

# Outsourcing & Offshoring: Transportation & Logistics

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# Presentation Objectives

- How *outsourcing* is affecting services offered by transportation & logistics companies
- How *off-shoring* is affecting, and is affected by, the efficiency of transportation & logistics companies

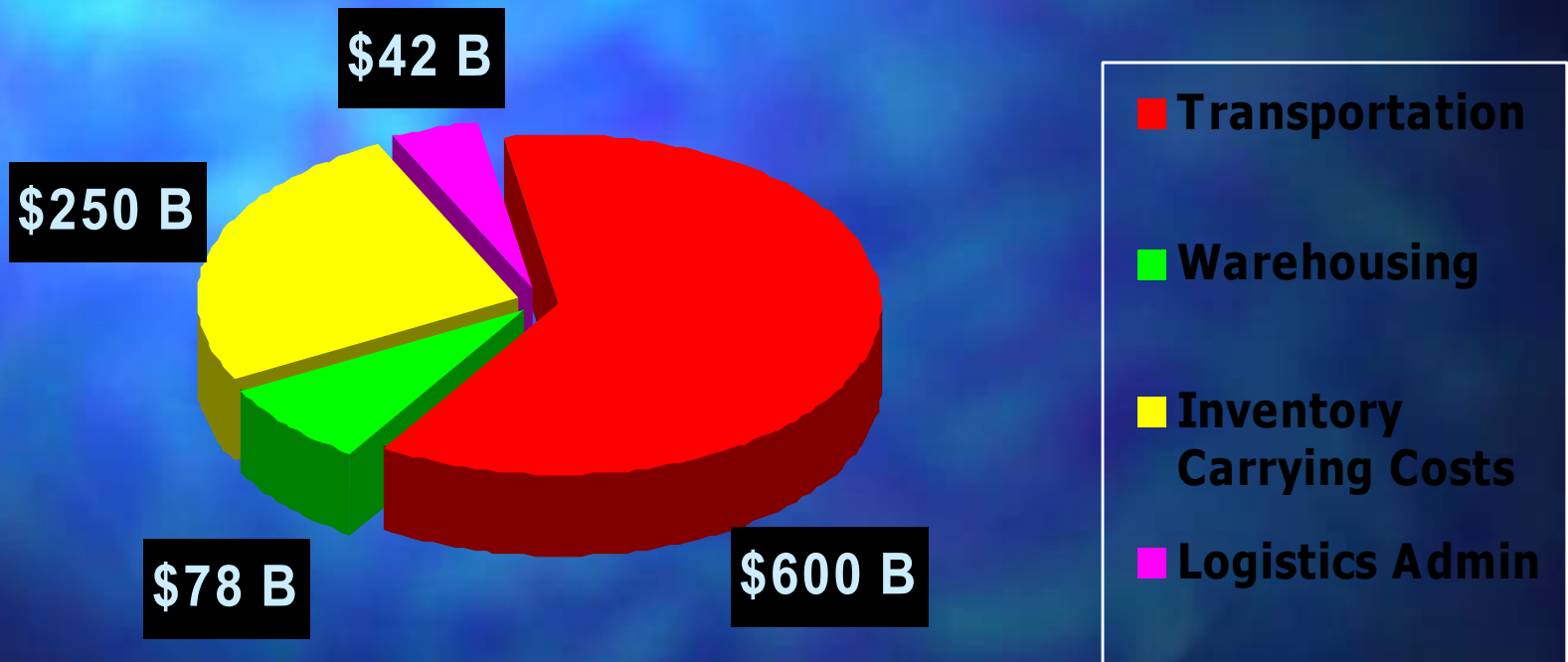
# Outline

- Background
- Outsourcing
- Offshoring

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# U.S. Spent \$970 Billion on Logistics in 2001

