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# Challenges of the World's Ports in the Globalization Era

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# Outline of discussions

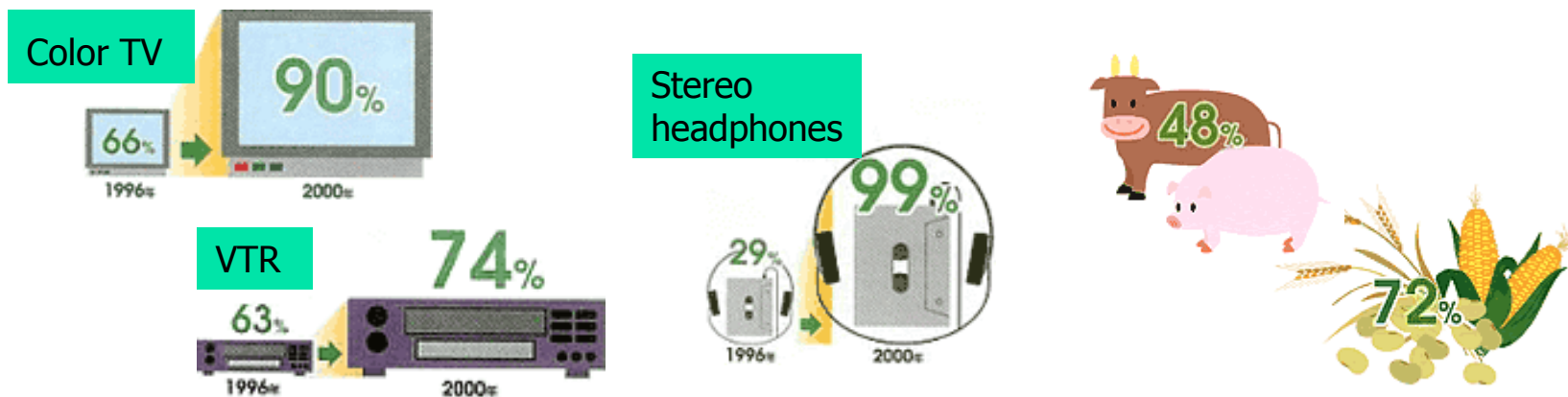
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1. Globalization and Ports  
-- *technological challenges*
2. Evolution of port management system  
-- *institutional challenges*
3. Transformation of port business model  
-- *functional & strategic challenges*
4. Towards sustainable ports  
-- *emerging challenges*

# Life in the globalization era

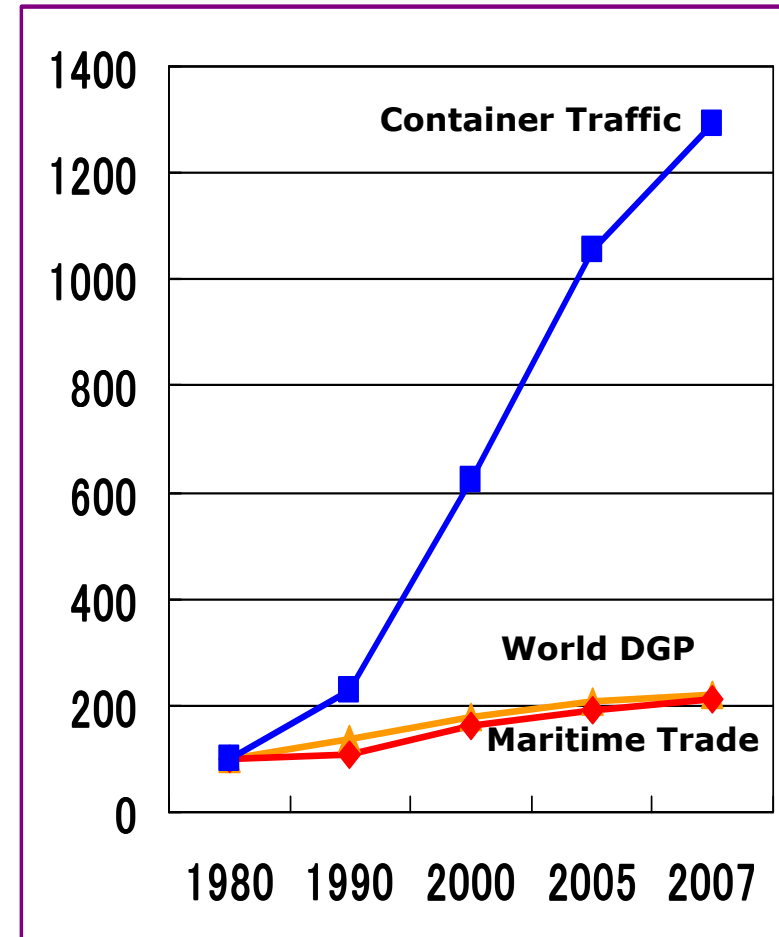
- Look around your home, office & street!
- Full of goods and foods coming from around the globe.

