An Exploratory Study of Internet Implementation in the United States Pulp & Paper Industry

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What am I Going to Talk About?

- eBusiness Overview

- The Study

- Some Final Thoughts

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

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--CULTURE.

It's About:

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...

(Adapted from Poirier 2000)

- eBusiness will continue to grow tremendously in the next several years, bringing significant change to many industries.

- Increasing competition and globalization are two factors fueling eBusiness/eCommerce growth.

Where is the Forest Products Industry in eBusiness?

Industry in General

Forest Products Sector

| Develop- ment | Introduction | Growth | Maturity |

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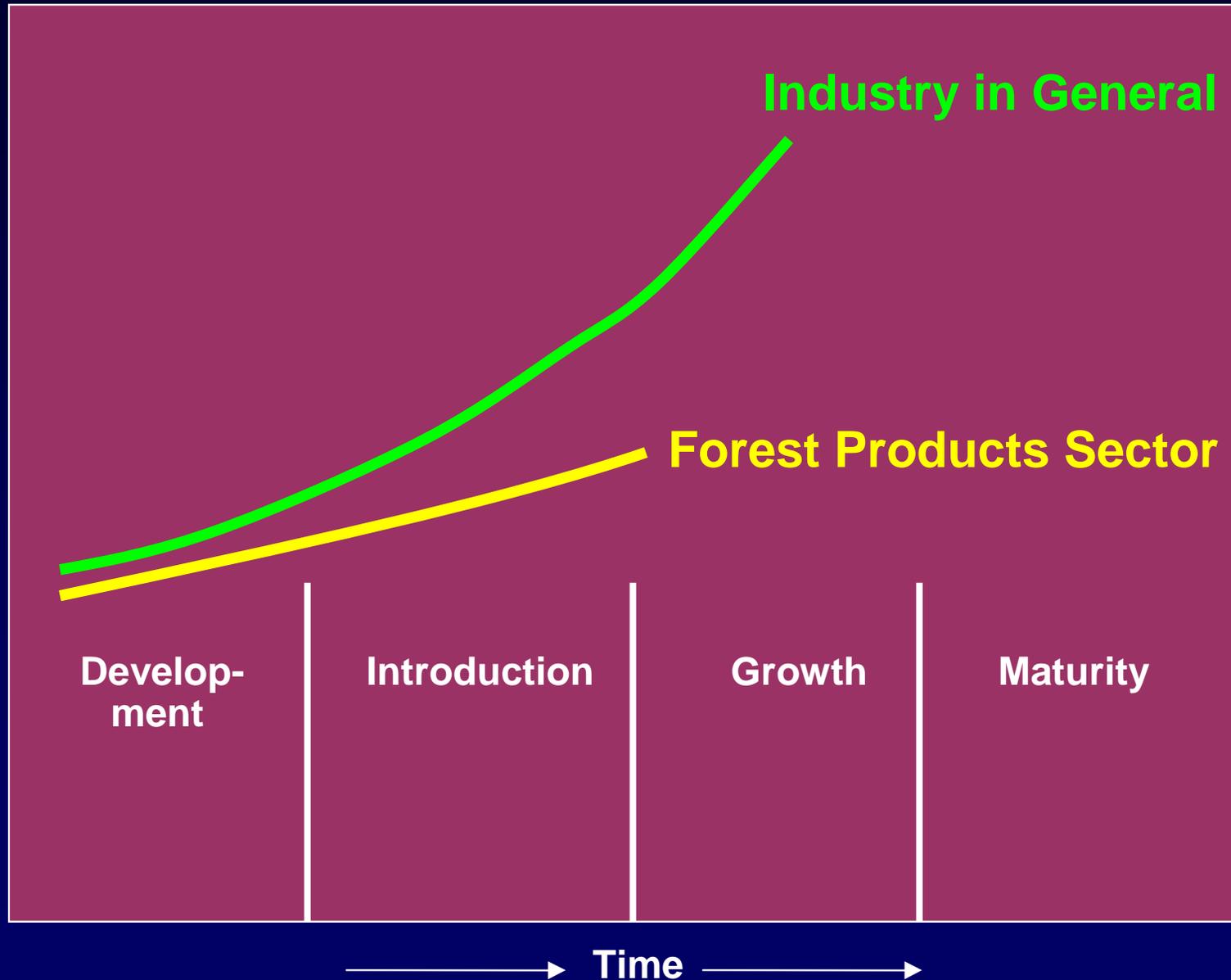
Where is the U.S. Paper Products Industry in eBusiness Adoption?

eCommerce Rank (%)	Sector	Ship. Value ($ Billion)	(% of Shipments)
1	Transportation Eq.	$639	46%
2	Electrical Equip., Appliances	$125	24%
3	Leather and Allied Products	$10	22%
4	Apparel	$60	20%
5	Textiles	$34	17%
14	**Paper**	**$166**	**12%**
LAST	Wood Products	$94	6%

US Census 2003

The Study

Research Context

This study, conducted in 2001, examines Internet use in the pulp/paper industries in the United States.

Overall, respondents were asked to discuss their current or planned eBusiness strategies and the impacts they have on dealings with customers and suppliers.

Methodology

• The 300 largest pulp and paper companies
In the United States were surveyed.

• Questionnaires were mailed using the Total Design
Method of survey protocols developed by Dillman
(1978).

• Response rate was 9 percent.

Results

Respondent Size
2000 Sales
(n=27)