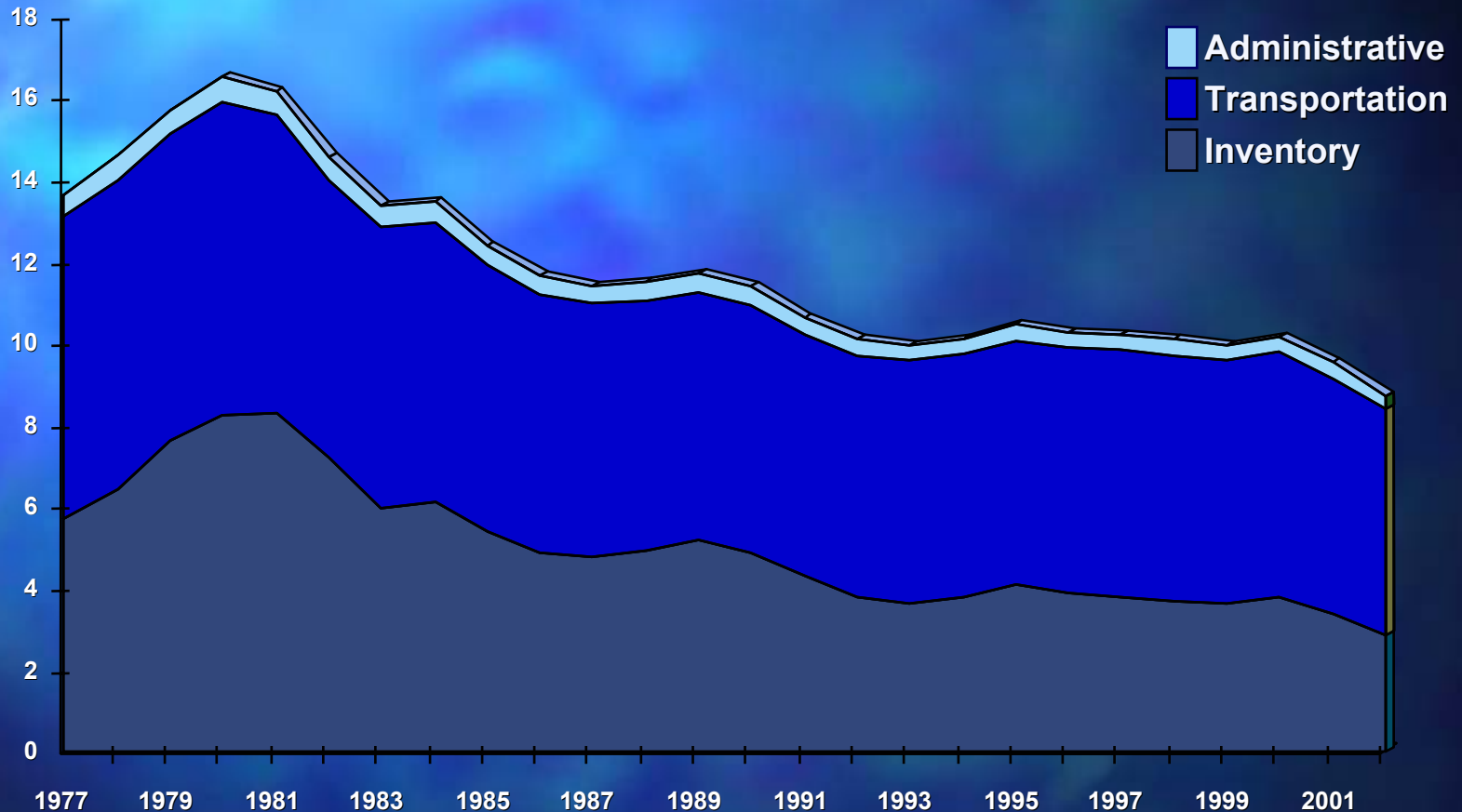


Source: Cass/ProLogis, 13<sup>th</sup> Annual State of Logistics Report  
ELC, 18<sup>th</sup> Logistics Seminar

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# Total Logistics Expenditures & GDP

Percentage of GDP



Source: Cass Logistics.

