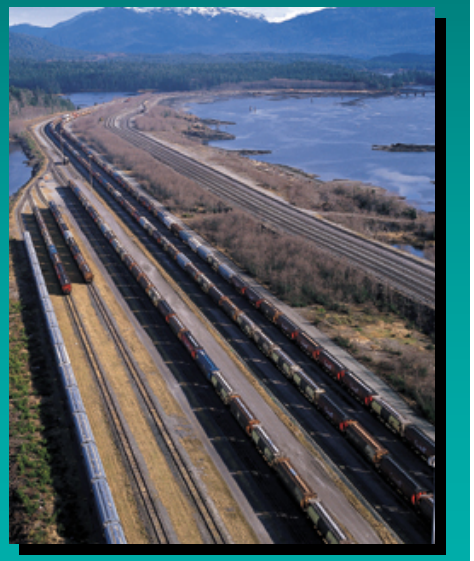
Source: MTC Media Announcement April 2006

TranSystems

New North American Container Gateway







Connecting Canada's Pacific & Eastern Intermodal Gateway Strategies

Pacific Gateway

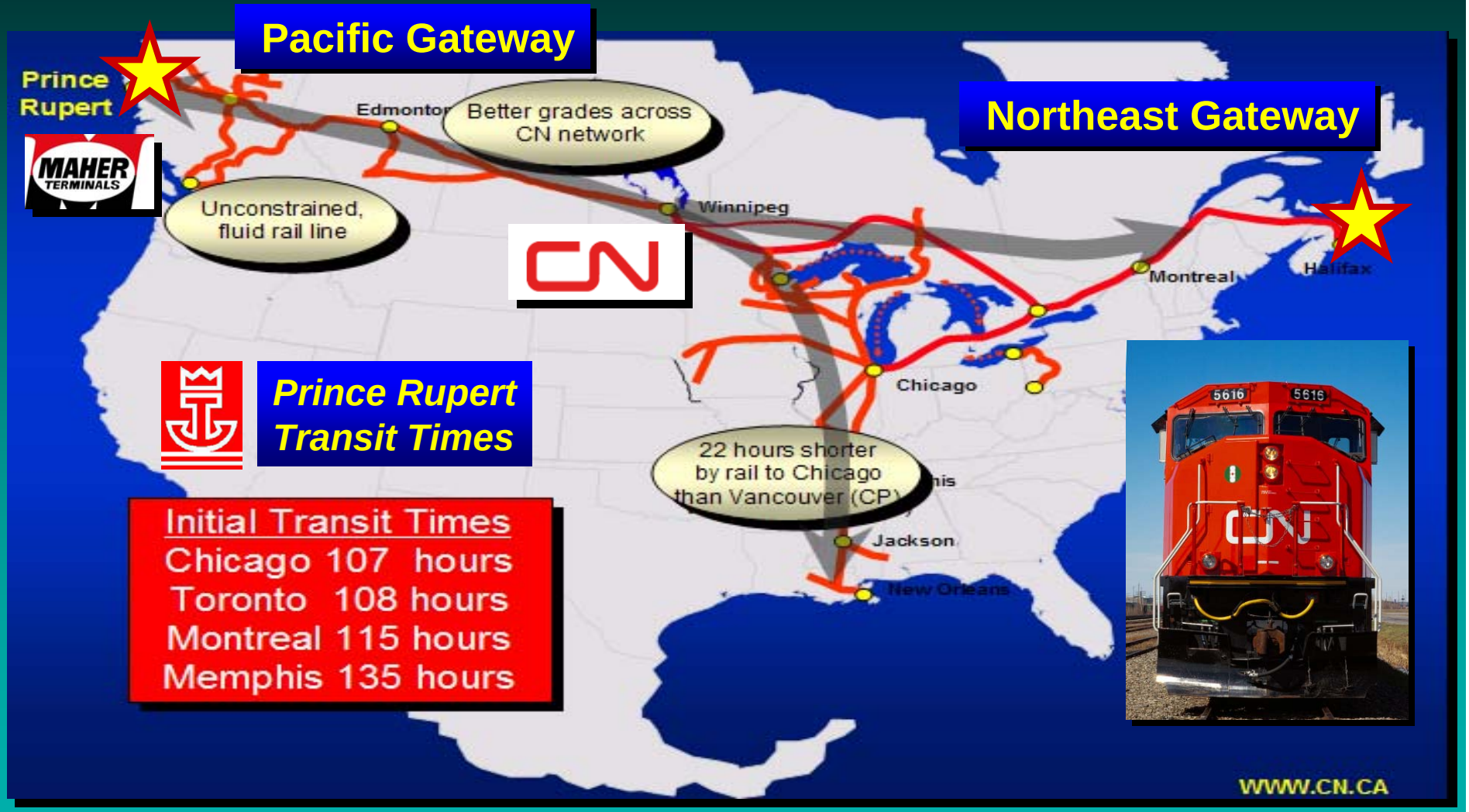
MAHER TERMINALS

Potential Northeast Gateway

CN

"North America's North East Gateway"

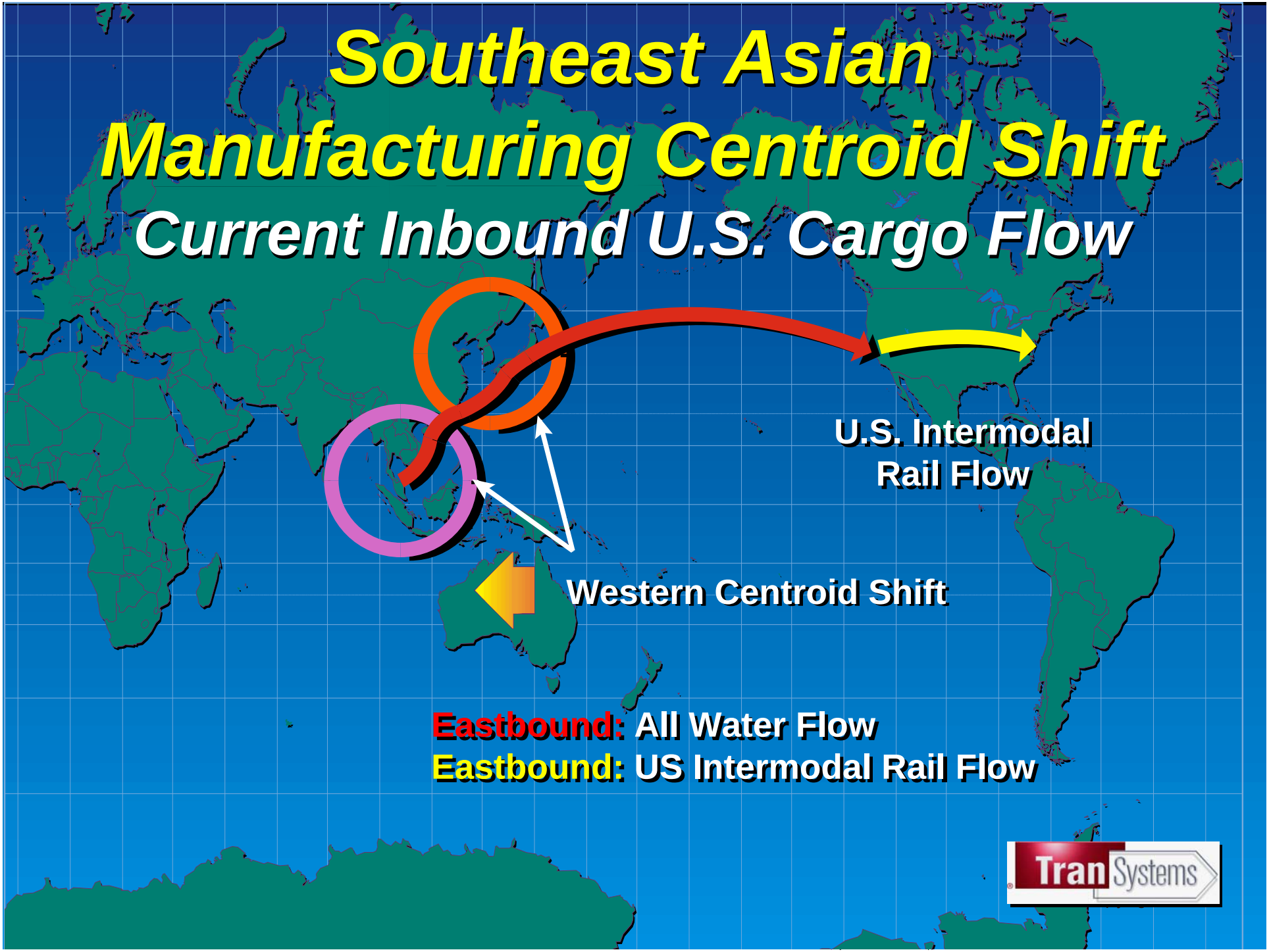
The Emerging CN Transcontinental Land Bridge

