Hong Kong: A Logistics Hub
Part I

Logistics Services

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Logistics (traditional)

- Supplier - deliver materials
- Producer - produce product
- Consumer - consumes product

Logistics is:
physical movement of materials
from suppliers to producers,
and of products
from producers to consumers
Logistics (traditional)

Seller/Buyer Logistics:
Warehousing
Transportation

Supply Chain

Supplier → Manufacturer → Distributor → Retailer → Customer

Pipeline Logistics Distribution Logistics
Integrated Logistics Management

- Global logistics
- Co-ordination of supply, production, distribution, sales, and customer location
- Supply Chain Management
Global Inventory Management

• Just in time (JIT) for the raw materials
• Minimize inventory cost
  – at the stores
  – in transit
  – minimize travel time
• Inventory at the hub
• Easy consolidation
• Information intensive
Outsourcing

- Not company’s core competence
- Reliance on Suppliers
- Supplier’s TQM
- Supplier’s Process capability
- Supplier’s financial capability and Forex
- Supplier’s logistics: costs and reliability
- Joint Ventures
3rd Party Logistics Services

Supply Chain

by forwarders/integrators at the client sites
3RD Party Logistics Center

Supply Chain

Supplier > Manufacturer > Distributor > Retailer > Customer

3PL Center

Supplier > Manufacturer > Distributor > Retailer > Customer

Supply Chain

Image: 3rd party logistics center diagram showing the flow of supply chain from supplier to customer with an intermediate 3PL center.
3RD Party Logistics Park

Supply Chain

Supplier → Manufacturer → Distributor → Retailer → Customer

Customs, Banks, Insurance Companies, etc.

Supply Chain
4TH Party Logistics Center

Supply Chain

Supplier → Manufacturer → Distributor → Retailer → Customer

Customs, Banks, Insurance Companies, etc.

3PL

4PL Center

Supply Chain

 CENTER OF cyber logistics

http://sic.hkfb.cityu.hk
Agents of Cargo Logistics

- Shippers and Buyers
- Freight Forwarders
- Trucking and warehousing agents
- River Trade
- Seaport Terminal Operators
- Airport Terminal Operators
- Air-lines and Sea-liners
- Customs
- Air-express couriers (Integrators)
Modern Logistics Functions

• consolidation and deconsolidation
• packing and repacking,
• transportation and handling,
• customs clearing,
• carrier bookings,
• warehousing, and
• inventory control
The Cost of Business Logistics

<table>
<thead>
<tr>
<th>Year</th>
<th>Inventory Costs</th>
<th>Transport. Costs</th>
<th>Admin. Costs</th>
<th>Total US Logistics Costs</th>
<th>% of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>283</td>
<td>451</td>
<td>25</td>
<td>659</td>
<td>11.4</td>
</tr>
<tr>
<td>1995</td>
<td>302</td>
<td>441</td>
<td>30</td>
<td>773</td>
<td>10.4</td>
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<tr>
<td>2000</td>
<td>377</td>
<td>590</td>
<td>39</td>
<td>1006</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Source: Twelfth Annual State of Logistics Report, 2001

12% of the world’s GDP
China’s Logistics Cost is 20% of GDP
Modern logistics support systems

Included auxiliary functions:

- tracking of shipments,
- simple assembly,
- labeling,
- inspection,
- kitting, and
- merchandising.
Product vs. Product Competition
(in the old days)
Supply Chain vs. Supply Chain
Studying Supply Chain Structures

1. Physical flows
2. Information flows
3. Decisions
4. Financial arrangement
Here is the Profit
Results: 95% is make-to-order. Few companies build inventory
Ocean Cargo Logistics
Ocean Cargo Logistics

- Ship liners
- Terminal Operators
- Forwarders
- Truckers
- Customs
- Warehouse/Logistics Providers
- Shippers
Delivery & Security Checks
Container Terminal Operations

<table>
<thead>
<tr>
<th>KPI</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quay Crane Rate (move/hour)</td>
<td>33</td>
</tr>
<tr>
<td>Vessel Operation Rate (move/hour)</td>
<td>117</td>
</tr>
<tr>
<td>Truck Turnaround Time (mins)</td>
<td>37</td>
</tr>
</tbody>
</table>
Ranking of Container Ports

Singapore
Hong Kong
Shanghai
Shenzhen
Busan
Kaohsiung
Rotterdam
Hamburg
Dubai
Los Angeles

0,000 TEUs
IT & Logistics
Integrators
Network Integration and Information Technology

- Information Integration
- Physical Integration
E-commerce

Aviation Logistics will evolve around E-commerce

• E-commerce
  Aviation Logistics

• Aviation Logistics
  E-commerce
Existing IT Infrastructure for Hong Kong Air Cargo Industry

Myths:
- Plenty of software systems available for the players
- Internet-enabled online platforms and services are widely available
Carriers
Terminal Operators
Customs
Forwarders
Sellers
Banks
Buyers
Agents
Problems with the Existing Logistics IT Infrastructure

- Systems don’t talk to each other
- Heavy burden on freight forwarders
Air Cargo Community Network

Integrators

Warehouse/Distributors

Tradelink

E-commerce Host System

Internet based Network

Forwarders

LINE, ESCM, SAP

Traxon

Carriers

Sellers

COSAC

Terminal Operators

ACCs

Customs

Tradelink

Banks

Integrators

Buyers

Warehouse/Distributors

Community Web Server

Information Repository

Air Cargo Community Network

Center of Cyber Logistics

http://cd.baf.cuhk.edu.hk
A Three-tier Community Network

- e-business
- Management Platform
- Exchange Platform
- Information Exchange Hub
- e-commerce
Different Levels of e-Business

- **Stand-alone**
- **Prearranged partners**
- **Online partnering**
Digital Trade & Transportation Network (DTTN) in Hong Kong

A Platform that

• Provides interconnection among industry stakeholders

• Facilitate information flow

• Supports business process interconnect
DTTN in Hong Kong

Six core services for nine Communities

Value added services

Core messaging infrastructure

Standards and protocols

Source: www.logisticshk.gov.hk/logisticshk/about/index.html
DTTN Example
(Purchase to Delivery)

Buyer 1
1. PO (X 12)
4. Shipment Status (X 12)

Buyer 2
4. Master BL, Shipment Status (EDIFACT)
6. Shipment Status (EDIFACT)

Carriers
3. Master SO (EDIFACT)
4. Master BL, Shipment Status (EDIFACT)

App. Service Provider 1
1. PO (Web)
3. Master SO (EDIFACT)
4. Master BL, Shipment Status (EDIFACT)
6. Shipment Status (EDIFACT)

App. Service Provider 2
2. SO, CI, PL (Web)
5. BL (Web)
6. Shipment Status (Web Services/XML)

App. Service Provider 3
3. Master SO (EDIFACT)
4. Master BL, Shipment Status (EDIFACT)

Forwarders
1. PO (Web)
2. SO, CI, PL (EDIFACT)

Sellers
1. PO (Web)
2. SO, CI, PL (Web)
5. BL (Web)

Physical Delivery

SO - shipping order
CI - commercial invoice
PL - packing list
BL - bill of lading