

Linking Asia to Global Logistics Systems Development

**Dr. Ting Ho
Logistics Venture Limited
July 1-2, 2004
Intercontinental Hotel, Bangkok**

Presentation Outline

- Global trends
- Demand factors
- China factors
- Linkage through hub and spoke
- Linkage through pipeline
- Conclusion

Global Trends

Business Trends

Increasing market dynamics

- Shorter product life cycles
- More outsourcing
- Demand transparency
- Global coverage
- Collaboration

- Increase in high value goods
- Increase in Express freight
- Global networks (virtual & physical)

Changing customer requirements

- One stop center
- Seamless information flow
- Differentiated products
- Time definite “JIT”

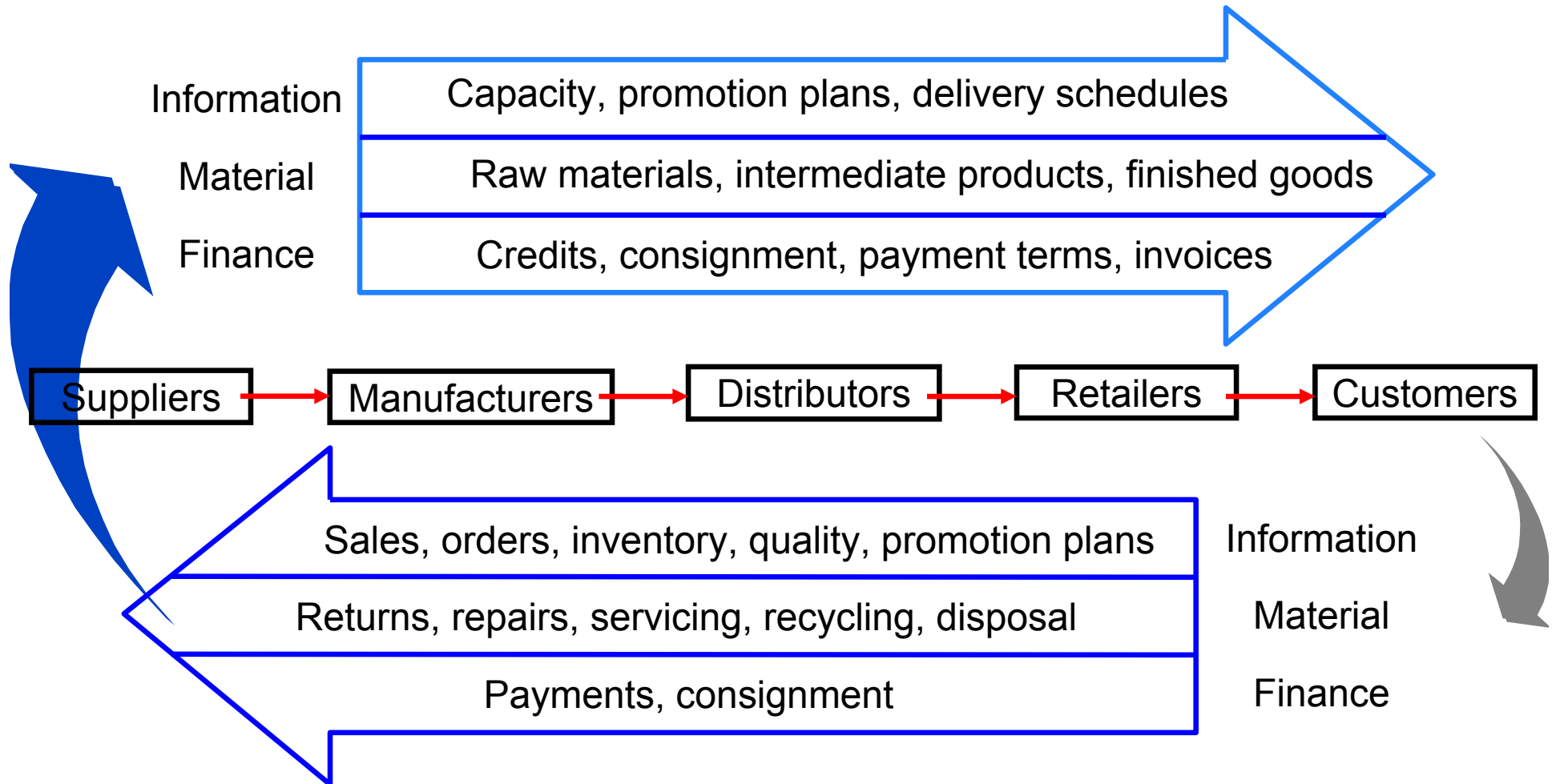
- Ability to assume system leadership
- New/additional services
- Time, costs, quality leadership

