



Making Sense of eBusiness in the Forest Products Industry



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Southern Forest Products Association Annual Meeting

July 2001



What am I Going to Talk About?

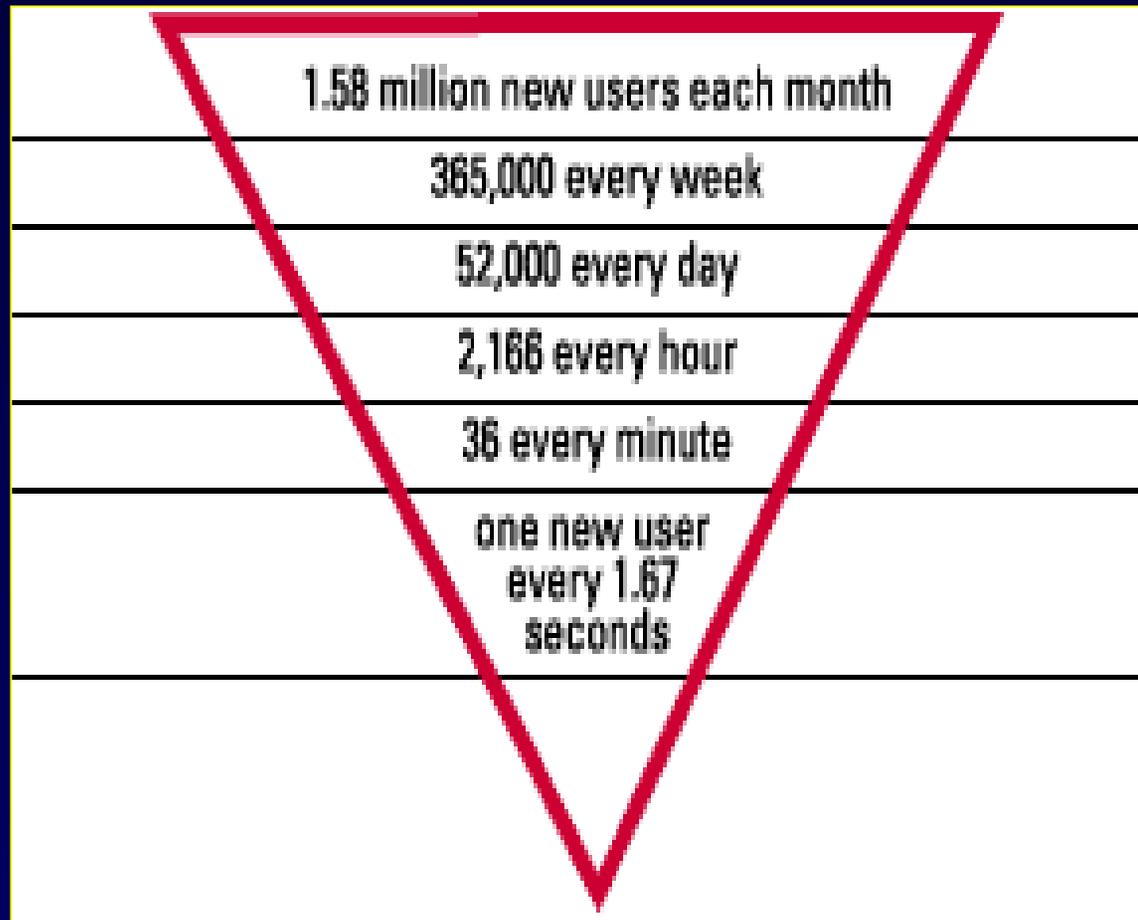
- eBusiness and Business Practices
- Whats Going on Here Anyway??
- Strategies
- Some Final Thoughts

Most Important Market Forces Affecting Business

Pressure to reduce overall supply chain costs	59%
Pressure to compress total time to market/cycle time	41%
Pressure to collaborate more effectively with trading partners	33%
Unstable/unpredictable demand for products/services	23%
Movement toward a more global marketplace	22%
Proliferation of the Internet	21%

Internet Growth

- No slow down in sight
- 115 million people in U.S. are on-line
- Growing faster outside the U.S.



In Three Years:

- Two-thirds of the world's Internet users will be outside the United States.
- 36 percent of all Internet users will not want to use English. (And they are up to 400 percent more likely to buy online from sites that support their language of choice).
- Western Europe and Japan together will account for about 47 percent of the world's e-commerce revenue. In 1999, they accounted for 28 percent.

Top 10 Computer-Using Countries in 2000

RANK	COUNTRY	COMPUTERS (MILLIONS)	% SHARE
1	UNITED STATES	164.1	28.32
2	JAPAN	49.9	8.62
3	GERMANY	30.6	5.28
4	UNITED KINGDOM	26.0	4.49
5	FRANCE	21.8	3.77
6	ITALY	17.5	3.02
7	CANADA	16.0	2.76
8	CHINA	15.9	2.75
9	AUSTRALIA	10.6	1.82
10	SOUTH KOREA	10.6	1.82



Digital Africa



Pacific Islands

Internet Resources



Tokyo PC
Users Group

¿Qué quiere <<
usted
>> que sea la
Internet?

CHINA LINKS
中國文化網




US ISRAEL
eBusiness Exchange



Hamburg
newmedia.
net

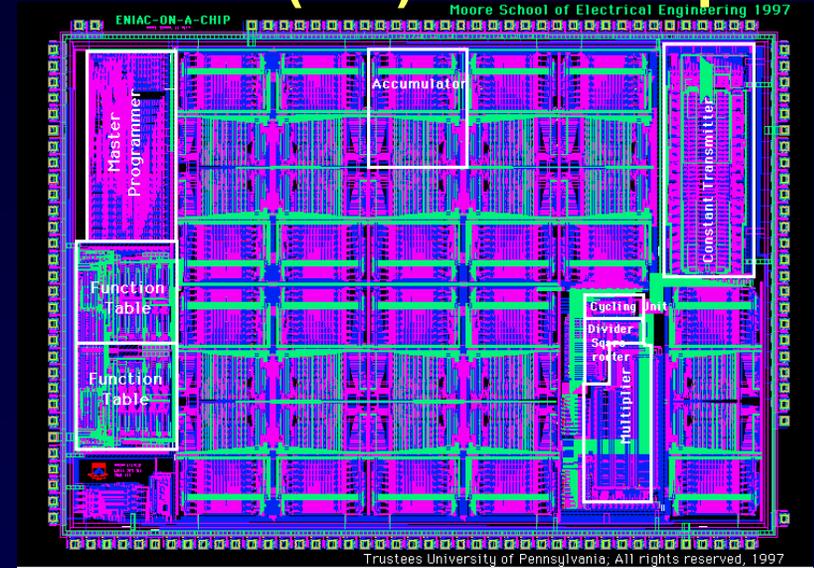
ZDNetAsia THE INTERNET &
TECHNOLOGY HUB OF ASIA



ENIAC



ENIAC(TM)-on-a-Chip

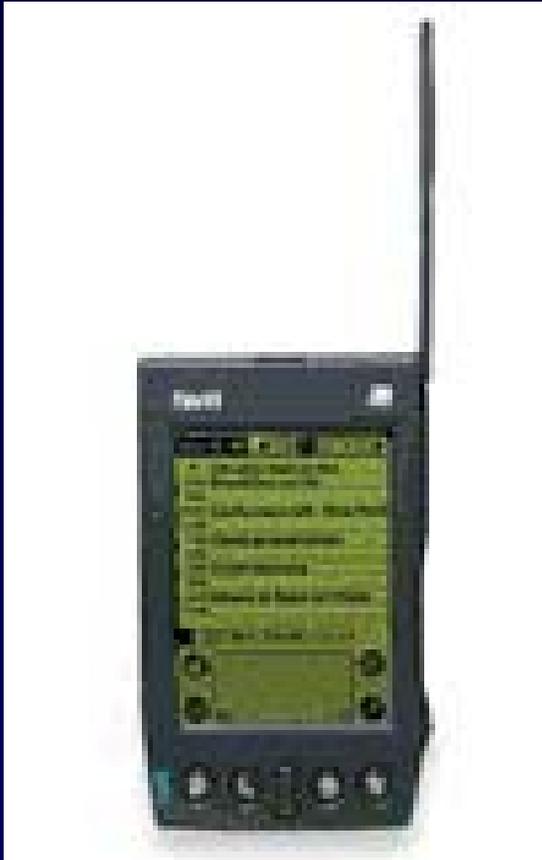


- Its thirty separate units, plus power supply and forced-air cooling, weighed over thirty tons.

- 19,000 vacuum tubes, 1,500 relays, and hundreds of thousands of resistors, capacitors, and inductors.

- consumed almost 200 kilowatts of electrical power

The chip has a size of 7.44mm by 5.29mm and contains about 174,569 transistors.



