

***Logistics and Transportation  
12<sup>th</sup> Annual Survey of  
Issues and Trends***

***2003 Survey Results***

***Georgia Southern University  
University of Tennessee***

***&***

***Cap Gemini Ernst & Young U.S. LLC***

## ***Introduction***

We are pleased to present the findings of the 2003 Logistics and Transportation Annual Survey of Issues and Trends. Our hope is that this data will provide useful information regarding current trends, and assist you in better managing your organization.

A few comments regarding the data and methodology are worth noting here:

- The mail survey was conducted in the Spring of 2003.
- There were 188 participants in this year's study.
- This year's respondents controlled approximately \$25.1 billion in transportation expenditures.
- Since some questions have more than one response, not all percentages will add to one hundred.
- Not all respondents answered all of the questions.
- Where appropriate the mean, the median and the mode are provided in the report. The mean is the average of all of the responses, while the median is the midpoint (50% above and 50% below) for a specific response to a question. The mode is the single most frequent response.
- This report is divided into five sections: Customer Management, Technology and Process Management, Order Fulfillment, Metrics and Demographics.

To those of you who participated in this research, we would like to again thank you for taking time out of your busy schedule and assisting us in this effort. We hope you find this information helpful in managing and improving your supply chains.

A special thanks to Troy Innis, MBA student - GSU, for his assistance in producing this report.

Sincerely,



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Director, Southern Center for Logistics  
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Associate Professor  
University of Tennessee

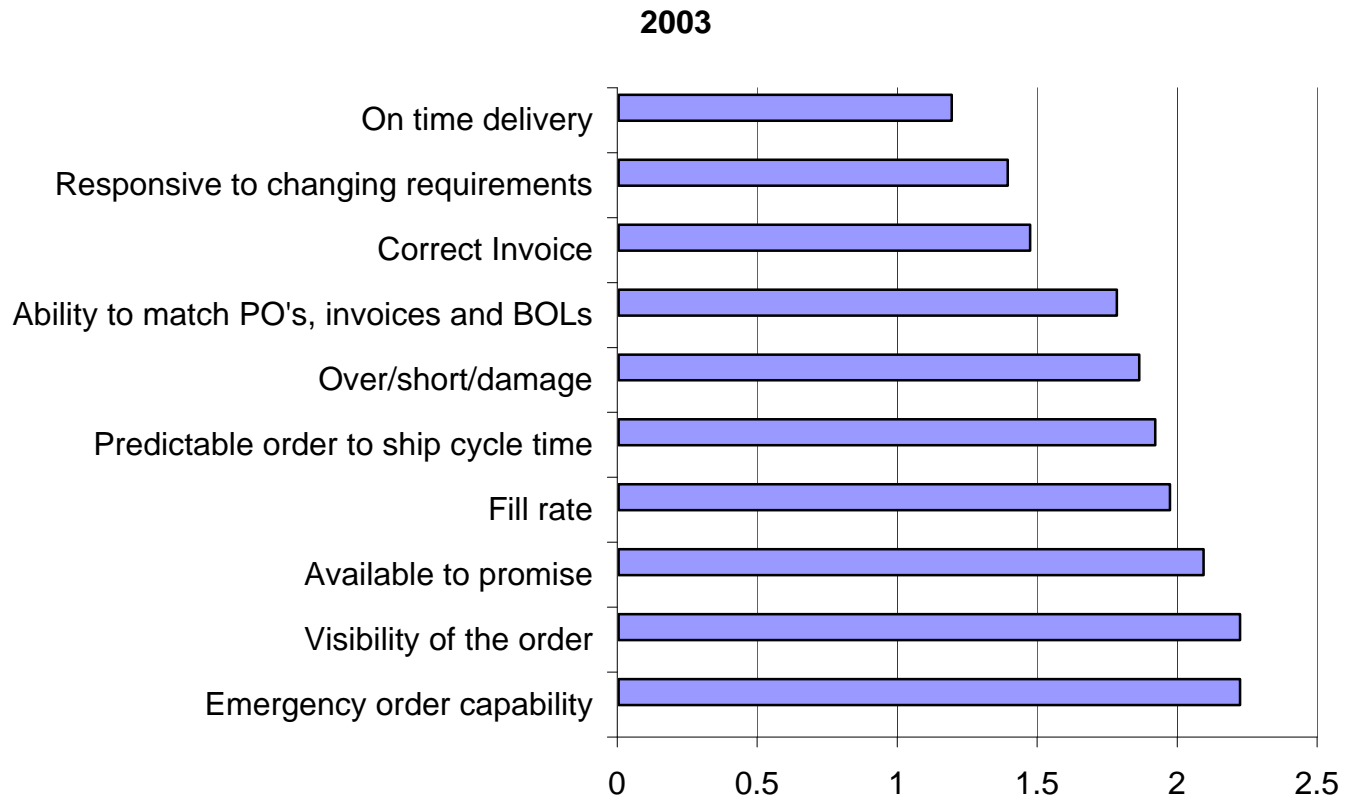
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**How important are the following attributes to your customers ?**