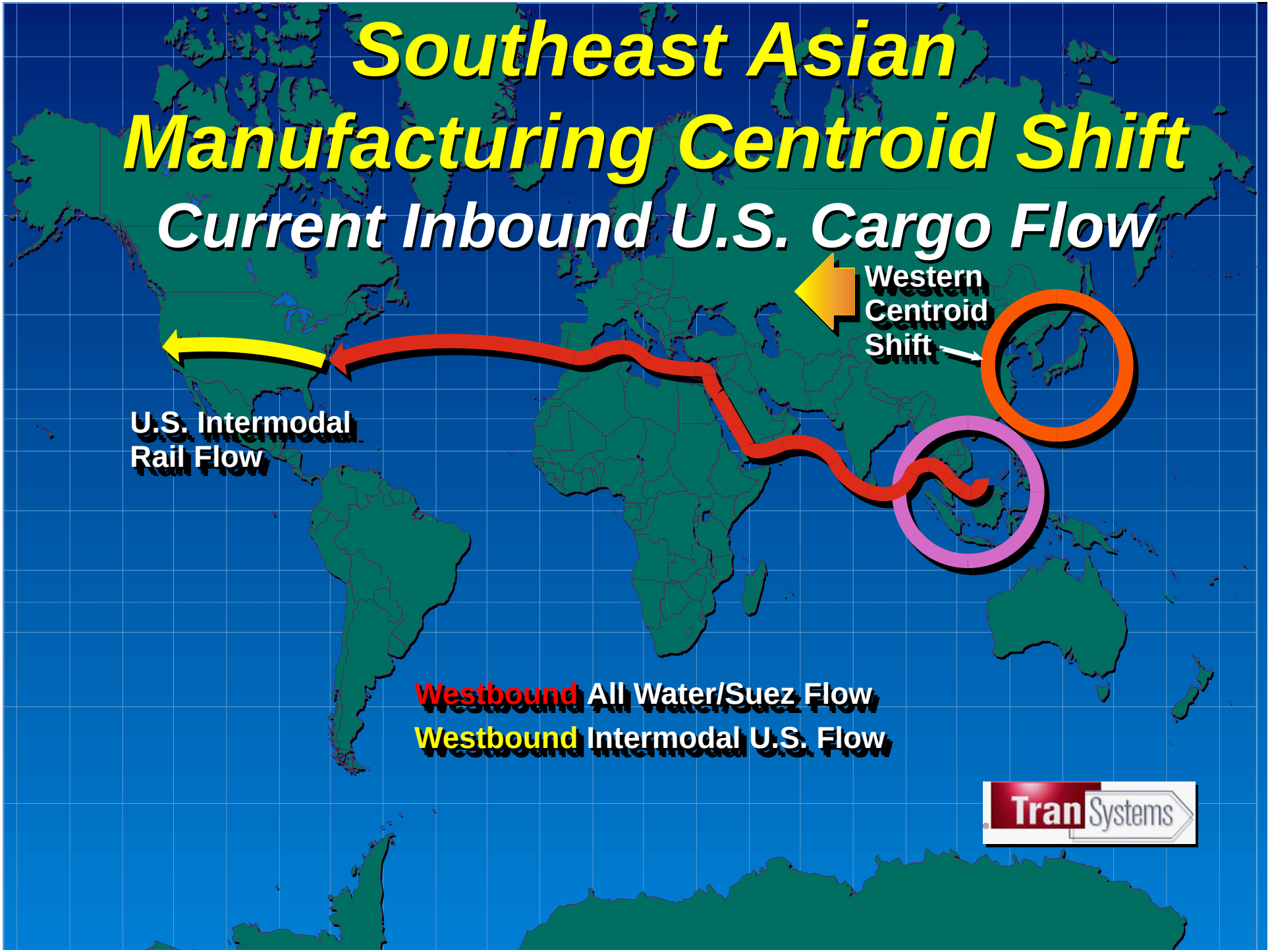


Tran Systems

Southeast Asian Manufacturing Centroid Shift

Current Inbound U.S. Cargo Flow




Southeast Asian
Manufacturing Centroid Shift
Current Inbound U.S. Cargo Flow
Western
Centroid
Shift
U.S. Intermodal
Rail Flow
Westbound All Water/Suez Flow
Westbound Intermodal U.S. Flow
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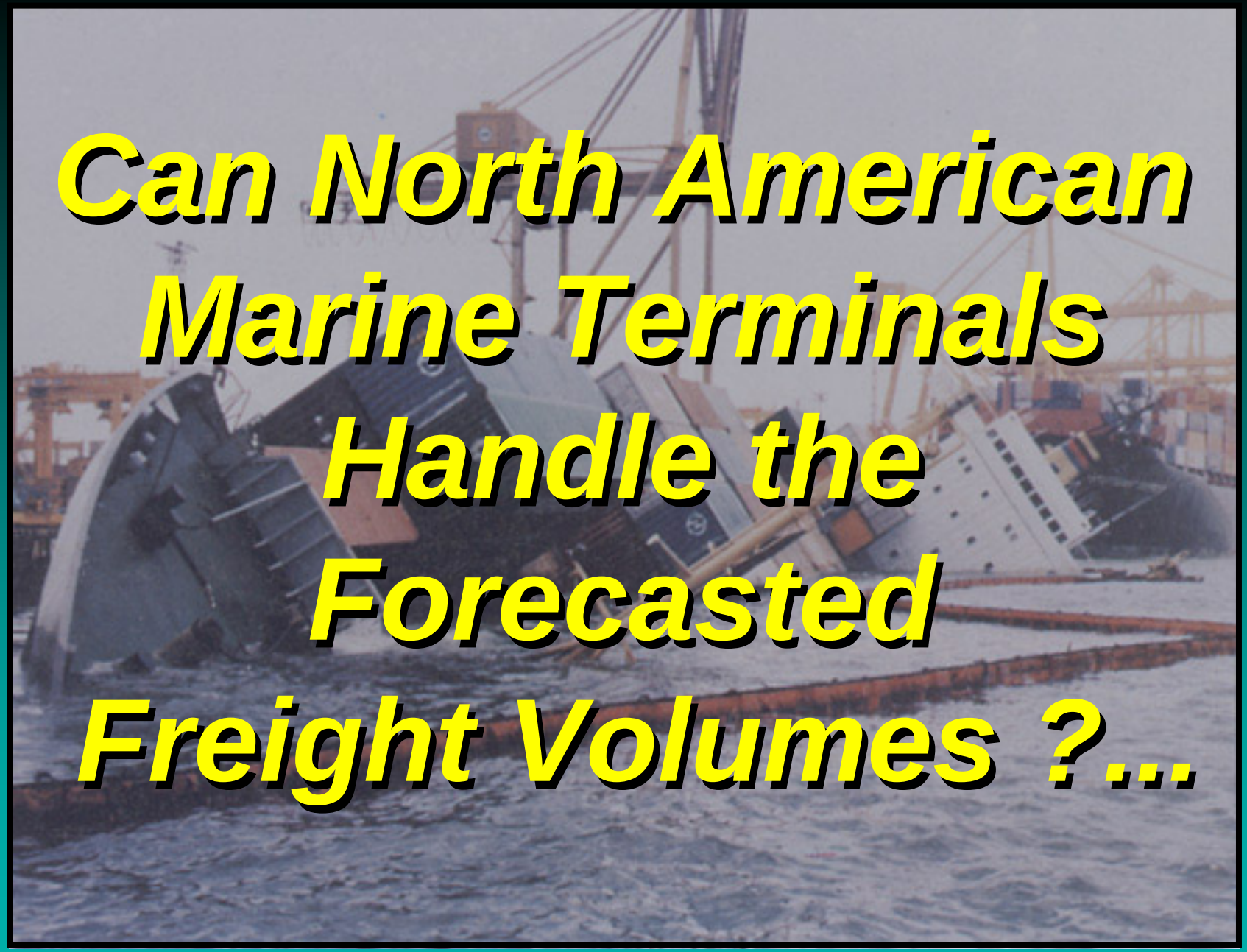
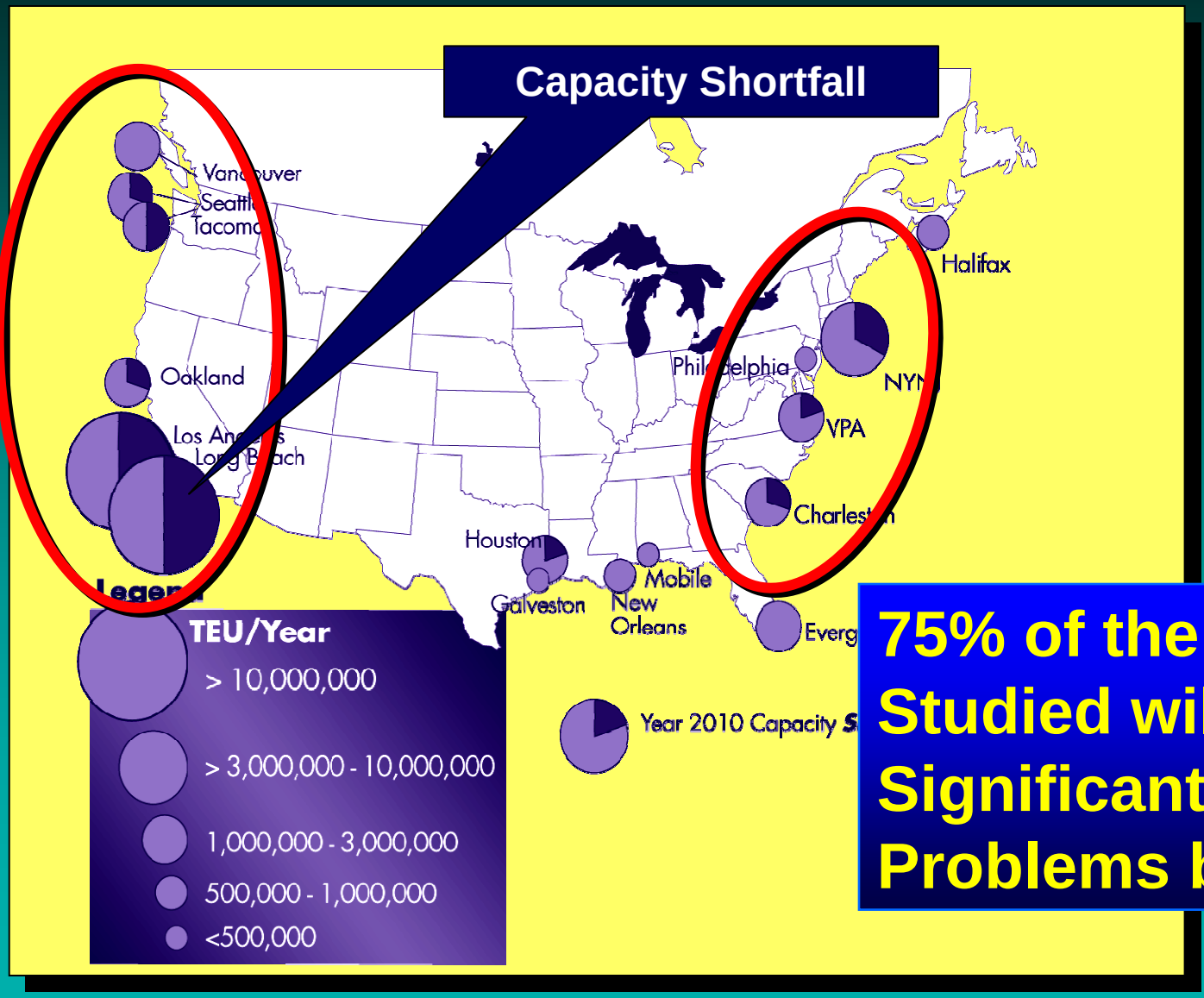
North American Port & Intermodal Capacity Trends