Date Book • Address Book • To Do List • Memo Pad • Calculator • Web Clipping Application • iMessenger® Application • Expense, E-Mail* • HotSync® Manager • Security • Games • Communications: • Juno Air™ • Rovenet P-7-fax • ThinAirMail • Yahoo! MailFinancial: • CBS MarketWatch.com • E*Trade • Fidelity Investments • Prudential • USABancShares.com News & Sports: • ABCNEWS.com • ESPN.com • Real Cities • USAToday.com • The Wall Street Journal (Interactive Edition)References & Directories: • Ask Jeeves • BarPoint Shopper™ • Britannica.com • Excite Mobile • Mirriam-Webster • MyInfo Powered by Yodlee • Palm, Inc. • Switchboard Yellow Pages • Yahoo! People SearchShopping: • Amazon.com • Barnes & Noble.com • Buy.com • SNAZ.com • Vicinity Brandfinder • Palm, Inc. Travel & Entertainment: • American Airlines • Continental Airlines • Delta Airlines • Etak Traffic Touch • MapBlast! • MapQuest.com • Moviefone.com • TicketMaster • TravelerSOS • Travelocity.com • United Airlines • Weather.com



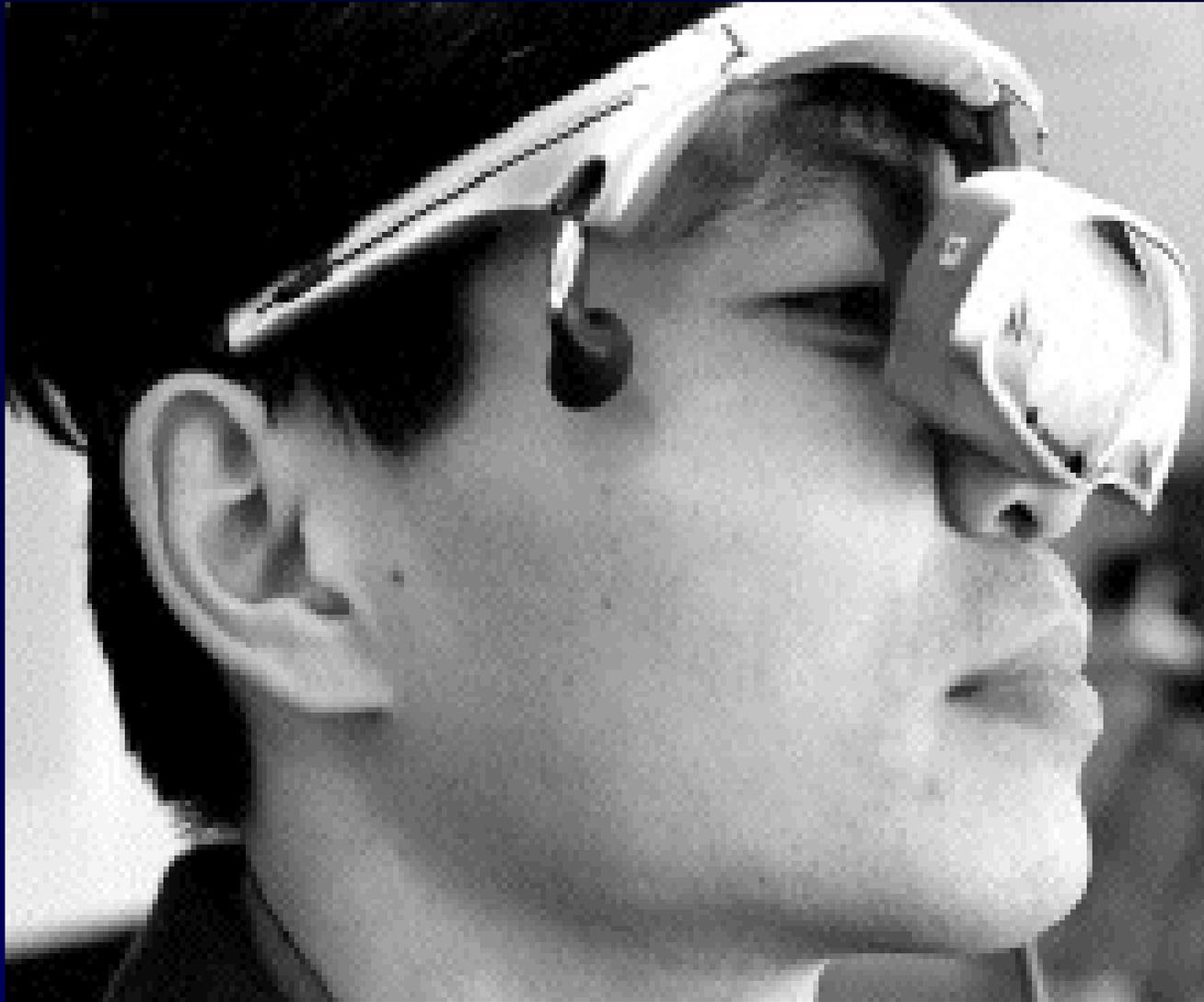
CPU: 66 MHz 486-SX

Main Memory: 16 MB SDRAM

Video: 512K VRAM

SVGA Resolution (800x600), 256 colors

XVGA Resolution (1024x768), 16 colors



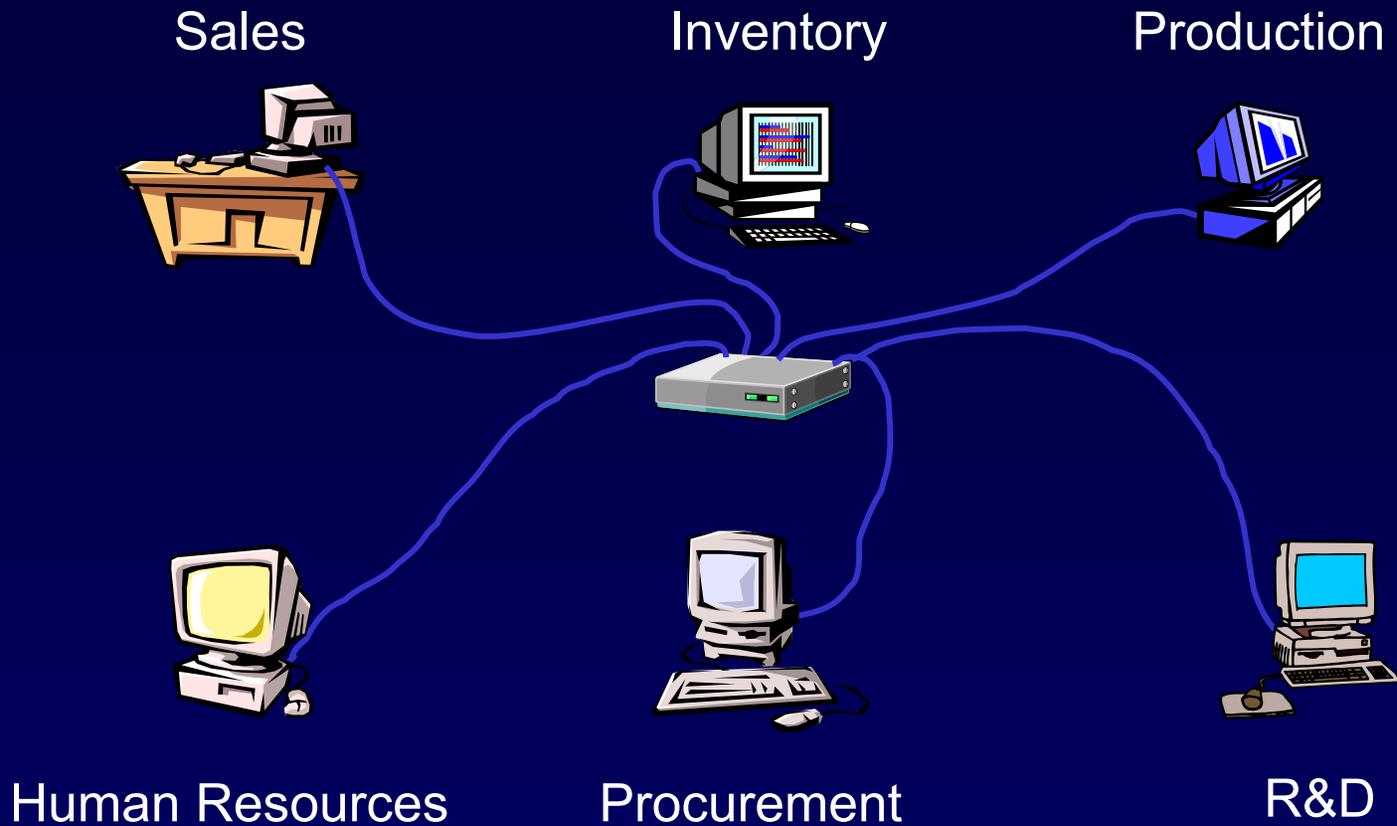
What is eBusiness?

- **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?

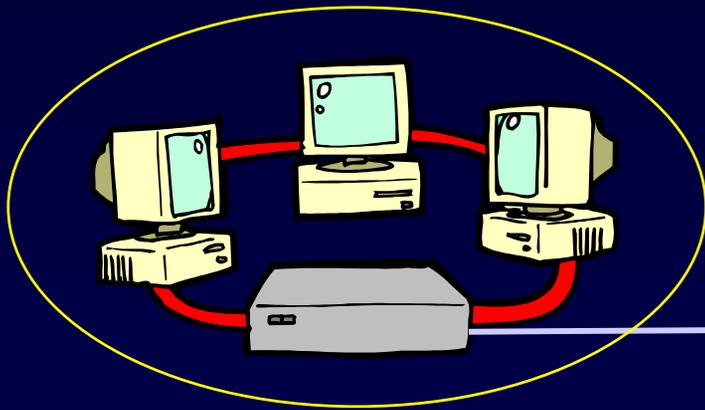
- First and foremost about business, not technology.
- Technology facilitates eBusiness.
- Challenge is managing the changes in business strategies and internal corporate processes.
- Can include intra-company networks (intranets) and Internet linkages with customers or suppliers (extranets).