$50-$99 Million
11.8%

$250-$499 Million
7.8%

$500-$999 Million
11.8%

Less than $50 Million
23.5%

Greater than $5 Billion
18.6%

$1 Billion-$5 Billion
26.5%
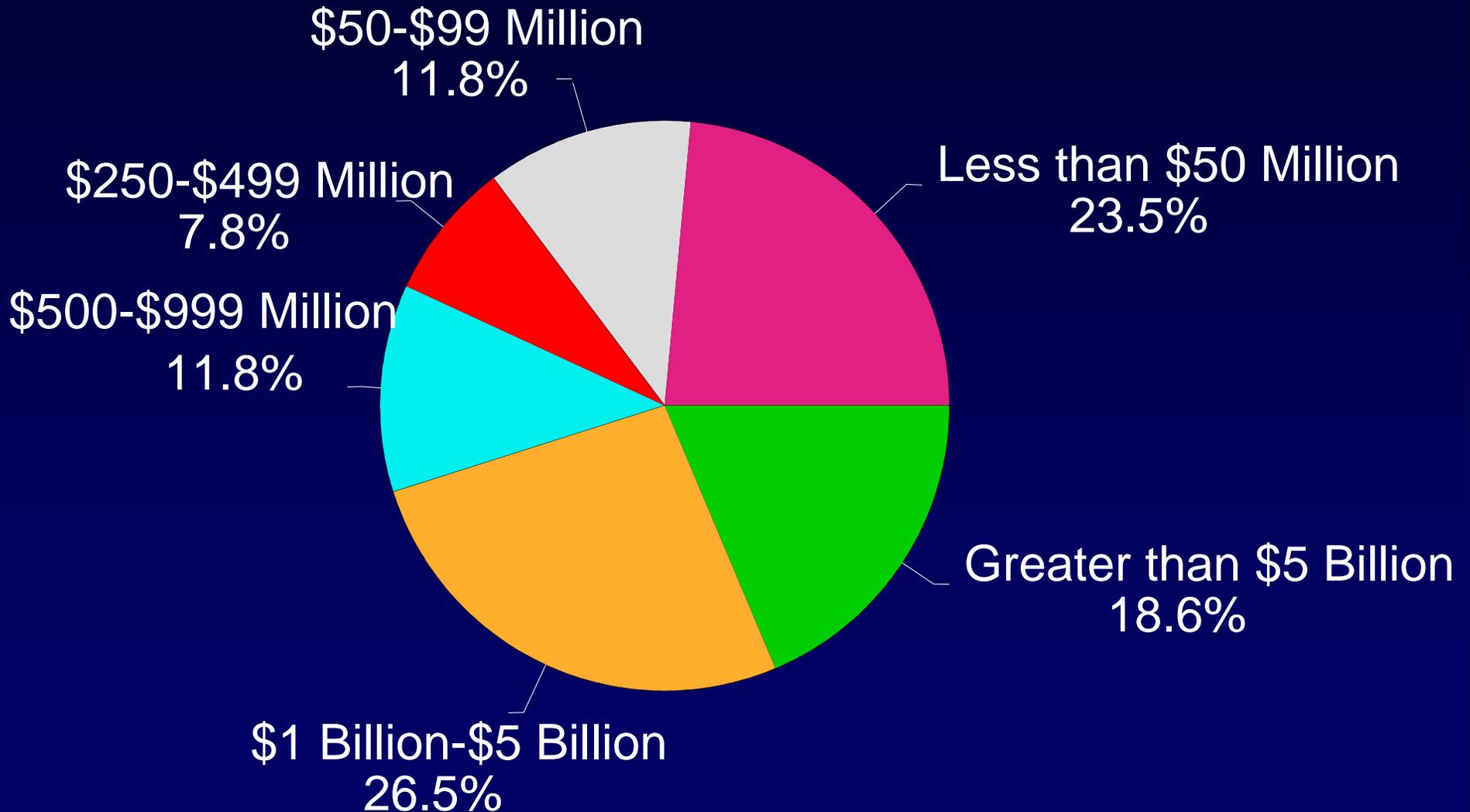
Respondent Size
Number of Employees in 2001
(n=27)

- 501-1,000 employees 7%
- 251-500 employees 4%
- 1,001-2,500 employees 7%
- 250 or less employees 26%
- Over 2,500 employees 56%
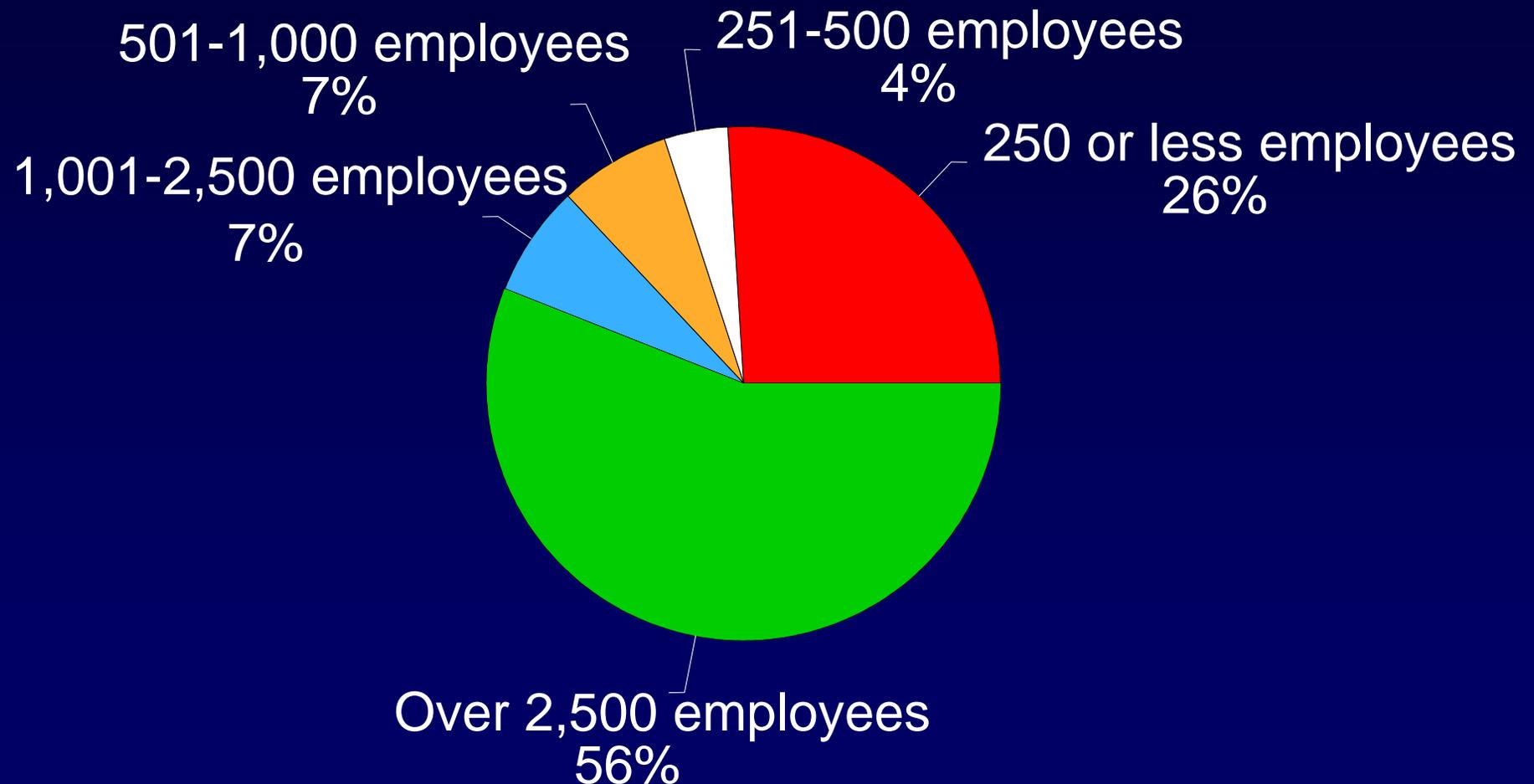
Respondent Major Product Categories-Pulp & Paper
Number of Respondents
(Multiple responses possible)