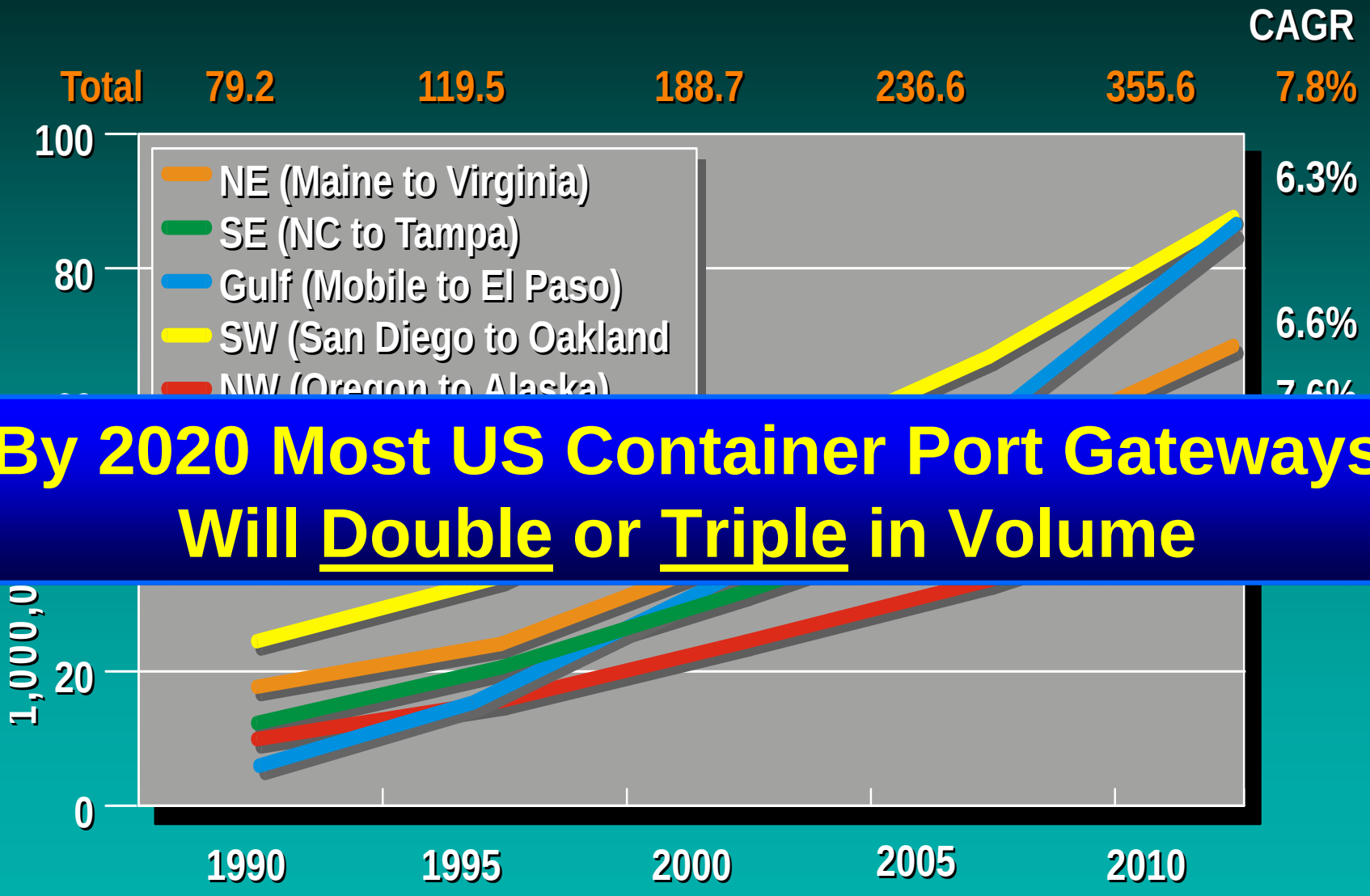


2010 Projected Public Port Capacity Shortfall



75% of the 16 Ports Studied will have Significant Capacity Problems by 2010

U.S. Containerized Tonnage Forecast



By 2020 Most US Container Port Gateways Will Double or Triple in Volume

Source: DRI/McGraw Hill

North American Maritime Container Current and Future Trade Growth

(Top 10 Ports)

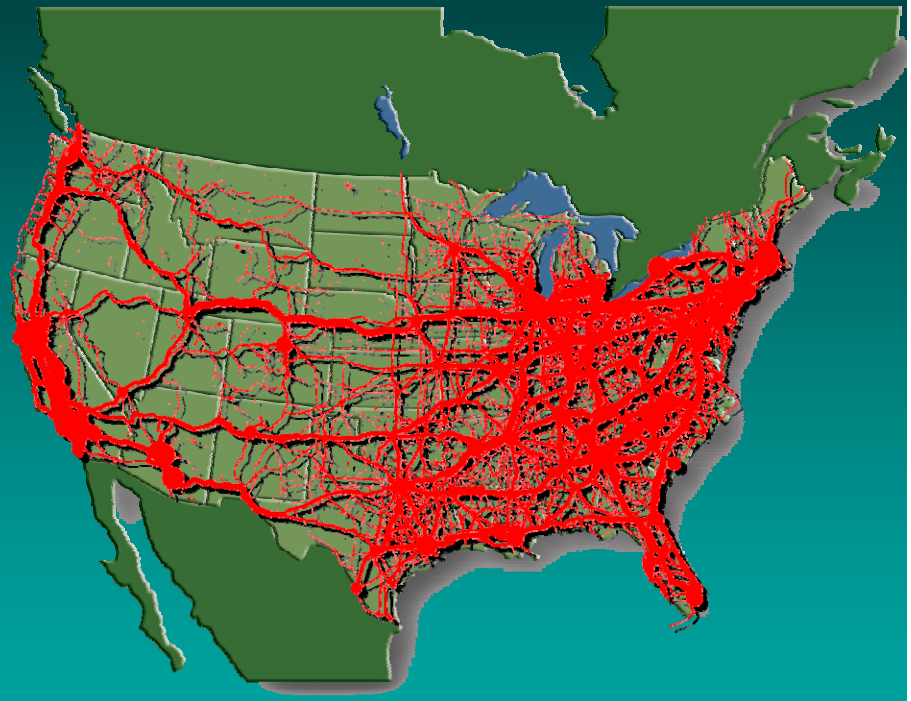
By 2020 demand will exceed current capacity of many U.S. ports by as much as 200%.