	<u>Mean</u>
Emergency order capability	2.22
Visibility of the order	2.22
Available to promise	2.09
Fill rate	1.97
Predictable order to ship cycle time	1.917
Over/short/damage	1.86
Ability to match PO's, invoices and BOLs	1.78
Correct Invoice	1.47
Responsive to changing requirements	1.39
On time delivery	1.19

1= Very important, 7= Not important



**Strategies employed to increase customer profitability**

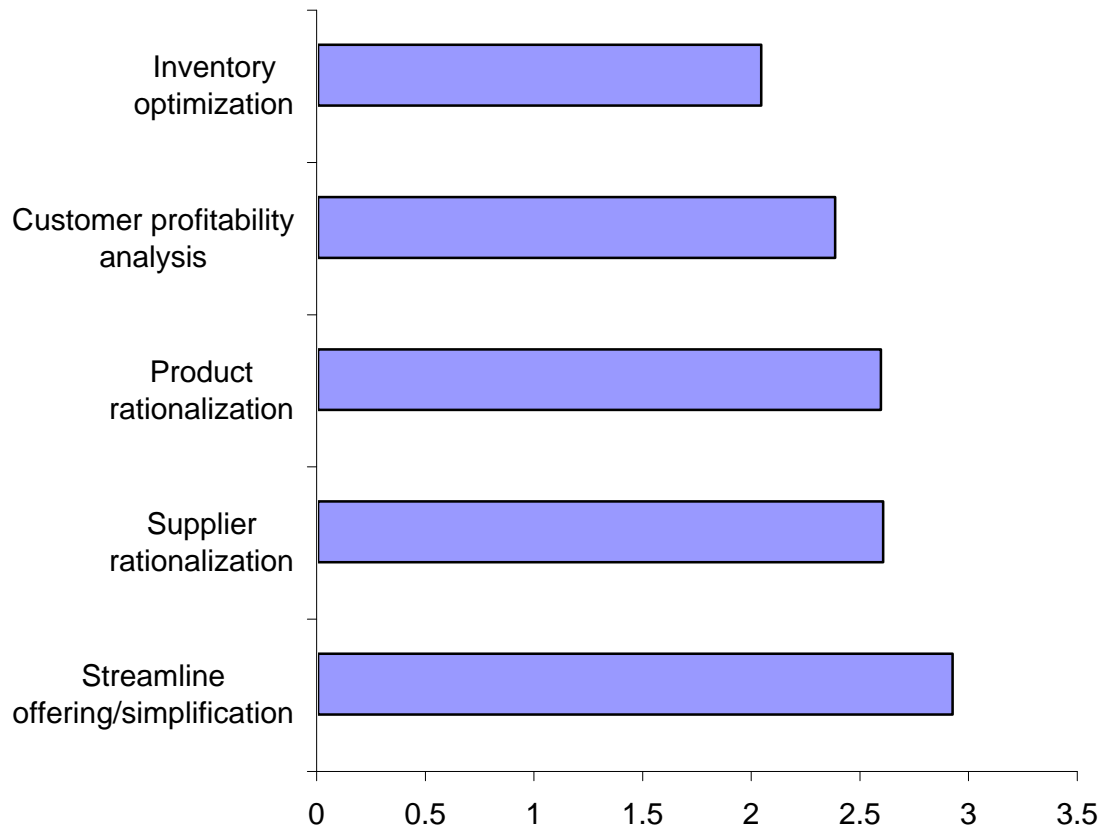
<b>Attribute</b>	<b>Use</b>
Adjusted frequency of replenishment	84
Customer segmentation strategy	62
Utilized a customer relationship management system	62
Utilized a transportation management system	79
Reduced transportation costs	127
Differential customer service levels	48
Rationalization of product offering	56
Improved forecast accuracy	62
Using CPFR	17
Utilized a warehouse management system	72
Reduced warehousing costs	79
Cost plus / gain sharing contract with 3PL	25
Collaborative planning with trading partners	51
Reduced order to ship cycle time	87
Reconfigured supply chain or logistics network	71
Implemented a VMI - type program	48
Reduced inventory	91
Six Sigma	28