Manufacturers and Retailers Sourcing Globally



Geographic concentrations of hi-tech manufacturing have emerged in each region

Supply Chain Management



Roles of Logistics

Manage

Plan

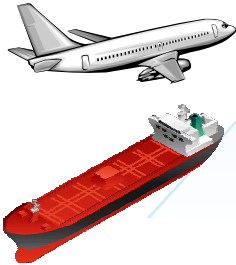
Design

Collaborate

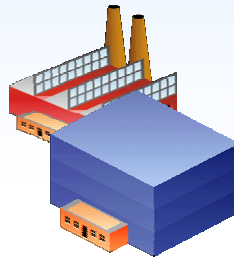
Operate

Maximize

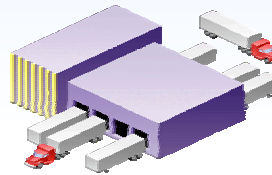
Global Information Visibility



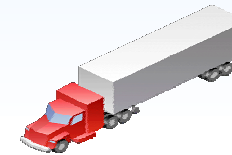
Transportation



CMs/OEMs



Warehousing



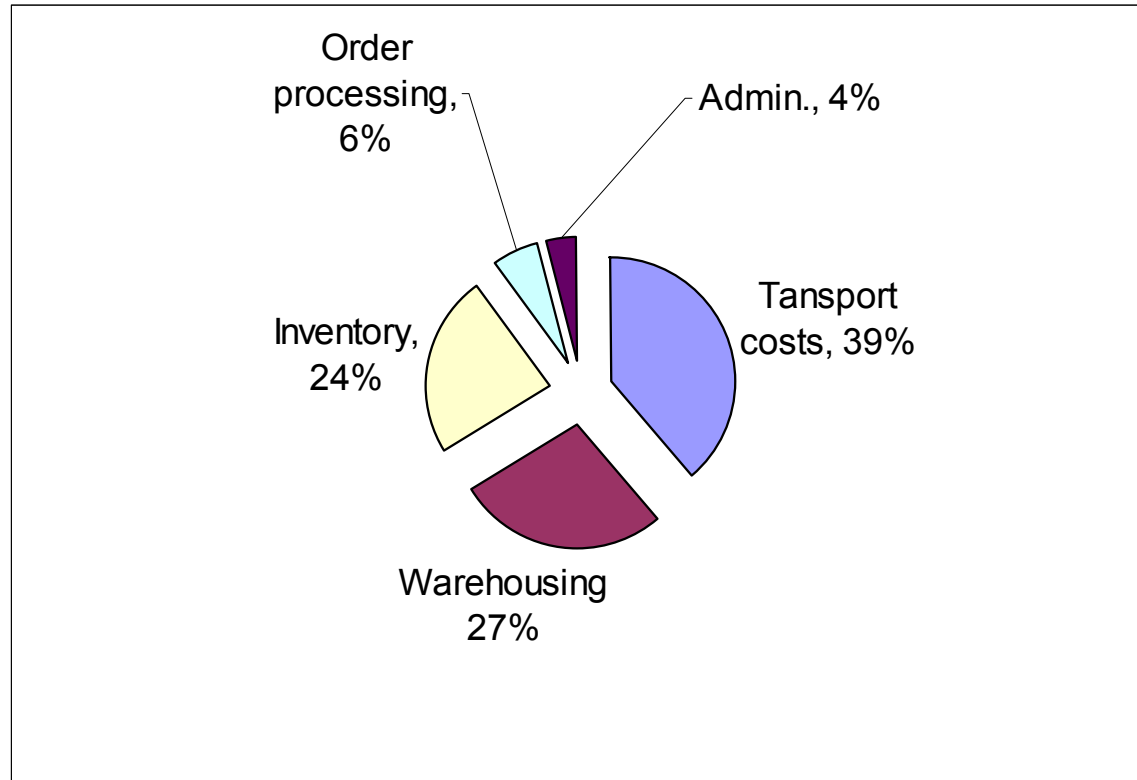
Distribution



Fulfillment

LL manages an efficient supply chain in collaboration with its clients to minimize cash-to-cash cycles, inventory levels, logistics costs with improved customer visibility

Share of Transport in Logistics



Worldwide logistics costs exceed US \$1 trillion, of which US\$390 billion is transportation cost

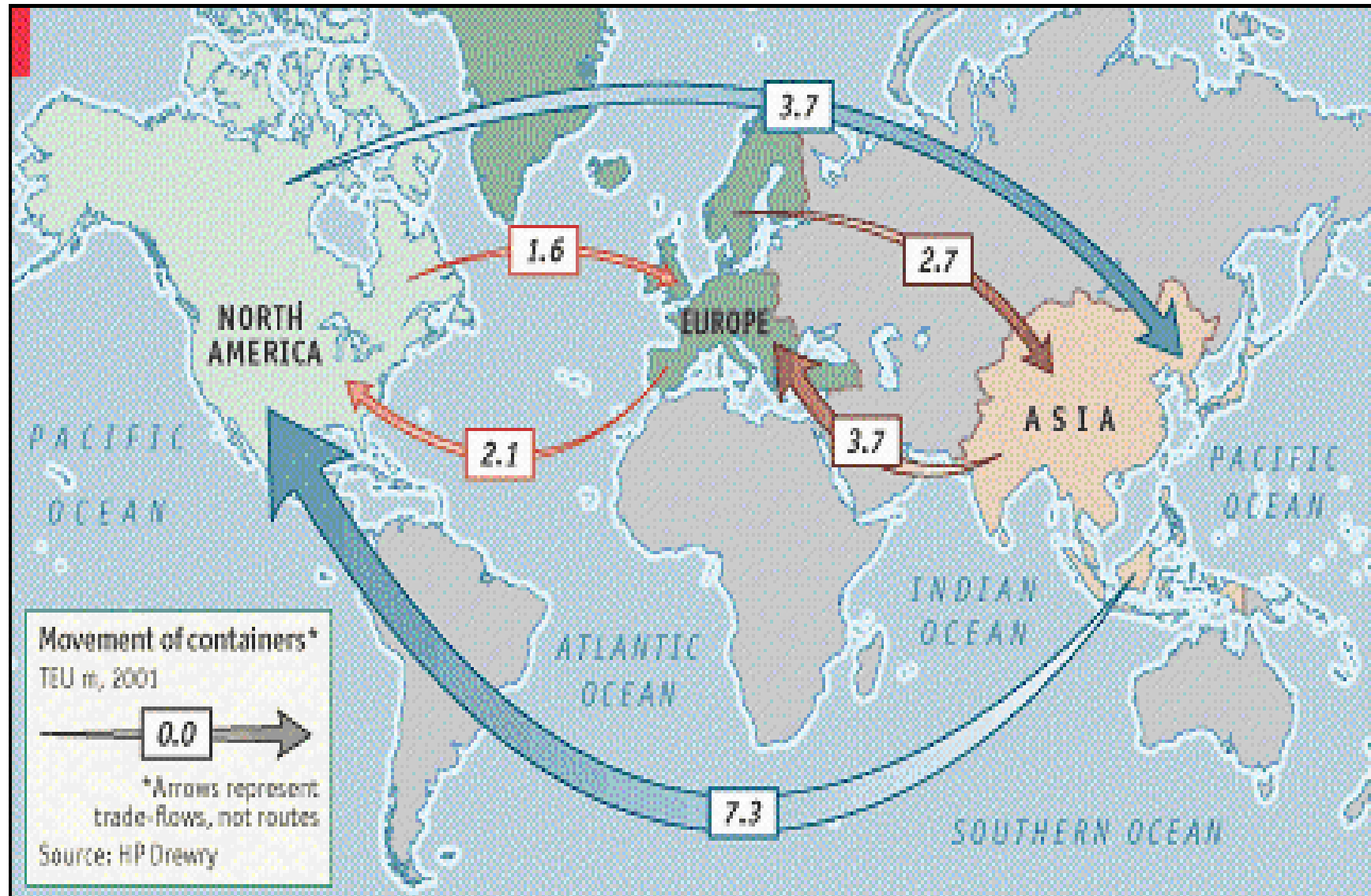
IT has redefined logistics practices

Transport costs Affect Competitiveness

Country	High CIF/FOB Ratio	Country	Low CIF/FOB Ratio
Cambodia	2.80	Malaysia	1.20
Laos	2.49	Singapore	1.16
Vietnam	2.02	Japan	1.16
Korea	1.82	Hong Kong	1.10
Myanmar	1.56	Thailand	1.09
China	1.41	Indonesia	1.06
Philippines	1.38	Taiwan	1.04