Forecast figures based on 6 year linear regression

Future US Truck Traffic Growth In Urban Consumption Zones

Today

2020



Truck Volume Scale

50,000 25,000 12,500

Source: USDOT FHWA Freight Analysis Framework

TranSystems

POLA/POLB Challenge: Truck Congestion

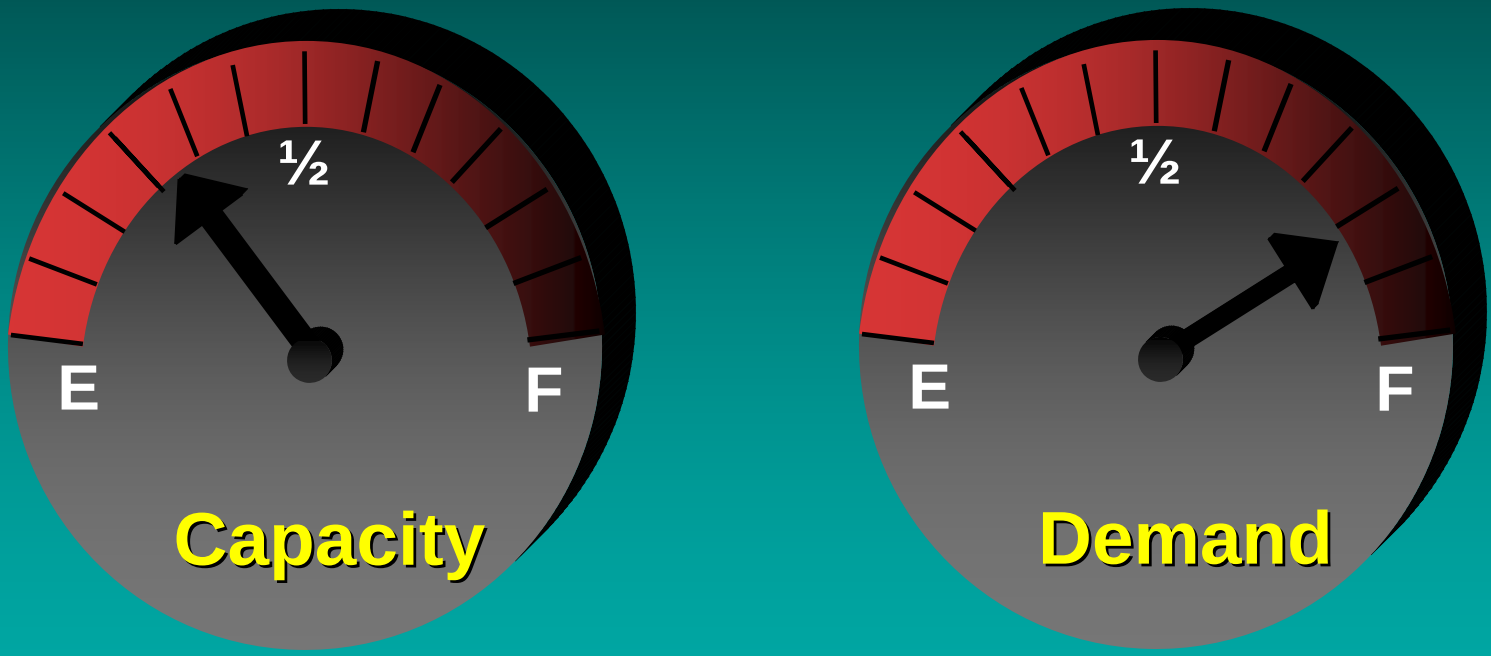
Goods movement is a major contributor to traffic congestion and a bottleneck to future growth.

I-710 Typical Day

I-710 During 2002 Port Lockout

Capacity vs. Demand Bottom Line:

Balancing Capacity and Demand is Both a Public and Private Issue



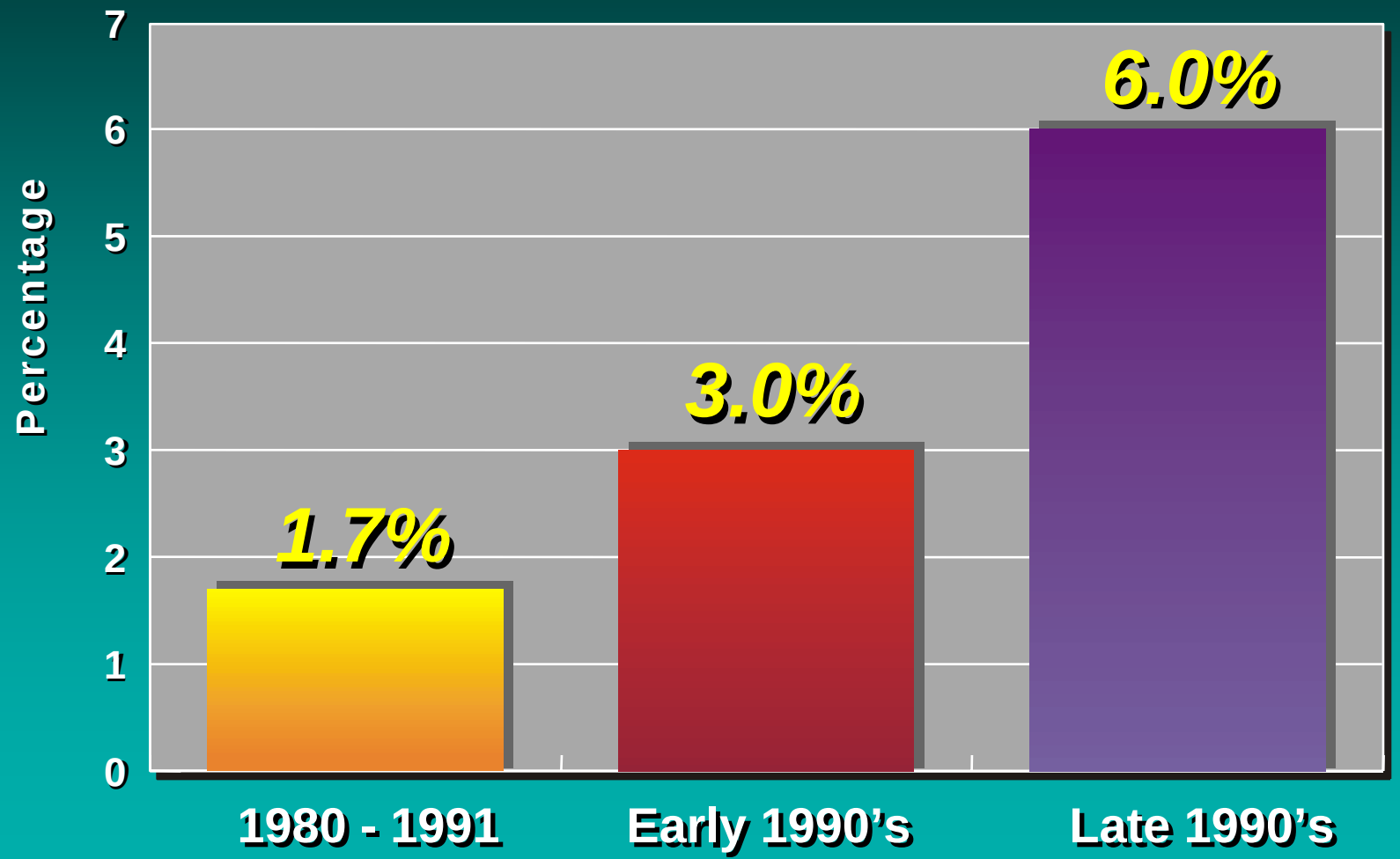
North America's future economic and environmental health is at risk as a result of declining transportation efficiency and reliability.

"Tools to Lead and Manage Competitive Ports"

Latin America North/South Freight Corridors

Emergence of the Demand for a North-South Freight Corridor

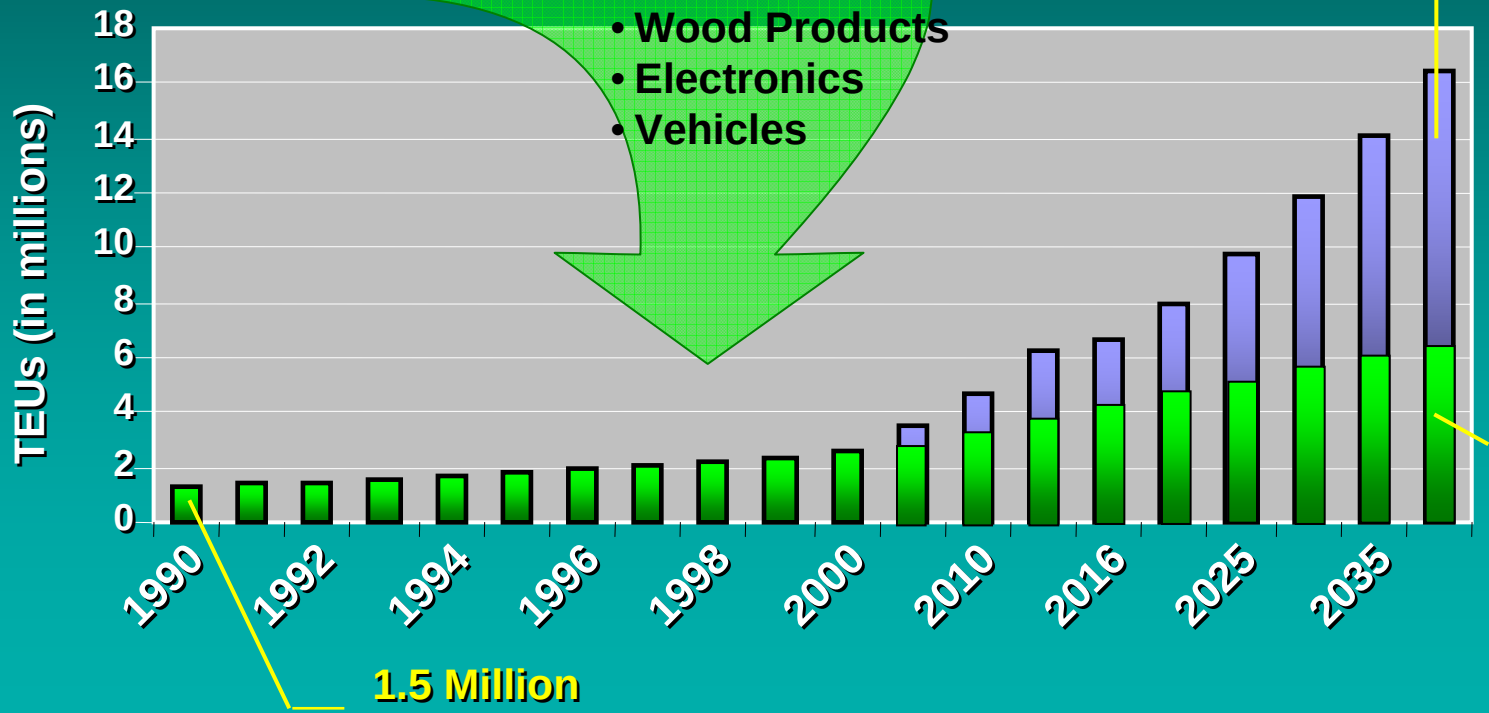
Latin American Gross Domestic Product Growth, Last Two Decades