Category	Value
Specialty Paper	14
Market Pulp	12
Packaging Products	11
Printing Paper	10
Containerboard	7
Office/Commercial	7
Newsprint	4
Fluff Pulp	2
Paperboard	2
Tissue	2
Coated Papers	1
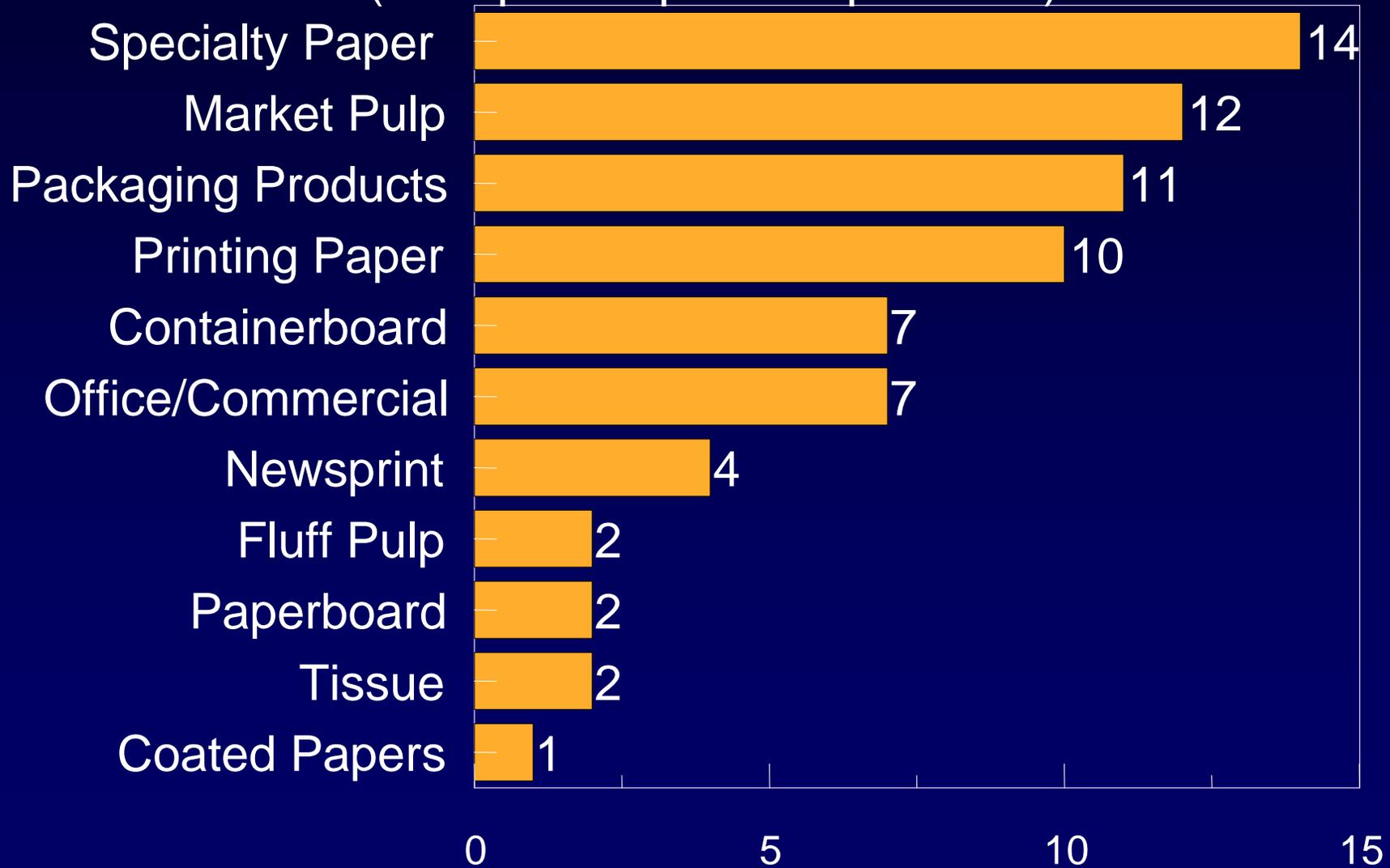
Internet Business Applications-Current & Planned in the Next Year

Percent of Respondents
(n=27)

Application	Percentage
Website	88%
Product/Price Inquiries	78%
Customer contacts	74%
Internet EDI	74%
Vendor contacts	70%
Sales to customers	63%
Purchases from Suppliers	63%
Marketing	59%
Product Promotion	59%
Order Status	59%
Inventory Management	57%
Shipping Notices	56%
Order Tracking	54%
Logistics	41%

Legend: 2001 (green), 2002 (orange)
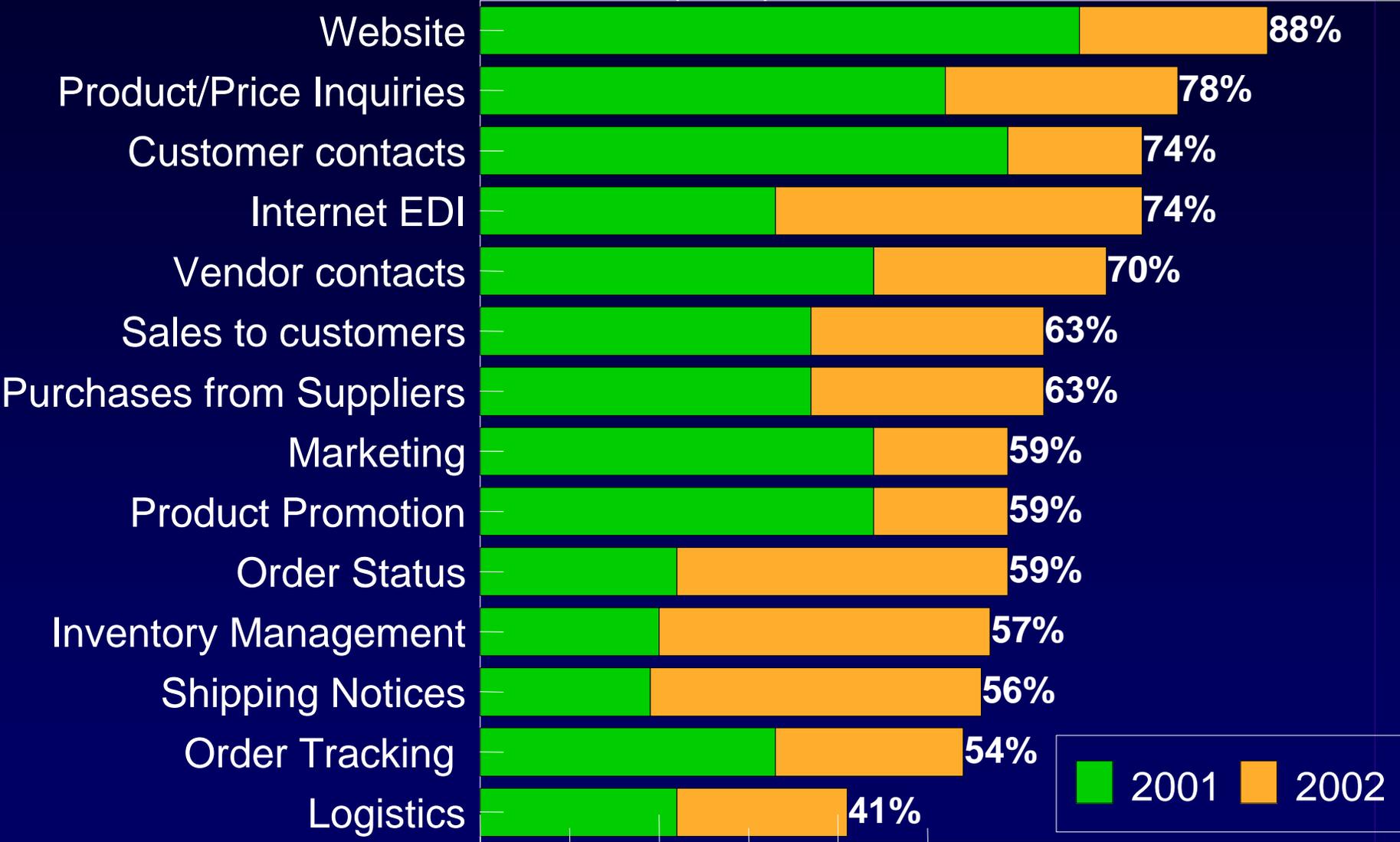
Axis: 0% 20% 40% 60% 80% 100%