# Supply Chain Network— The Scope

Real Time Monitoring and Planning -  
Information now flows to the left

Supplier

Manufacture

Logistics &  
Distribution

Retailers

Consumers

Real Time Execution Process  
Product Flows to the right

Product  
& Communication  
System  
Development

**Need capacity and incentives  
all along the chain**

Customer  
Alert  
& Protection

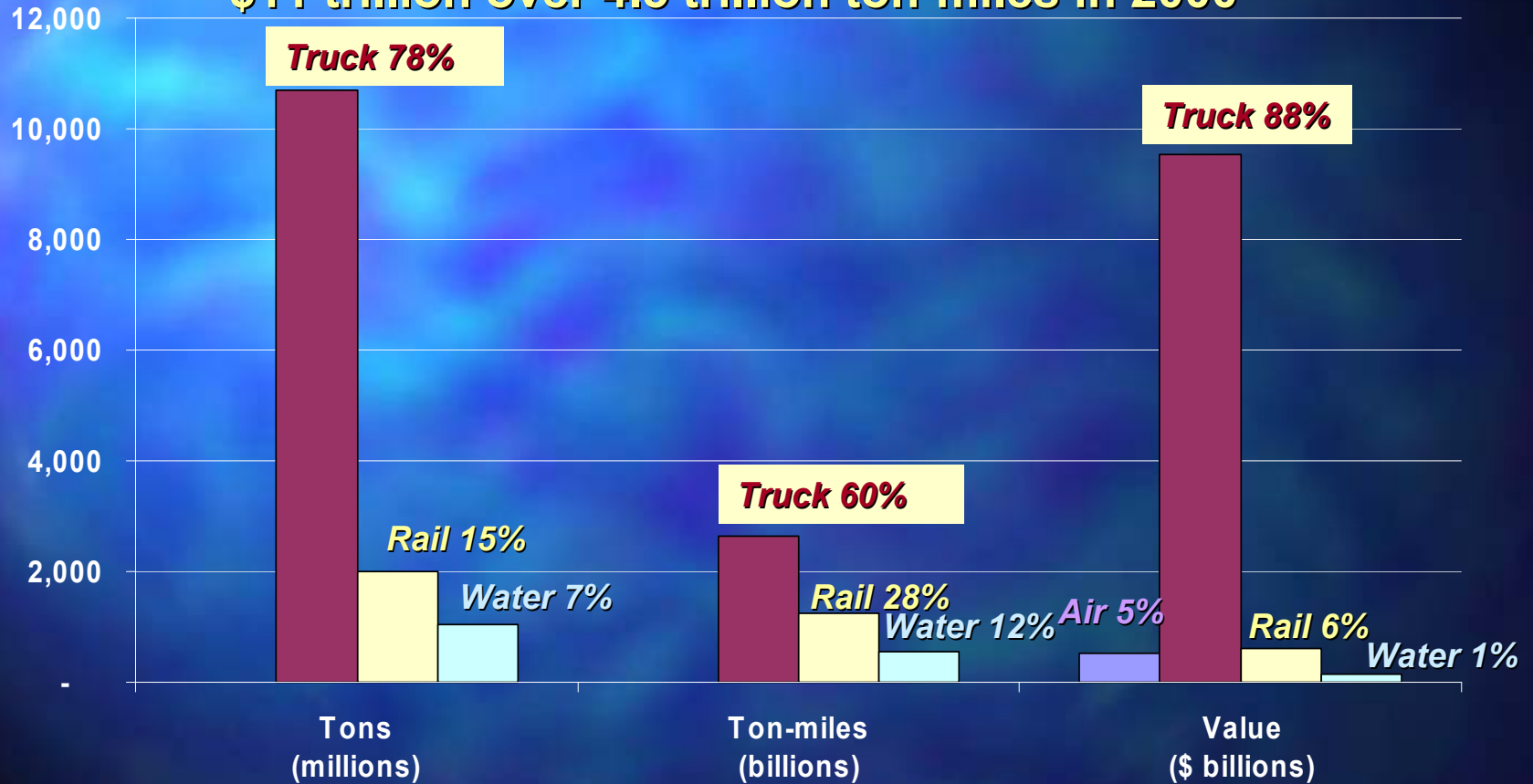
# Logistics is Multimodal





# Goods Movement Today

U.S. freight system moved 14 billion tons of freight valued at \$11 trillion over 4.5 trillion ton-miles in 2000



