

eBusiness in the Forest Products Industry Opportunities and Realities

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Forestry On The Grow Conference and Expo



What am I Going to Talk About?

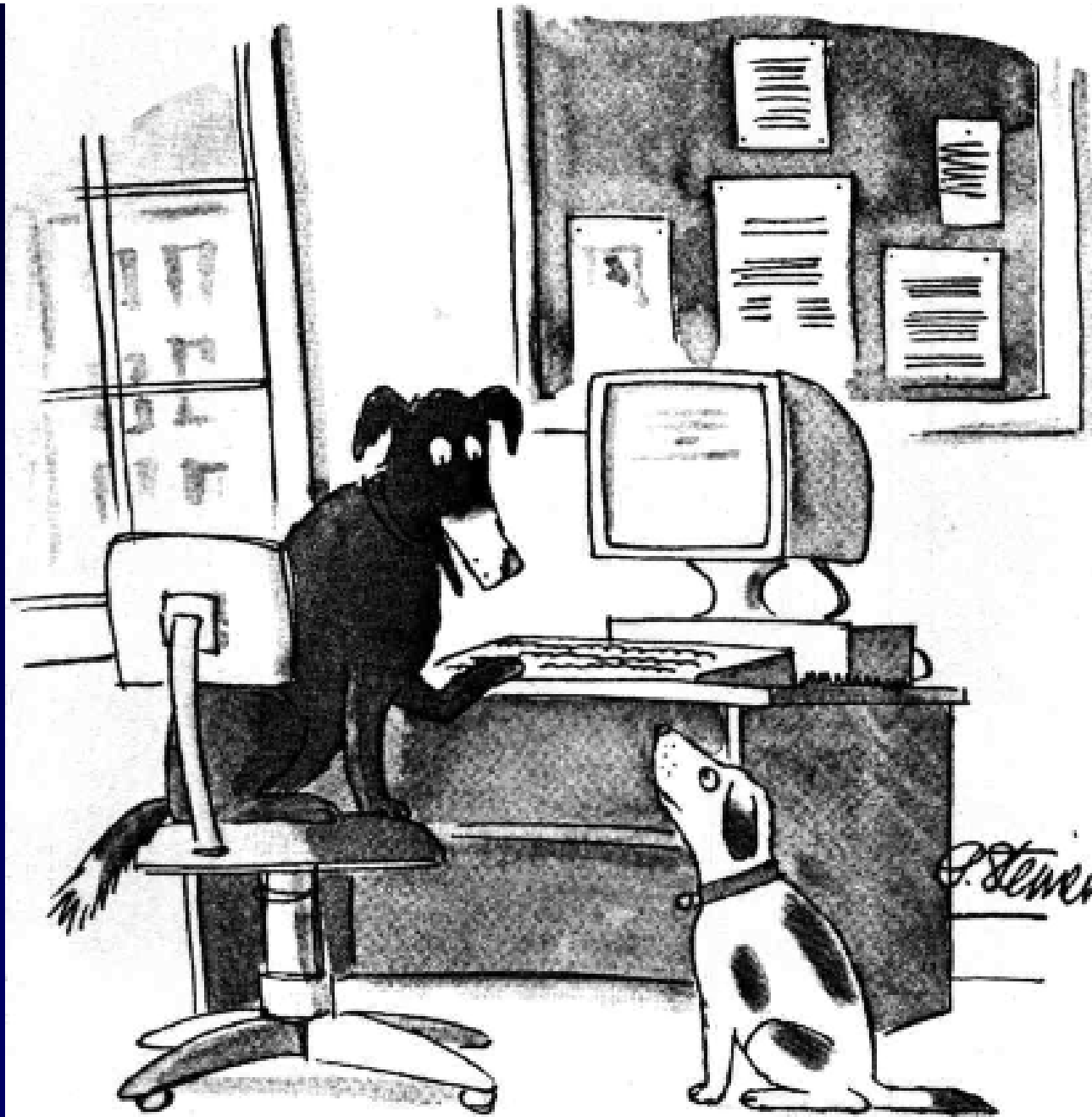
- Internet Structures
- eBusiness and eCommerce
- eBusiness in the Forest Sector
- How Companies Can Get Involved
- Some Final Thoughts

I CAN DO
WITHOUT SEX...
OR INTERNET...

...BUT NOT
BOTH AT THE
SAME TIME.



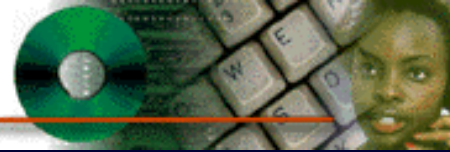
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"On the Internet, nobody knows you're a dog."



Digital Africa



Pacific Islands

Internet Resources



Tokyo PC
Users Group



CHINA LINKS

中國文化網

US ISRAEL
eBusiness Exchange

¿Qué quiere
usted
que sea la
Internet?



Hamburg
newmedia.
net

ZDNetAsia THE INTERNET &
TECHNOLOGY HUB OF ASIA



Top 10 Countries-Internet Users (2006)

Country	Users (Million)	Percent of Population	Percent of World Users
United States	203.6	68.7%	20.0%
China	103.0	7.9%	10.1%
Japan	78.1	60.9%	7.7%
Germany	47.1	57.0%	4.6%
India	39.2	3.6%	3.9%
United Kingdom	37.8	63.1%	3.7%
South Korea	32.6	65.2%	3.2%
Italy	28.9	49.3%	2.8%
France	25.6	42.3%	2.5%
Russia	22.3	15.5%	2.2%
Top 10 Countries	618.2		60.7%

Broad Internet Applications

- Information source
- eCommunications (inter/intra)
- eBusiness (operations)
- Sales and purchases (eCommerce)



e-mail





eBusiness & eCommerce



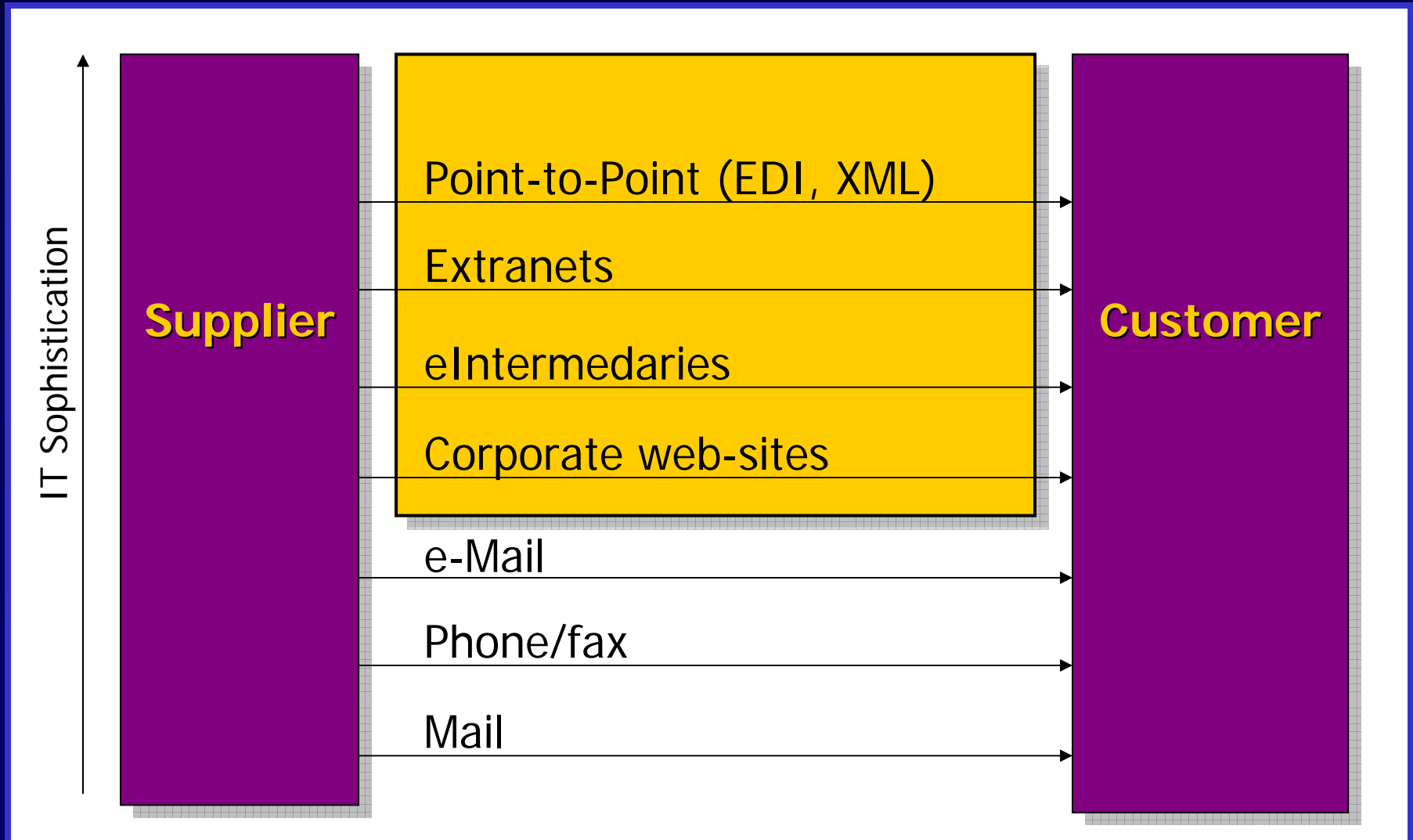
What is eBusiness?

- **eBusiness** is the application of Internet-based technologies for conducting business.
- It includes **eCommerce**, the actual transaction activities as well as other **business oriented applications** such as logistics, order entry, information sharing and transmission of information between exchange partners.