Current Use & Planned Development of Internet-Based Technologies

Percent of Respondents
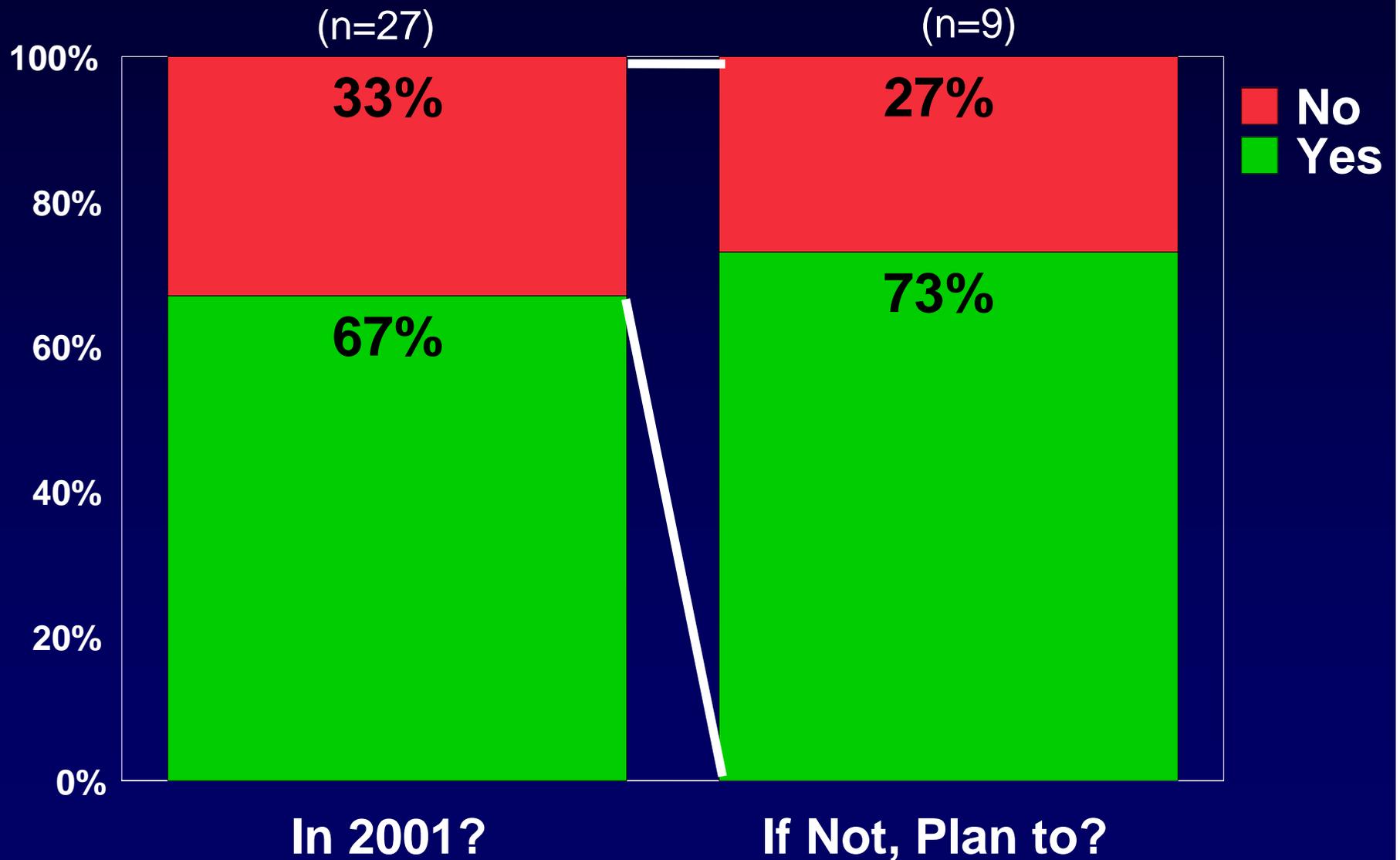
# When Internet Capabilities Were First Developed