## Shares of imported materials in Japan's market



# Unprecedented growth of maritime trade

- World Maritime Trade
  - 1980: 3.70 (billion tons)
  - 1990: 4.01
  - 2000: 5.98
  - 2005: 7.11
  - 2007: 7.88
- World Container Traffic
  - 1980: 0.37 (100 mil teu)
  - 1990: 0.86
  - 2000: 2.32
  - 2005: 3.92
  - 2007: 4.81



# Containerization

## “Box” has changed the world

20ft container (20 x 8 x 8) TEU: twenty-foot equivalent unit

40ft container (40 x 8 x 8) FEU: 2xTEU



# Revolution in freight transport

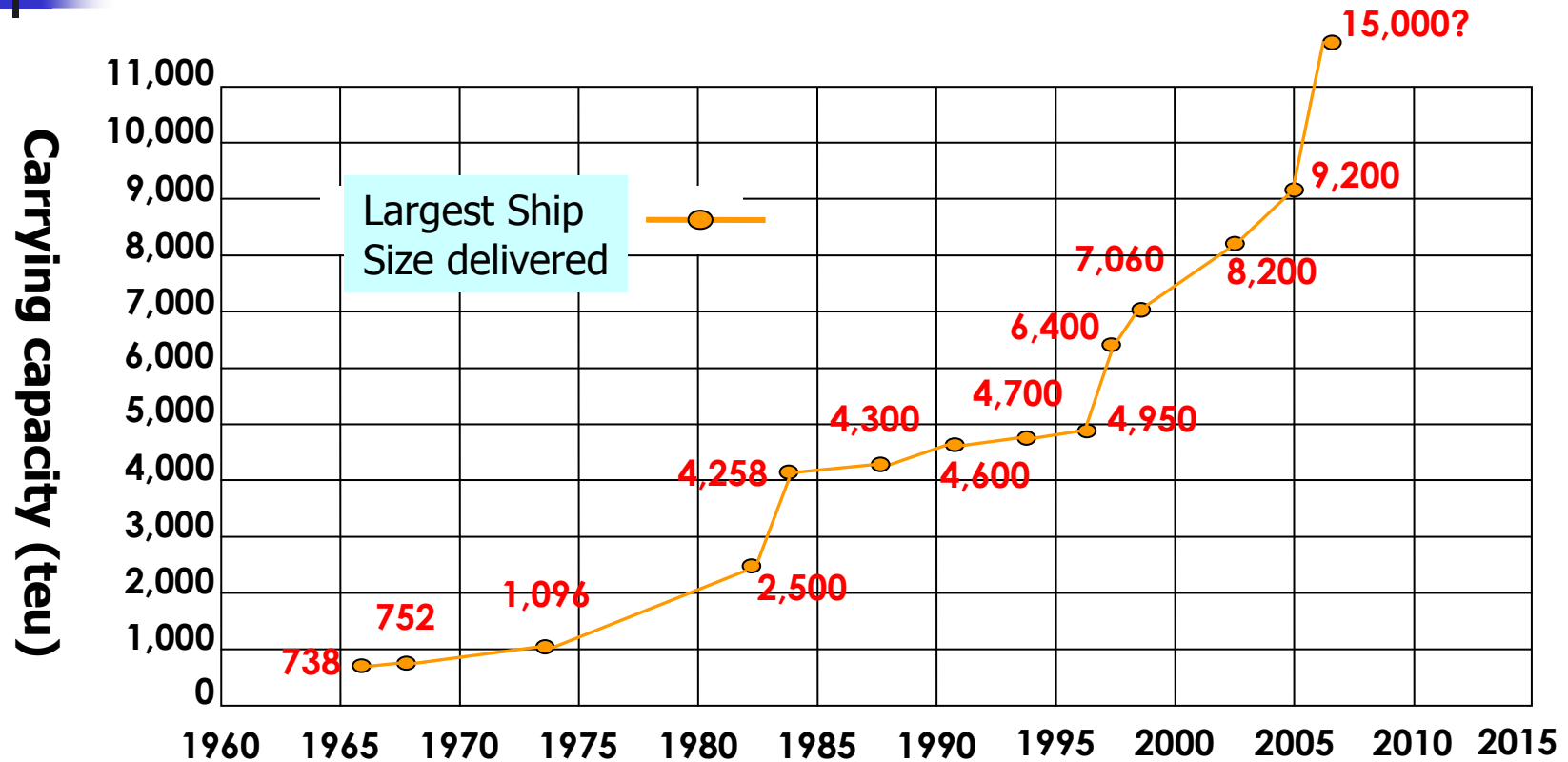
- How revolutionary?
  - Handling efficiency
  - Labor efficiency
  - Damage
  - Pilferage, security
  - Temperature control (reefer)
- Multi-modal transport