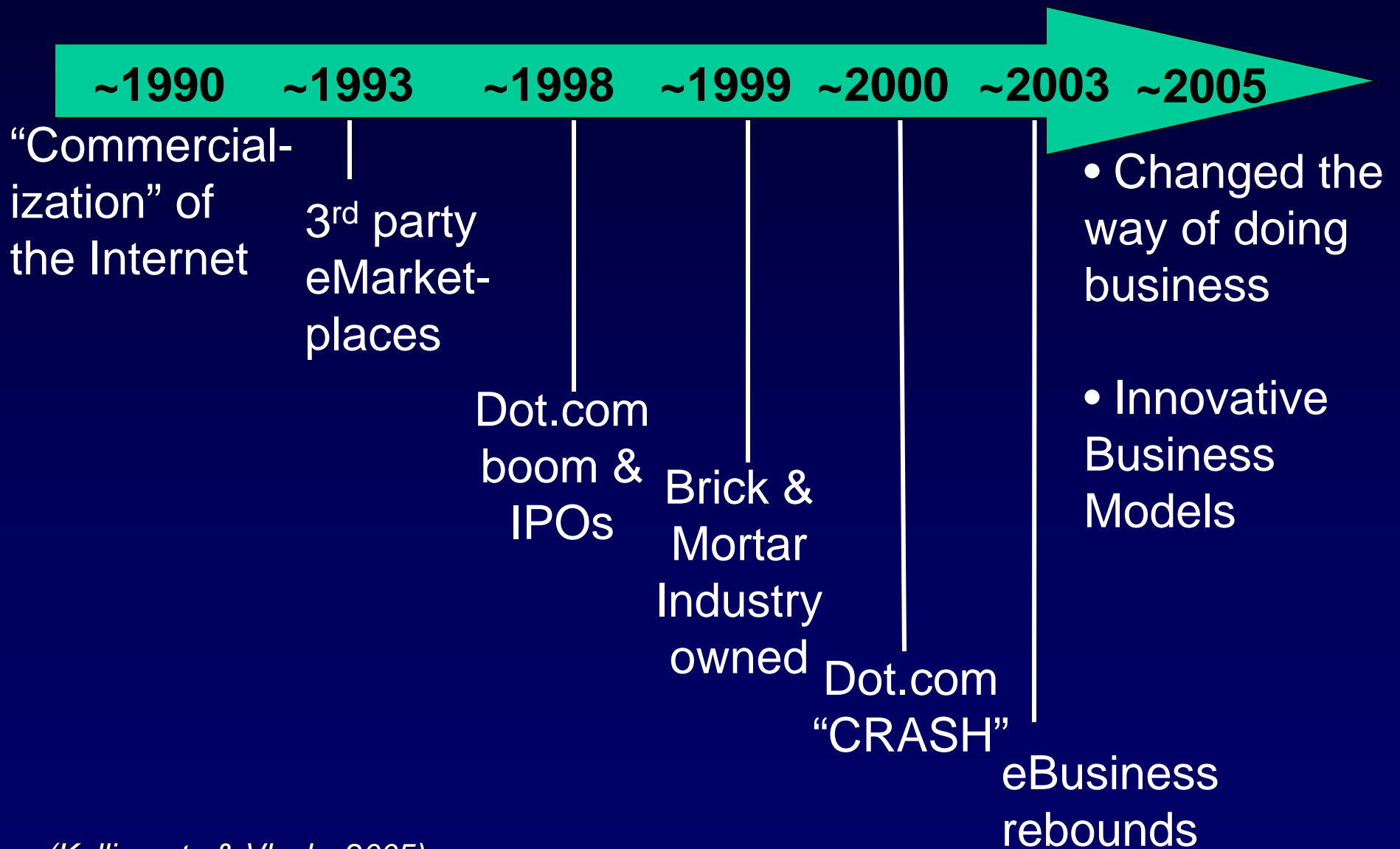
What is eBusiness?

- First and foremost about business, not technology.
- Technology facilitates eBusiness.
- Challenge is managing the changes in business strategies and internal corporate processes.
- Can include intra-company networks (intranets) and Internet linkages with customers or suppliers (extranets).

eBusiness Technologies/Applications

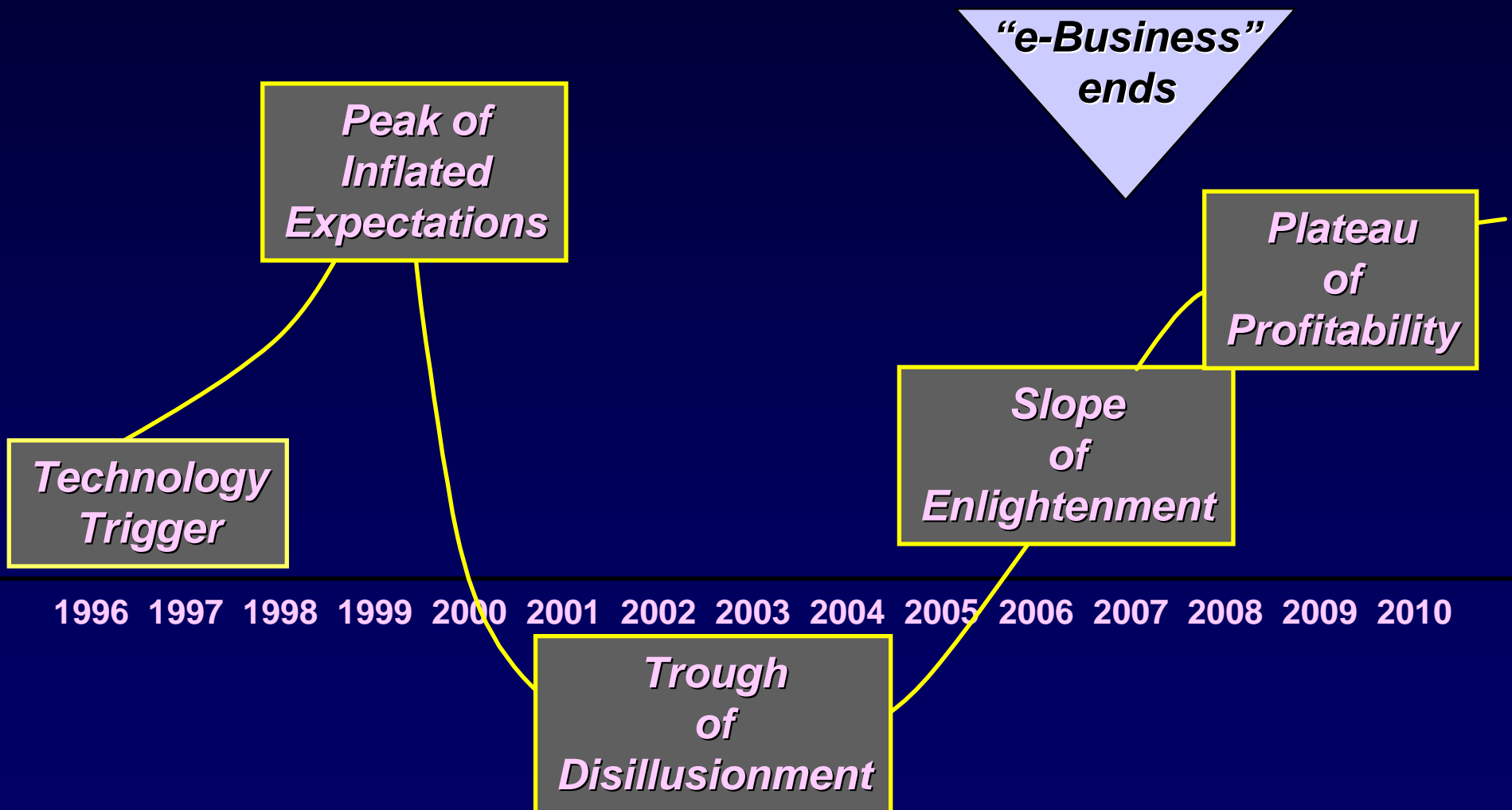


eBusiness Timeline



(Kallioranta & Vlosky 2005)

The Life Cycle of eBusiness



(Forrester Group)