An Intranet Network

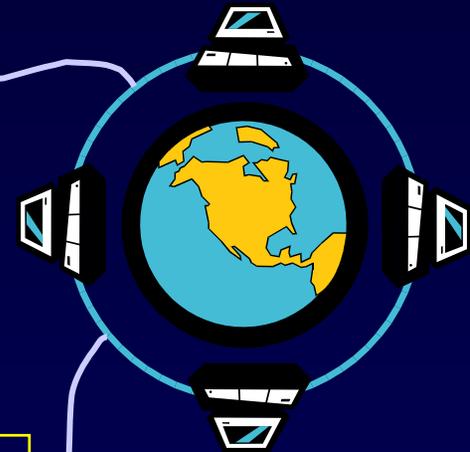
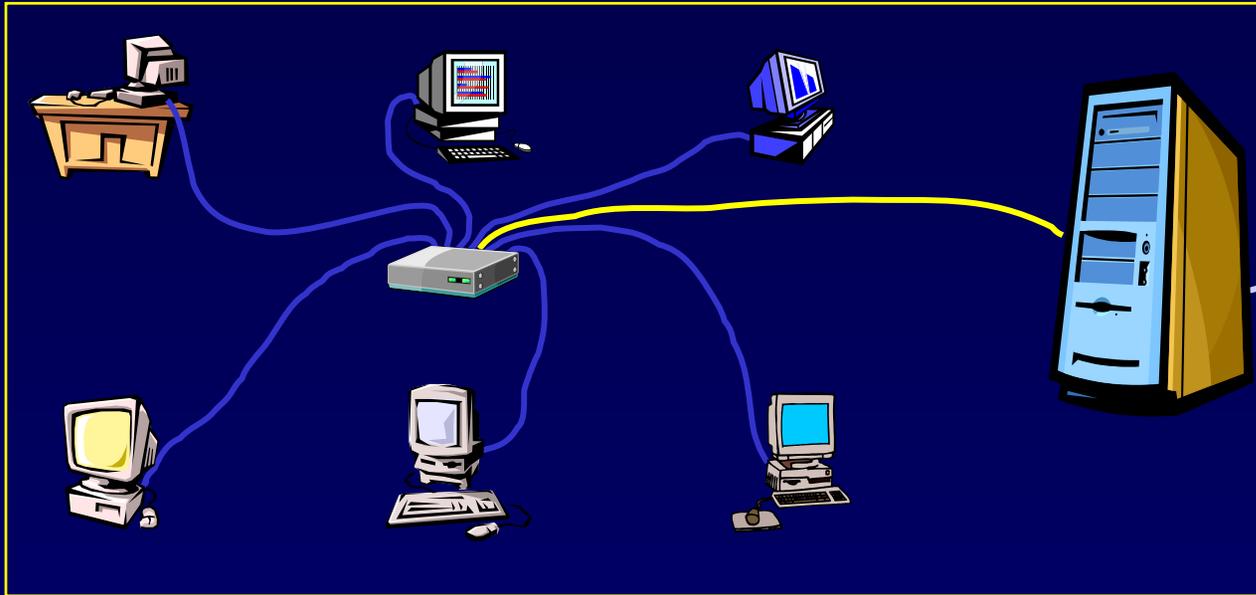


An Extranet

Your Company



Your Customer or Supplier



(From Michael & Punches 2000)

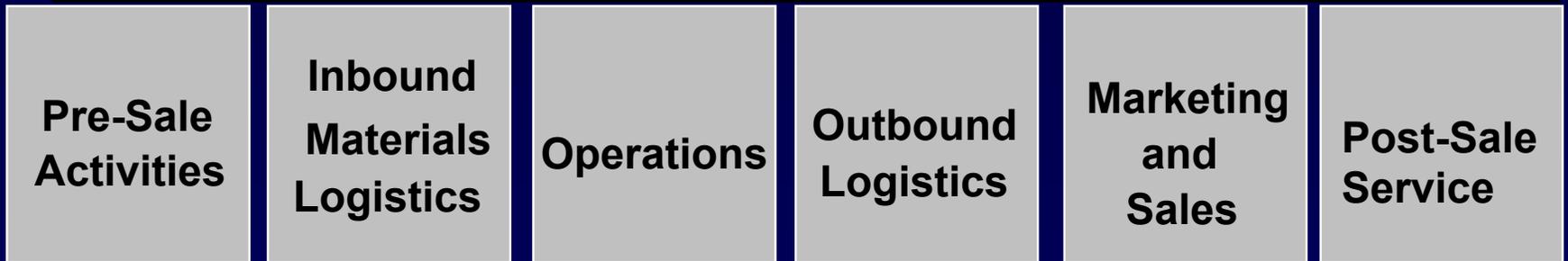
	INTERNET	INTRANETS	EXTRANETS
What is it?	The information superhighway.	The use of Internet technology within a company or organization.	A network that uses the Internet to link company Intranets in order to enhance business-to-business relationships.
Access	Open	Private	By agreement only
Users	Public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

eBusiness Can Impact the Whole Company

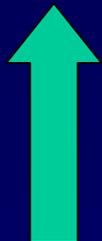
eBusiness Can Impact the Whole Value Chain

Company Activities

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



Value Chain Activities



**International
eBusiness
spans differences in:**

Language

Economies

**Politics/
Law**

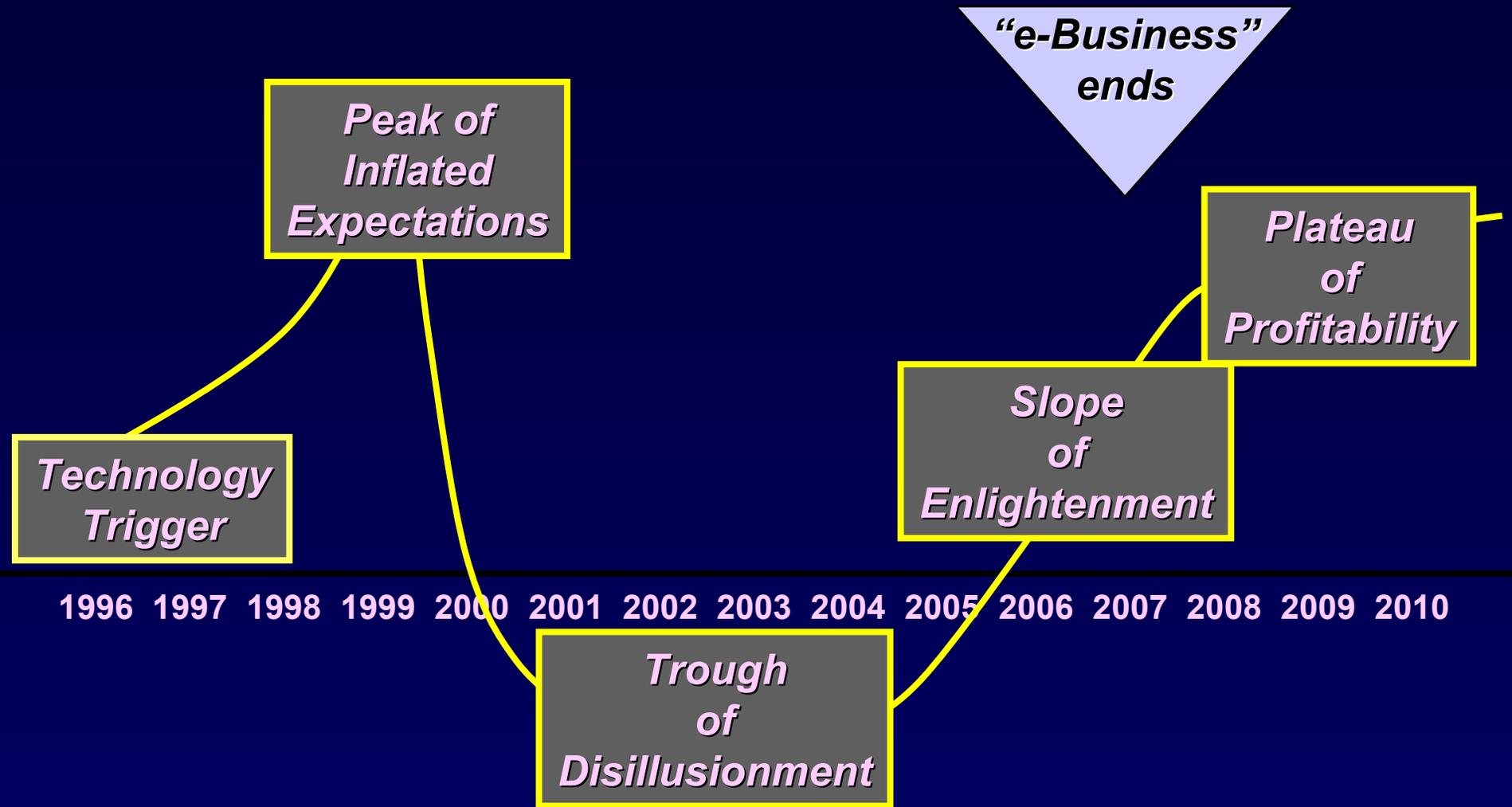
Cultures

**Technology
Infrastructure**

Markets

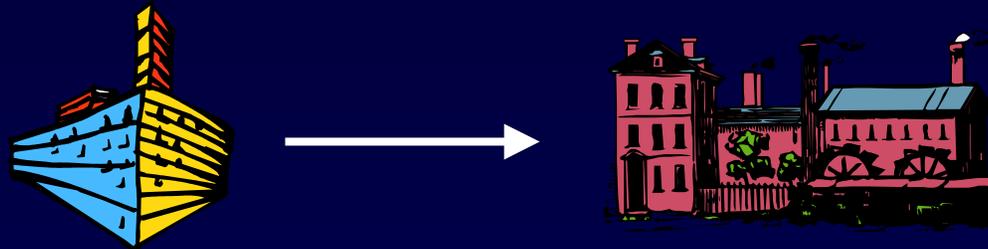
The Life Cycle of eBusiness

(Forrester Group, 1999)