Percent of Respondents
(n=18)
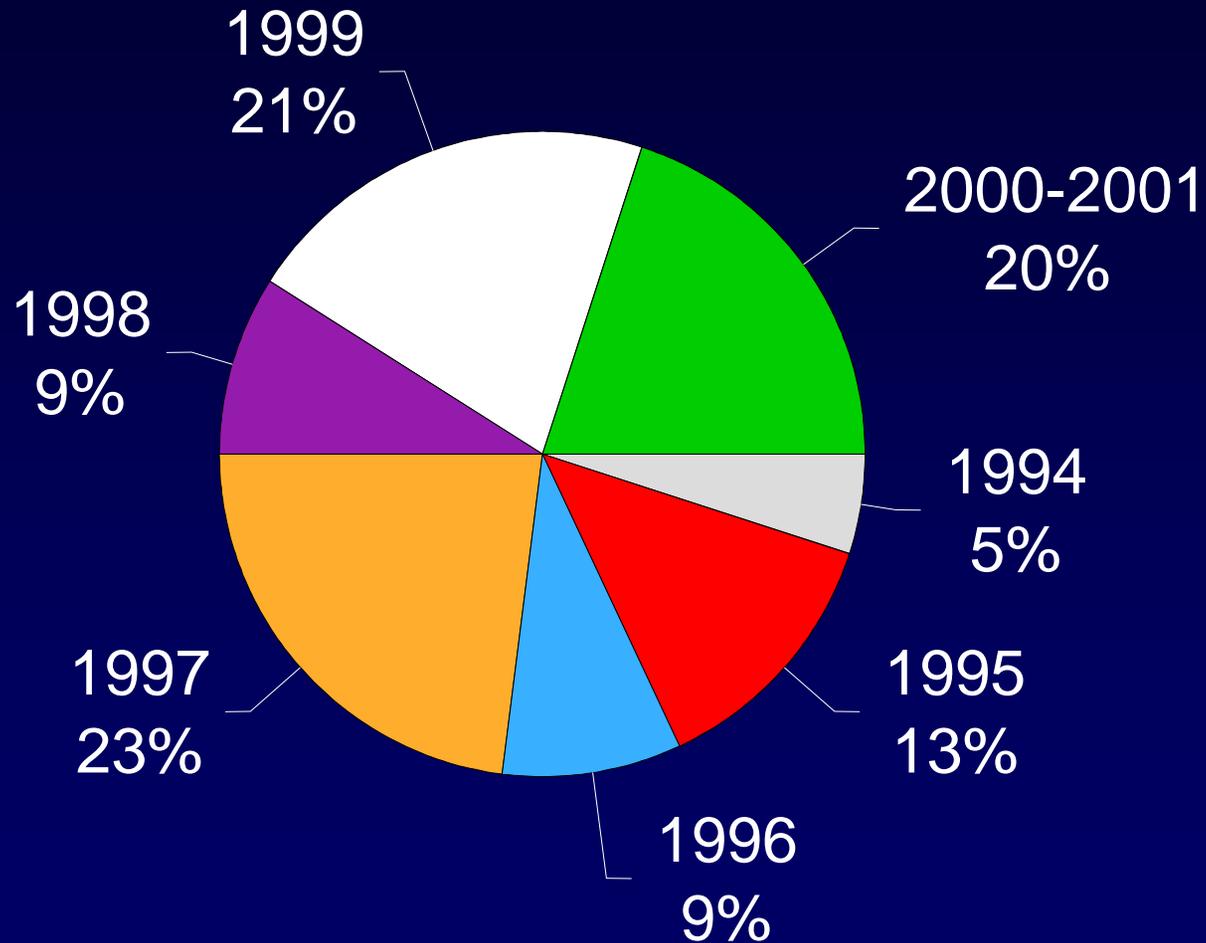
An Extranet
(letting partners in…selectively!)

Your Company
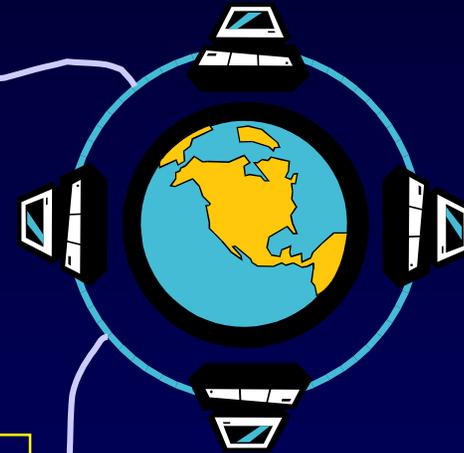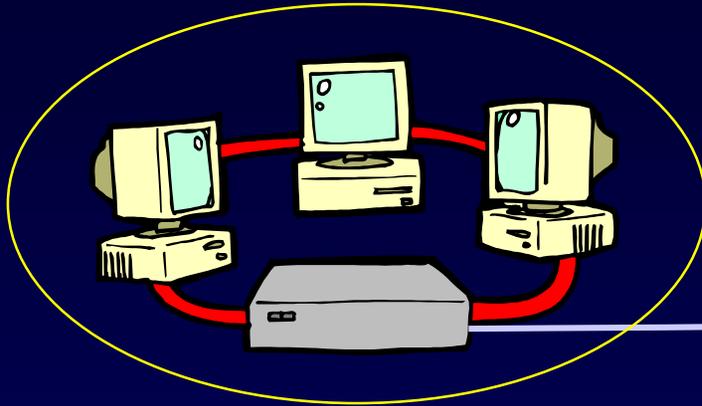
Your Customer or Supplier
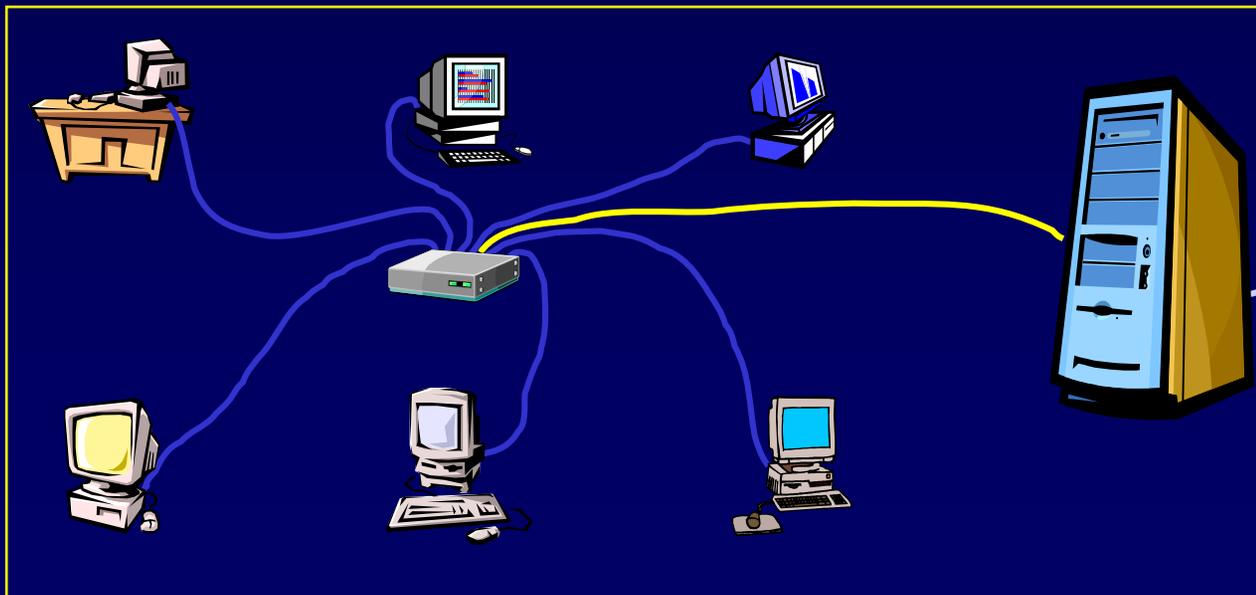
When Extranet Capabilities Were First Developed

Percent of Respondents

(n=11)