Demand factors

Movement of Containers



Source: Economist, April 6, 2002

ASEAN Trade

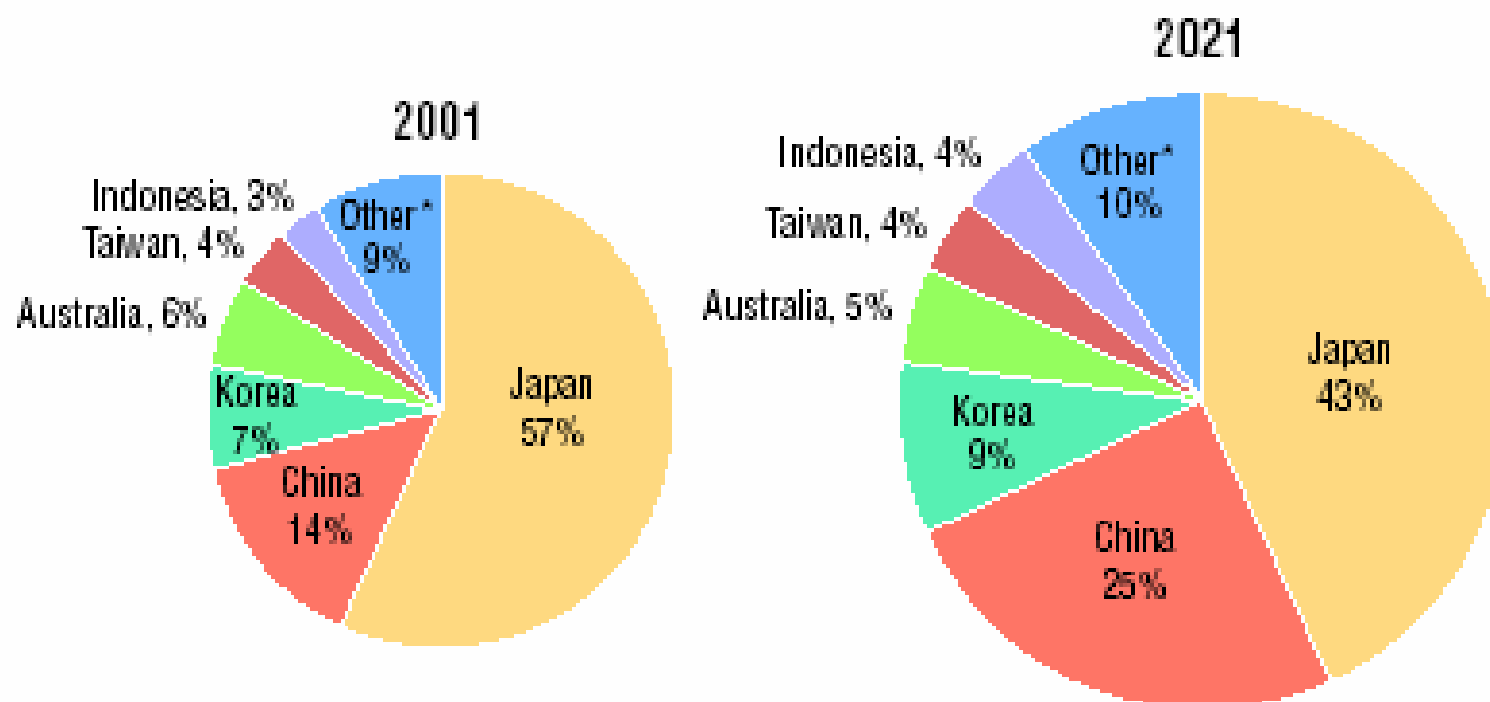


MARKET DISTRIBUTION OF ASEAN'S EXPORTS: 1993-2000 (percent)

Year	US	Japan	EU	Australia	Rep of Korea	China	India	ASEAN
1993	20.3	15.0	14.8	1.8	3.0	2.2	0.7	20.9
1994	20.0	13.9	13.9	1.8	2.8	2.1	0.8	23.6
1995	18.5	14.4	14.6	1.7	0.29	2.1	1.0	23.5
1996	18.4	13.3	14.5	1.9	2.9	2.3	1.2	24.7
1997	20.4	12.3	13.4	1.9	3.1	8.5	1.3	24.6
1998	20.4	10.9	14.6	2.3	2.5	2.9	1.7	22.0
1999	20.5	11.0	16.3	2.3	3.2	2.8	1.6	21.8
2000	20.8	16.0	18.0	2.5	4.3	10.4	1.9	27.8

Asian Economic Power Distribution Is Shifting

Share of regional GDP



* Thailand, Hong Kong, Singapore, Malaysia, Philippines, New Zealand

FTA stimulates growth

- **World Output rose from US \$1.3 trillion in 1960 to more than US \$34 trillion by 2000 through trade liberalization**
- **Global trade to GDP ratio increased from 29% to more than 45% in same period**
- **World output is expected to grow at about 3% per year over the next decade, while trade is expected to grow at 6% to 7%**
- **FTA will further stimulate trade**

Advantages of FTA

- **Increase regional integration**
- **Provide free direct market access to members**
- **Establish common standards and practices**
- **Enlarge market size**
- **Promote growth and development**
- **More efficient resource utilization**

The China Factor

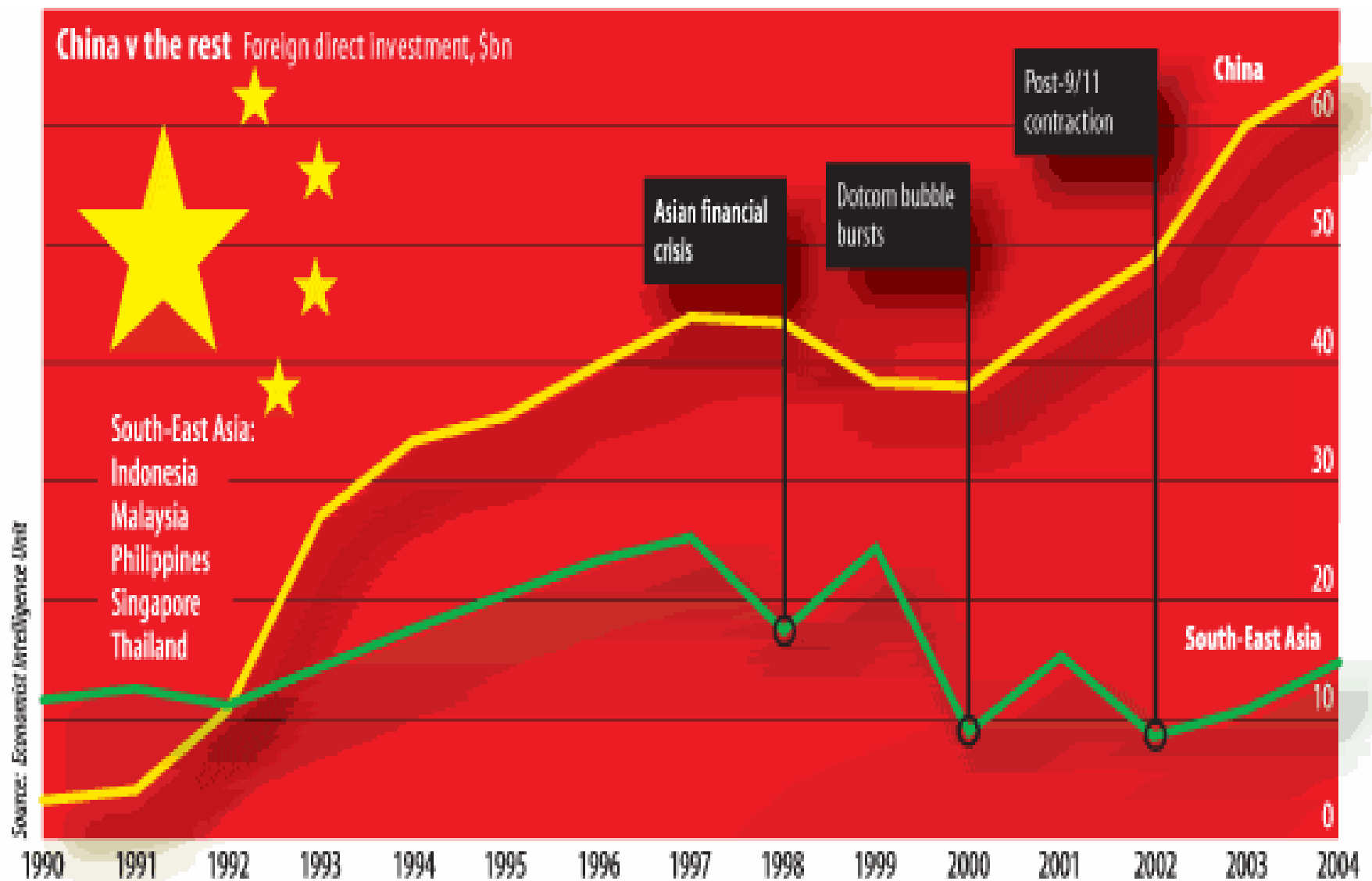
Role of China in World Trade

- WTO has integrated China to the world
- Compete for trade and investment
- Transform into the factory of the world
- Continued economic reforms and liberalization will drive growth
- Both exports and imports are rising rapidly