**How important are the following in evaluating and managing the costs associated with serving your customers?**

	<u>Mean</u>
Streamline offering/simplification	2.92
Supplier rationalization	2.6
Product rationalization	2.59
Customer profitability analysis	2.38
Inventory optimization	2.04

1= Very important, 7= Not important

**2003**

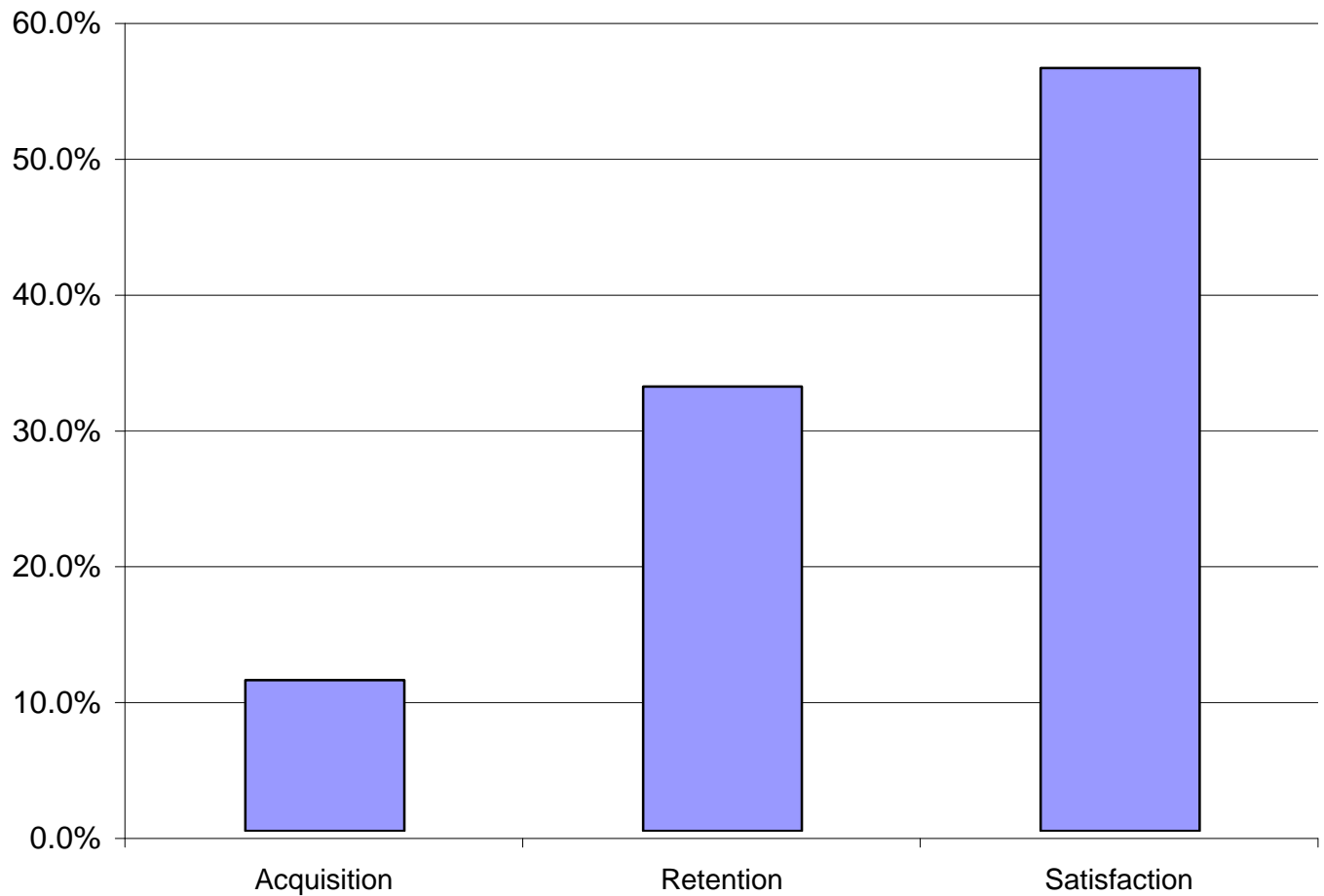