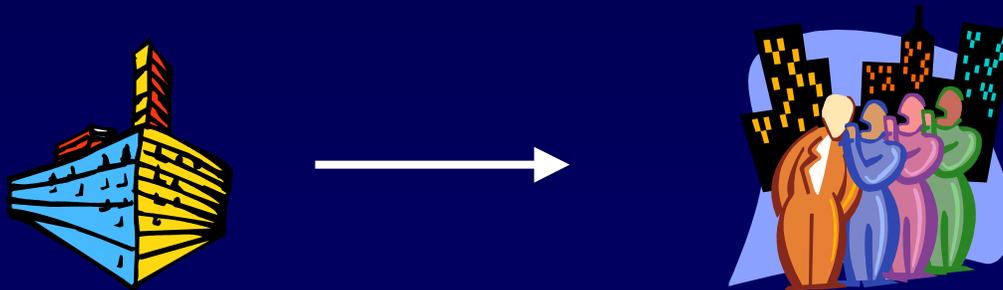
Forest-Based Industries

are **Business-to-Business (B2B)**



As opposed to

Business-to-Consumer (B2C)

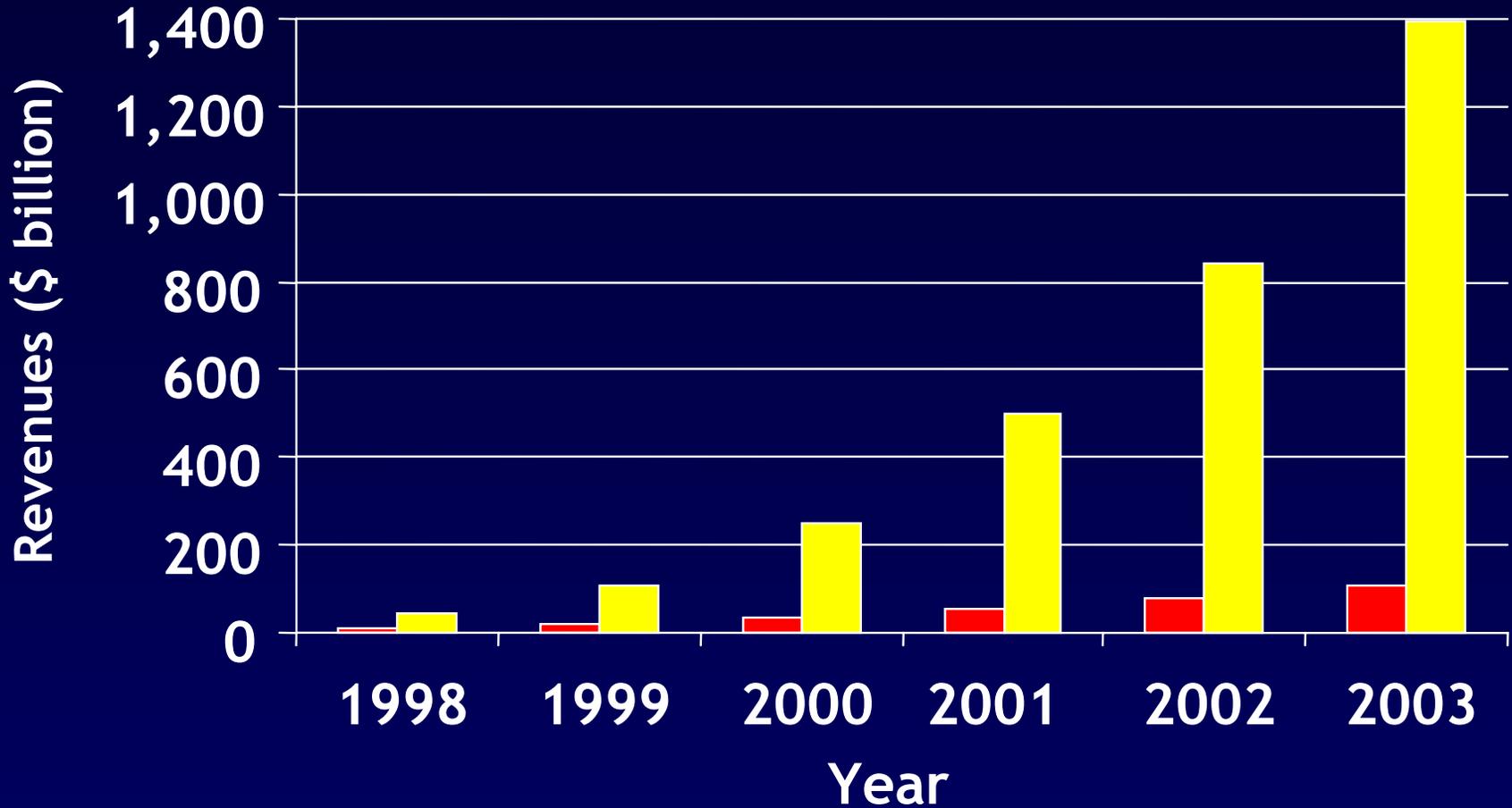


- Business-to-business **eCommerce will grow tremendously** in the next several years, bringing significant change to most industries.
- Increasing **competition** and **globalization** are two factors fueling business-to-business eCommerce growth.

eCommerce

- Comprised 0.8% of U.S. GDP in 1999
- Will comprise 8.9% of GDP in 2003
- B2B comprises 90% of online sales
- 12% of all manufacturing shipments were sold online in 1999

B2B eCommerce: The iceberg below the tip!



■ B2C e-Commerce
■ B2B e-Commerce

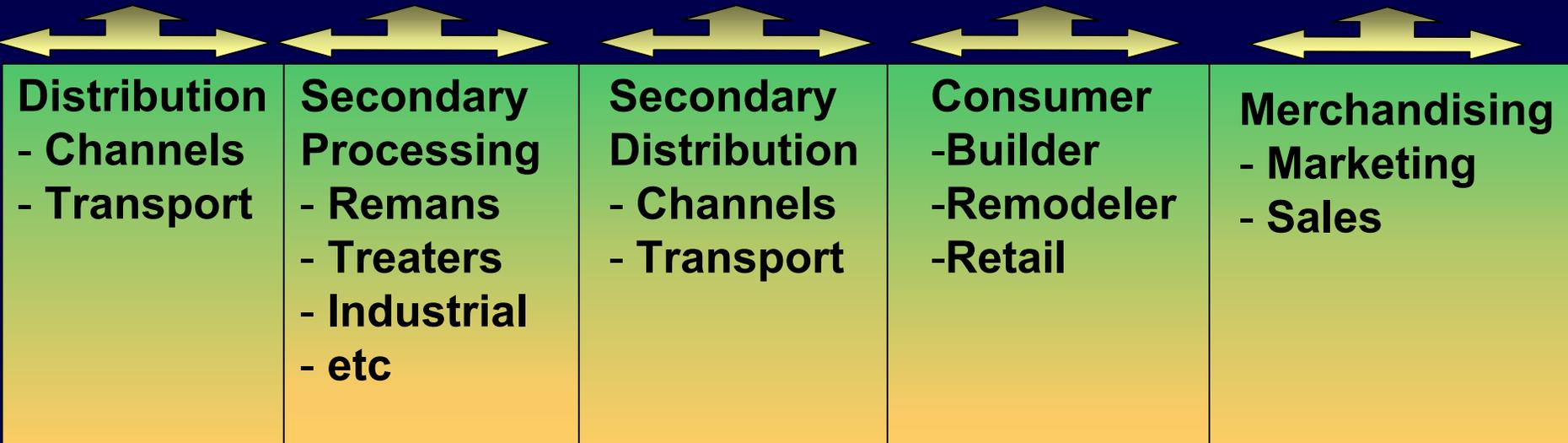
What's Going On Here Anyway???