2000-2001
25%

1996
9%

1997
9%

1998
27%

1999
30%
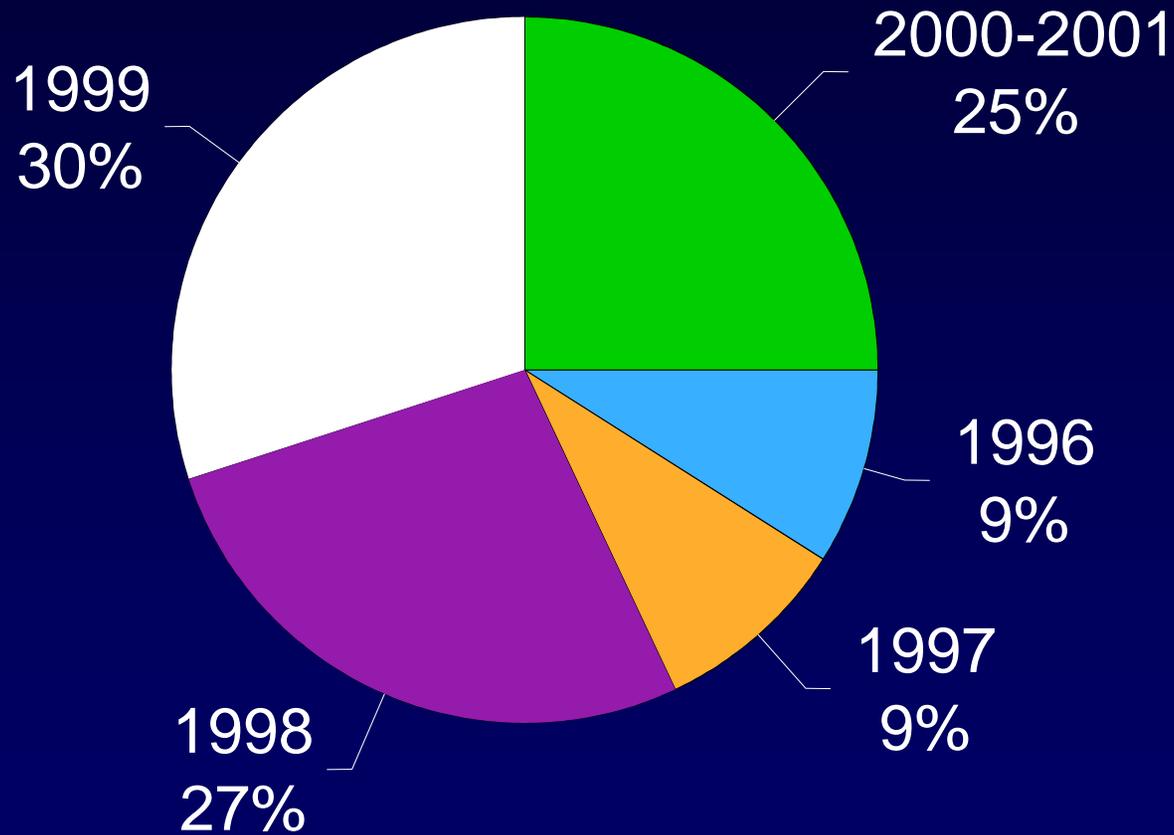
Investment Made to Date on Internet Applications

Percent of Respondents

(n=27)

$10,000-$49,999
26%

$50,000-$99,999
4%

Less than $10,000
13%

$100,000-$249,999
17%

Greater that $1 Million
23%

$250,000-$1 Million
17%
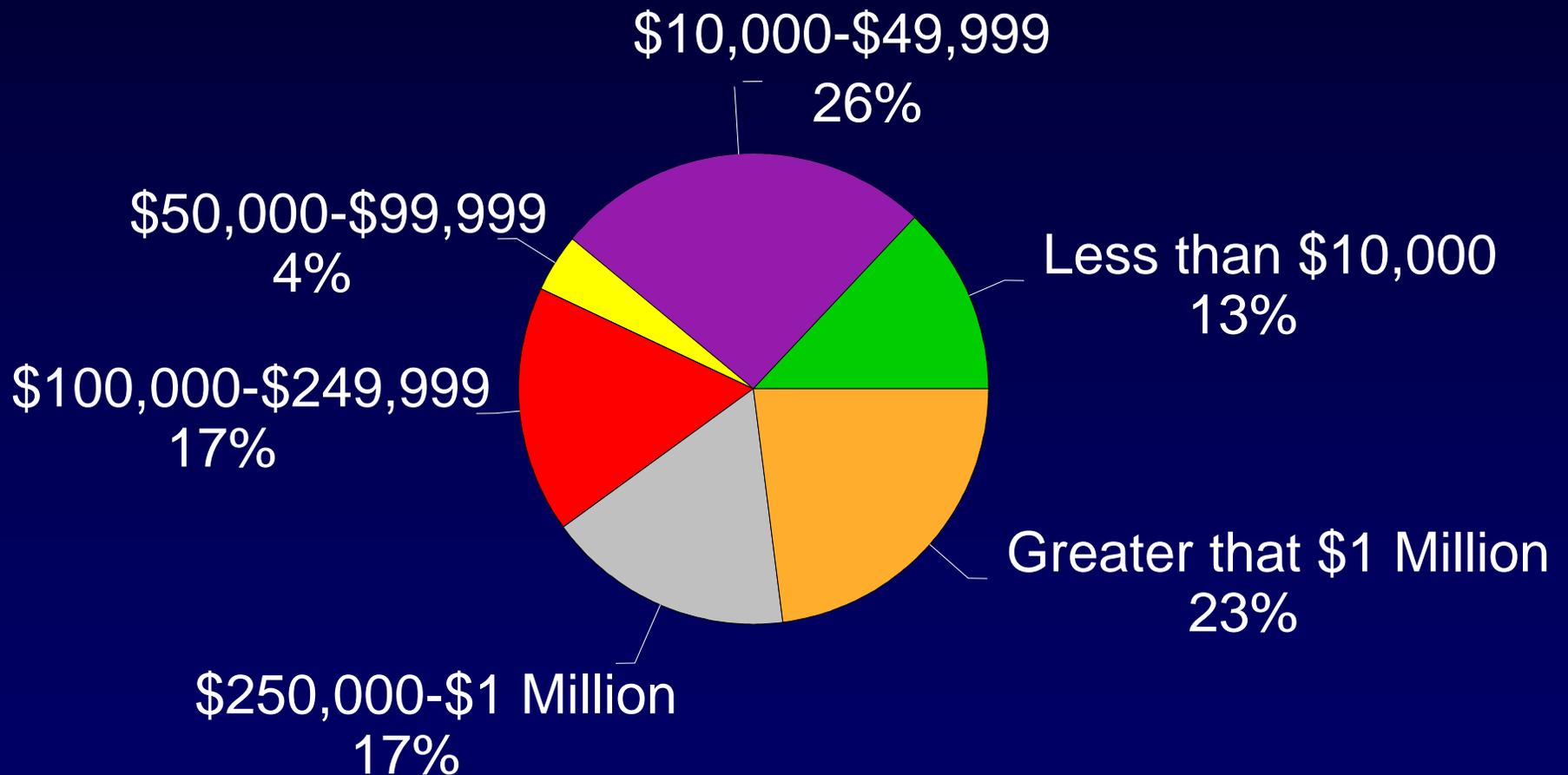
Implementation Schedule and Internet Benefits