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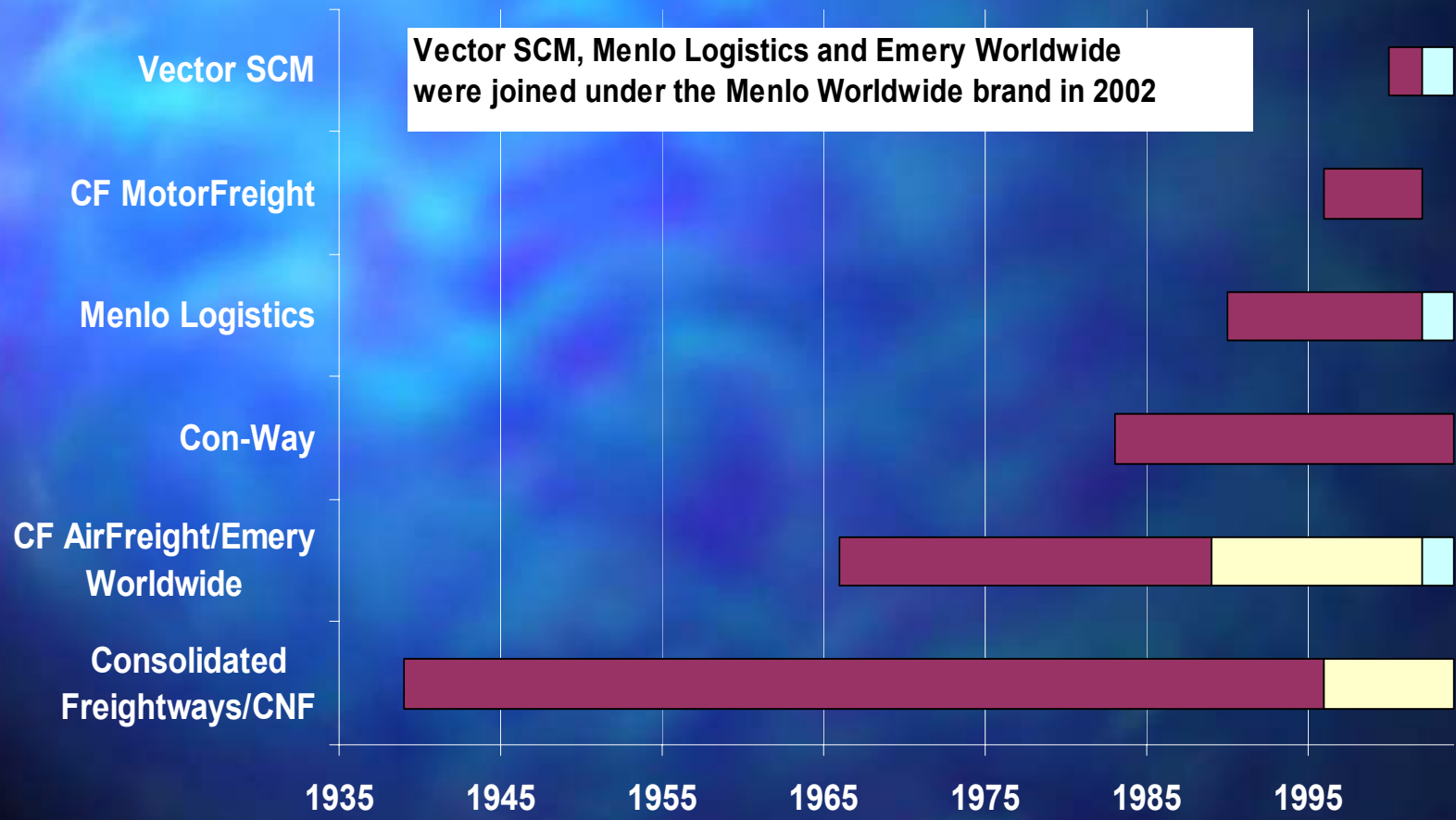
# Outsourcing & Logistics

- Outsourcing has lead to an expansion of transportation & logistics services
- *“One stop shopping”*
- Internal growth
- Mergers & acquisitions

# **Impact of Outsourcing: *An Expansion of Transportation & Logistics Services***

- Simple transportation of product between two points
- Cross dock management to support JIT deliveries
- Marketing
- Packaging design
- Sequencing
- Light assembly
- Vendor managed inventories
- Software development and data management