eCommerce Spending

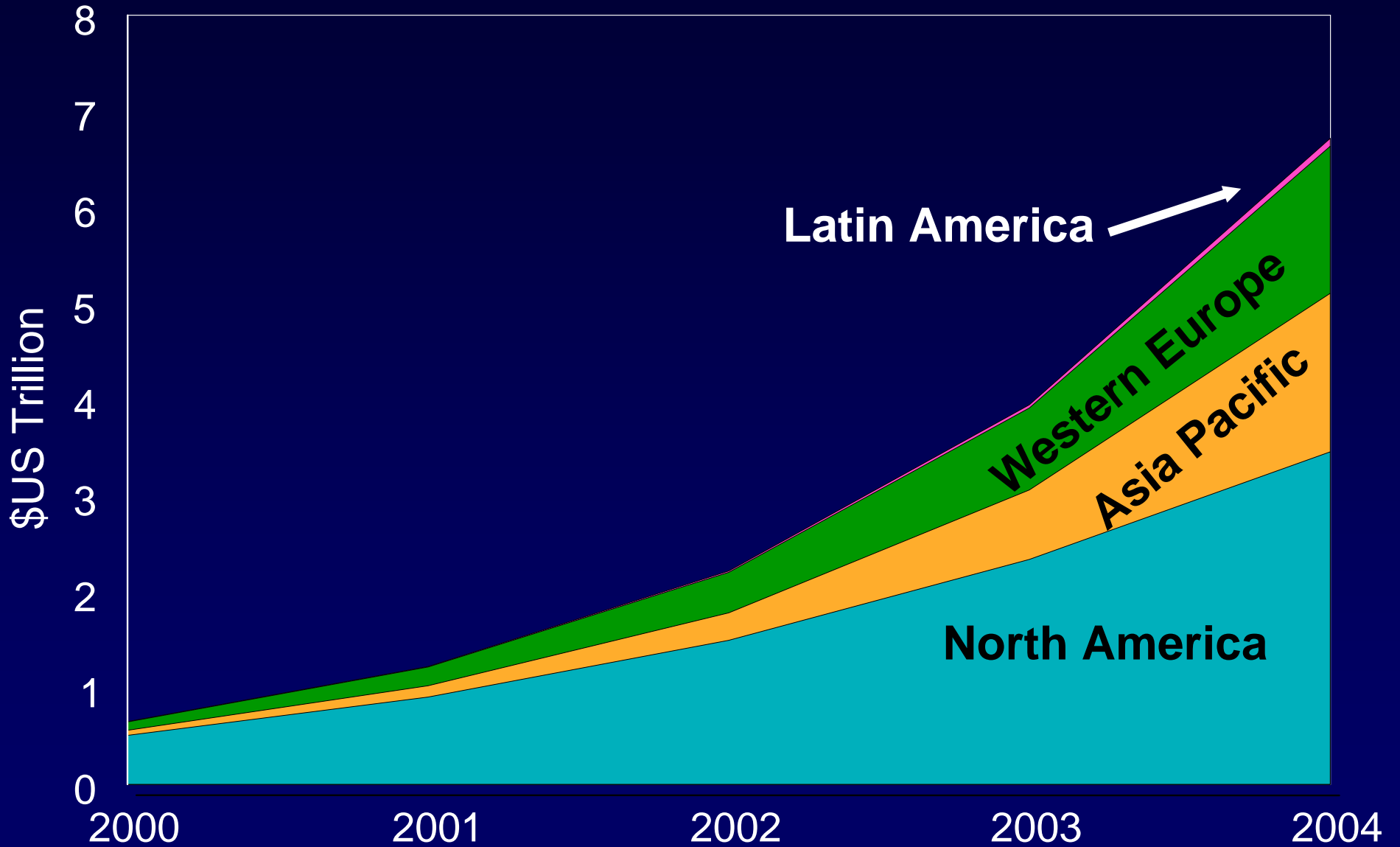
- Business to Business (B2B) is 80% of total eCommerce
- 2% of B2B transactions conducted on-line
- Estimated worldwide B2B eCommerce:

	2003	2004
eMarketer	\$1.4	\$2.4
Goldman Sachs	\$2.1	\$3.2
Forrester Research	\$3.7	\$6.3

\$Trillion US

ALL AGREE ON CONTINUED GROWTH !

Worldwide eCommerce Growth



(Forrester Group, 2005)

Important Market Forces Affecting Business

**eBusiness Can Reduce
These Pressures**



- Pressure to reduce overall supply chain costs
- Pressure to compress total time to market/
cycle time
- Pressure to collaborate more effectively
with trading partners
- Unstable/unpredictable demand for products
/services
- Movement toward a more global marketplace

eBusiness Can Impact All Company Functions

Back Office	Market Research
Human Resource Management	Finance
Technology Development	Distribution
Procurement	Information Systems

**Pre-Sale
Activities**

**Inbound
Materials
Logistics**

Operations

**Outbound
Logistics**

**Marketing
and
Sales**

**Post-Sale
Service**

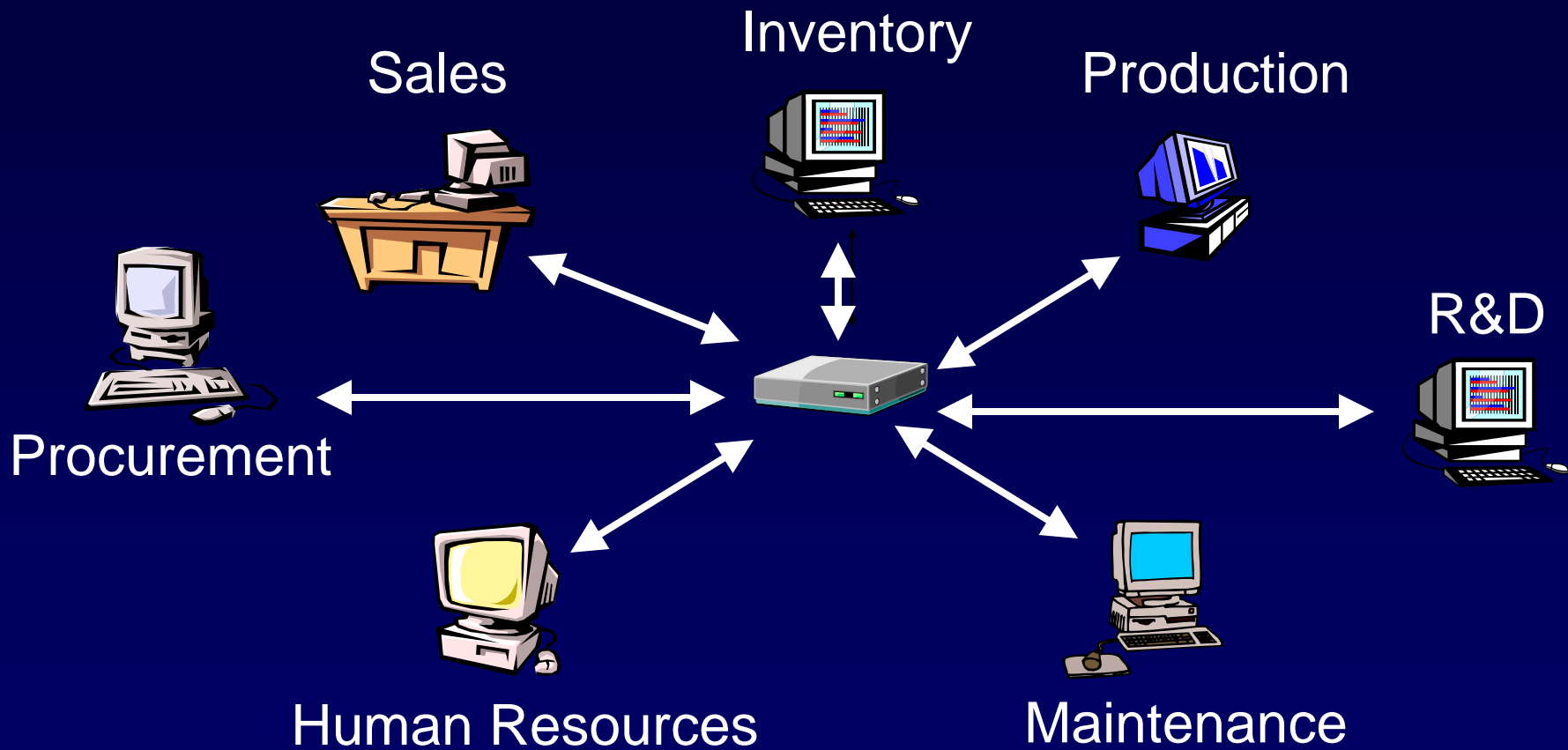
Key eBusiness Benefits

- Lower inventory levels
- Reduced uncertainty
- Enhanced response to customer demands
- Shortened product-to-market cycles
- Optimized use of materials and processes

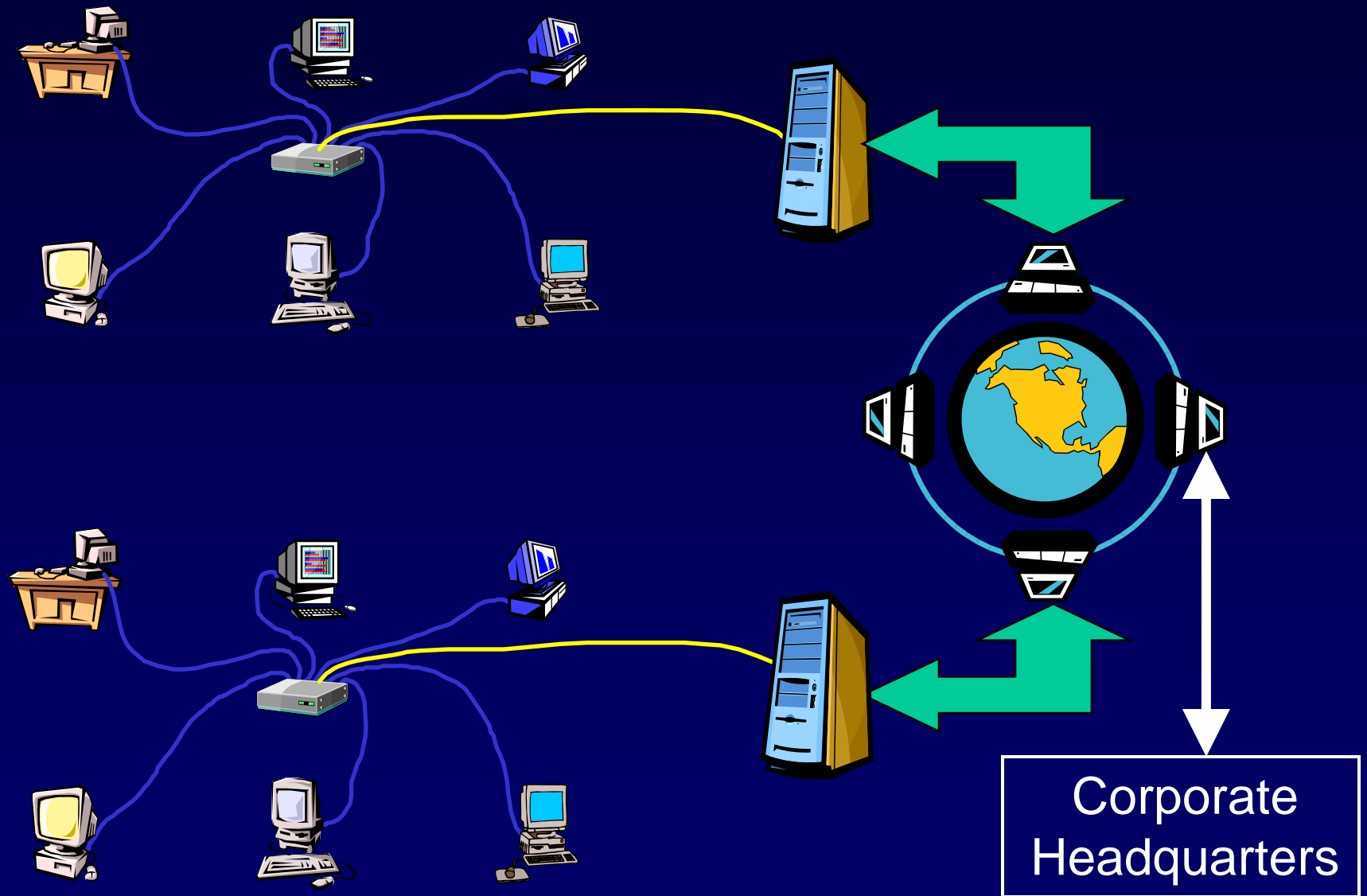
Intranets: Internalizing The Internet



An Intranet



Intranet-Internet Connectivity



Intranets can host...