Percent of Respondents

Yes
13%

No
87%

Yes
22%

No
78%
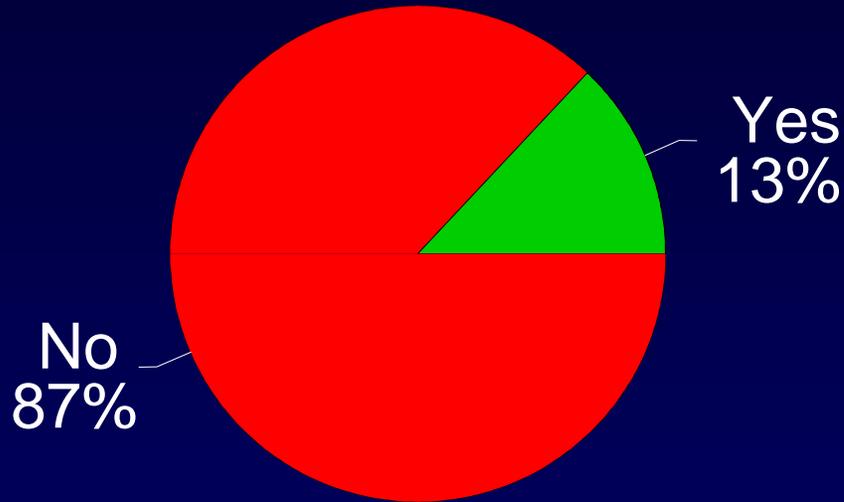
Is your company where it wants to be in implementing Internet /Extranet capabilities?
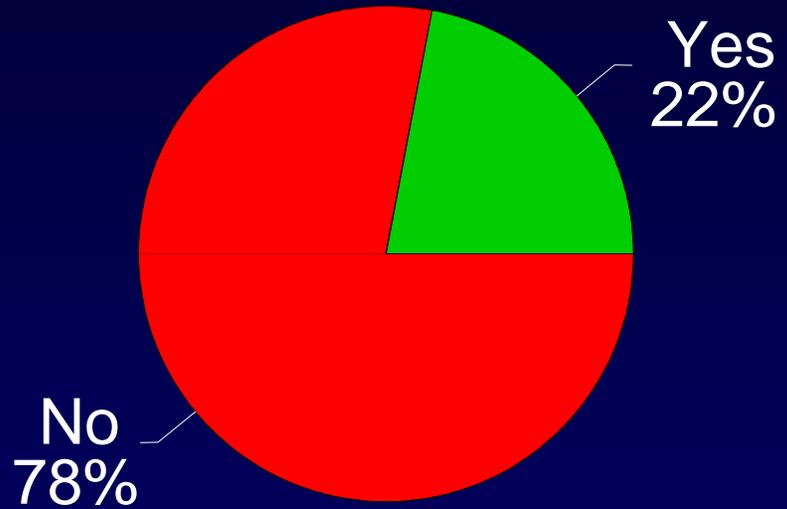
If your company has an Internet and/or Extranet capability, have the desired benefits been received?

Willingness to Sell Products via the Internet

Percent of Respondents

(n=27)

Very Willing
40%

Somewhat Willing
26%

Would NEVER Sell
13%

Not Very Willing
21%
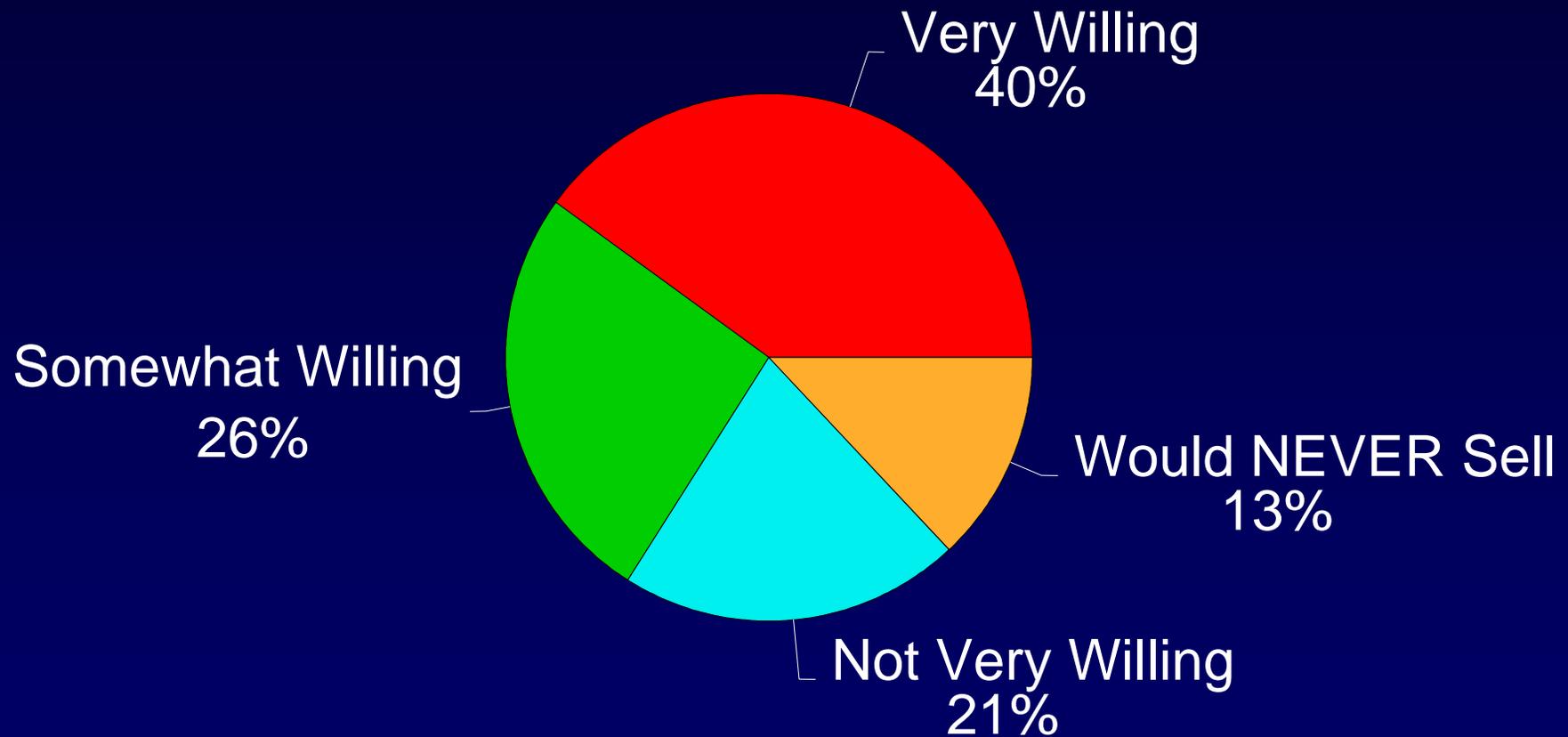
Benefits from Using the Internet