# CNF Service Expansion



# UPS Service Expansion



# FedEx Service Expansion



# Presentation Objectives

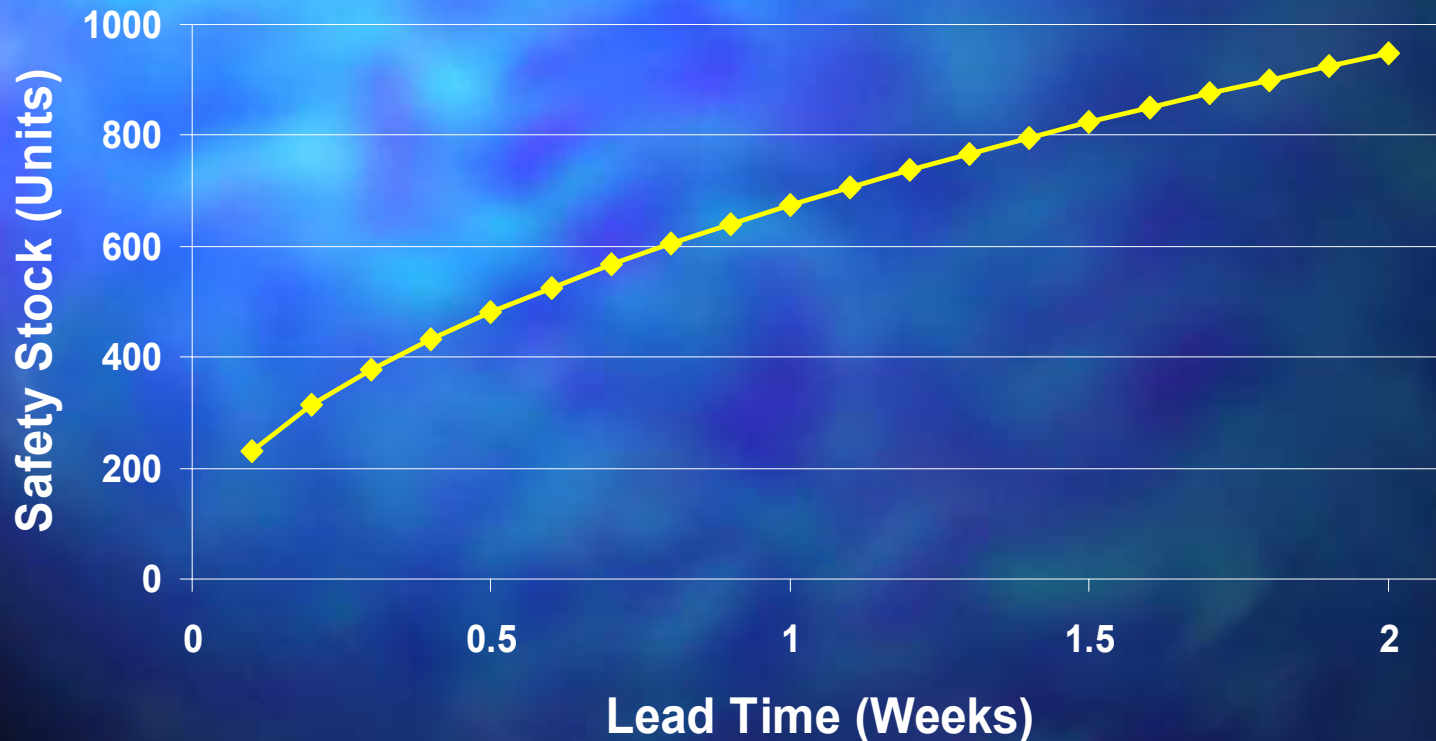
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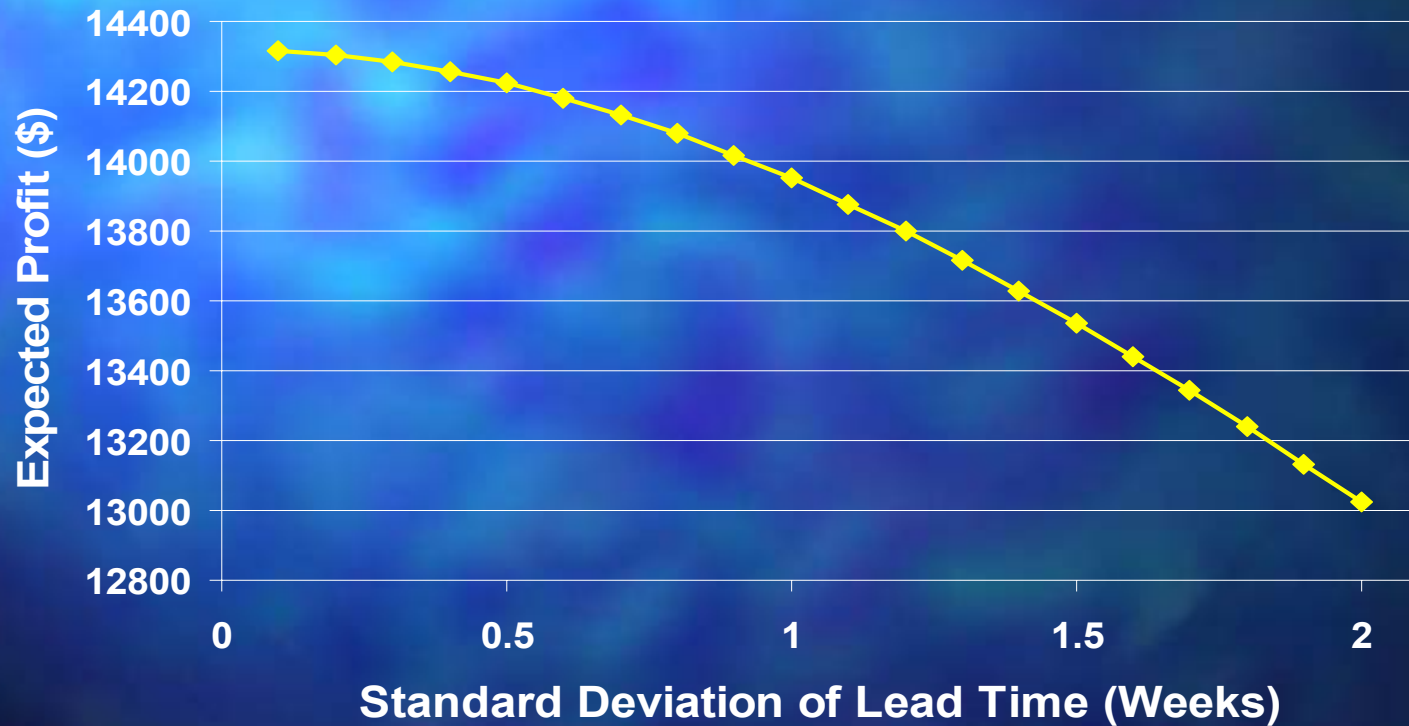
# Effect of Lead Time on Profit