Major Increase of Trade Expected Between U.S. and Latin Americas

Global Investment Shifts to Latin America

- Chemicals
- Textiles
- Wood Products
- Electronics
- Vehicles



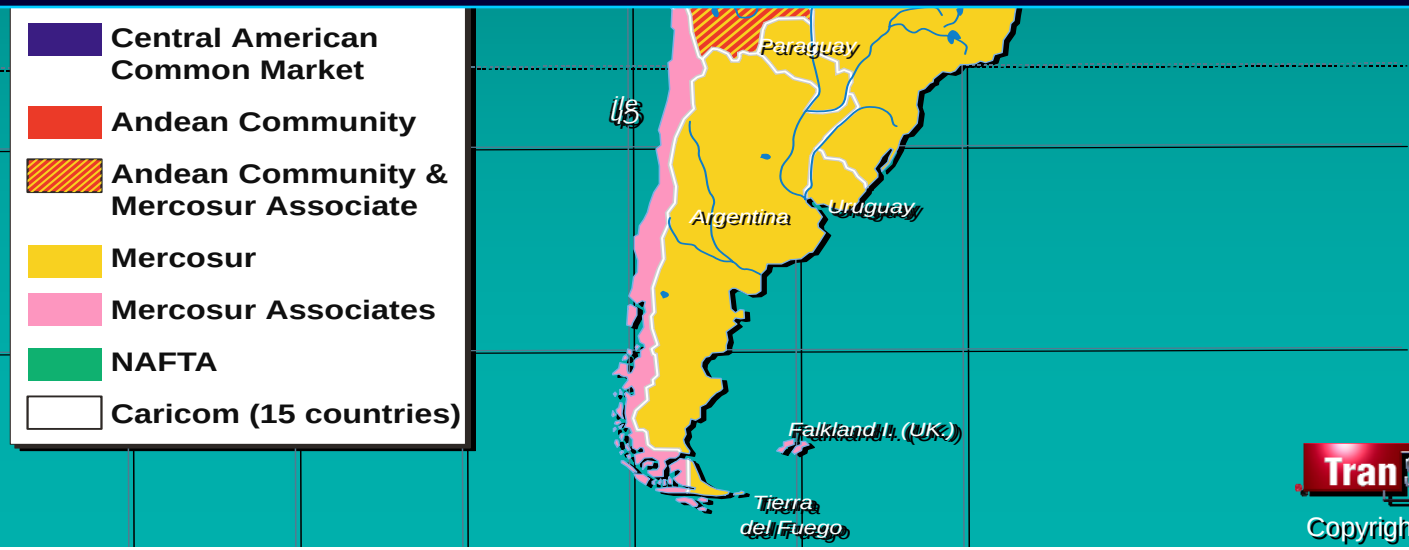
Forecasted: 16 Million TEUs @ 6% CAGR

Expected 6 Million TEUs @ 3.5% CAGR

1.5 Million TEUs

“Free Trade Area of the Americas” (FTAA)

Largest Free Trade Zone In the World
(Over $14 Trillion in 2006)
A Tripling of US Exports with the Majority Bringing Manufactured Products to Central & South America…



North America's North-South Multi-Modal Super Transport Corridor Coalition (NASCO)

An Inland Port Network along NAFTA Corridor Routes. Specifically Planned to Alleviate Congestion at Ports, Urban Intermodal Centers and at Border Crossings.

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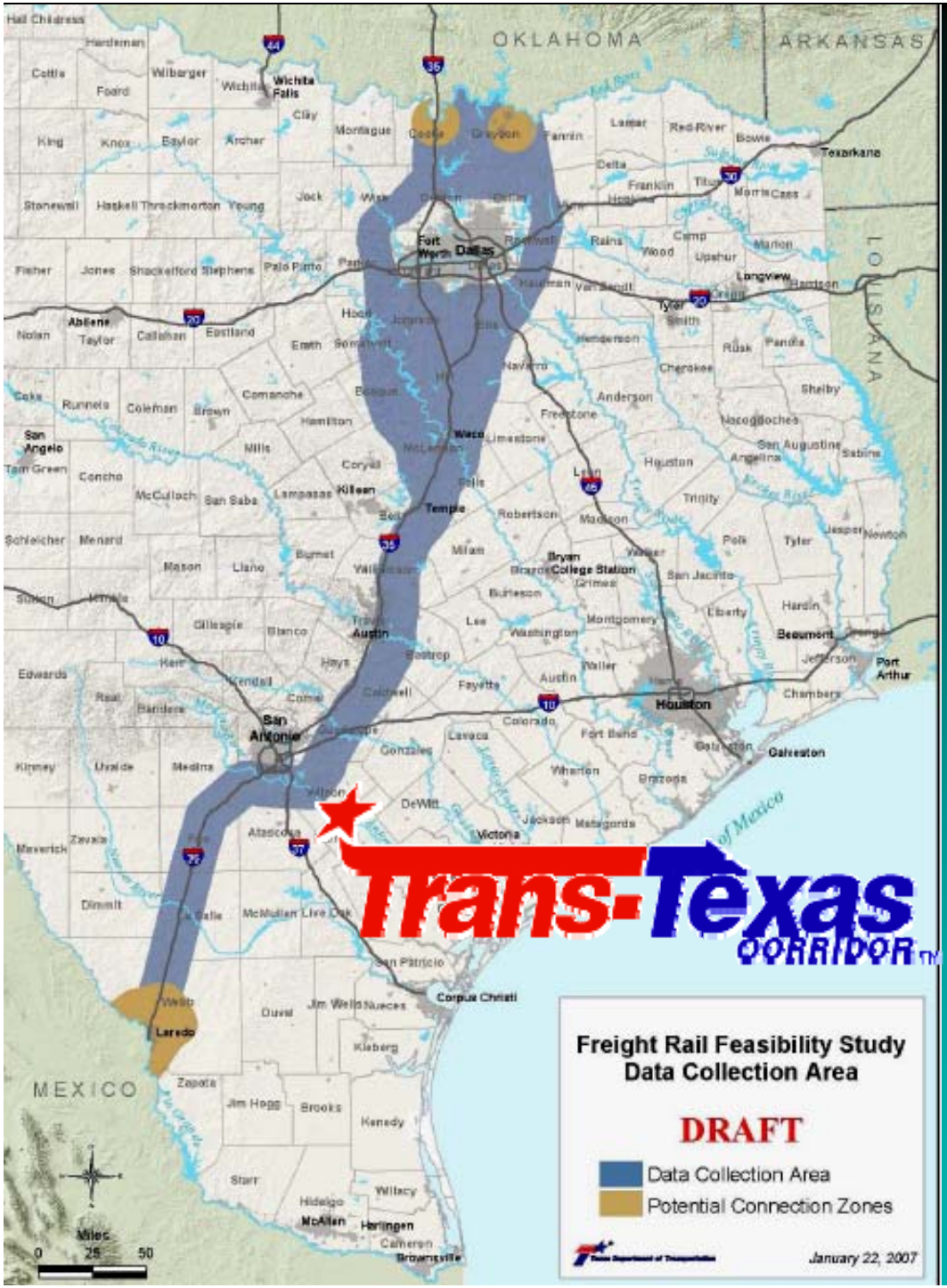

Texas Department of Transportation

Cintra

ZACHRY

RS&H

TranSystems

Trans-Texas Multi-Modal High Priority Freight Corridor TTC-35

TranSystems

Kansas City's SmartPort

THE TRANSPORTATION AND LOGISTICS CENTER OF NORTH AMERICA

KC SMARTPORT
AMERICA'S INLAND PORT SOLUTION

Investor Based, Non-Profit Economic Development Organization Supported by both the Public and Private Sectors. A Regional International Trade Processing Center, Permitting Freight to Clear US Customs in Kansas City and Avoid Border Delays.

Canadian Intelligent Super Corridor (CISCOR)

SASKATCHEWAN AGRIVISION CORPORATION INC.