(n=26)

Scale: 1=strongly disagree to 5=strongly agree

Benefit	Score
Will increase shareholder value	3.5
Will increase customer retention	3.5
Will attract new customers	3.4
Is a competitive advantage	3.4
Will increase sales	3.4
Improve information exchange	3.4
Improve access to industry information	3.2
Will lower costs	3.0
Will lower prices	2.8

Reason for Implementing Internet Capabilities
(n=26)

Scale: 1=strongly disagree to 5=strongly agree

part of corporate strategy	4.0
retain customers	3.7
increase accuracy of data	3.3
customer request	3.3
reduce errors	3.3
improve cash flow	3.0
reduce cycle time	3.0
create a cost savings	2.9
implement JIT inventory management	2.7

Impediments to Implementing Internet Capabilities

(n=23)

Scale: 1=strongly disagree to 5=strongly agree

Impediment	Rating
Lack of an understanding of the benefits to my company	3.7
Lack of skilled IT staff	3.1
Inadequate application tools	3.1
Expense of development	2.8
Expense of hardware and software	2.5
Lack of infrastructure: (firewalls, security)	2.3
Customer resistance	2.3
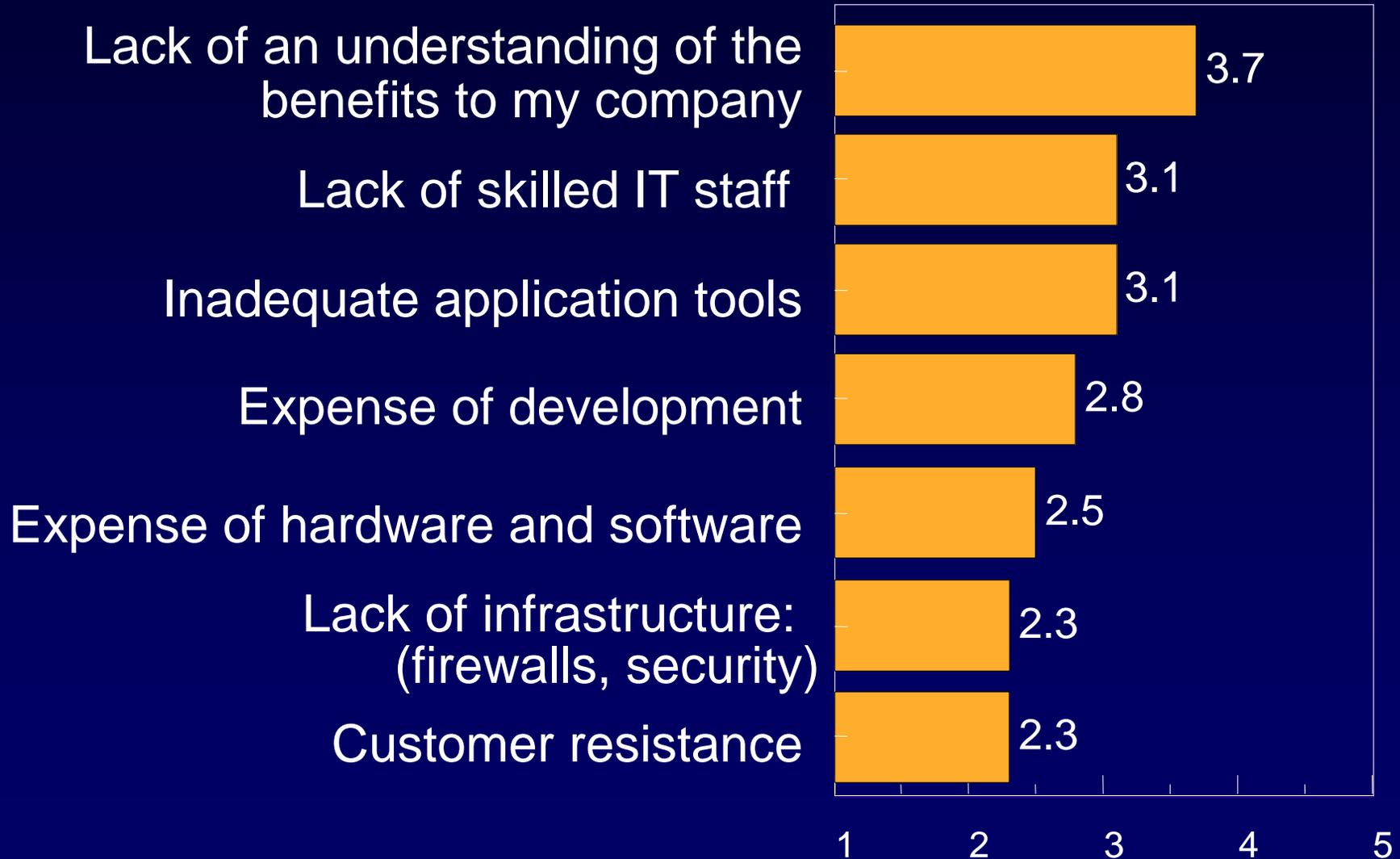
Concerns about Using the Internet
(n=25)

Scale: 1=strongly disagree to 5=strongly agree


Concern	Rating
Need to change established procedures	3.6
Security of sensitive information	3.4
Availability of technical resources	3.4
Cost (expensive to set up and maintain)	3.3
Speed of access	3.3
Training of personnel	3.2
Loss of contact with customers	3.2
Need to restructure the sales department	3.2
Less contact from the sales force	3.1
Competition can too easily track our efforts	2.9
It won't be profitable	2.7

Summary

- The Internet has significant potential to support business processes in the pulp and paper sector.

- The Internet can not solve business problems; it CAN be a tool in the business development tool box.
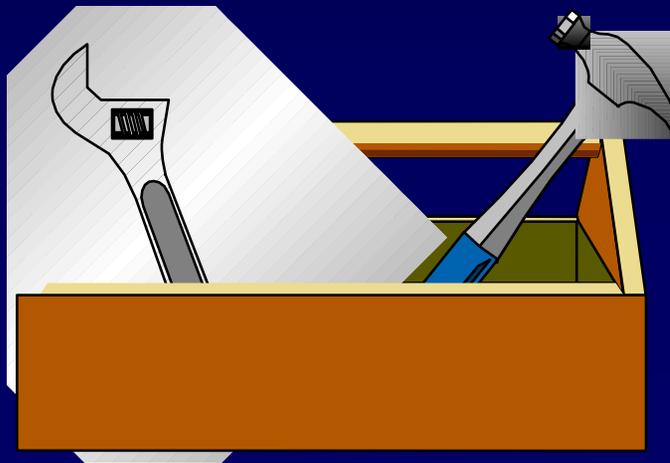
Summary

- There is a multitude of applications.

- Companies should adopt applications to best <u>achieve THEIR UNIQUE objectives</u>.

Questions?

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