- product price lists
- product specifications
- customer databases
- inventory records
- supplier databases
- employee databases
- employee newsletters
- performance records
- maintenance records
- marketing schedules

Intranets can facilitate...

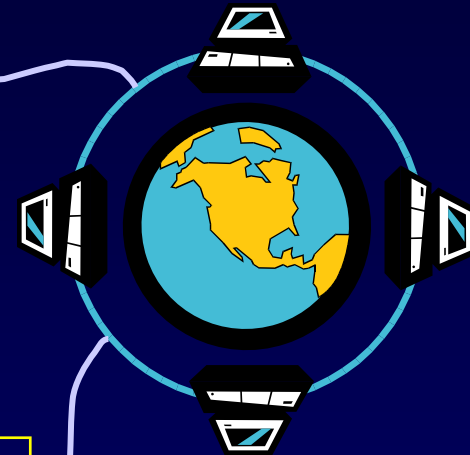
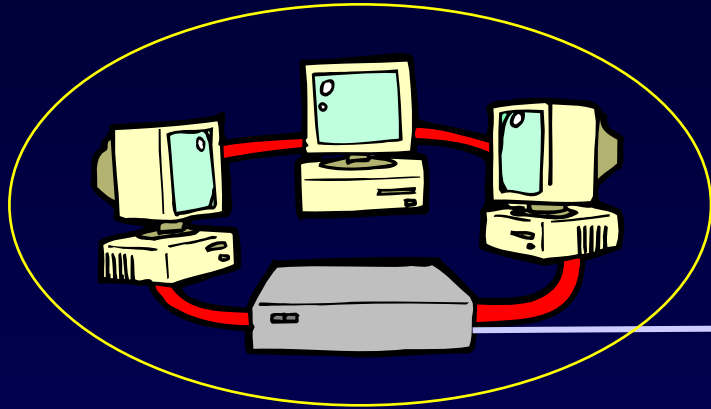
- production scheduling
- sales coordination
- project management
- regulatory compliance
- ISO 9000 qualification
- employee training
- management decision making

Extranets: Connecting Exchange Partners

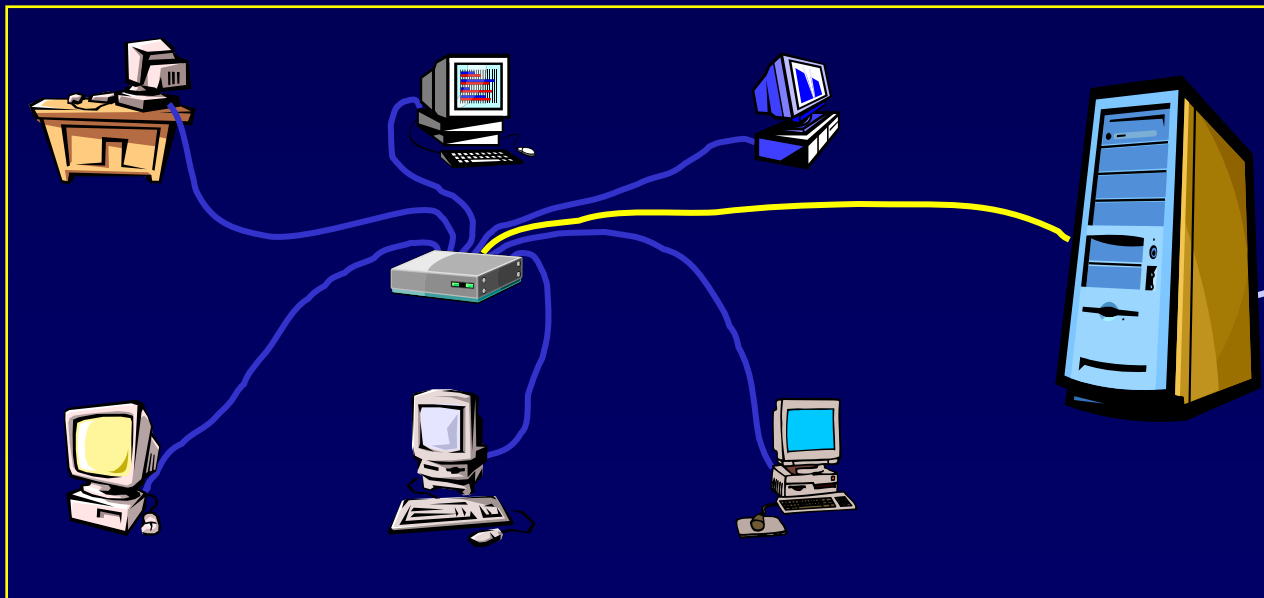


An Extranet (letting partners in... *selectively!*)

Your Company



Your Customer or Supplier



Extranets facilitate...

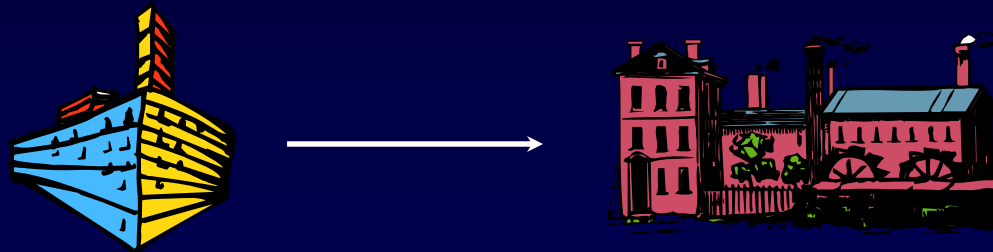
- collaboration between companies
- training and support
- communication with suppliers & customers
- data Interchange
- production/purchasing coordination
- sales and purchases

	The Internet	Intranets	Extranets
What is it?	The information superhighway.	The use of Internet technology within a company or organization.	A network that uses the Internet to link company Intranets in order to enhance business-to-business relationships.
Access	Open	Private	By agreement only
Users	Public	Organization members	Business partners
Information	General	Proprietary	Selective

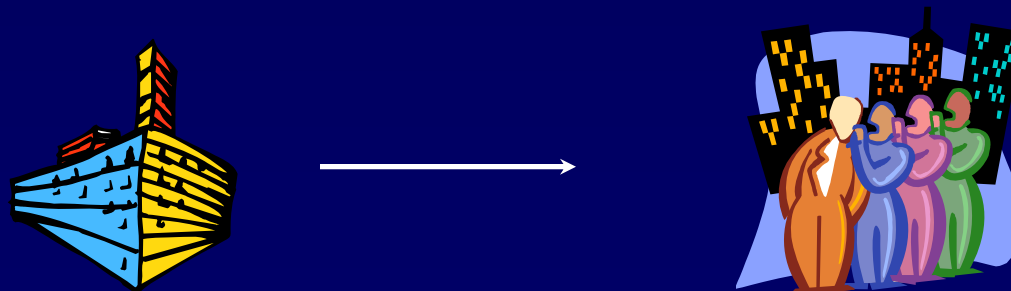
eBusiness and the U.S. Forest Sector



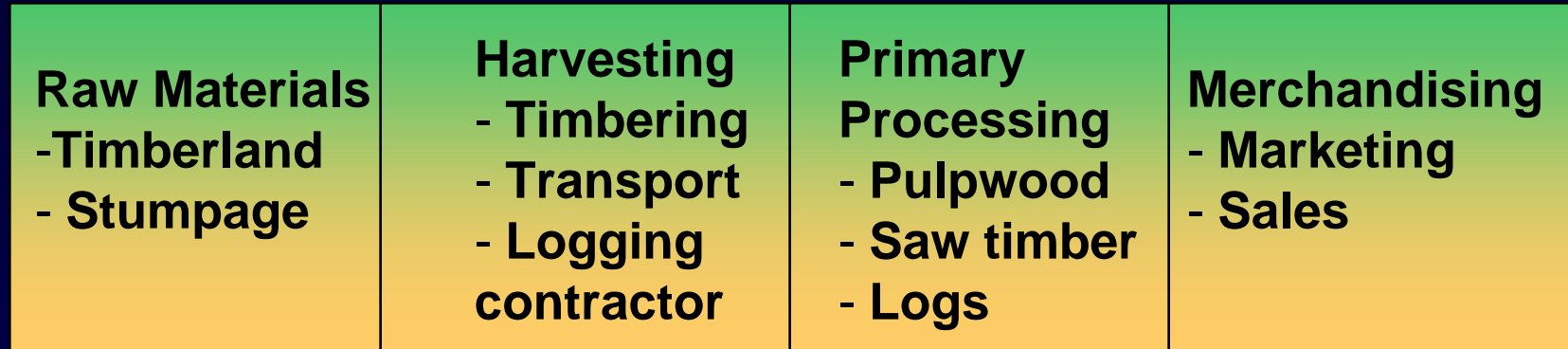
Forest-Based Industries are generally Business-to-Business (B2B)