China's FDI

- In 2002, **FDI** grew 12.5% YOY to US\$52.7 billion overtaking USA
- 400 out of Fortune 500 have invested in over 2,000 projects in China
- In 2003, FDI is expected to exceed US \$60 billion
- Trade liberalization and further market opening in services sector will stimulate FDI

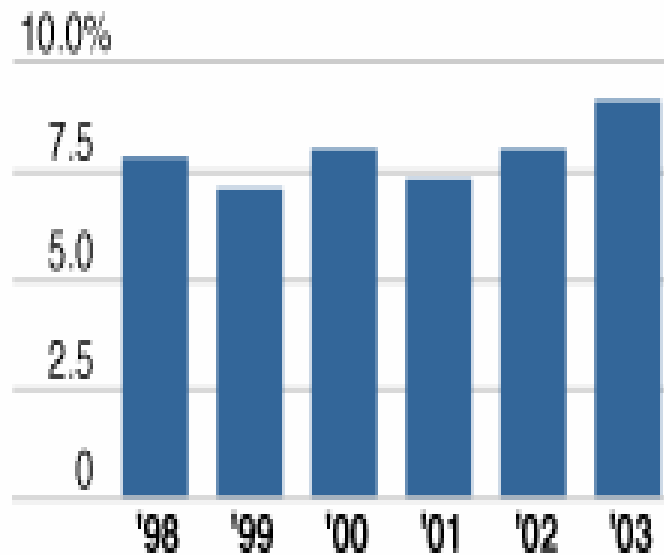
China v the rest Foreign direct investment, \$bn



Relationship between China and Japan

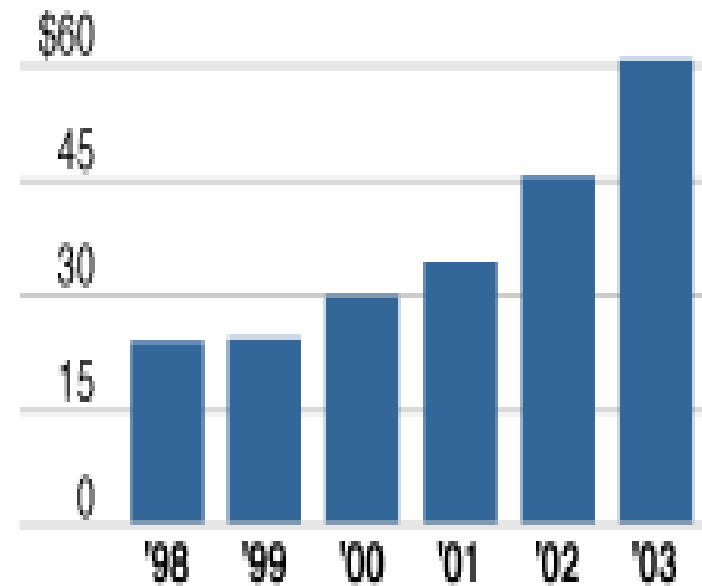
As China roars...

Year-to-year percentage change in China's GDP



Japan's exports rise...

Japan's exports to China, in billions of dollars*



China's cargo

- Manufacturing:
 - Automobile: China's auto market is now no. 4 in the world after USA, Japan and Germany (VW is expected to invest 6 billion Euro in the next 5 years
 - Ford started a US \$1.5 billion 2nd production plan
 - BMW: entered into Euro 450 million Euro JV with Brilliant
 - Petrochemical – BP invested in a US \$2.7 billion ethylene cracker plant in Shanghai
 - Telecoms – Motorola will have a cumulative investment of US \$10 billion
- Retailing:
 - 2/3 of world's top 50 retail enterprises are in China (7-11, Carrefour, Walmart, B&Q, Starbucks, KFC, MD etc.
- Sourcing:
 - US\$ 20 billion in 2002, growing to US\$50 billion in 2005

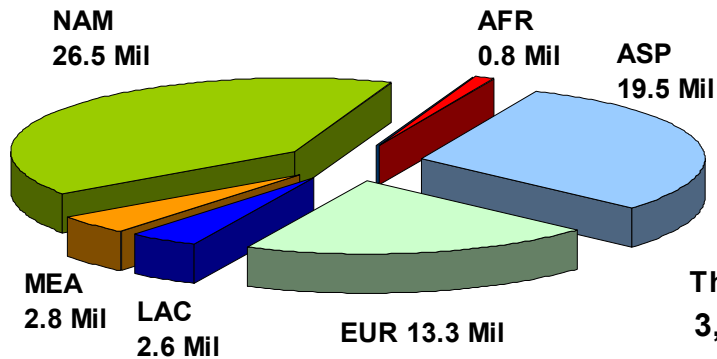
Asia – Fastest Growing Market For Airfreight Industry

Airline officials, governments, investment analysts predict a bright outlook for the cargo sector of the Aviation industry.

- ❑ Past two decades have seen cargo traffic from Asia grow much faster than air trade in the rest of the world. Since 1981 average annual growth rates have exceeded 10% for the region.
- ❑ Strong climbs in air cargo traffic movement is expected over next 5 years with emerging new hubs in Asia especially China. Her booming export market is expected to boost Asian airfreight shipments by above average rates of 6.8% for the next two years. [Lufthansa Cargo forecast].
- ❑ Asian air cargo industry is slated to grow between 8 to 10% in air traffic movement in the region in 2004. About 7 mil tonnes of freight are expected to be airlifted from Asia.
- ❑ Asian markets are expected to represent nearly 40% of global airfreight in 20 years time.