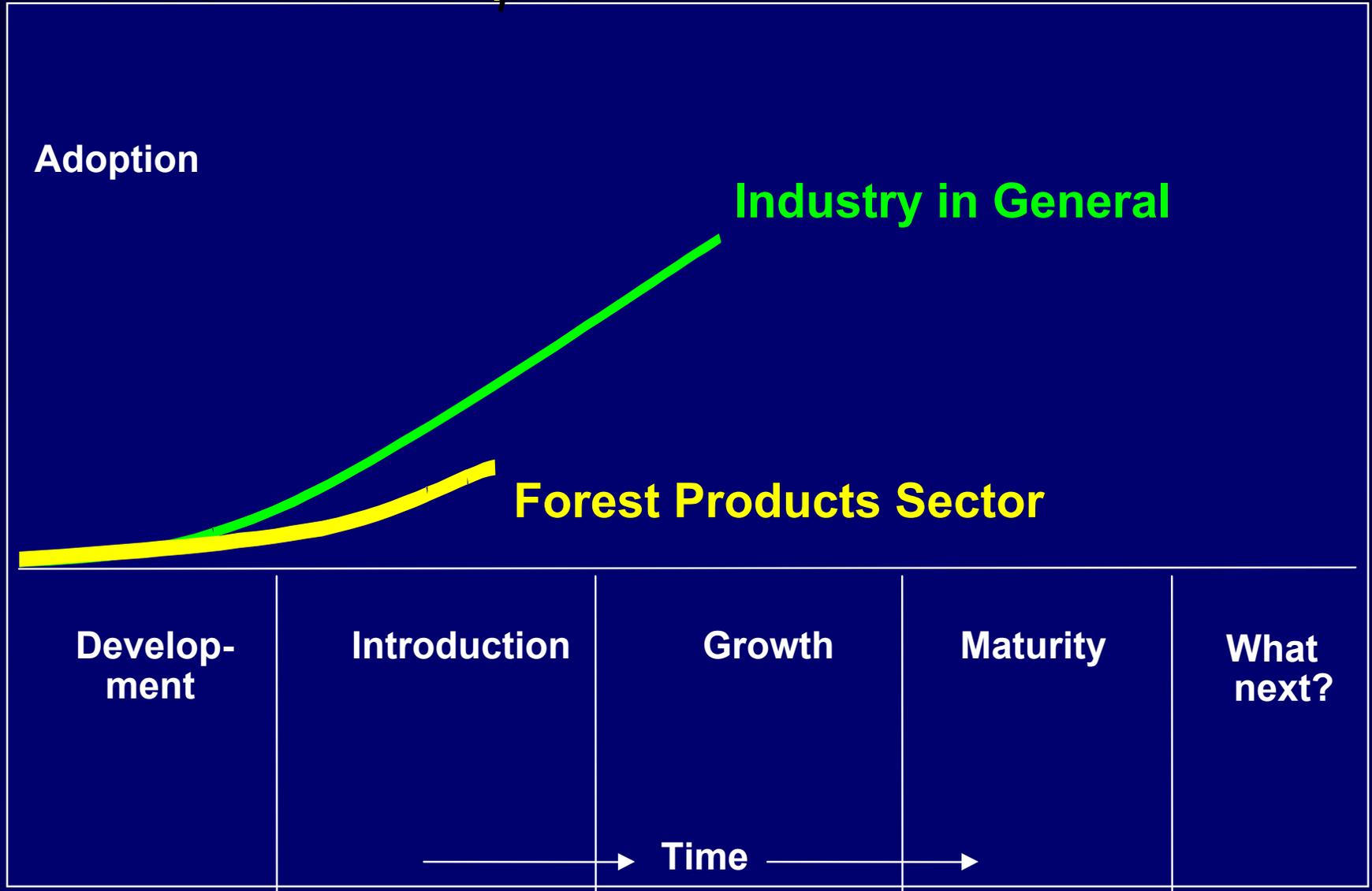
The Traditional Forest Products Value Chain



Information Interfaces



Where is the Forest Products Industry in eBusiness Adoption?



Where is the Forest Products Industry in eBusiness Adoption?

eCommerce %	Sector	Ship. Value (\$ Billion)	(% of Shipments)
1	Transportation Equip.	\$675	20.8%
2	Electrical Equip., Appliances	\$120	19.8%
3	Leather and Allied Products	\$10	18.3%
4	Apparel	\$63	18.1%
5	Textile Products	\$33	15.0%
14	Paper	\$157	8.5%
LAST	Wood Products	\$98	3.5%

Why?

Information Technology Reactive industry



Who is where in eBusiness Implementation In North America?

Industries in General > Forest Products Industry

Canada Forest Products > U.S. Forest Products Industry

Pulp & Paper Industry > Solid Wood Products Industry

Composites (MDF, Particleboard) > Softwood Lumber

Softwood Lumber > Hardwood Lumber

Is There a Place for My Company at the Table?



Reasons for Pursuing eCommerce

- 1) Keep up with competitors—74%
- 2) Seek new revenues--- 60%
- 3) Reinvent Industry--- 40%

Typical Internet Business Applications Being Used by the Forest Products Industry

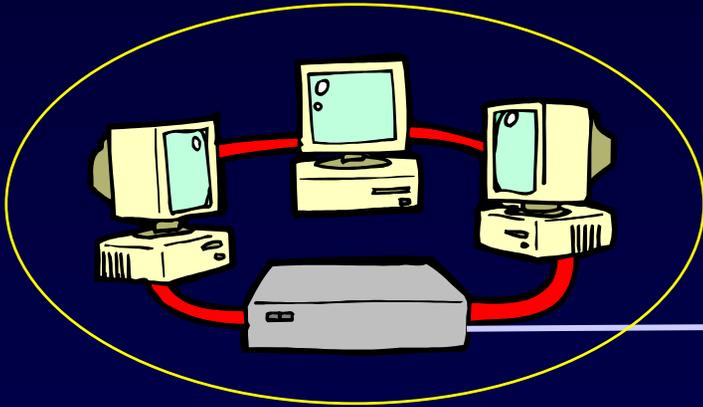
Relative Frequency



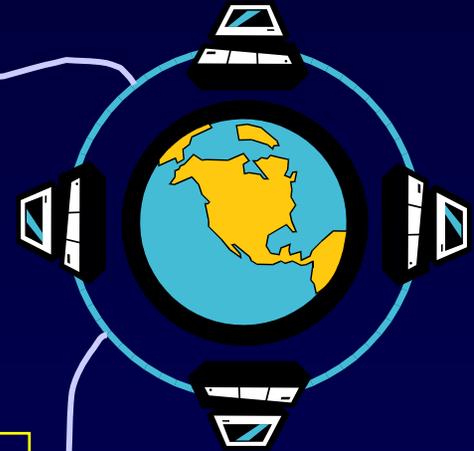
Options

1. Go it yourself
2. Use an Exchange

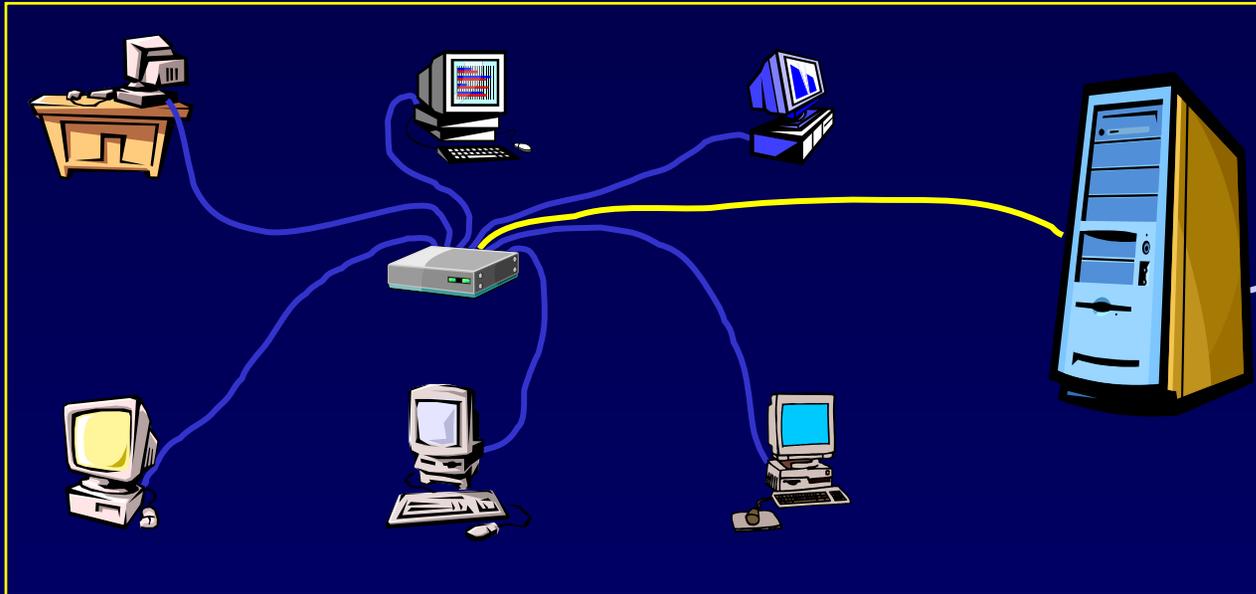
Your Company



Direct or Exchange



Your Customer or Supplier



(From Michael & Punches 2000)

eMarketplaces

- *Integrated marketplace eIntermediaries*
 - Business Exchange-Industry Sector, Value Chain Space
 - Virtual Trade Show
 - Product Showcase
 - Auction
- *eMarketplace services*
 - Tools (Web,Catalog,Buy/Sell,Offers,Discovery, Credit)
- *Additional Marketplace Support Services*
 - Industry Information, Links, News
 - Research, Dynamic Pricing

What are Their Value Propositions?