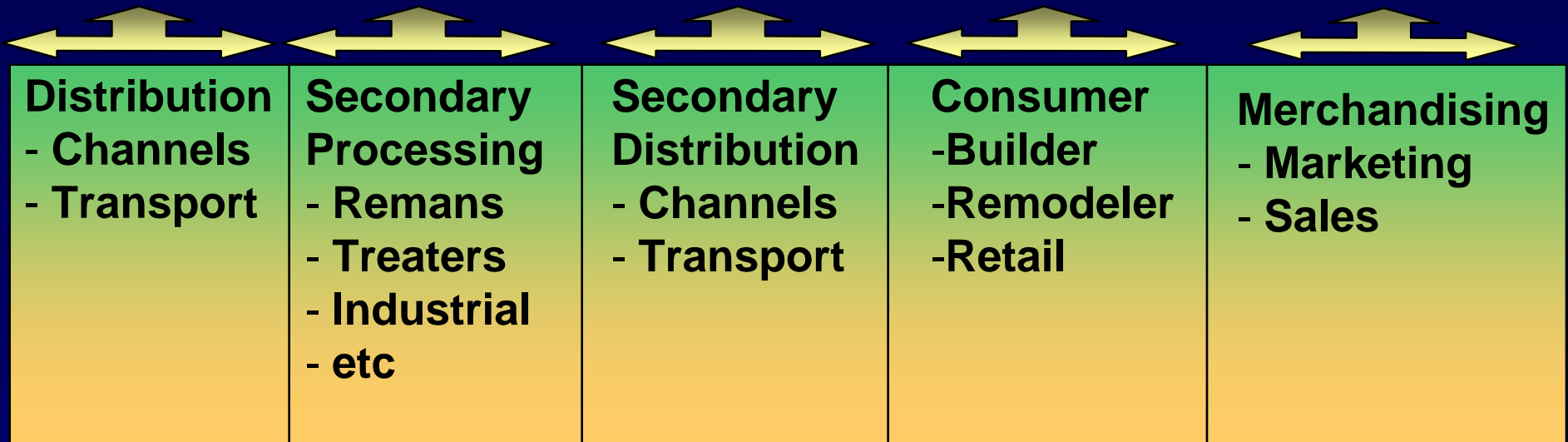
As opposed to Business-to-Consumer (B2C)



A Typical Forest Products Supply/Value Chain



Information Interfaces

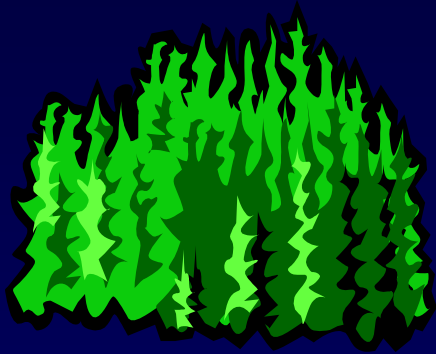


Even From the Forest to the Mill

Timber Owner

Forester/Loggers

Timber Buyer

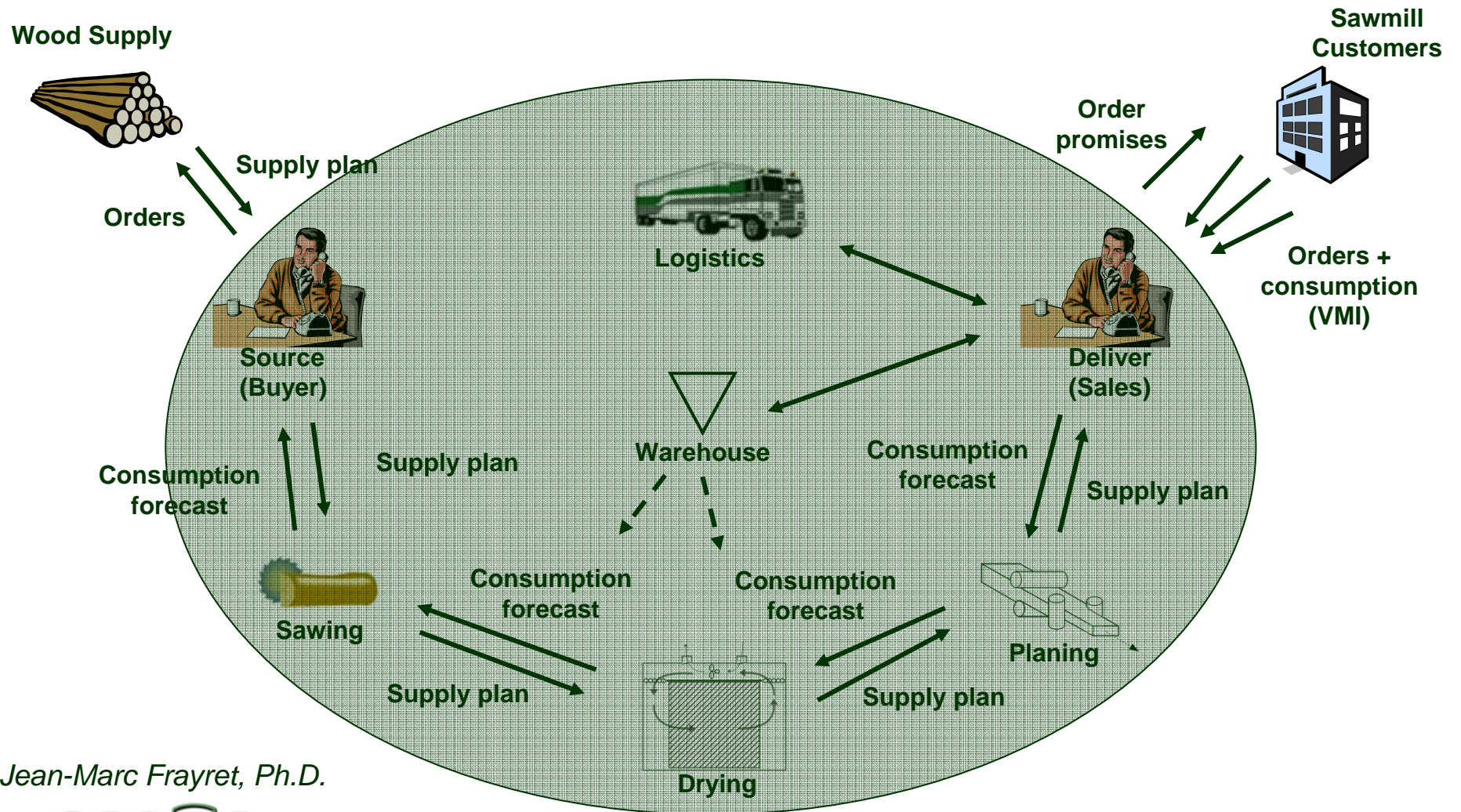


- Access to markets
- Timberland management

- Inventory management
- Consistent supply
- Search costs

(Forest One 2000)

Possible eLinkages in the Supply Chain



Jean-Marc Frayret, Ph.D.

FOR@C

Global Nature of the Industry



Where is the U.S. Forest Products Industry in eBusiness Adoption?

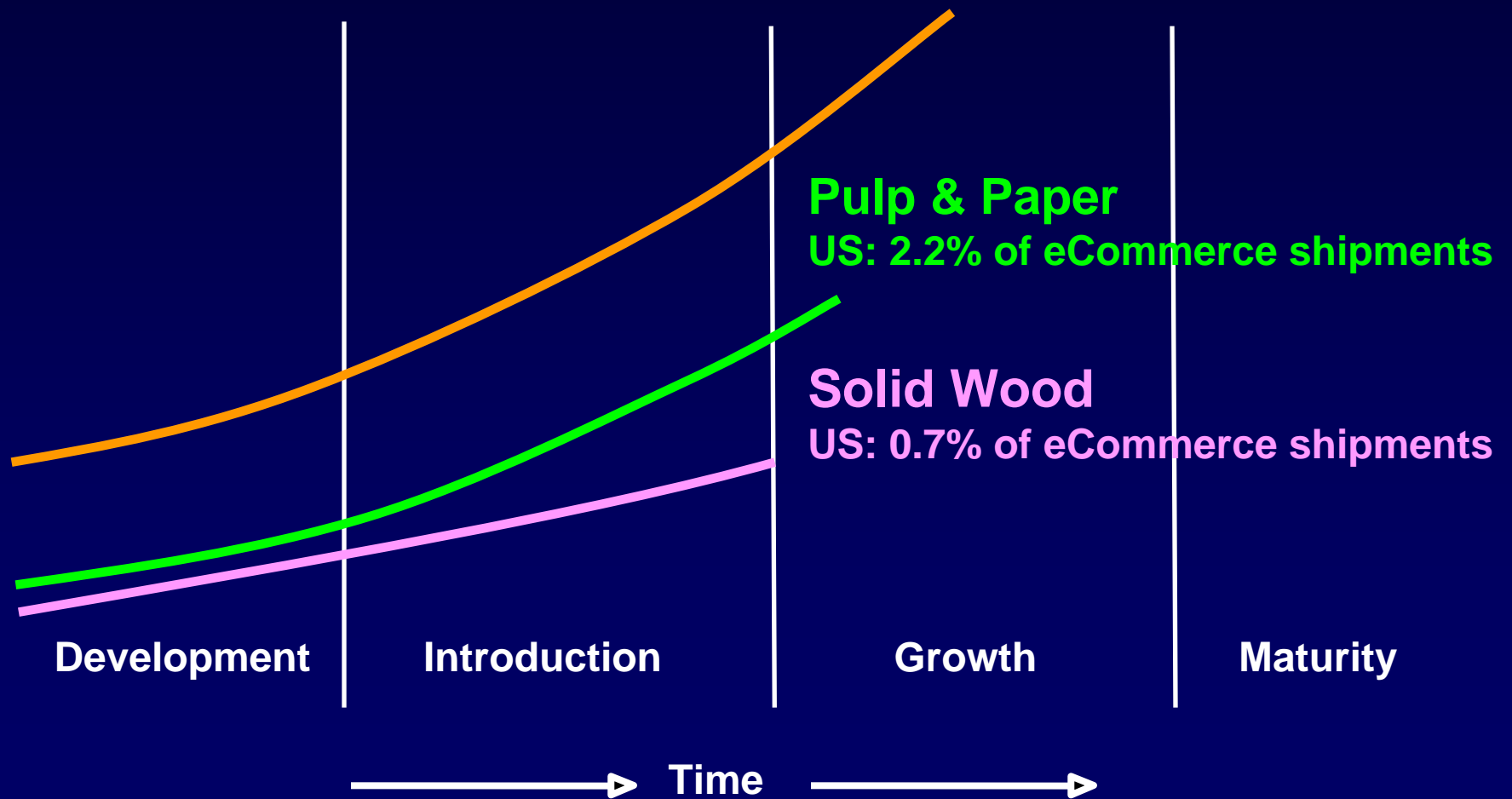
eCommerce Rank (%)	Sector	Ship. Value (\$ Billion)	(% of Shipments)
1	Transportation Eq.	\$639	46%