**Available to promise**

*Improvements Have Led to Measureable Results in Customer:*

	<u>2003</u>
<b>Acquisition</b>	11.1%
<b>Retention</b>	32.7%
<b>Satisfaction</b>	56.2%
Total	100%

**2003**

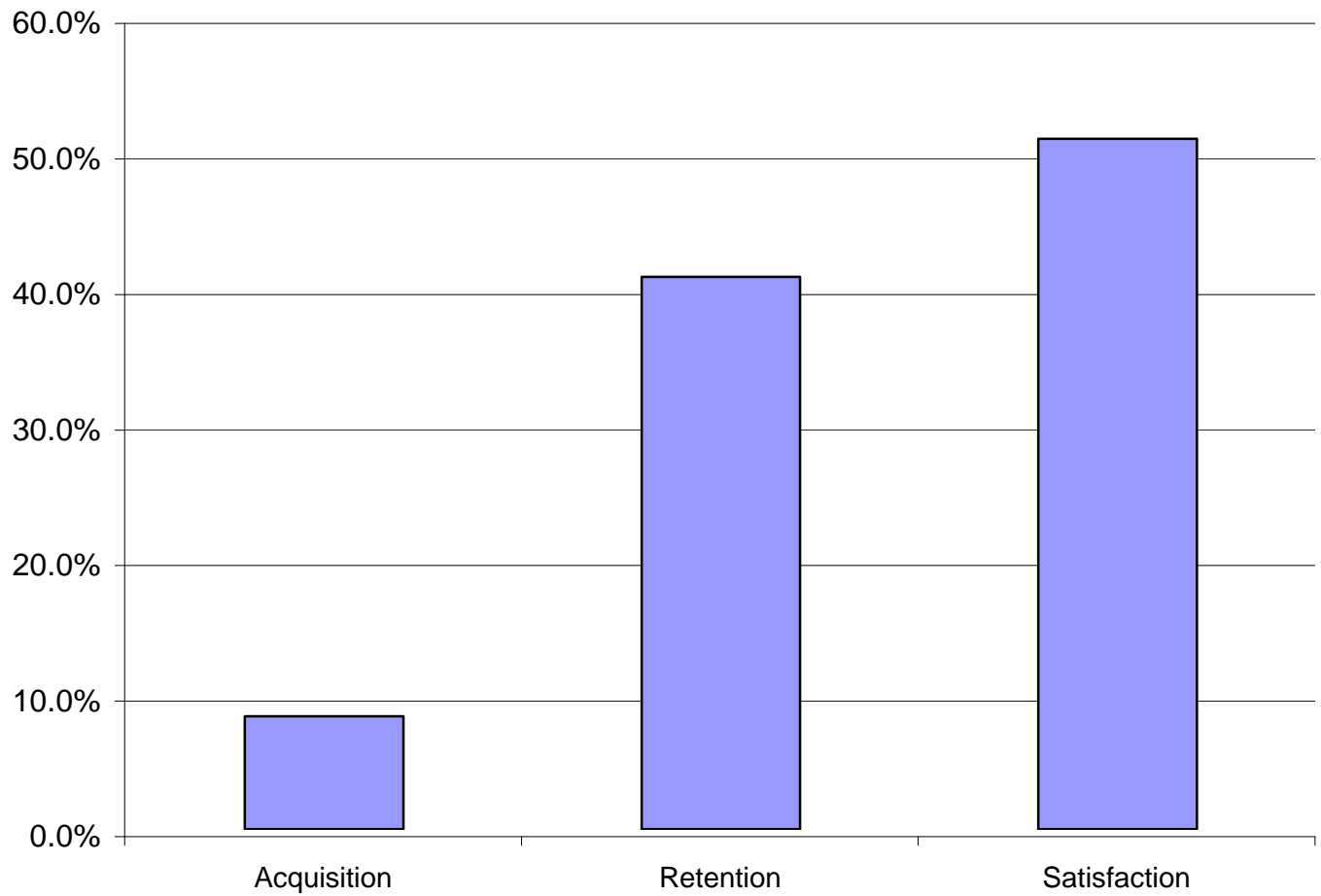


**On time delivery**

*Improvements Have Led to Measureable Results in Customer:*

	<u>2003</u>
<b>Acquisition</b>	8.3%
<b>Retention</b>	40.7%
<b>Satisfaction</b>	50.9%
Total	100%