- **Improve Business Performance**
 - Opening of New Markets
 - Creation of Operational Efficiencies
- **Enhance Service Value to Customers**
 - Streamlined Transactions
 - Deeper Relationship

Yet They Can Be Threatening

- **Fear they will Restructure the Value Chain**
 - Force Businesses “out of business”
 - Realign the existing Balance of Power
- **Concern that they will Destroy Existing Customer Relationships**
 - Remove the Personal Touch
 - 100% Focus on Cost Competitiveness
- **Expected to Threaten Peoples Jobs**
 - Machines will Replace People

Marketplace Proliferation

CSC

New Business Models: Markets are Changing

Gartner expects 10,000 New Transactional "iMarkets" by 2001!

•Gartner group predicts that 10,000 new iMarket companies will form by the end of 2002; CSC expects that many of these will be "agents" (such as Autobytel or Carpoint) or neutral transaction mechanisms (such as eSteel), although a significant number of information providers will also emerge (e.g. Edmunds). This turmoil creates numerous opportunities to define new market roles and value propositions.

GetSmart
BUSINESS FINANCE

ITG
The Future of Trading

XSCHEM.COM
SECURITY • MARKET ACCESS • PROFIT

LEASE-EXCHANGESM
Home of the On-Line Business Leasing Marketplace

MuniAuction

TreasuryDirect

Kraft Foods

ISLAND
ECN

INSTINET
A REUTERS Company

THE PLASTICS NETWORK

CFOL.com
Commercial Finance **ONLINE!**
Established 1993

Chemdex.org

CSC

ChemConnectTM
Connecting Chemical Buyers and Sellers Worldwide

TradeWe
THE ONLINE BOND MARKET

e-Chemicals
ONLINE

IMX EXCHANGE

WebMDTM
Pay an office visit to the future of healthcare.

optimark.com

PaperExchange.com

CHEM MATCH ON LINE

Quicken Business CashFinder

STEEL

FastParts.Com

IRON CAMP
THE IRON MARKET OF AMERICA
DIVISION OF HEAVY

NTE

3/6/00 11:16 PM Kraft 21

(Computer Science Corp, 2000)

Forest Industry Exchanges



Impediments to Implementing Internet Capabilities

Impedes MOST

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

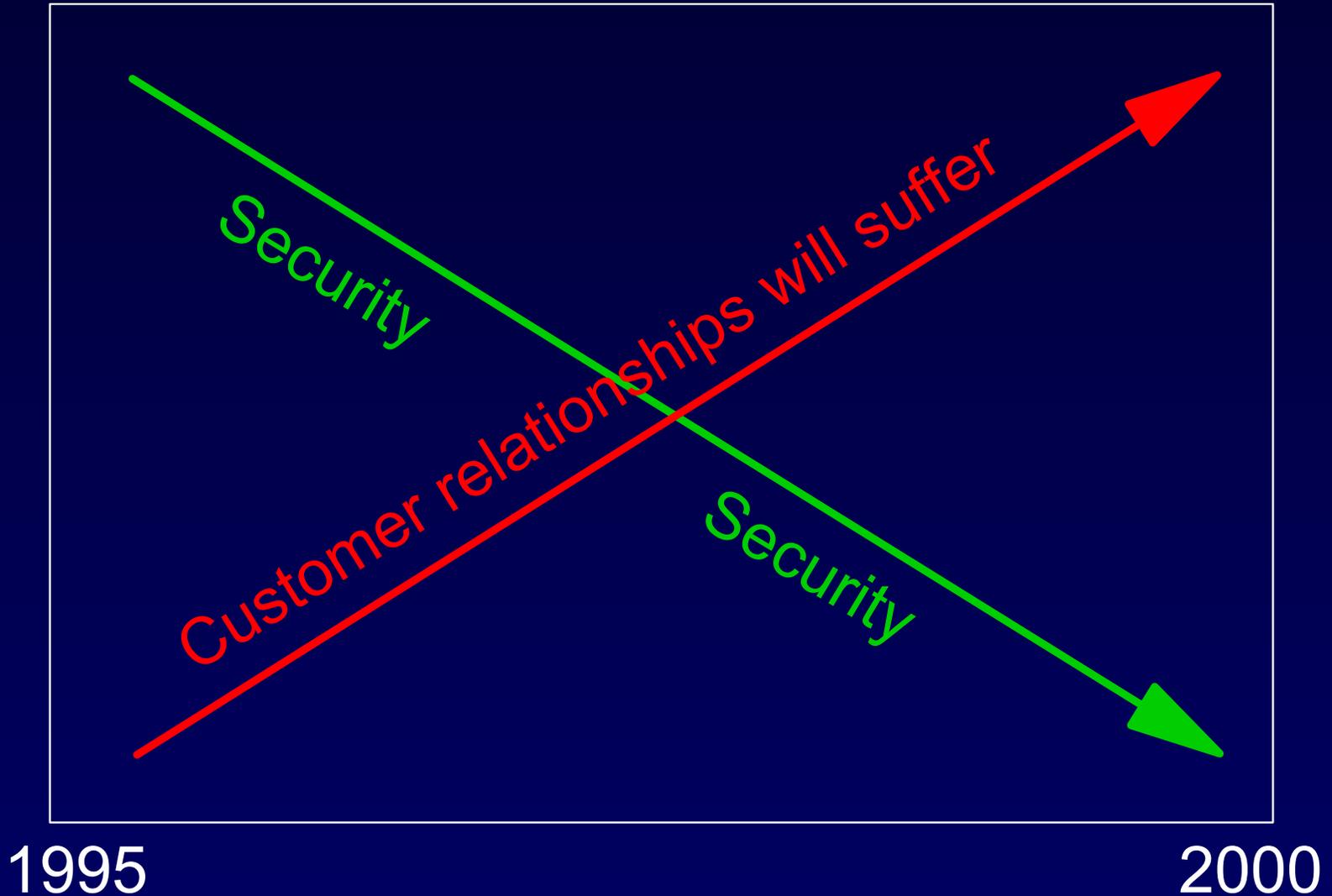
• **Inadequate application tools**

• **Lack of technology infrastructure
(TCP/IP, networks, firewalls, security)**

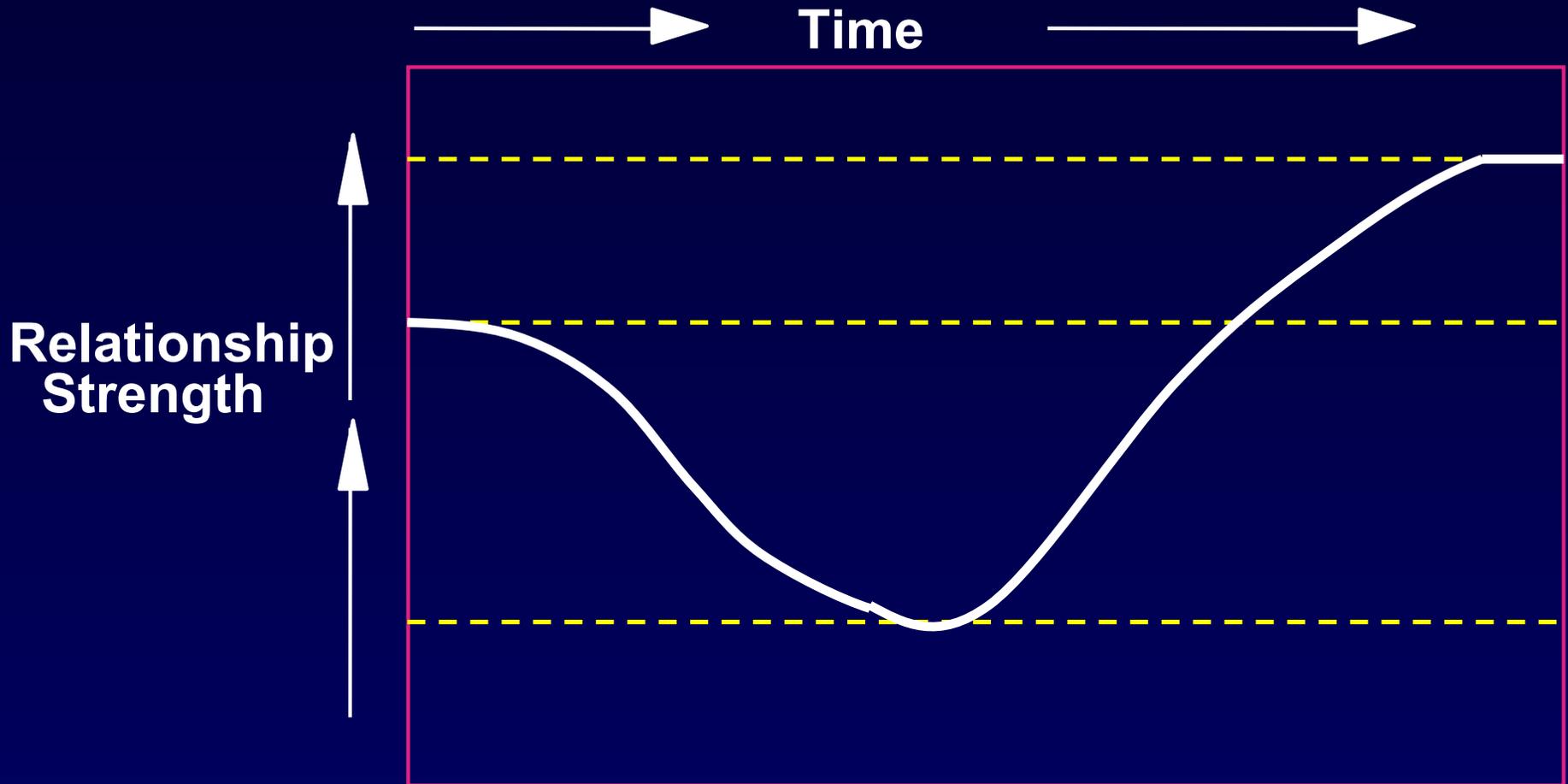
Impedes LEAST

• **Customer resistance**

#1 Concerns about Using the Internet



Internet Influences on Buyer/Supplier Relationships



(Vlosky and Wilson, 1993,1999)

Trust is an Essential Lubricant in eRelationships



(Adapted from: John Kador, eAI Journal, 2000)

Where's the beef???



