The Crossroads: Global Trade and Technology
Global Supply Chain Economists™

Industry Research

Cost and Pricing Analysis

Strategy Consulting

ALCOA
IRON MOUNTAIN
KCR
EnergyEast
CSX
APL
Merlin Gerin
Georgia-Pacific
JAXPORT
UPS
Microsoft
FedEx
BASF
Cisco Systems
DU PONT
World Bank
SAP
The Coca-Cola Company
SAP
Canadian Pacific
D’Logistics AG
Innospot
Saudi Aramco
Sneema
Groupe SAFRAN

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Summary

• **Data explosion**
  • Explosion of IT platforms and concepts
  • Data changing our world
  • Information = value
  • IT sustaining global economic growth

• **Global trade**
  • Beyond outsourcing
  • Asian import boom
  • China: the new empire
  • Asian traffic growth compounding

• **The IT imperative**
  • To handle trade
  • To reduce cost of long supply chains
  • Operating a global IT network
  • Investing in the IT infrastructure

• **What it means for you**
  • One-time opportunity
  • Plan ahead, profit from the opportunity
Agenda

- Data Explosion
- Global Trade
- The IT Imperative
- What it Means for You
Data Explosion
Explosion of IT Platforms and Concepts

ASCII
B2B
B2C
BOI
CAD
CIO
CPC
CPP
CTO
CTR
EDI
HTM/HTML
ISP
ISS
KM
MIME
MRP
POP
POS
Point Of Sale
ROI
XBRL

Chat
Client
DNS
Domain
FTP
Gateway
Hypertext
Internet
MultiMedia
OPAC
Packet
Port
PPP
Protocol
Router
Server
Signature
SPAM
TCP
Telnet
Trojan Horse
WWW

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Boston Strategies
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Data changing our world

- Innovation from outside
- Collaborative selling
- Supply networks
- Standardized subassemblies

“We’re moving towards a world where operations are network-centric. There used to be vertical silos, [but in the future we’ll] have horizontal businesses that can integrate with each other.”
- Stephen Miles, MIT
Information = value

Market Capitalization by Type of Asset

- Information Assets
- Other Tangible Assets
- Property, Plant & Equipment

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IT sustaining global economic growth

Growth With and Without Information Technology

Source: Economist Intelligence Unit, Boston Logistics Group
Global Trade
Beyond Outsourcing

Increasing the amount of external spend

- Traditional outsourcing
  - Call Centers
  - Logistics
  - Manufacturing
  - I.T.

- Emerging off-shoring models
  - Research & Development
  - Diagnostic testing
  - Lab services
  - Procurement

“This transforms Purchasing’s job from transacting orders to running virtual factories”
- Barbara Kux, CPO Royal Philips

BPO in India

Sources: EIU, Nasscom
Asian Import Boom

U.S. Imports

$US B


△=500%
1980-2005
7% CAGR
△=40%
2005-2010
7% CAGR

Sources: EIU WorldData
China: the New Empire

Share of World Consumption

Share of World Production

Source: Economist Intelligence Unit
Asian Traffic Growth Compounding

Sales Forecast by Geographic Area

Assumes current growth rates
Source: HSBC, Datamonitor, Baird

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The IT Imperative
To Handle Trade

- Launching More New Products Faster
  - Launching New Products More Frequently
  - Launching New Products Faster
- Delivering Better Service
  - Customizing product and service delivery
- Increasing Margins: Rapid, Flexible Response
  - Rapid Response
  - Postponement
  - Dynamic Pricing
To Reduce Cost of Long Supply Chains

- Lean manufacturing
- Lean inventory management
- Supplier partnering
- Cross-docking and fleet rationalization
So UPS Operates a Global IT Network

Technology Profile of UPS

- DIADS (Delivery Information Acquisition Device): 96,000 in daily use
- UPS's Global Telecommunications Network Sites: 2,700
- LAN Workstations: 149,000
- Servers: 8,700
- Number of Technology Employees: 4,700
- Data Centers: Mahwah, NJ and Atlanta, GA
- Mainframes: 15
- Mainframe Capacity (Millions instructions per second, MIPS): 37,399
- Terabytes of Storage (Direct Access Storage Device, DASD): 471
- Mid-range Computers: 2,342
And Others Are Investing in IT

- Web (FedEx)
  - Package tracking
  - Cost calculation
  - Customs
  - Payment
  - Powerpad: collects data, Bluetooth
- Hub/sorting (UPS)
  - Package Flow Technology
  - $600 million,
  - 61% complete at 2005 year-end
  - $20 billion in IT over 2 decades
  - Data on 97% of packages
  - Tech equipment investments of $362 mil, total tech equip value, $1,639
- Driver/dispatching (DP)
  - “IT Demand Units” optimize application landscape for each division
  - Mail and Express invested in technical equipment and the expansion of IT.
  - Network infrastructure in Europe and the United States
  - Centrally located data centers in all time zones
  - IT risk management system to guard against natural disasters
  - Will replace hand scanners in 30,000 or more districts
- Customer interface (TNT)
  - SAP integrated solutions
  - Proprietary customer interface technology
What it Means for You
One-Time Opportunity

- Investors
  - Logistics sector
- Manufacturers and service industries
  - Asian sourcing and outsourcing
- IT vendors: transportation=communication
  - Mobile Solutions
  - Advanced IP Telephony
  - Communications Equipment
  - VPN Security
  - Fast Voice Technology
  - Interactive Voice Response
  - Call Center Hardware and Software
  - Training
  - Converged Infrastructure
  - Intelligent System and Network Management
Plan Ahead, Profit from the Opportunity

- Speed benefits
  - Faster NPD cycle time (Hayes & Wheelwright)
- Scale benefits
  - Bigger and bigger
- Winner takes all
  - Losers get bought or sold
- Many mega-trends are in fact predictable long in advance (demographics, globalization), but most are slow to adapt. Be on top by thinking ahead.
Global Supply Chain Economists™

Boston Strategies International helps supply chain executives make critical supply chain decisions that involve investment and risk by forecasting the evolution of supply markets and technologies. Our mission is to help our clients develop globally competitive supply networks that maximize Supply Chain Value™. Our products and services include:

- **Industry Research** that helps investors and policy makers identify emerging issues that affect their supply chains, and quantify the impact that they will have.
- **Cost and Pricing Analysis** that helps financial and operational managers plan and budget by providing benchmark, best practice, and forecast data tailored to their companies' supply chains.
- **Strategy Consulting** that helps supply chain leaders make high-stakes decisions related to mergers & acquisitions, market entry, capital investments, outsourcing, off-shoring, and make-or-buy.

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