**2003**

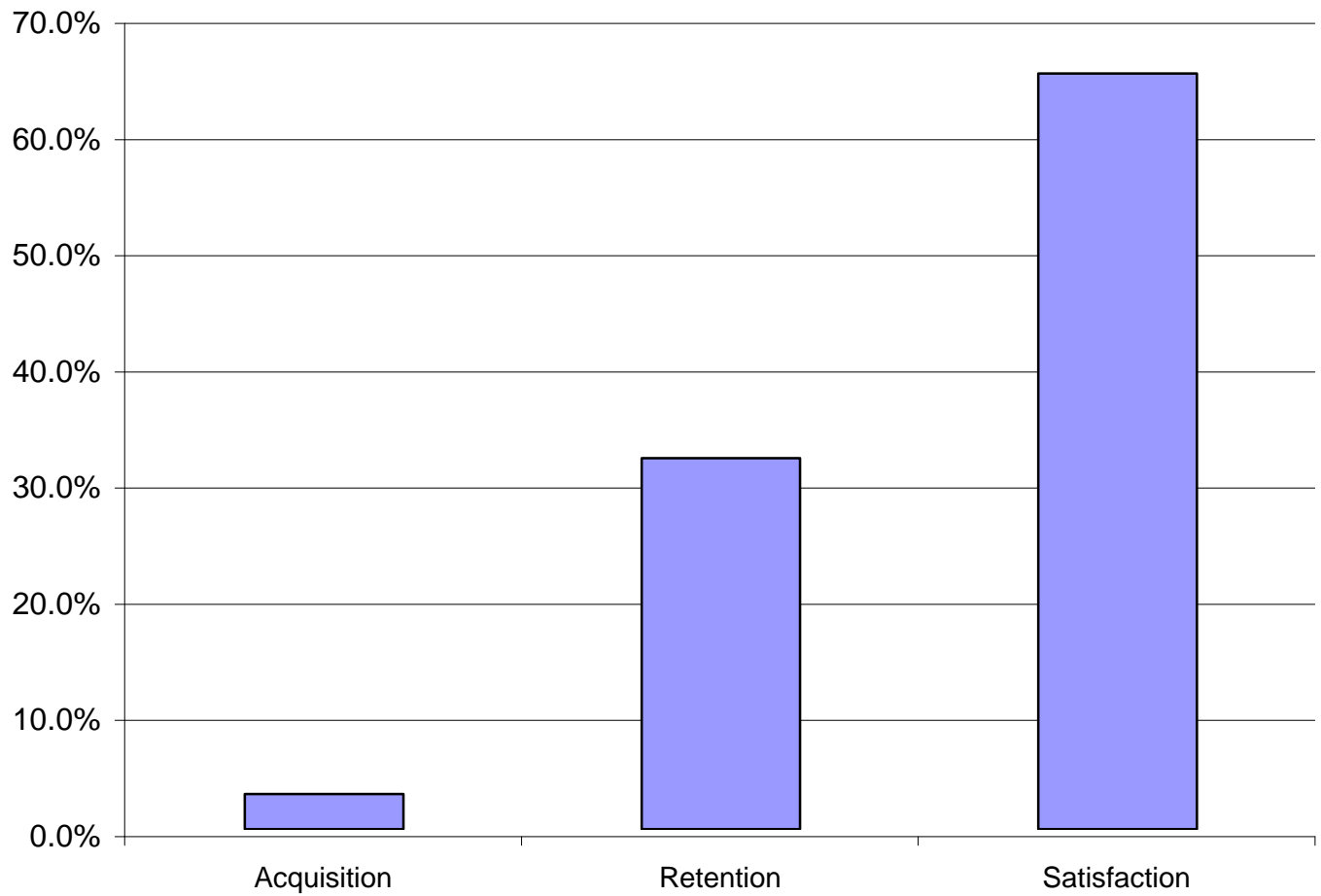


**Correct invoice**

*Improvements Have Led to Measureable Results in Customer:*

	<u>2003</u>
<b>Acquisition</b>	3.0%
<b>Retention</b>	31.9%
<b>Satisfaction</b>	65.1%
Total	100%