# Making possible “true” multi-modal transport through ports



# Trends of container ship sizes

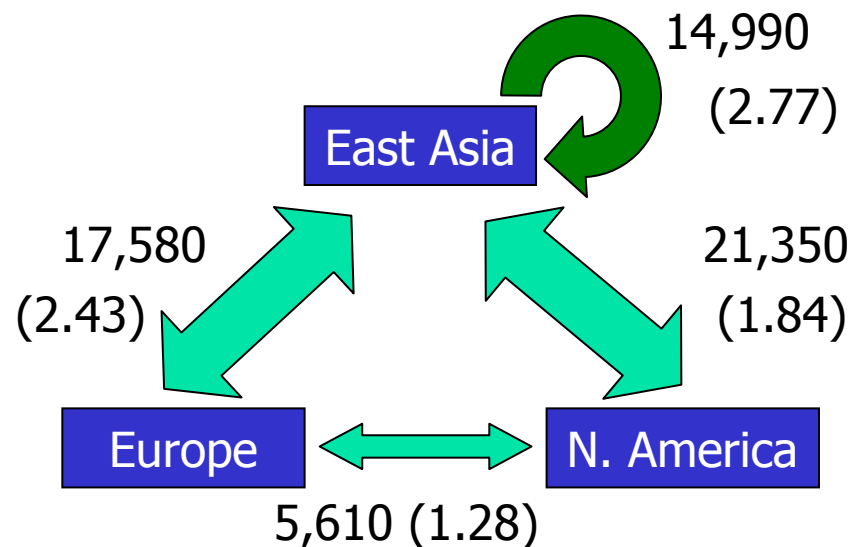


Source: Ministry of Land, Infrastructure and Transport, Japan



# Faster Growing Intra-East Asia Trade

Container Traffic between East Asia, North America and Europe (2007, 1000 TEU)



(X.XX) = growth rate  
from 2000 to 2007

compiled by MOL data



# Port reforms in response to globalization

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- Needs for port reform
  - Strengthening & diversifying **financial sources** for port development
  - Improving **efficiency & productivity** of terminal operations
  - Introducing up-to-date **know-how & technology** for terminal operations
  - Providing **customer-oriented** port services
  - Getting rid of **bureaucratic** rules & procedures
  - Developing **in-house expertise** for port management & strategy



# Port privatization

- Essentially, reform to “landlord port”
- Emergence of international terminal operators

	Infra- Structure	Super- Structure	Terminal Operations
Service Port	○	○	○
Tool Port	○	○	
Landlord Port	○		
Private Port	○	○	○