STEP
SASKATCHEWAN TRADE & EXPORT PARTNERSHIP

Regina
REGIONAL ECONOMIC DEVELOPMENT AUTHORITY

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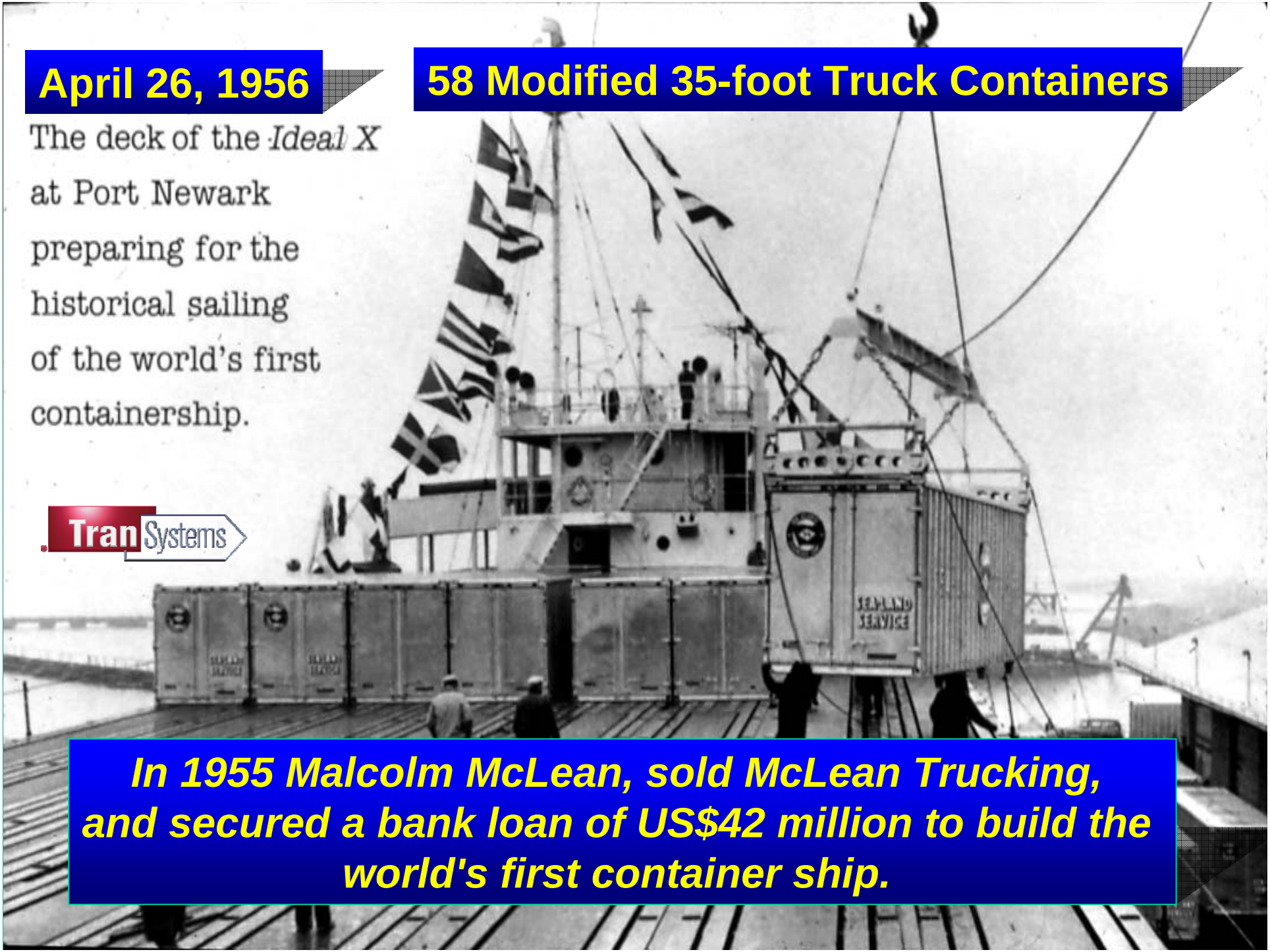
"Tools to Lead and Manage Competitive Ports"

Maritime Vessel Technology Trends

April 26, 1956

58 Modified 35-foot Truck Containers



In 1955 Malcolm McLean, sold McLean Trucking, and secured a bank loan of US$42 million to build the world's first container ship.

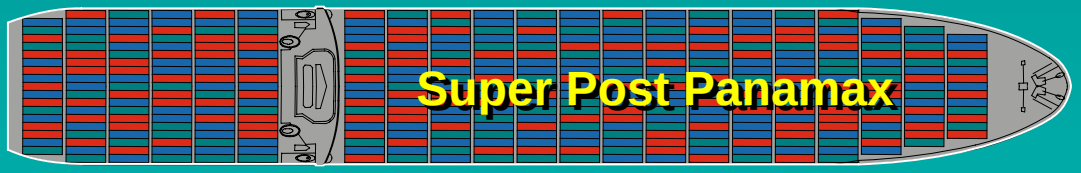
World Container Ship Evolution

1st Generation (Pre-1960 - 1970)

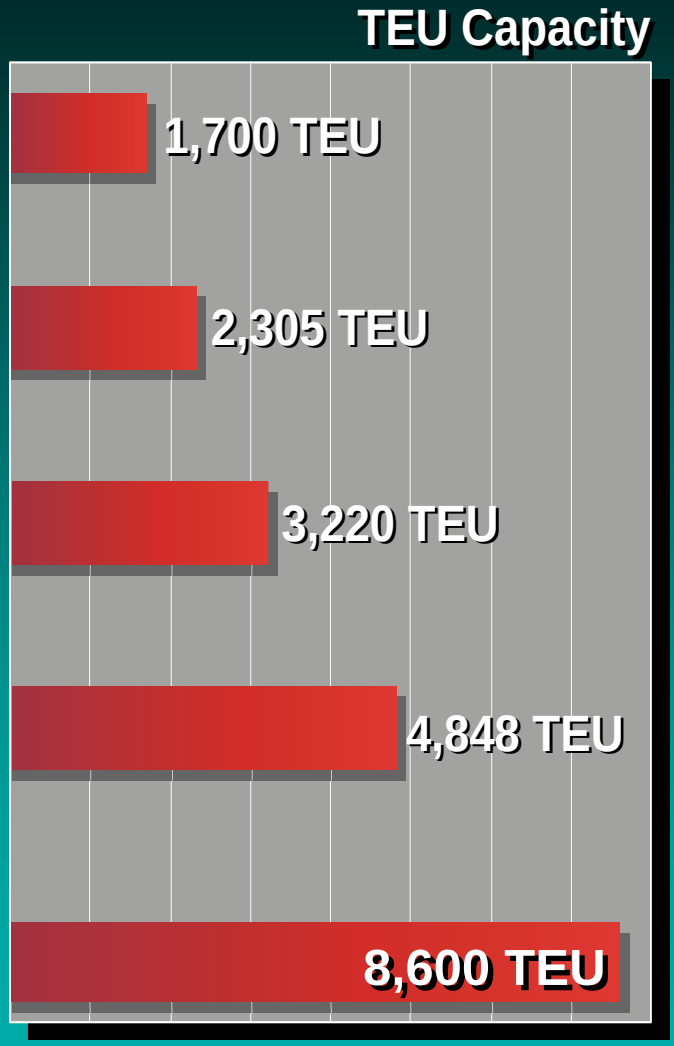
2nd Generation (1970 - 1980)

3rd Generation (1985)

4th Generation (1986 - 2000)

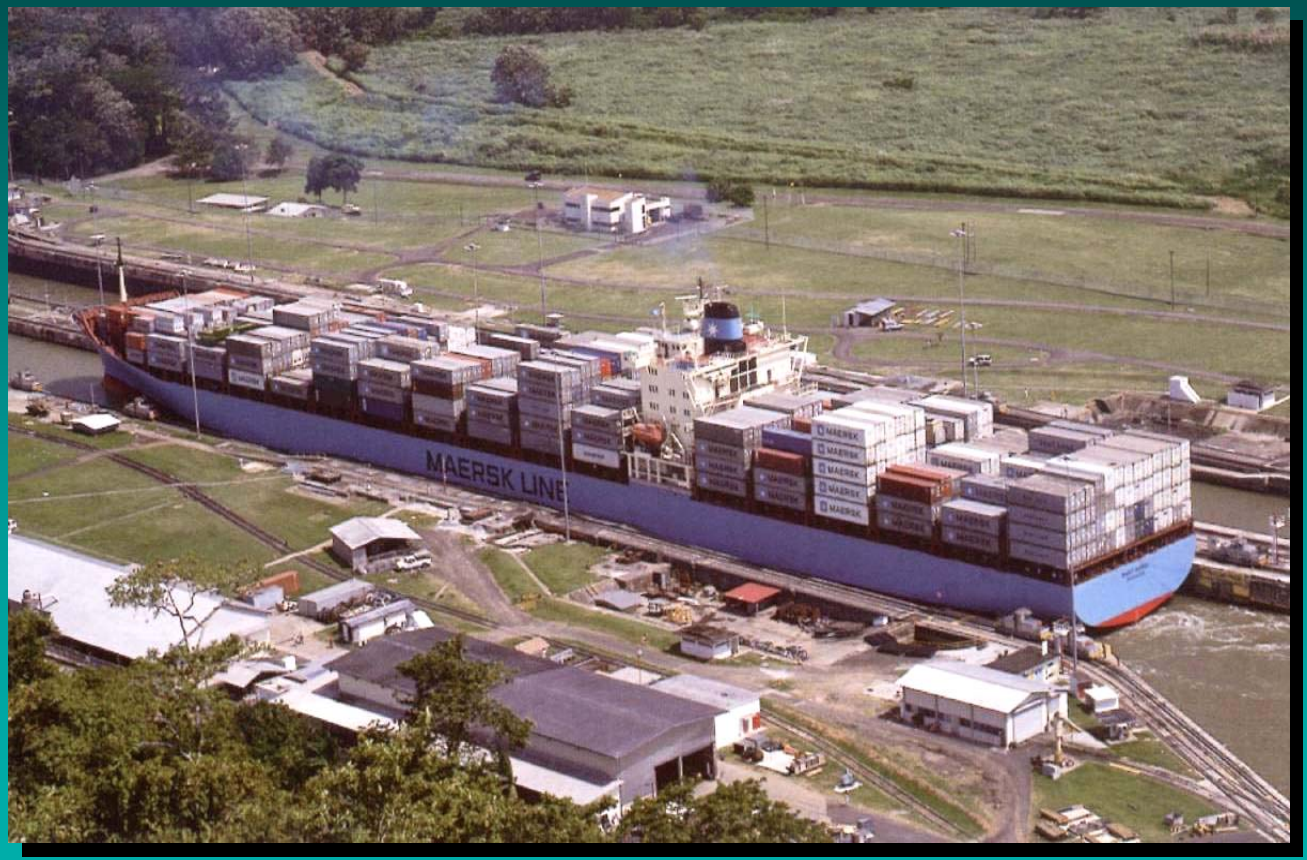


5th Generation (2000 - 2005)