**2003**

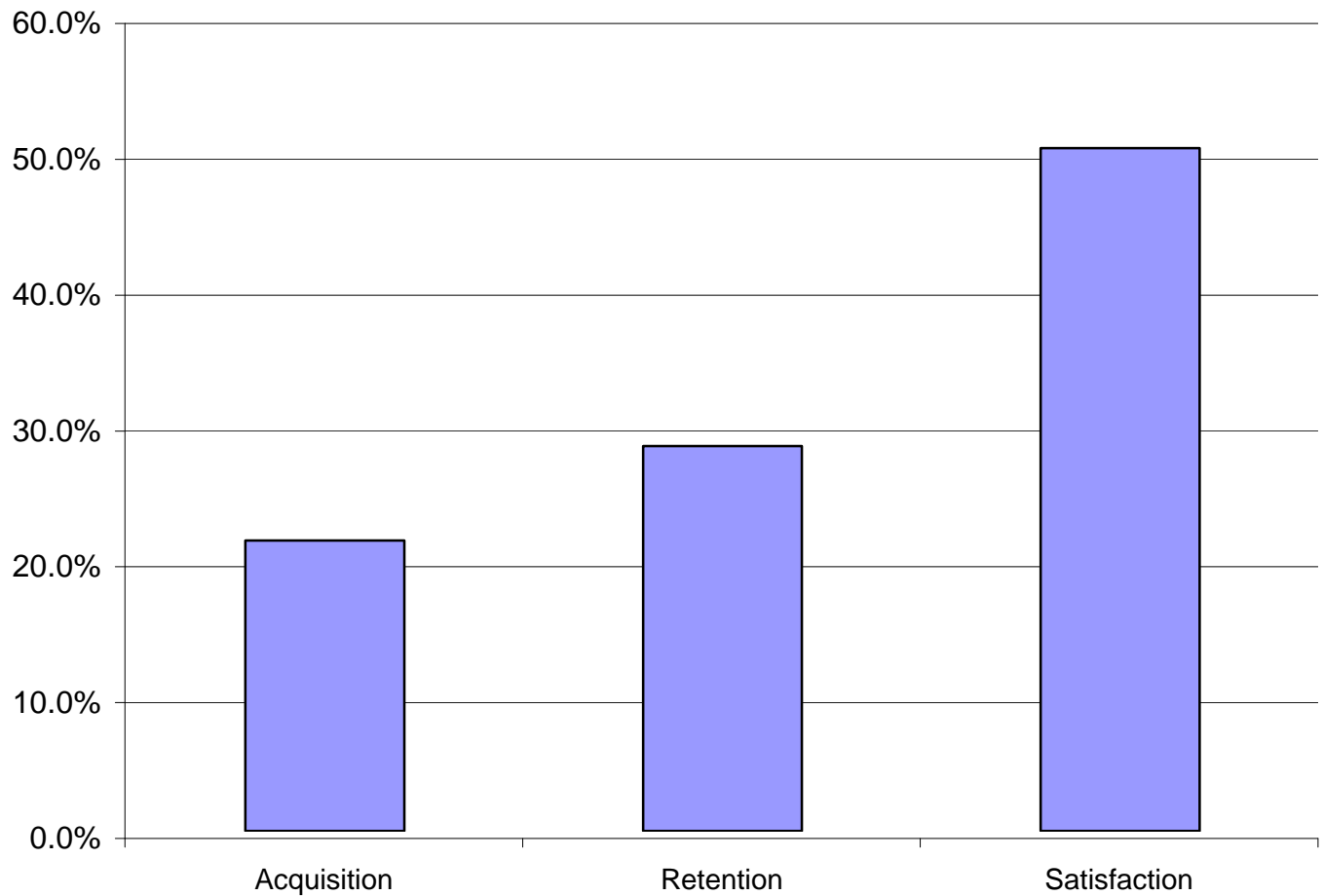


**Emergency Order capability**

*Improvements Have Led to Measureable Results in Customer:*

	<u>2003</u>
Acquisition	21.4%
Retention	28.3%
Satisfaction	50.3%
Total	100%