Asia Pacific Countries Gaining Prominence in the Global Air Cargo Industry

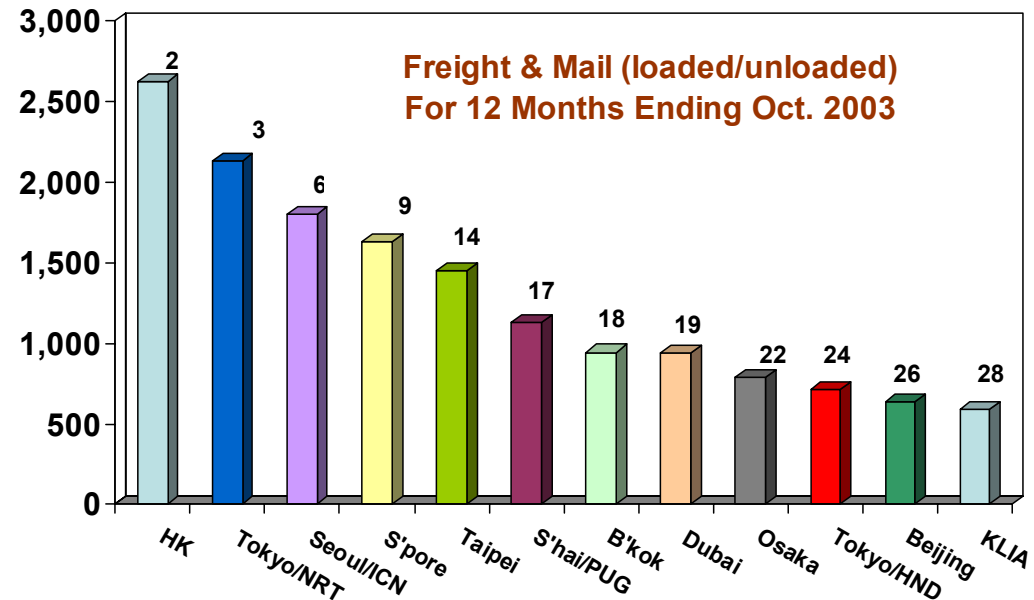
Total Cargo Movement (+ Mail) Loaded/Unloaded
(metric tonnes) For Year ending August 2003



Apart from N. America, the highest volume of air cargo trade was in the Asia Pacific region with 6.1% increase over previous year. Air cargo trade in Asia projected to grow by 9% in 2004

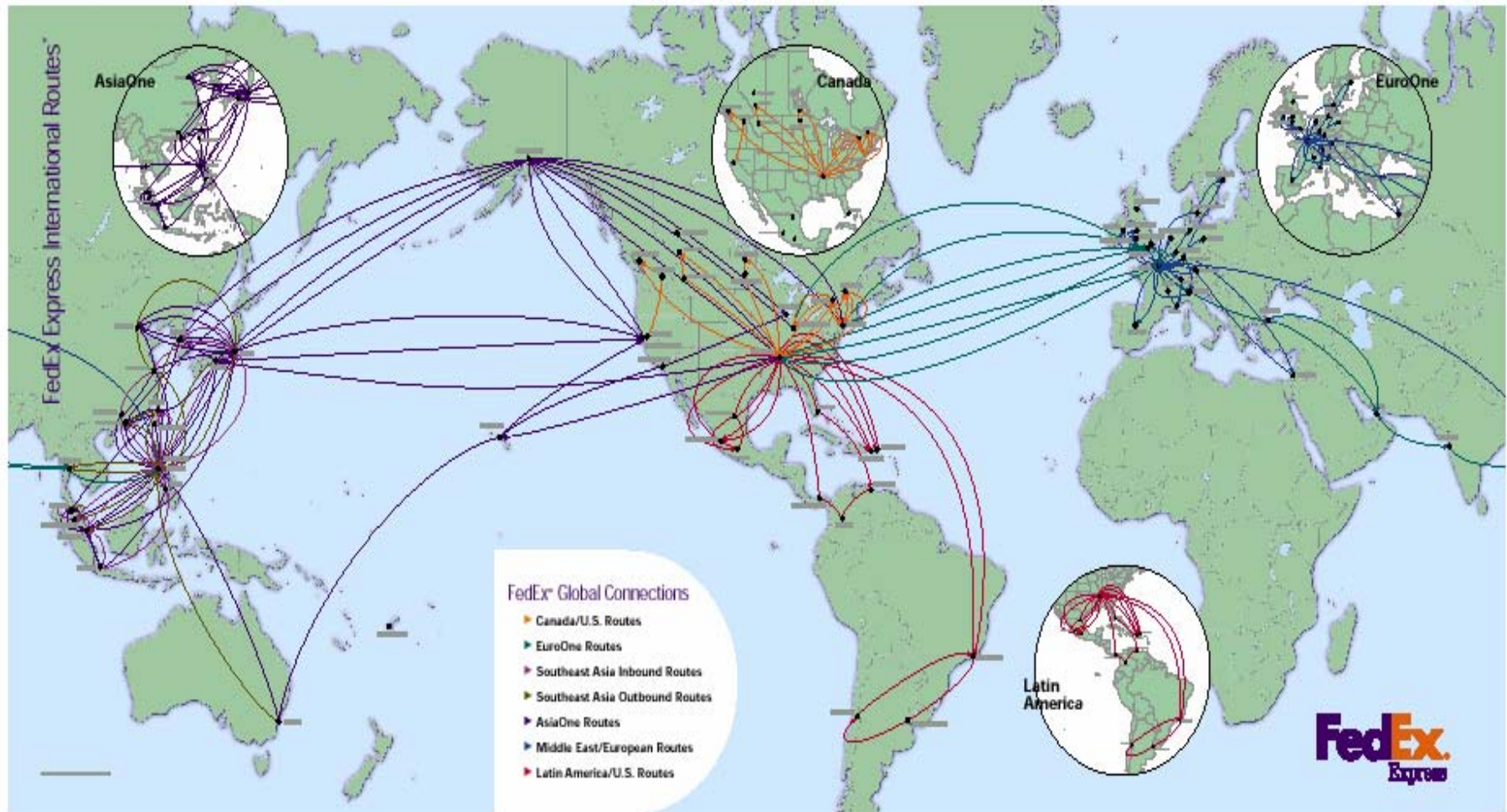
Asian airports are increasingly gaining share in Global Air Cargo Trade. Over 40% of the world's top 30 airports ranked by cargo volume in 2003 were from Asia.

Thousands (M. Tonnes)