- Geographical separation of components manufacturing and final assembly results in:
  - ✓ Longer lead times
  - ✓ Higher lead time variability
  - ✓ Lower unit production costs, if component manufacturing occurs in an inexpensive labor market
- Improvements in logistics can decrease lead time mean and variability and help justify the separation

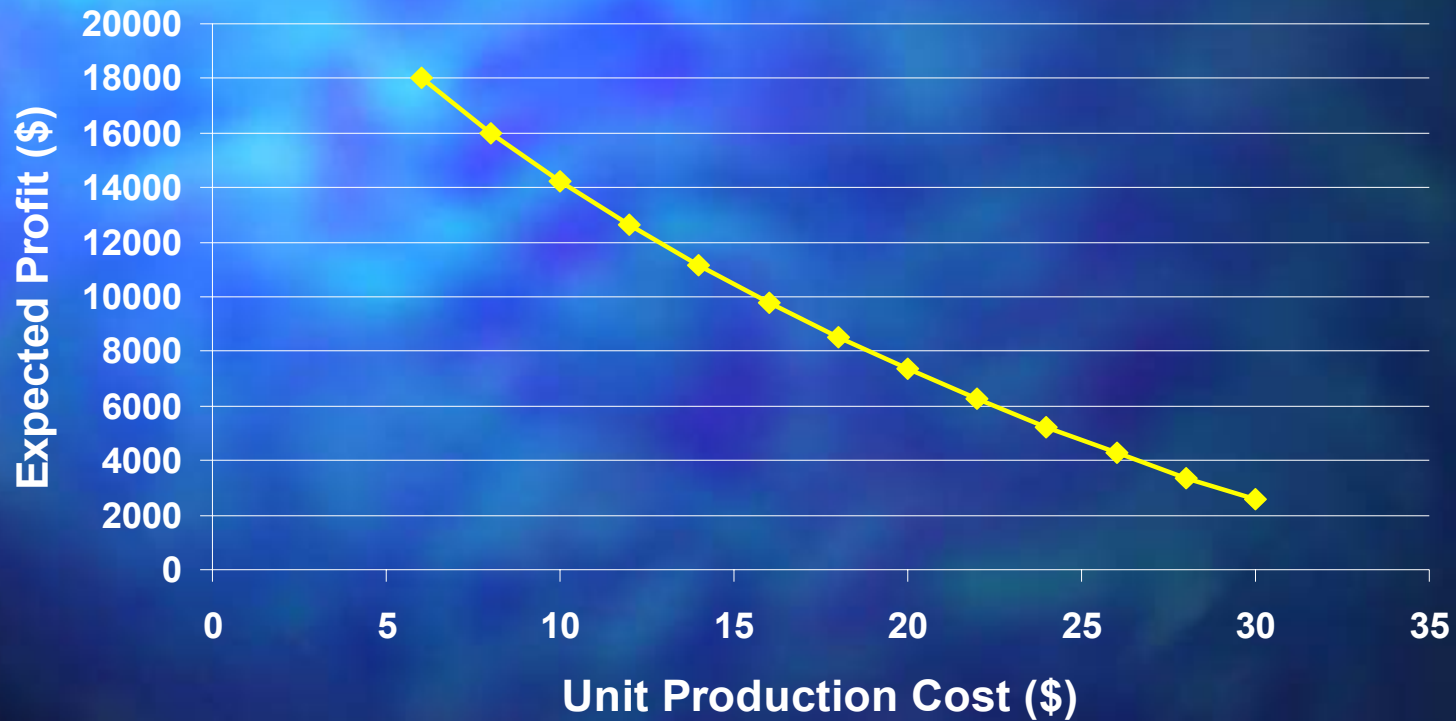
# Lead Time Increase Results in Safety Stock (and hence cost) Increase