Where's the Value?

- We shifted 70% of order status phone calls to real-time Website extranets (*electronic equipment OEM*).
- Order transaction costs (*IBM/Keen Consulting*):
 - Telephone: \$25-\$50
 - EDI: \$1.25
 - Internet: \$0.30
- Incoming error rates dropped from 6% to <1% (*IBM*).
- Manual entry results in 100% more errors than Internet (*Healthcare Products Mart*).

Where's the Value?

- Faster response to customer inquiries.
- Obtain new customers through Web promotion.
- Customers can look up order and shipment status on-line reducing phone calls to reps and freeing them up to handle orders rather than inquiries.
- Generate far more sales than could have been generated without the Internet.
- Faster, easier purchase of needed items from vendors.

Where's the Value?

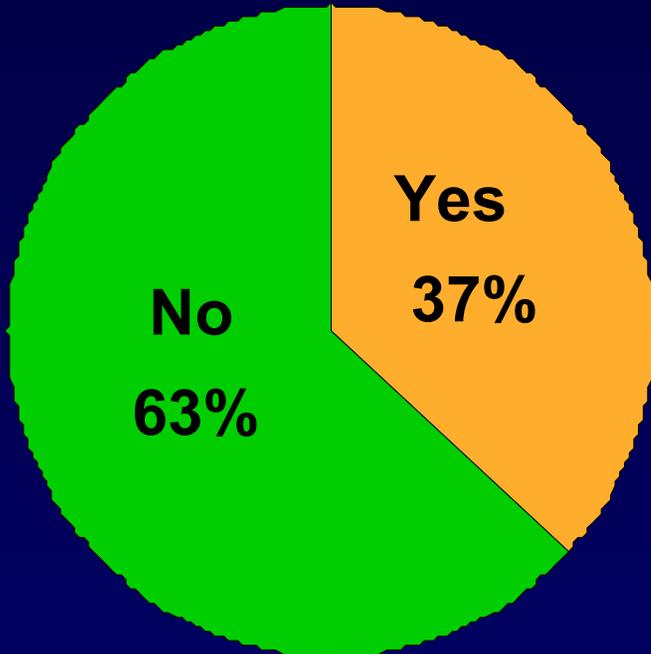
- Inventory reduction by broadcasting available stock to customers via the Internet.
- Better inventory control because of better information on inbound product locations and ETAs.
- Increased market share in large accounts by managing customer inventories on-line.
- Track all rail and truck orders for all customers and make the information accessible on a Website.

Some Thoughts on eBusiness Strategy

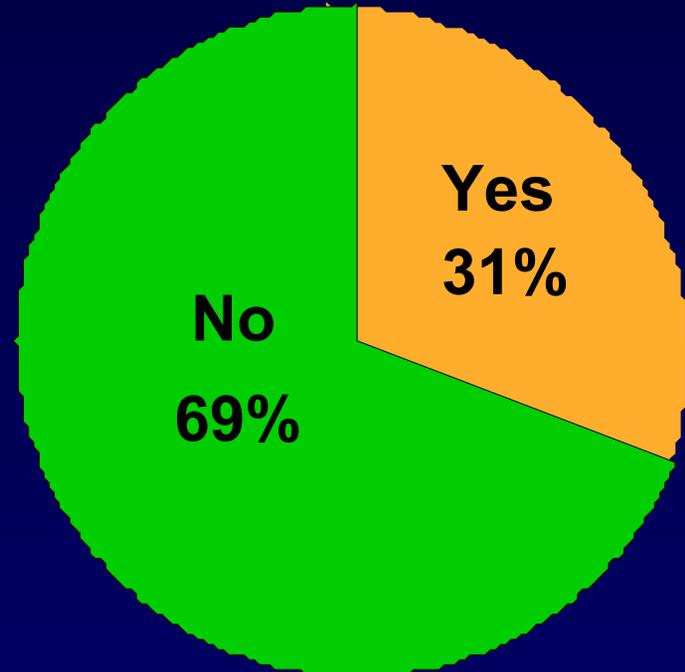


Internet Implementation Schedule and Benefits

Is your company where it wants to be in Internet implementation?



Has your company received the desired benefits?



eBusiness Strategy Characteristics



eBusiness Competitive Differentiation

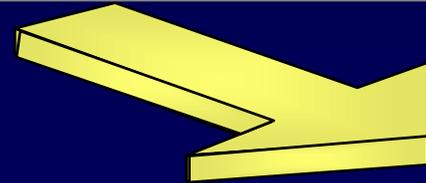
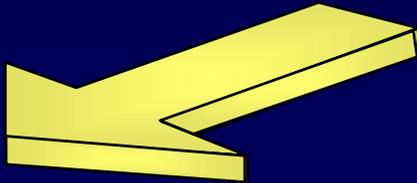
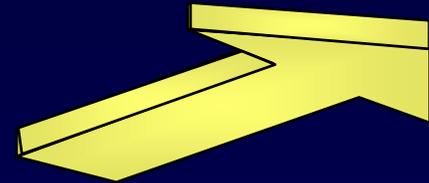
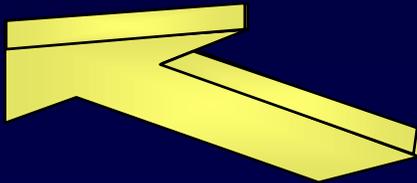
eProduct

eService

**Areas for Competitive
Differentiation**

ePersonnel

eApproach



eBusiness Strategic Planning Process

- involves developing an overall eBusiness company strategy for long-run positioning.

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- This process involves:
 - Defining an eBusiness Mission: Statement of purpose.

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 - Setting Company Objectives: Supporting goals and objectives to guide the entire company in its eBusiness efforts.

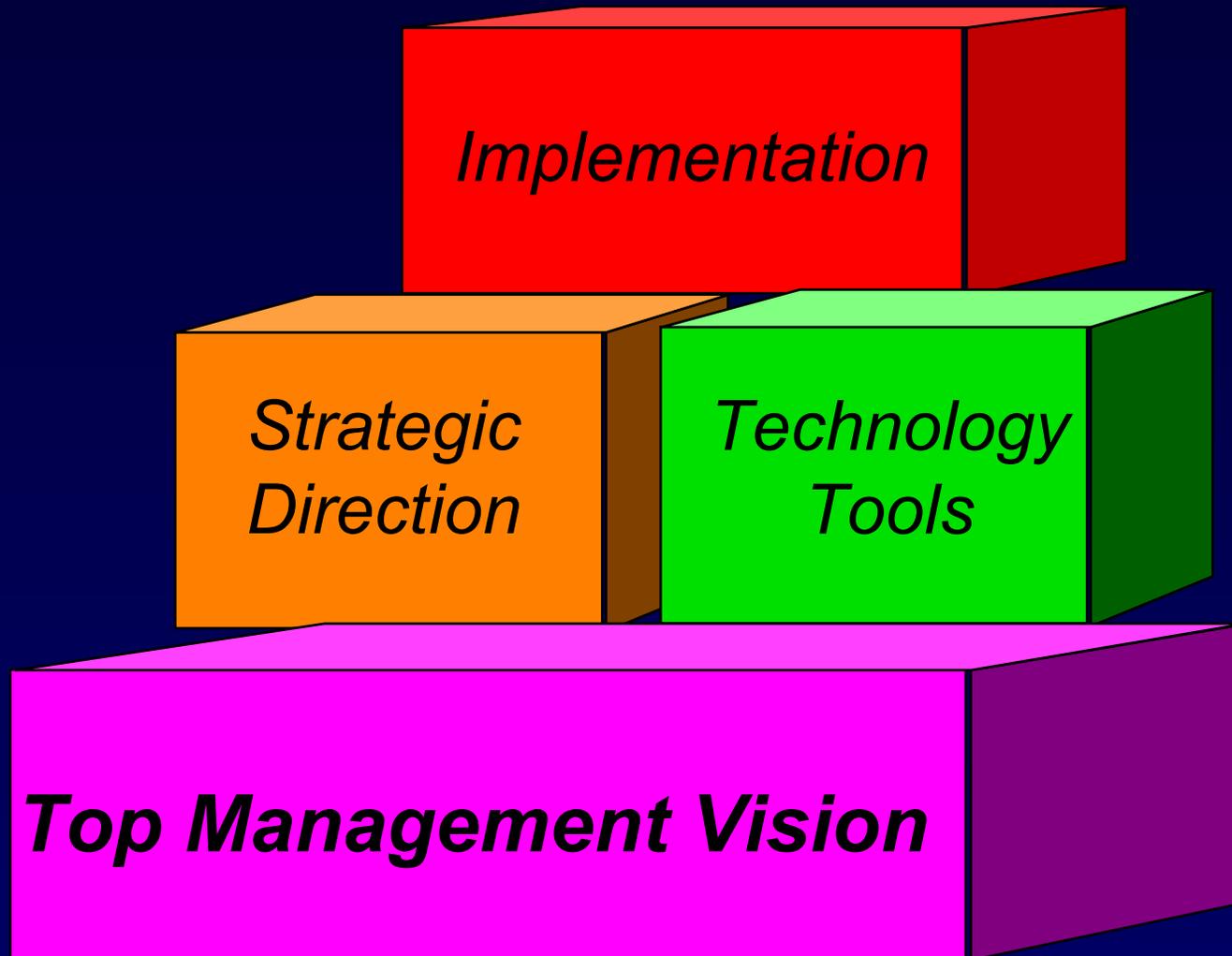
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- This process involves:
 - Defining an eBusiness Mission: Statement of purpose.
 - Setting Company Objectives: Supporting goals and objectives to guide the entire company in its eBusiness efforts.
 - Designing a Structural Plan: Overall plan including functions impacted.
 - Planning Functional Strategies: Detailed planning for each eBusiness activity to accomplish strategic objectives.