14	Paper	\$166	12%
LAST	Wood Products	\$94	6%

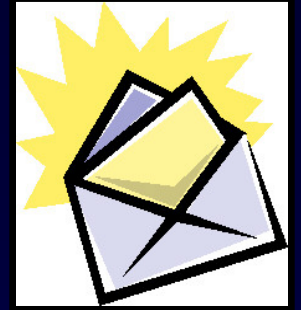
Forest Industry eBusiness

Manufacturing Industry in General
US: eCommerce: 21% of total shipments



(U.S. Census Bureau 2004; Vlosky 2000)

NEW Study-Methodology



Industry Sectors Sampled:

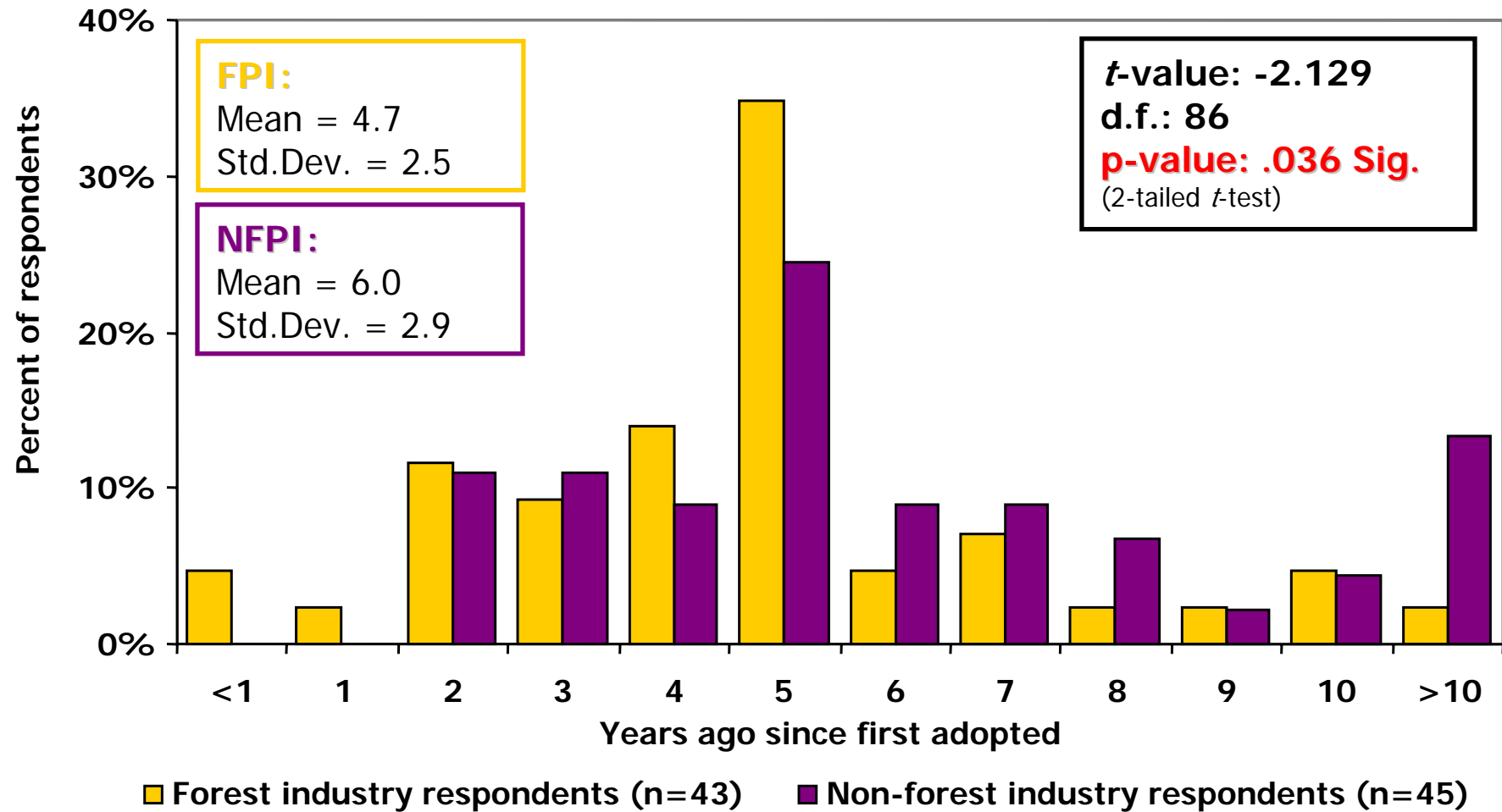
Forest Products Industry (FPI)

- 250 wood products manufacturing (SIC 24)
- 250 paper products manufacturing (SIC 26)

Non-Forest Products Industry (NFPI)

- 250 chemical manufacturing (SIC 28)
- 250 food manufacturing (SIC 20)

When eBusiness Was Adopted



Applications Adopted

	Application adopted by % of respondents			
	Website ^a	Extranet ^a	eIntermediary ^a	P2P ^a
Total (n=106)	85%	43%	15%	35%
FPI (n=52)	81%	31%	15%	21%
NFPI (n=54)	89%	54%	15%	48%
Pearson Chi-Square	1.363	5.703	.007	8.496
d.f.	1	1	1	1
Significance ⁺	.243	.017*	.935	.004**

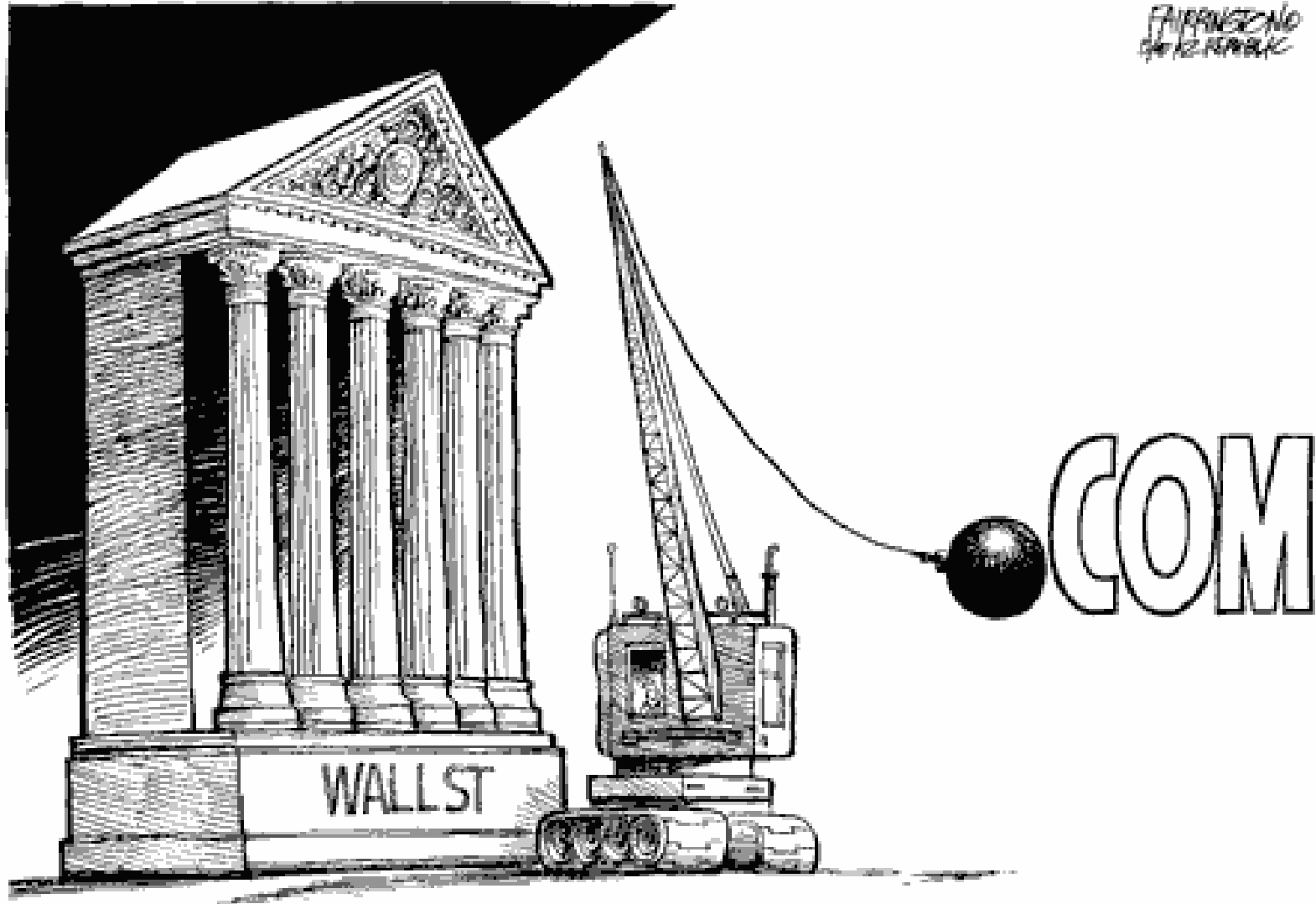
* Significant at $\alpha=0.05$; ** Significant at $\alpha=0.01$;

⁺ Assymp. Sig. (2-sided); ^a 0 cells (0%) have expected count less than 5

Why?