Linkage through Hub and Spoke

Linking Asia to the World





FedEx Express Global Hubs

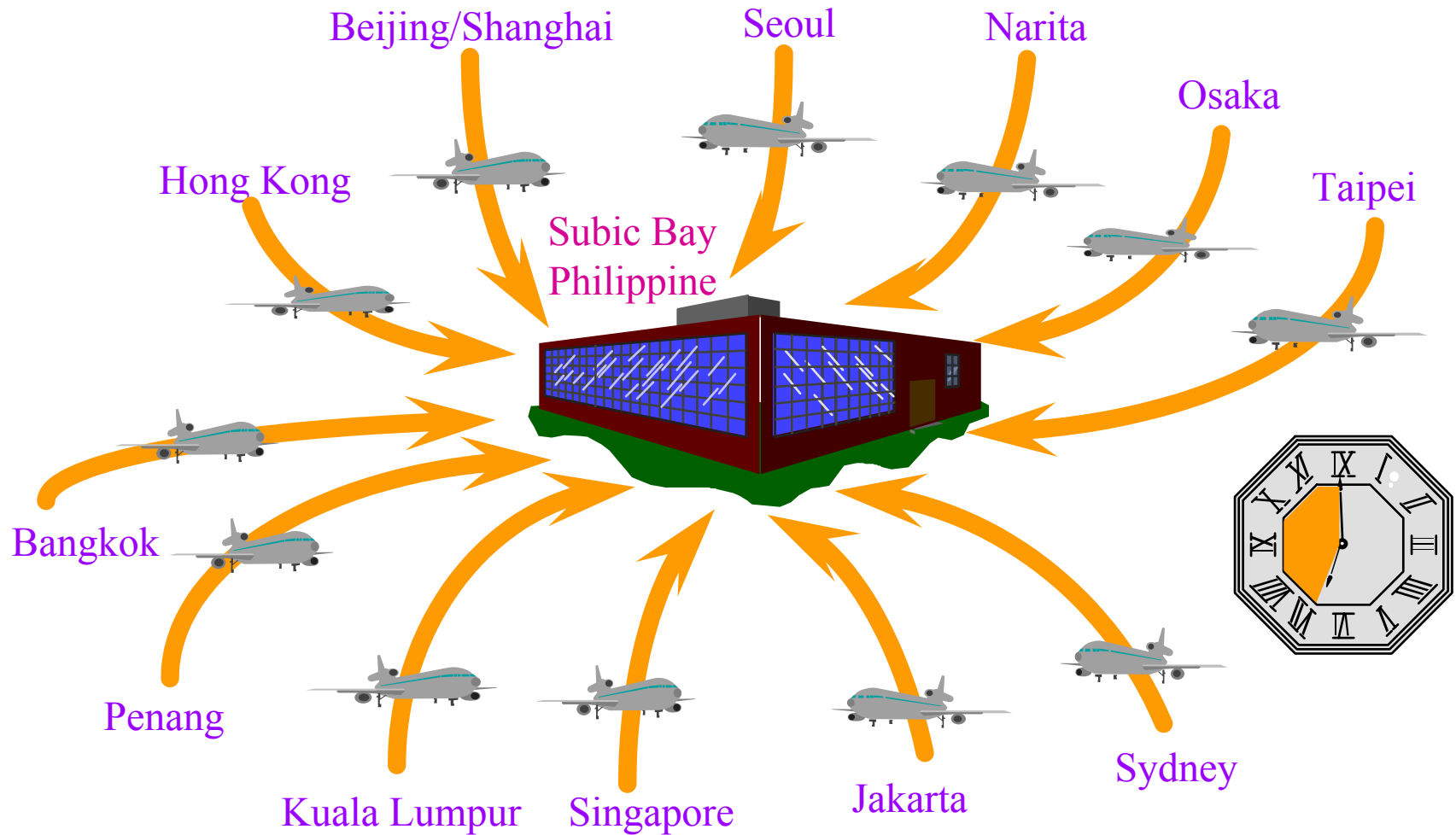
- 1 Memphis, Tennessee
SuperHub
- 2 Indianapolis, Indiana
National Hub
- 3 Fort Worth, Texas
National Hub
- 4 Anchorage, Alaska
National Hub
- 5 Newark, New Jersey
Regional Hub
- 6 Oakland, California
Regional Hub
- 7 Chicago, Illinois
Metroplex
- 8 Los Angeles, California
Metroplex
- 9 United Kingdom (Stansted Airport)
Global Network
- 10 Frankfurt, Germany
Global Network
- 11 Paris, France
Global Network
- 12 Tokyo, Japan
Global Network
- 13 Osaka, Japan
Global Network
- 14 Subic Bay, Philippines
Global Network
- 15 Dubai, United Arab Emirates
Global Network



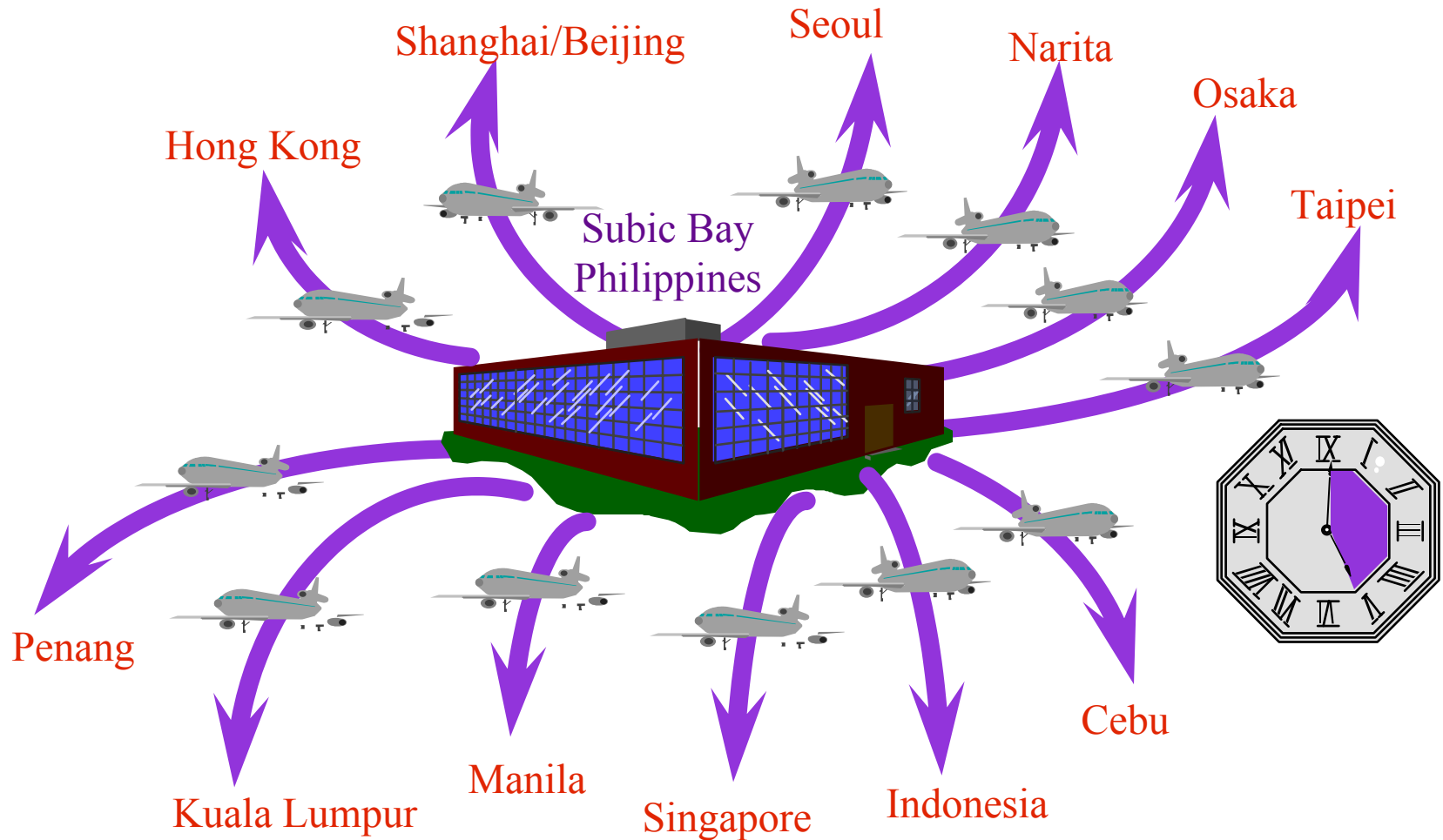
As a pioneer of the modern hub-and-spoke transportation system, FedEx Express has built an unsurpassed global network, including air route authorities to serve more than 210 countries around the world, the largest fleet of air-cargo aircraft and an extensive network of operational hubs placed strategically around the globe.