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

(Current Max Panamax = 5000 TEUs)



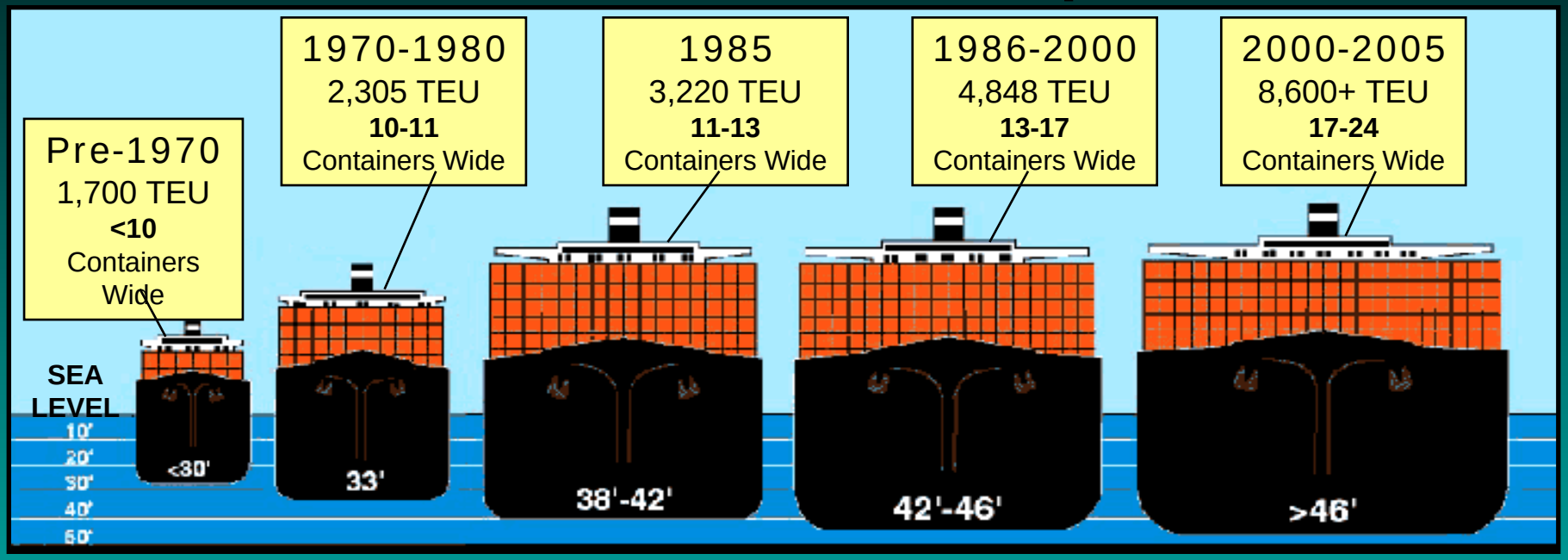
Today's Mega Ships - Measuring Up

Eiffel Tower – 990 feet

Regina Maersk – 1043 Ft, 140 Ft wide, 6000+ TEUs

Today's Mega Ships - Measuring Up

How Wide, How Deep?



7000+ TEU Containerships Slot Capacity in the Fleet and on Order

SUMMARY OF WORLD CONTAINERSHIP FLEET IN SERVICE AND ON ORDER (OCTOBER 2005)				
Ship Type	*5000-5999*	*6000-6999*	*7000+*	*Total*
Slots on Order	371,509	435,032	1,561,394	4,323,417
Ships on Order	68	67	183	1,113

Current Vessel Capacity = 2,304,286 Slots

Order Book Vessel Capacity = 2,367,935 Slots

A 103 % Increase in Fleet Slot Capacity on Order

Source: *Containerisation International Yearbook 2005*

10,000 TEU Container Ships Currently on Order

Zim orders four 10,000 TEU container ships from Hyundai Shipyards in Korea; will double its carriage capacity
Zim will take delivery of the ships, second half of 2009

Cosco orders four 10,000 TEU containerships from Hyundai Heavy Industries to be delivered in 2008
$505 M Deal

Source: North Sea Terminal Bremerhaven GmbH & Co

A.P. Moller-Maersk September 2006 Service Announcement for 14,000 TEU Vessel

The new-build known as "M/S Emma Maersk", was christened at the Odense-Lindo Shipyard in Denmark in August 2006.

The nominal capacity of the new vessel could be as high as 14,000 TEUs based on its reported LOA of 397 m, Beam of 56 m, Draft of 15.5 m, Gross Tonnage 170,974 gt, Speed 25.5 knots

Source: Journal of Commerce August 2006, Marine Log December 2006

A.P. Moller-Maersk L Class M/S Emma Maersk

(14,000 TEU Vessel - 22 Containers Wide)

Length: 1,302 ft, Width: 207 ft, Net Cargo: 123,200 tons
Key Cranes: 10, Engine: 14 in-line cylinders diesel engine (110,000 BHP)
Cruise Speed: 31 mi/h, Full Crew: 13, Construction cost - US $145 M+

Source: Maritime World Logistics Inc. January 2007

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Source: Maritime World Logistics Inc. January 2007

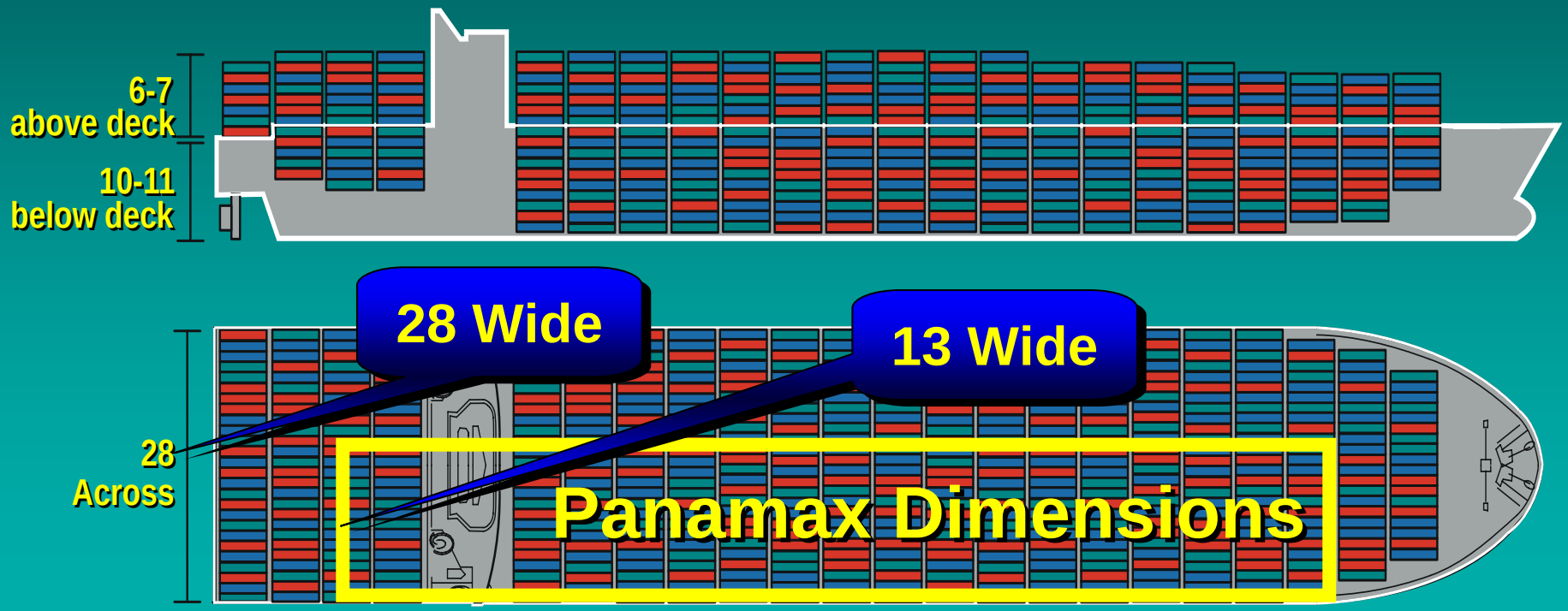
The 15,000 TEU Containership

"…the ship is a flight of fancy… but such a ship is within the current state of the shipbuilder's art…"