eBusiness Building Blocks



eBusiness Gap Analysis

**Conduct Internal, Customer and Supplier
Audits and Determine
the Current IT Infrastructure**

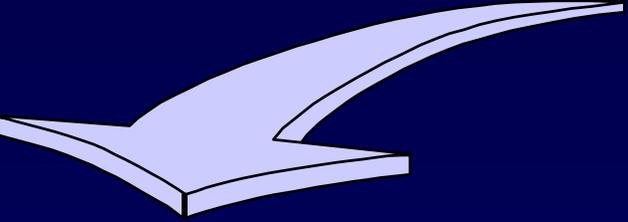


**Conduct Internal, Customer and Supplier Audits
and Determine What is
Desired, Needed, and Feasible to Implement**

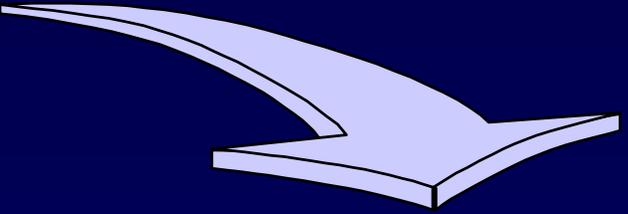
Assessing eBusiness Needs



Pool of Possible eBusiness Initiatives



**Rank/Prioritize
eBusiness
Activities**



**Examine Cost/ Benefit of
Desired
Activities**

Getting Started

Getting Started

- Think strategically

Getting Started

- Think strategically
- Embrace fundamental changes

Getting Started

- Think strategically
- Embrace fundamental changes
- Secure top management support

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Getting Started

- Think strategically
- Embrace fundamental changes
- Secure top management support
- Get educated
- Choose technology partners carefully
- Sell concept to suppliers and customers
- Just do it!

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.

eBusiness can...

Change the way we go to market...

Open new markets with an outside in perspective...

Optimizing position in the value chain...

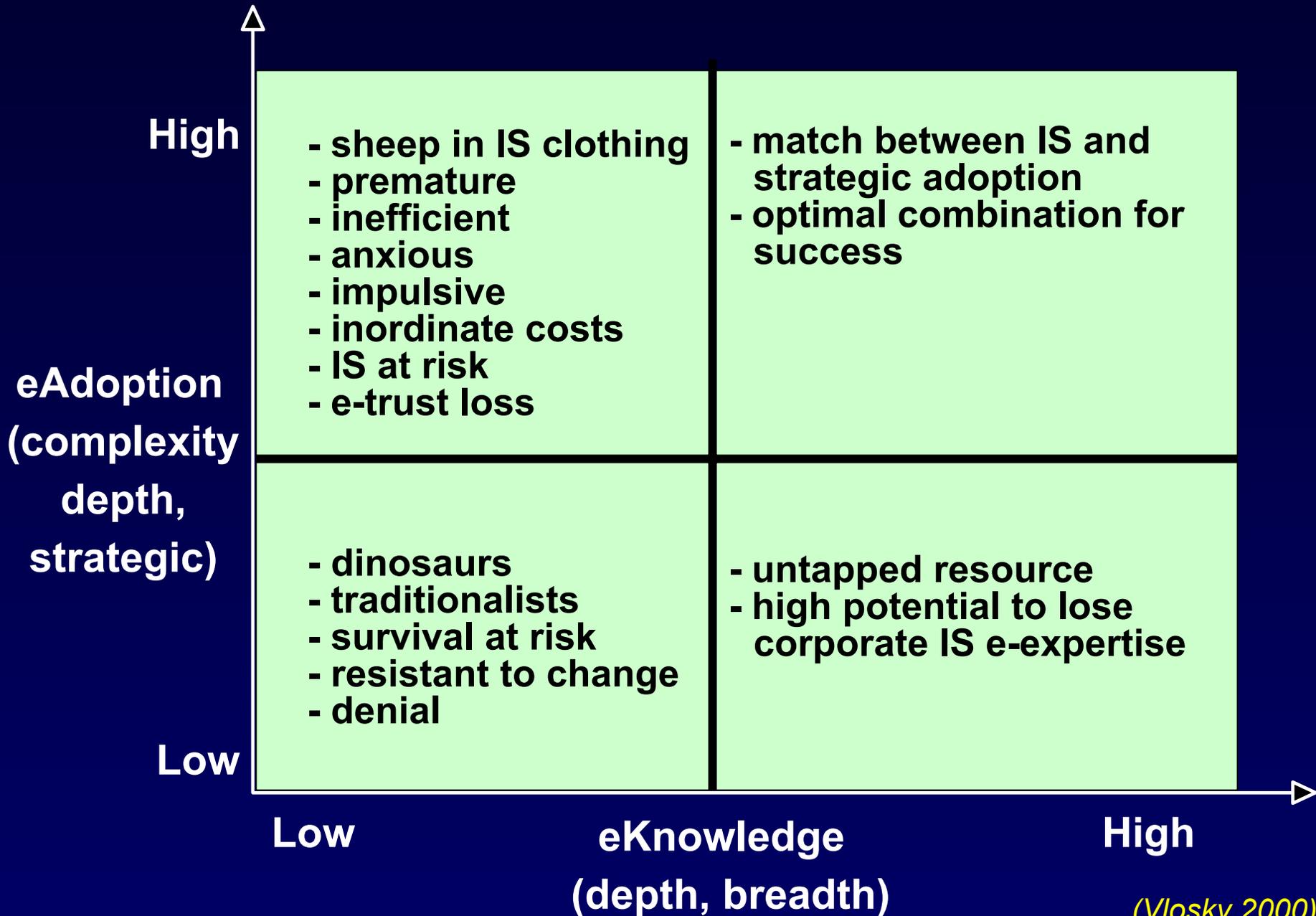
Link customers, markets, partners and suppliers...

Fundamentally rethinking business models...

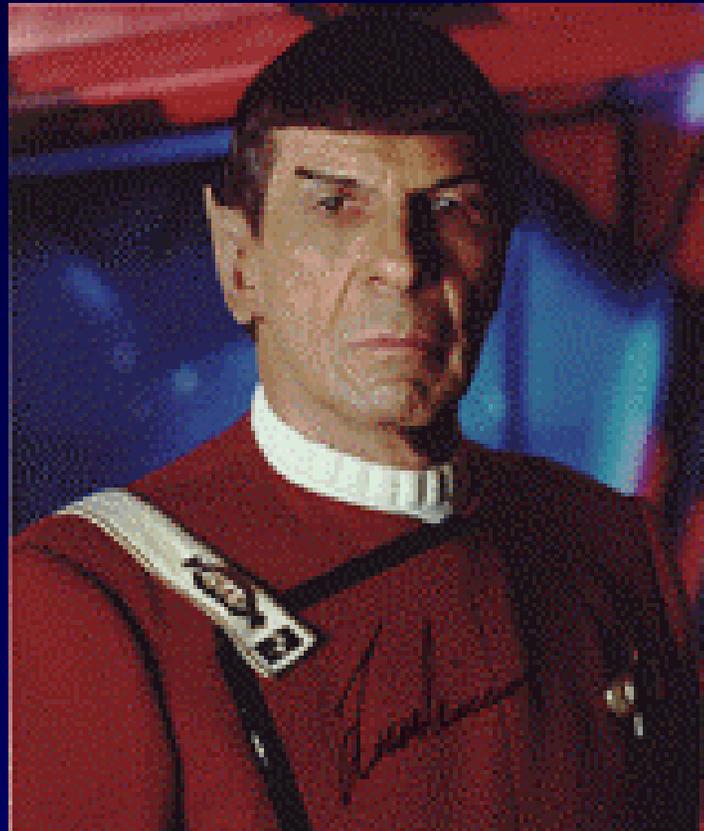
Leverage core processes...

...using a digitally connected marketplace

eBusiness Implementation/Success Matrix



Live long and prosper.....





Questions?

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