Flights Into Subic Bay Asia Hub



Flights Out of Subic Bay Asia Hub



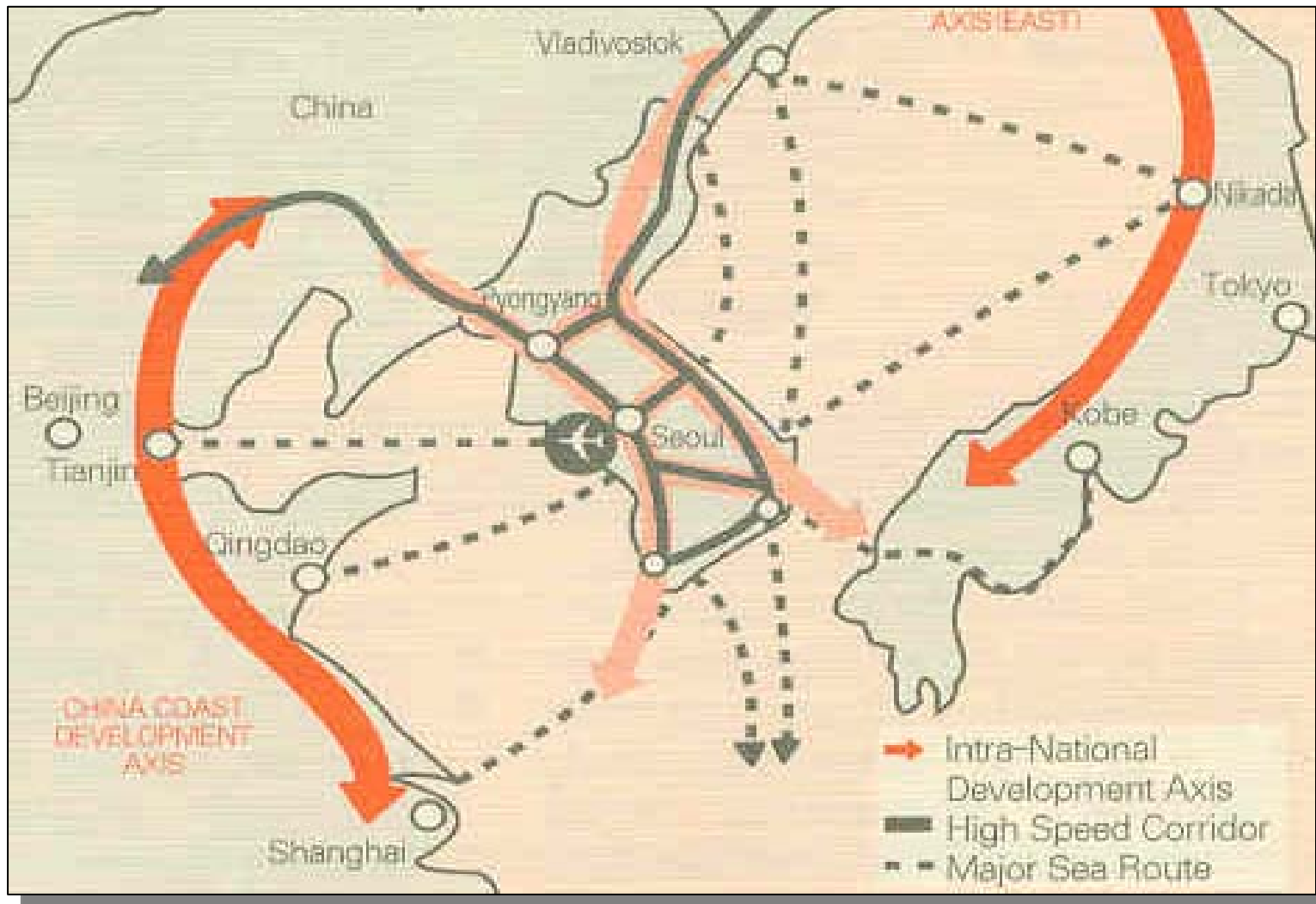
Advantages of Hub and Spoke

- Efficient in multi-destinations sort (From anywhere to anywhere within 48 hours) – FedEx model
- Precision in time management
- Easy to add a new destinations to the network
- Using the minimum no. of aircrafts to link a large number of destinations into a network to allow origin - destination exchange at a hub location
- Allowing sorting to be undertaken cost effectively in a limited number of hubs
- Provide time-definite express services cost effectively

Disadvantages of Hub and Spoke

- Limited time window for sorting to be undertaken
- Earlier cut-off times for accepting cargo for next day delivery
- Highly pressurized working environment
- Require meticulous planning and coordination
- A missed sort could result in service degradation
- Breakdown at the hubs will cause service disruption
- Idle aircraft and human resources during non-peak hours
- Large workload swings between peak and trough demand not only meticulous planning but support of temps

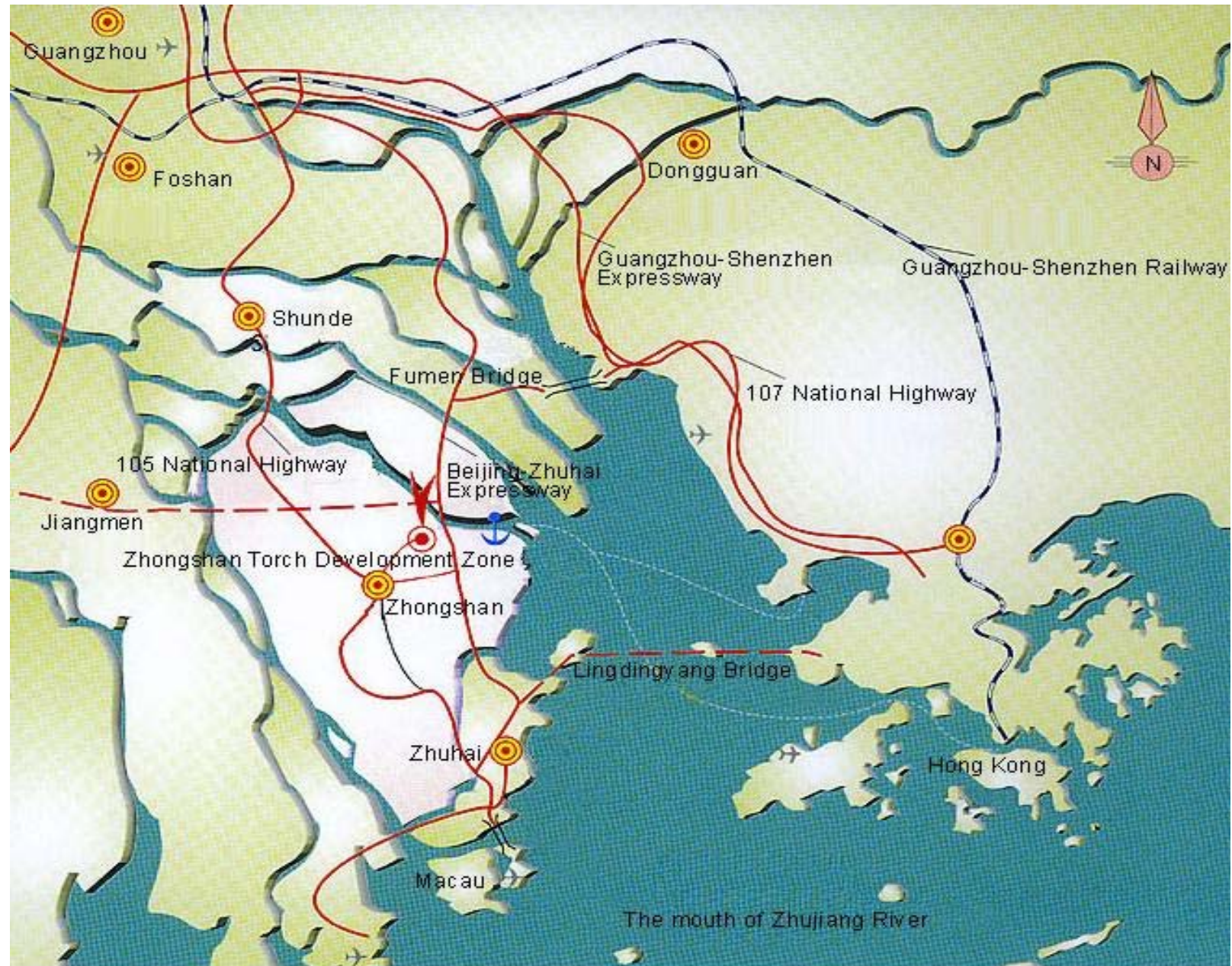
Global Frame of Korean National Development