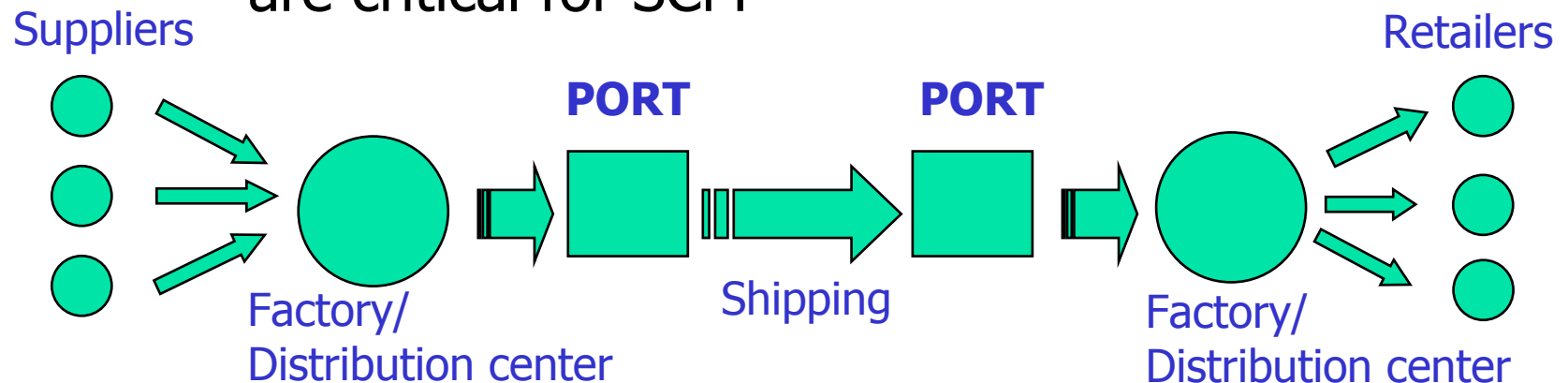


# Some examples of port reform

	1980-	2000-
Europe	UK Spain, Italy, Greece, Poland	France, Netherlands, Germany
Africa	Nigeria, South Africa, Senegal, Egypt, Djibouti	
Asia	Singapore, Malaysia, India, Pakistan, Indonesia	Korea, China
Oceania	Australia, New Zealand	
Americas	Canada Mexico, Chile, Peru, Argentina	

# Integrating logistics systems in response to globalization

- Supply Chain Management
  - Optimization of total logistics system
  - Not just cost & time at port terminals, but also predictability & traceability of entire cargo flow are critical for SCM





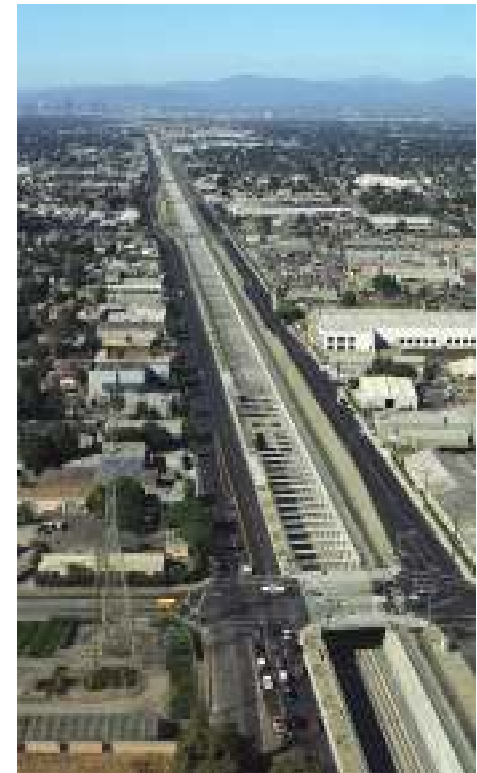
# New port business model

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- Traditional port business model
  - Port: “Interface” between shipping and land transportation
  - Goal: to provide quick port services with low price
- Emerging port business model
  - Port: “Logistics Center” or “Logistics Hub” in global supply chain systems
  - Goal: to provide integrated & seamless logistics systems and logistics value-added services

# Transforming into “logistics hub” port

- Innovative terminals
- Logistics parks/zones
- Advanced hinterland access
- IT system & infrastructure





# Towards sustainable ports

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- Sustainability is the license to operate ports in the years ahead Climate Change
  - Climate Change
    - World Ports Climate Initiative (WPCI)
  - Green logistics systems
    - Eco-mileage, logistics carbon footprint
  - Port security system
    - SOLAS-ISPS Code
  - Supply chain security
    - Authorized Economic Operator (AEO)
- Leading to accelerated growth of intra-regional industrial activities and trade





# Key implications of sustainability to ports

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- “Sustainability” becomes part of port management system and strategy
  - Not trade-off but go-together with port business
- “Sustainability” accelerates intra-regional economic activities
  - Increasing importance of “regional logistics system”



*Thank you for your attention*

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