- Reactive rather than proactive
- Not inclined to be lead adopter; generally, a wait - and -see posture
- Production-oriented culture
- Lower investment in IT research and development
- Not convinced eBusiness is relevant
- Lack of trained information technology staff
- Lack of application tools

FAIRPLAY
GIBT ES NICHT



Tradition

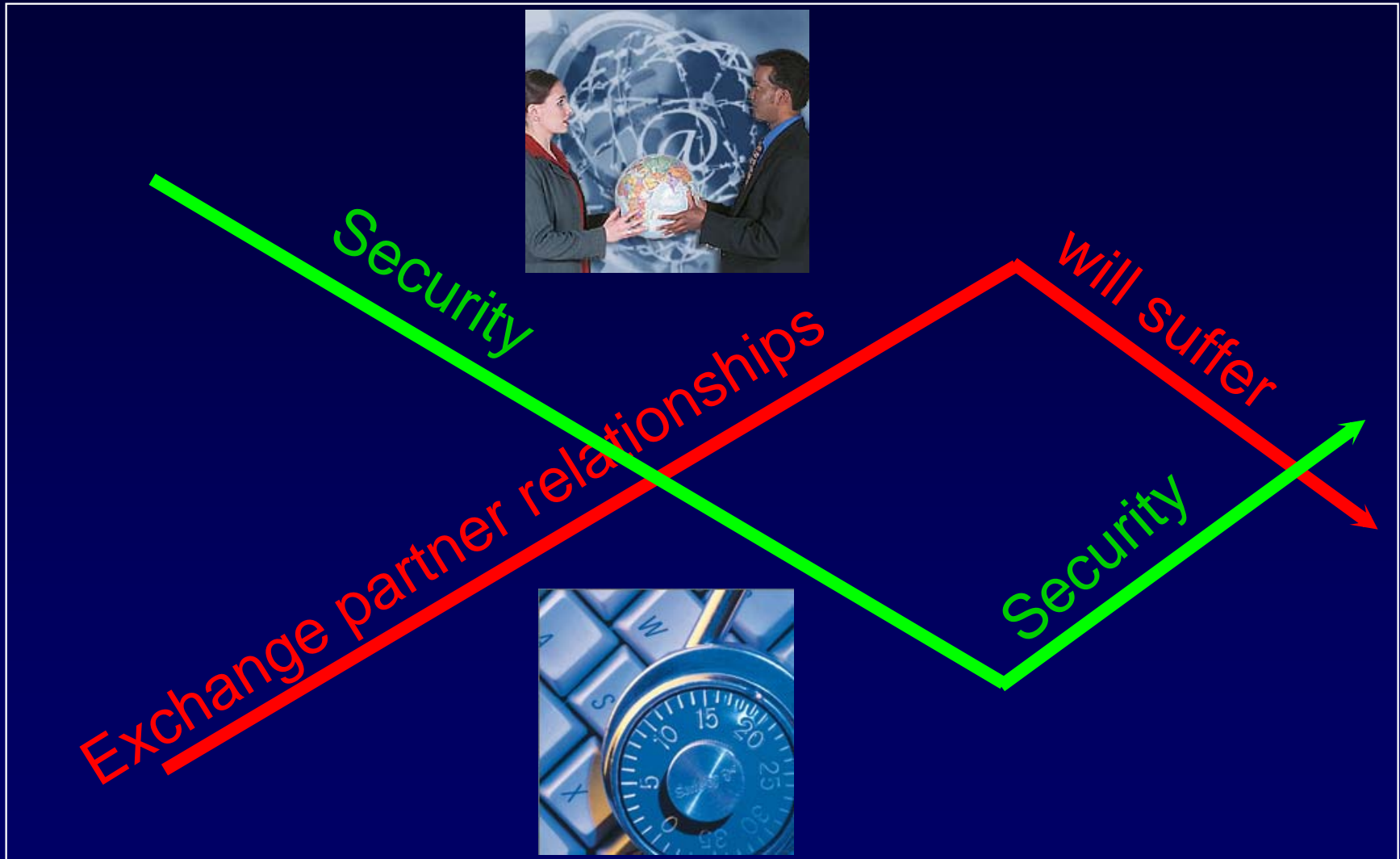


ANXIETIES



#1 Concern about Using the Internet

U.S. Wood Products Industry



1995

2005

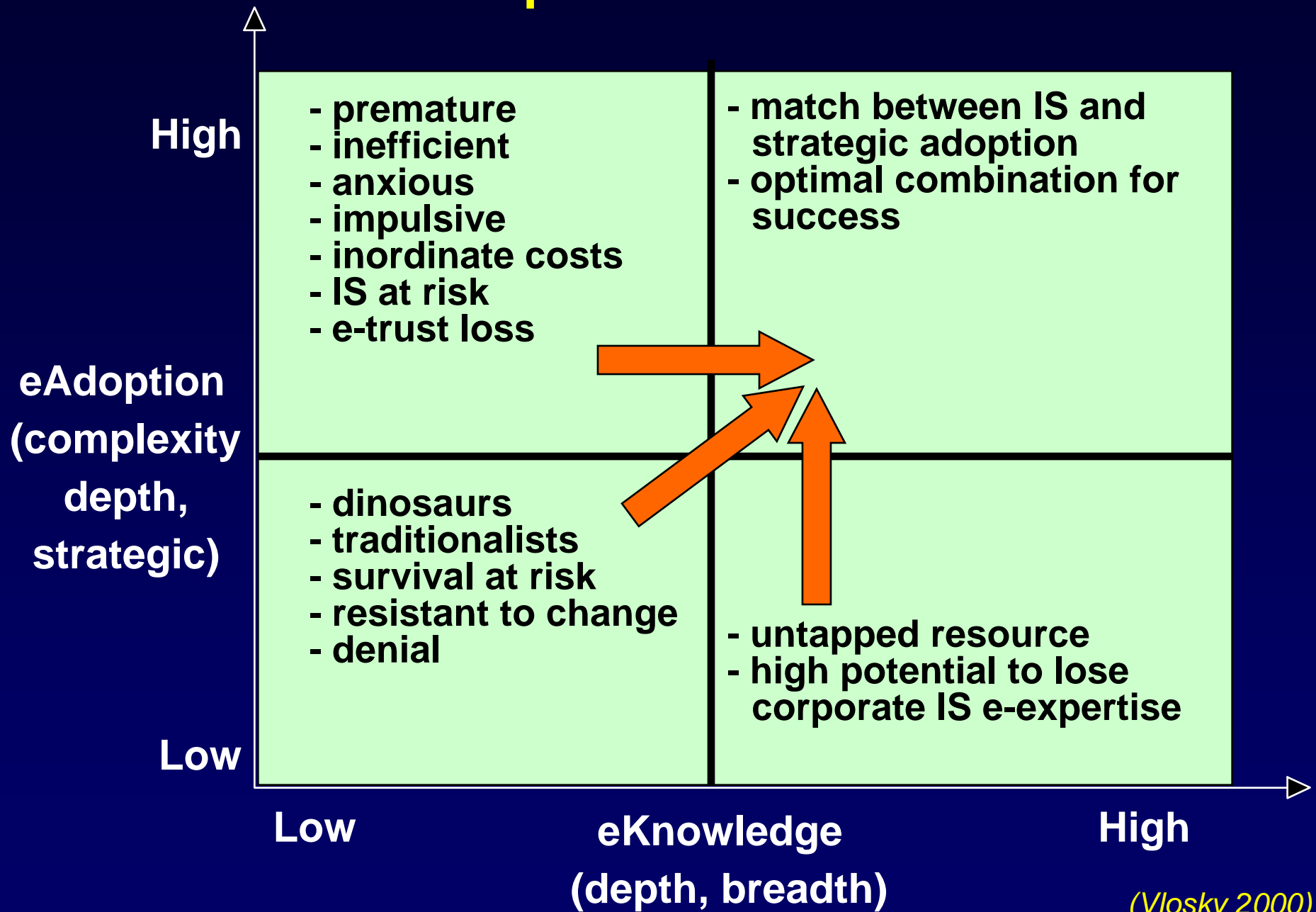
Impediments to Implementing eBusiness In the Forest Products Industry

- Lack of skilled IT staff
- Lack of an understanding of benefits
- Expense of development
- Expense of hardware and software

Factors Contributing to Successful Internet Implementation in the Forest Products Industry

- 1) User involvement
- 2) Development of trust in using technology
- 3) Management support
- 4) User training

eBusiness Implementation/Success Matrix



(Vlosky 2000)