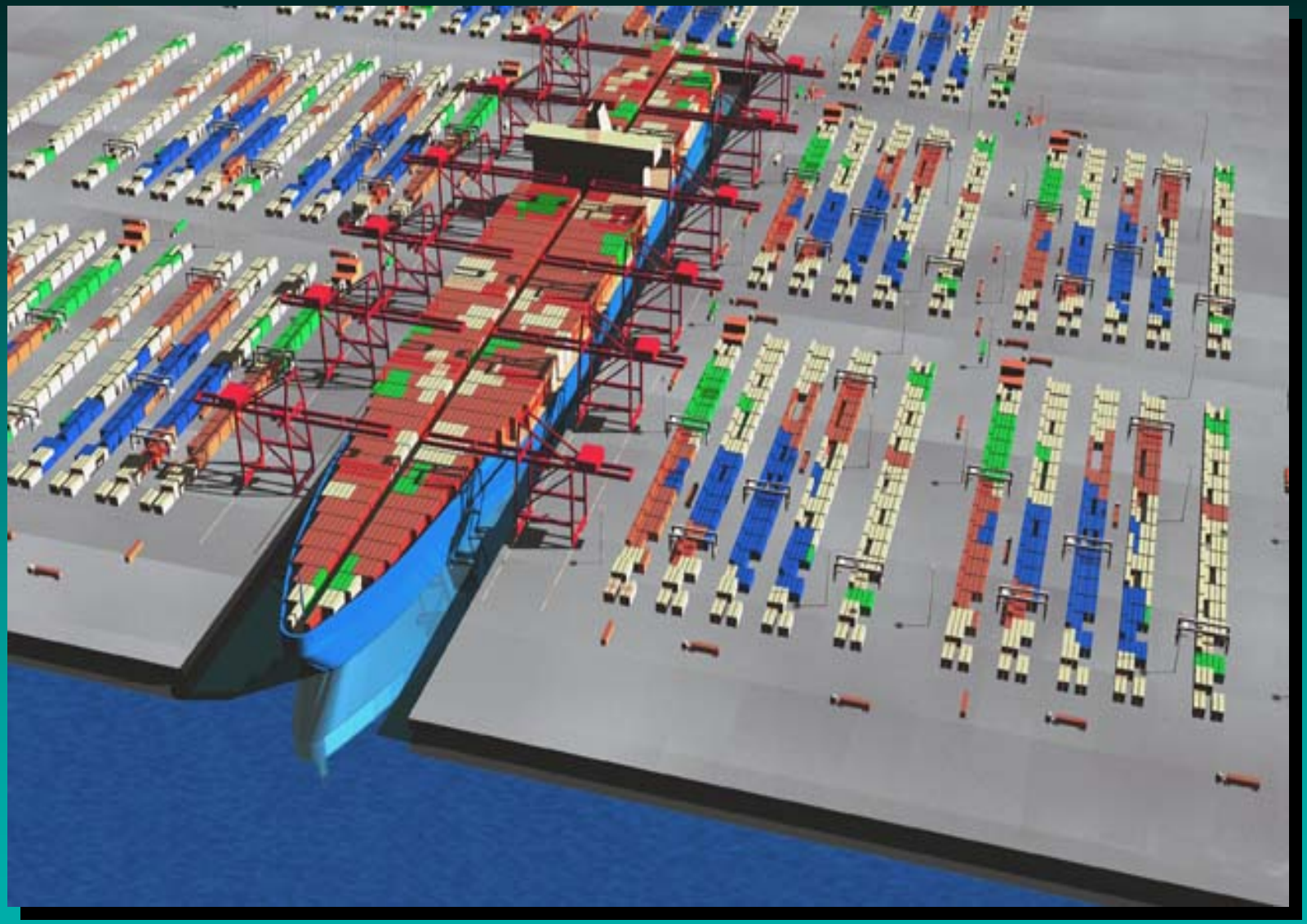
R. G. McLellan, P&O Containers

The 15,000 TEU Containership

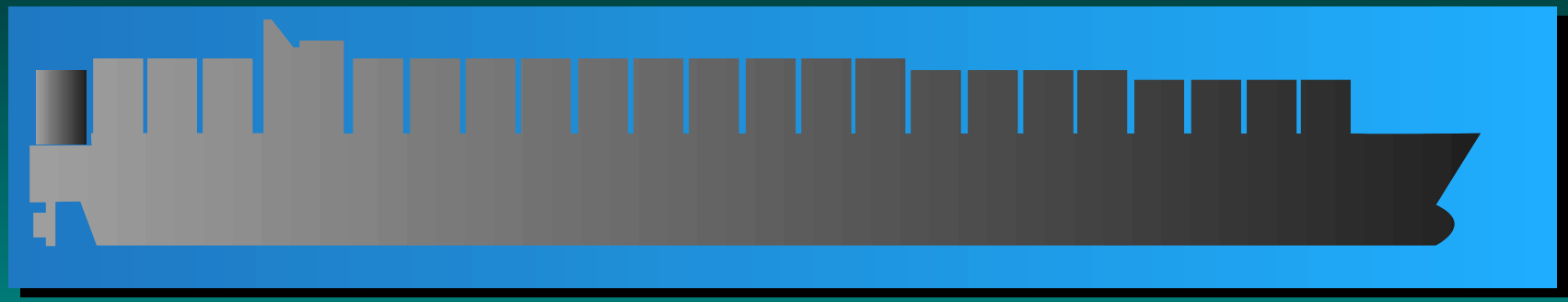
LOA. = 400 m (1,312 ft.)
Draft = 14 m (46 ft.)
BEAM = 69 m (226 ft.)



Container Ship-in-a-Slip Concept



The 18,000 TEU Malaccamax Reported Predictions/Benefits



- By 2010 on Asia-Europe Trade Route
- **30% Cheaper** than 4800 TEU Panamax Vessel, primarily due to "Economies of Scale"
- US$40/TEU Savings

Source: Dynamar Consultancy, Rotterdam

Emergence of North American Fast Feeder Short-Sea Coastal Vessels

The New Frontier:
Transshipment and Short Sea

2,000 - 3,000 TEU
Feeder Ship

10,000 to 15,000 TEU Mega Ship

Short Sea Shipping
COOPERATIVE

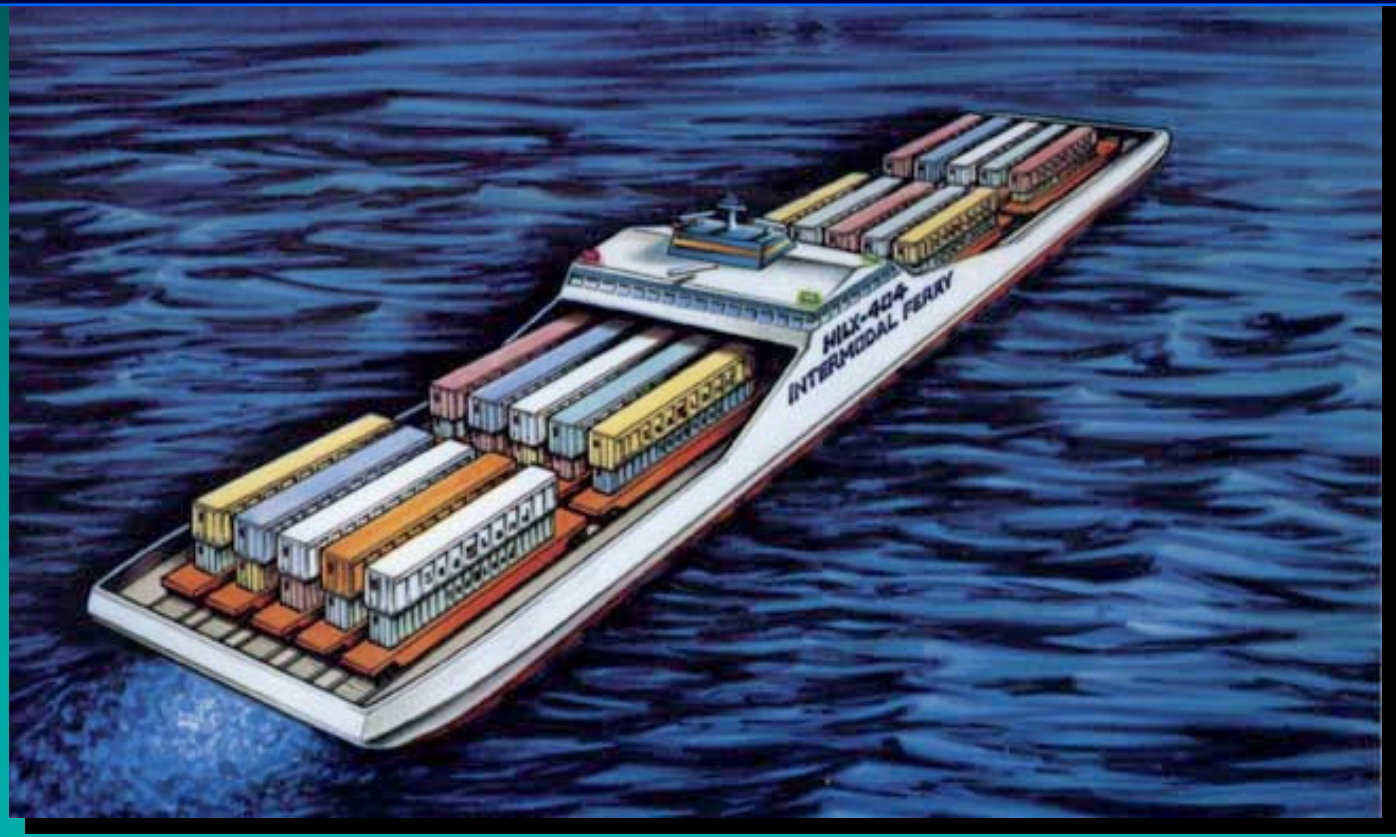
Short Sea Shipping
Coastwise Maritime Trade

Taking Freight off of Congested Roads

TranSystems

Emerging Viable Container On Barge Coastal Shipping Concepts & Inland Intermodal Port Potential

High-Speed, Low Wake, Intermodal Float Technology



Port & Intermodal Terminal Competitive Mandates

- Ports & intermodal linkages must change the current **cost** versus **value** relationship in the logistics chain. **Become Value Added Multipliers...**
- Successful ports & intermodal terminals in the next decade must **invest in and leverage technology** to improve terminal productivity, cost, effectiveness and reliability for all modes of transportation…**securely as environmental stewards.**

Executive Management Conference for Latin America and the Caribbean

February 12, 2007 Miami, Florida

"Tools to Lead and Manage Competitive Ports"

Global Maritime Logistics & Port Operating Trends

Macroeconomic Situation

Thank You

TranSystems