The Yangtze Delta



The Pearl River Delta



Alternative Model Air Cargo Pipeline for Asia



Key Features of the Cargo Pipeline

- Divide the pipeline into economically viable segments
- The entire cargo pipeline is equipped with a common IT platform
- Same aircraft type, pallet hold, and cargo handling machineries are used at each node of the pipeline
- Regular departures between each nodes
- Point-to-point flights between nodes
- Entire cargo is discharged at destinations
- Uniform operating procedures and IT support are implemented at each node
- Efficiency and cost effectiveness in cargo handling is key to success

Competitive Advantage

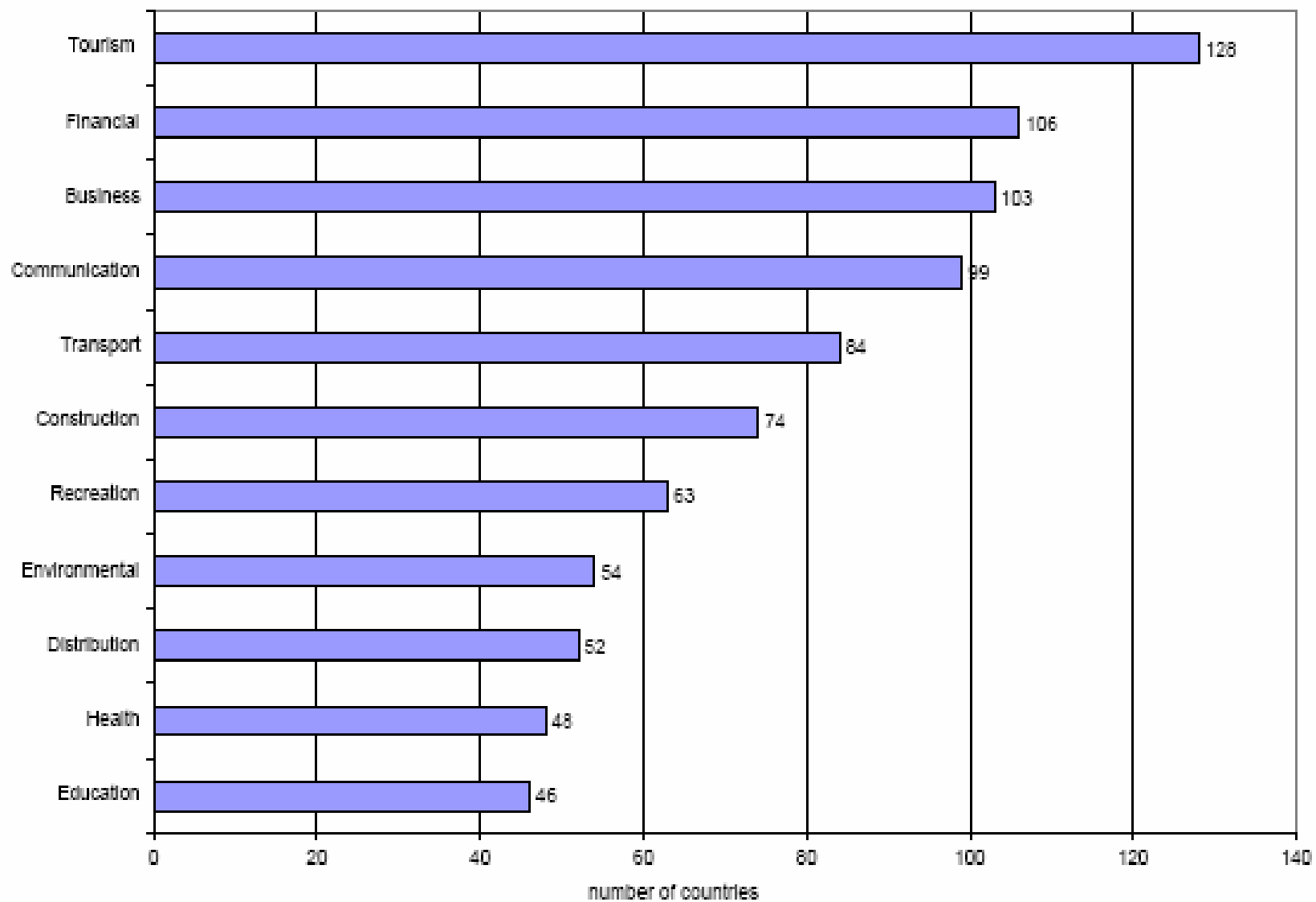
- **Alternative model to that offered by integrators**
- **Significant cost savings**
- **Optimize asset utilization across network**
- **Unparalleled market reach**
- **Strong relationship with customers**
- **Enormous capacities**
- **Frequencies and space availability**
- **Flexibility and tailor-made solutions**

Conclusion

Competition or Collaboration

- ❑ Traditional Air cargo transshipment hubs in Asia are HK & Singapore whose free port status and IT infrastructure have resulted in efficient handling.
- ❑ Growth in air cargo is on average 2.5x GDP growth.
- ❑ With China's steady GDP growth at 8%, aviation experts say new cargo hubs could emerge Southern China in the next 3 – 5 years, reducing the dominance of neighboring airports in Singapore and Thailand.
- ❑ Possibly of FedEx Asian hub in New Baiyun Airport

Figure 12. Structure of WTO Members' Commitments by Sector, June 2000



Source: WTO (2001).