# Variability in Lead Time Reduces Profits

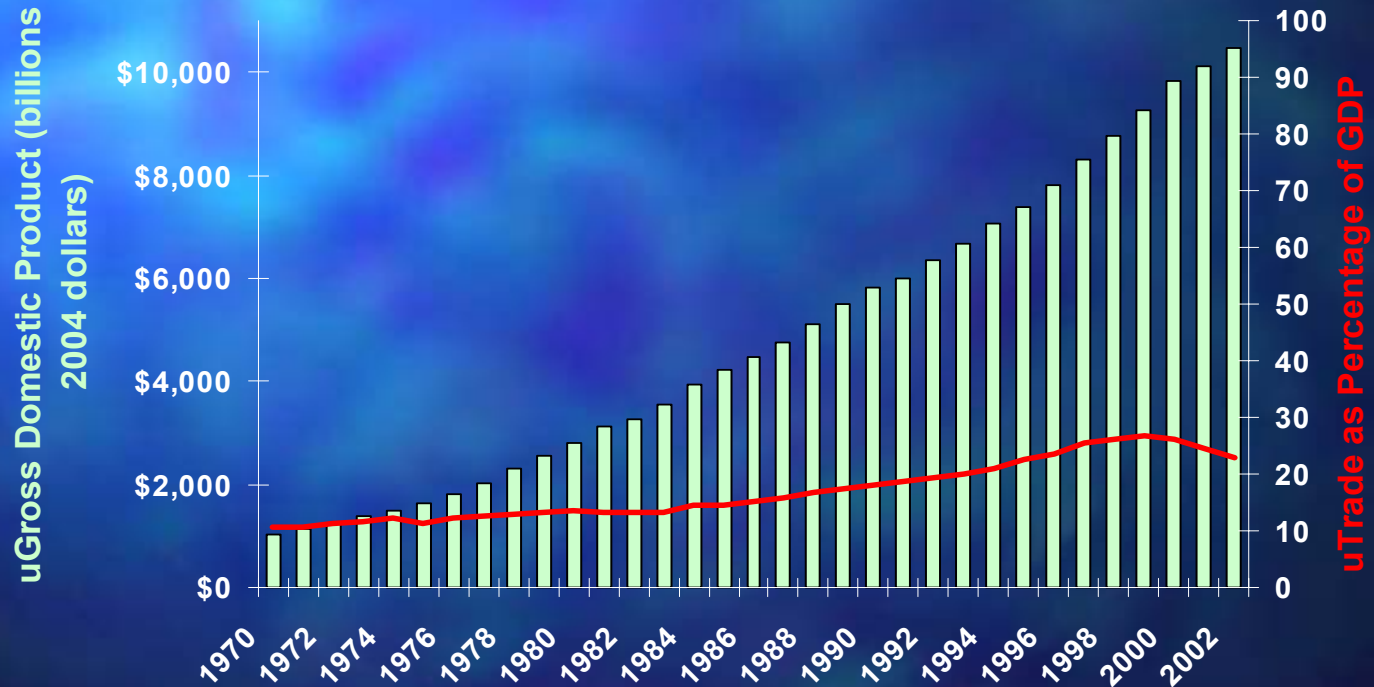


# Reducing Unit Production Cost Increases Profit



# U.S. GDP & Trade History

GDP growth has averaged 3.2 %/year; trade in goods and services is now 22% of GDP