Options for Involvement

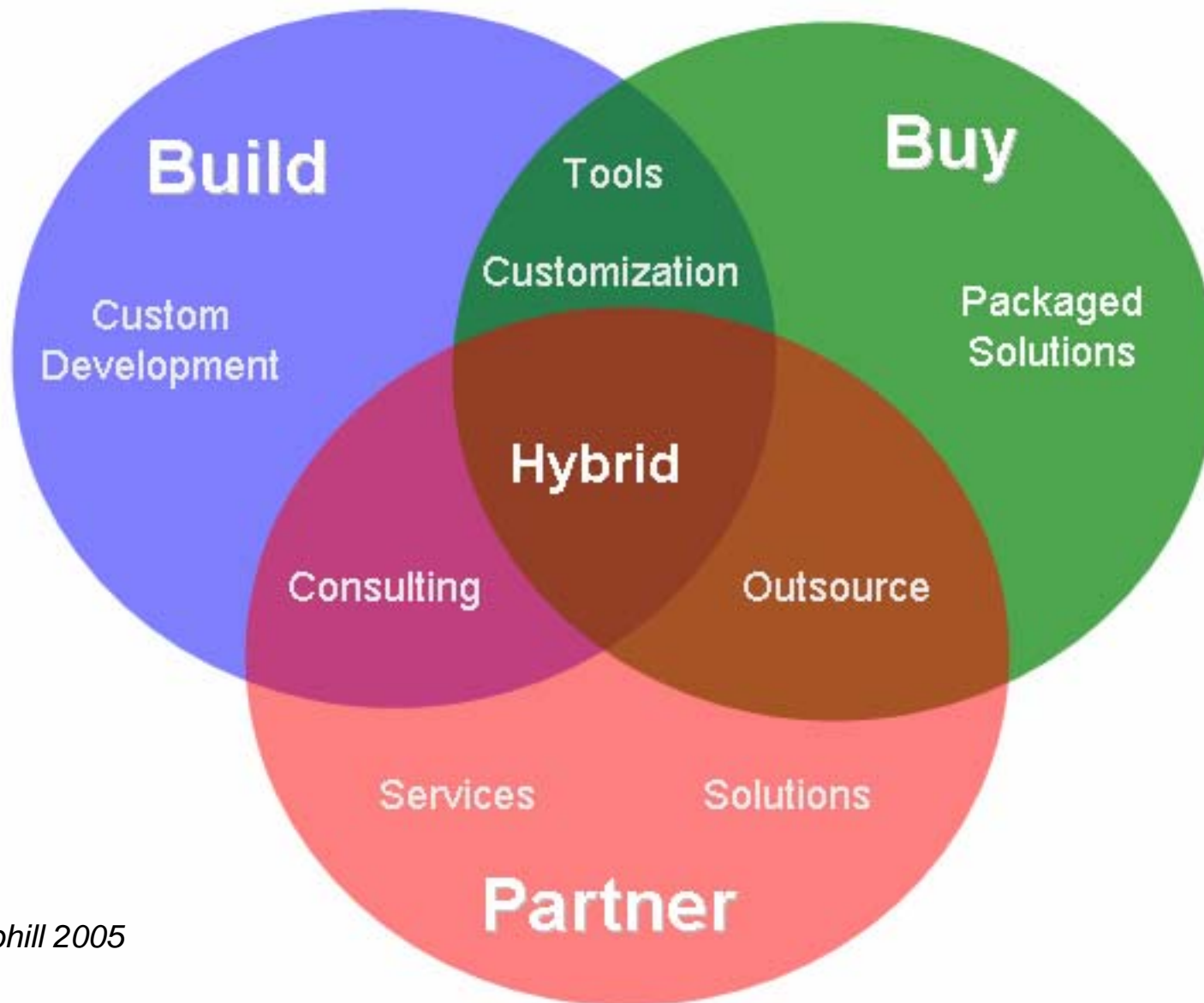


eBusiness Applications-Something for Everyone! (U.S. forest products example)

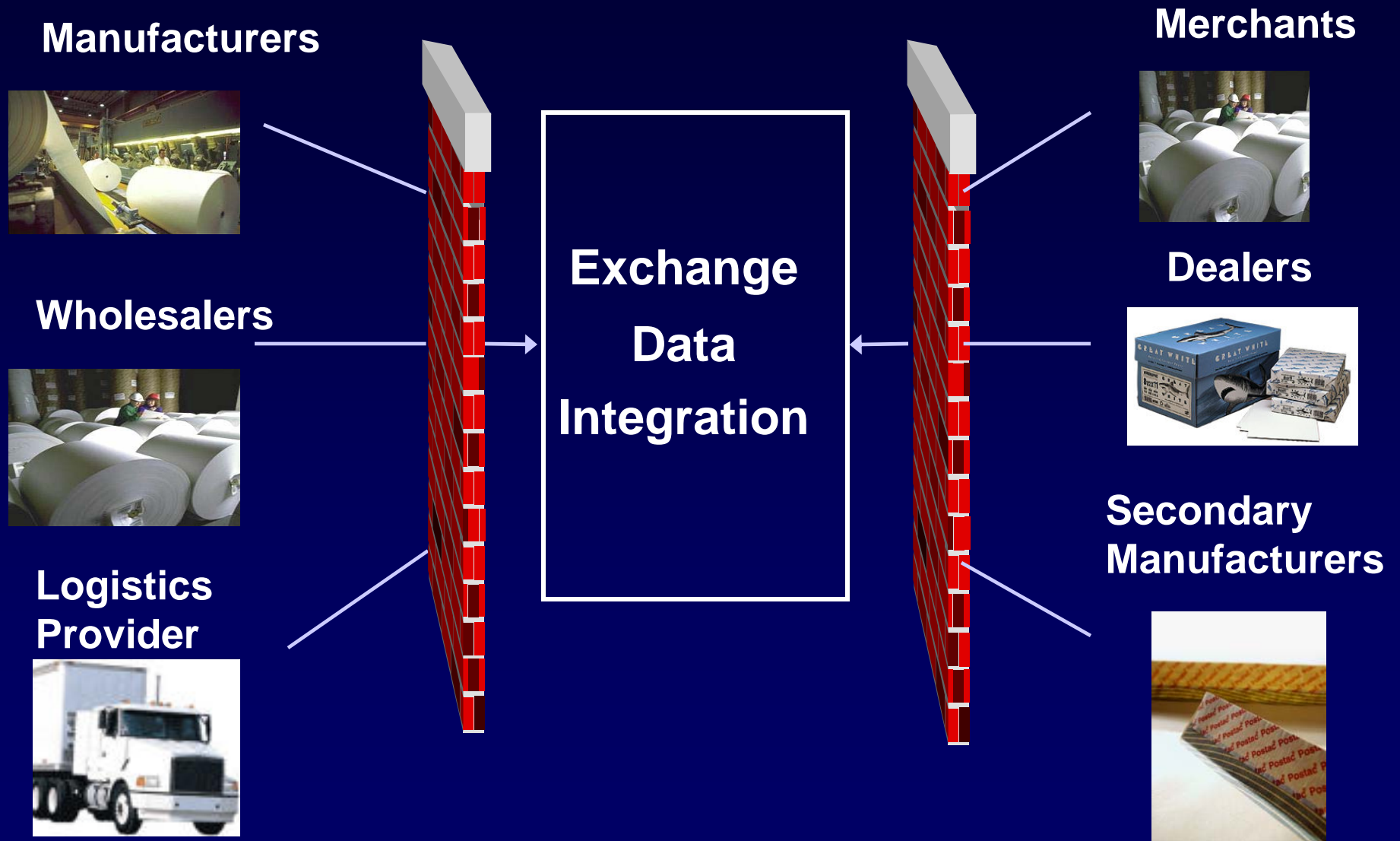
Relative Frequency



eBusiness Development Options



eIntermediaries Connect Buyers & Suppliers



Some Thoughts on eBusiness Strategy



eBusiness Strategy Characteristics

**Market
Oriented**

**Fits Overall
Co. Strategies**

Realistic

**Characteristics
of Good eBusiness
Strategies**

**Distinctive
Competencies**

Specific

**Fit Market
Environment**

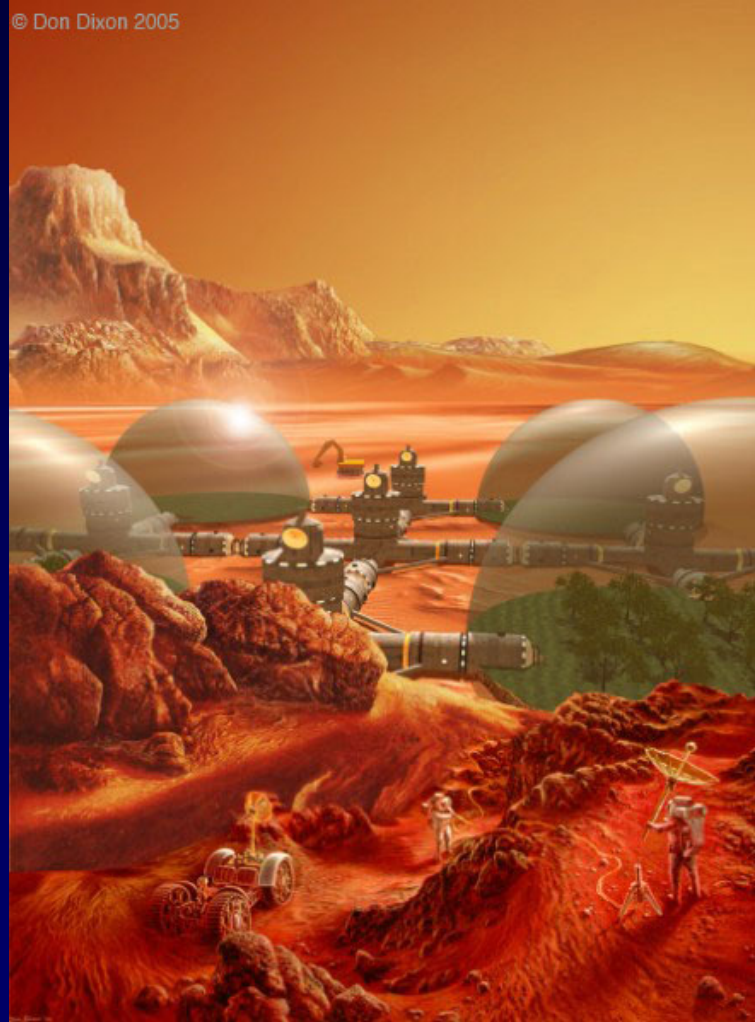
What's the Bottom Line?

- The emergence of cyberspace is a fundamental force that is transforming business and society.
- Internet-based technologies offer revolutionary tools for business development and management.
- eBusiness is one means for developing competitive advantage.

Companies that succeed will be ones that use the Internet as a complement to traditional ways of competing, not those that set their Internet initiatives apart from their established operations.

Porter 2006

What Does the Future Hold?





Questions?
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