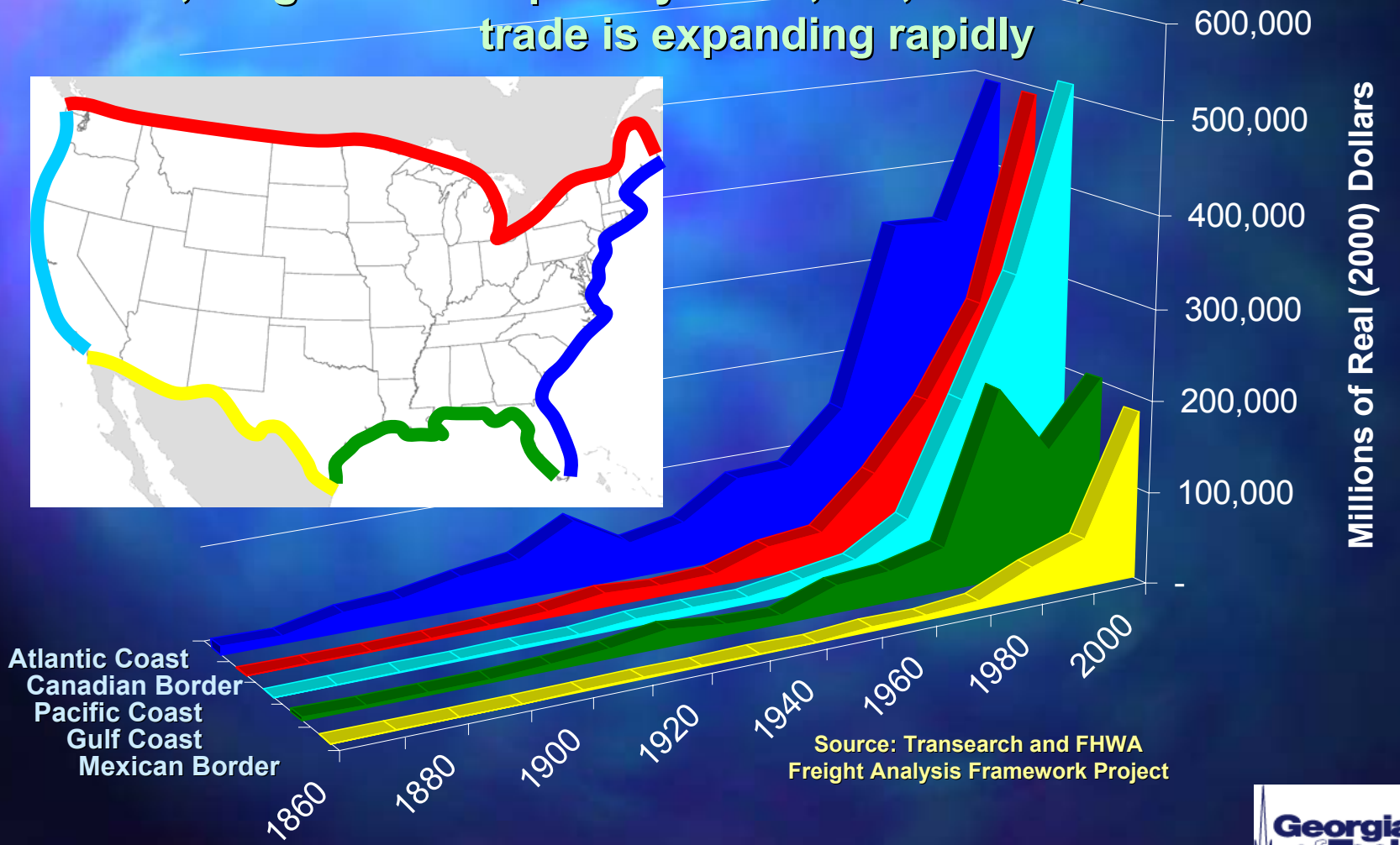
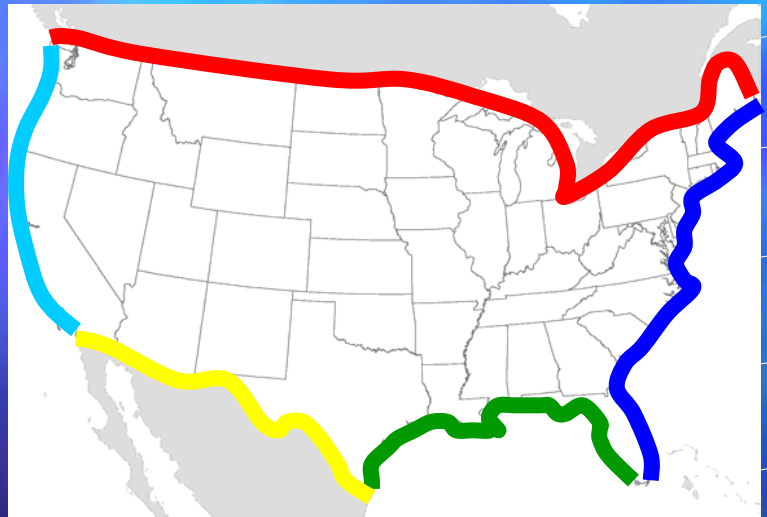


Source: Bureau of Economic Analysis

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# 21st Century/Information Era

Global economy is being built on information, telecommunications, and low-cost, long-haul transport by water, rail, and air; north-south NAFTA trade is expanding rapidly



Source: Transearch and FHWA Freight Analysis Framework Project