**2003**

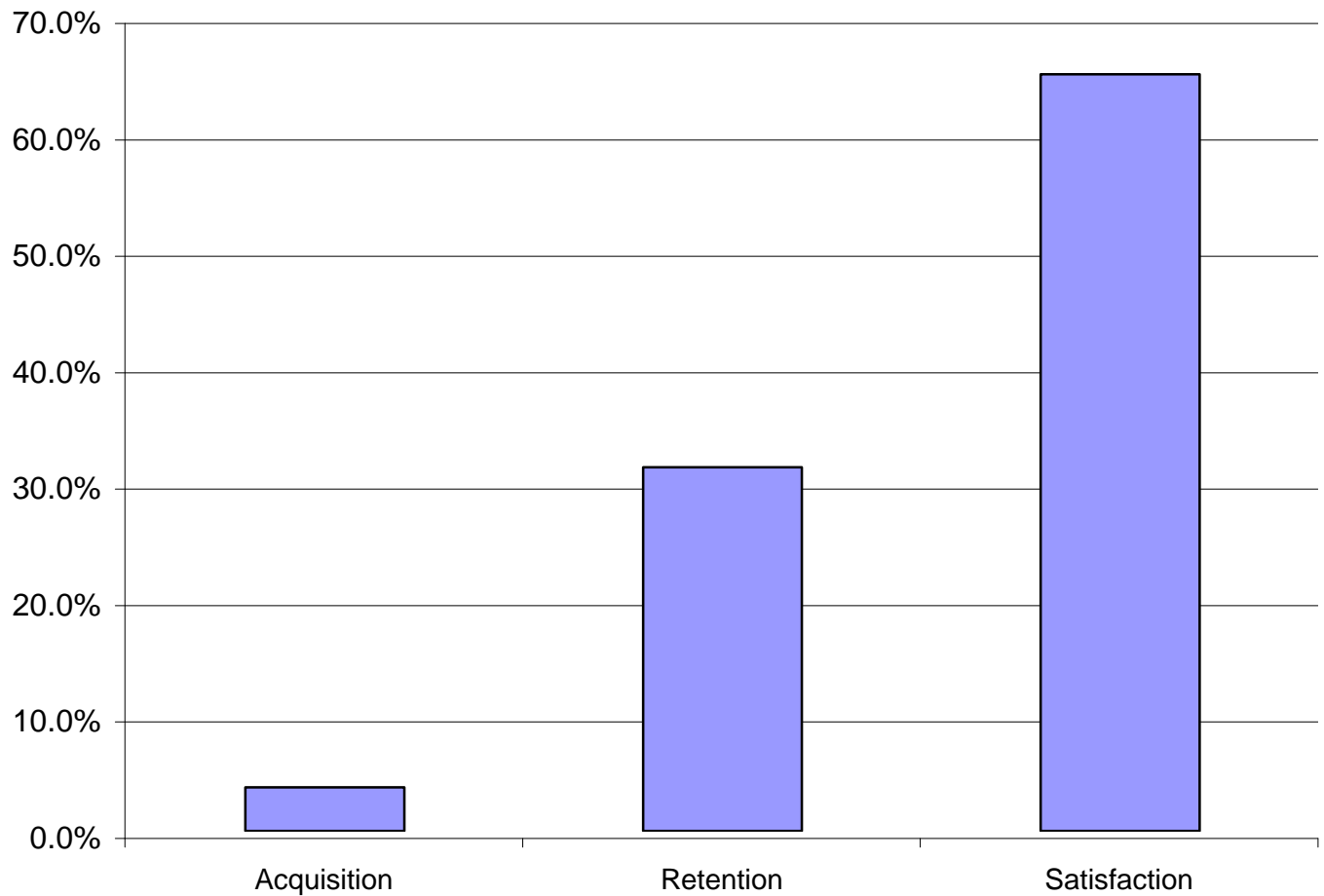


**Over / short / damage**

*Improvements Have Led to Measureable Results in Customer:*

	<u>2003</u>
<b>Acquisition</b>	3.8%
<b>Retention</b>	31.3%
<b>Satisfaction</b>	65.0%
Total	100%

**2003**

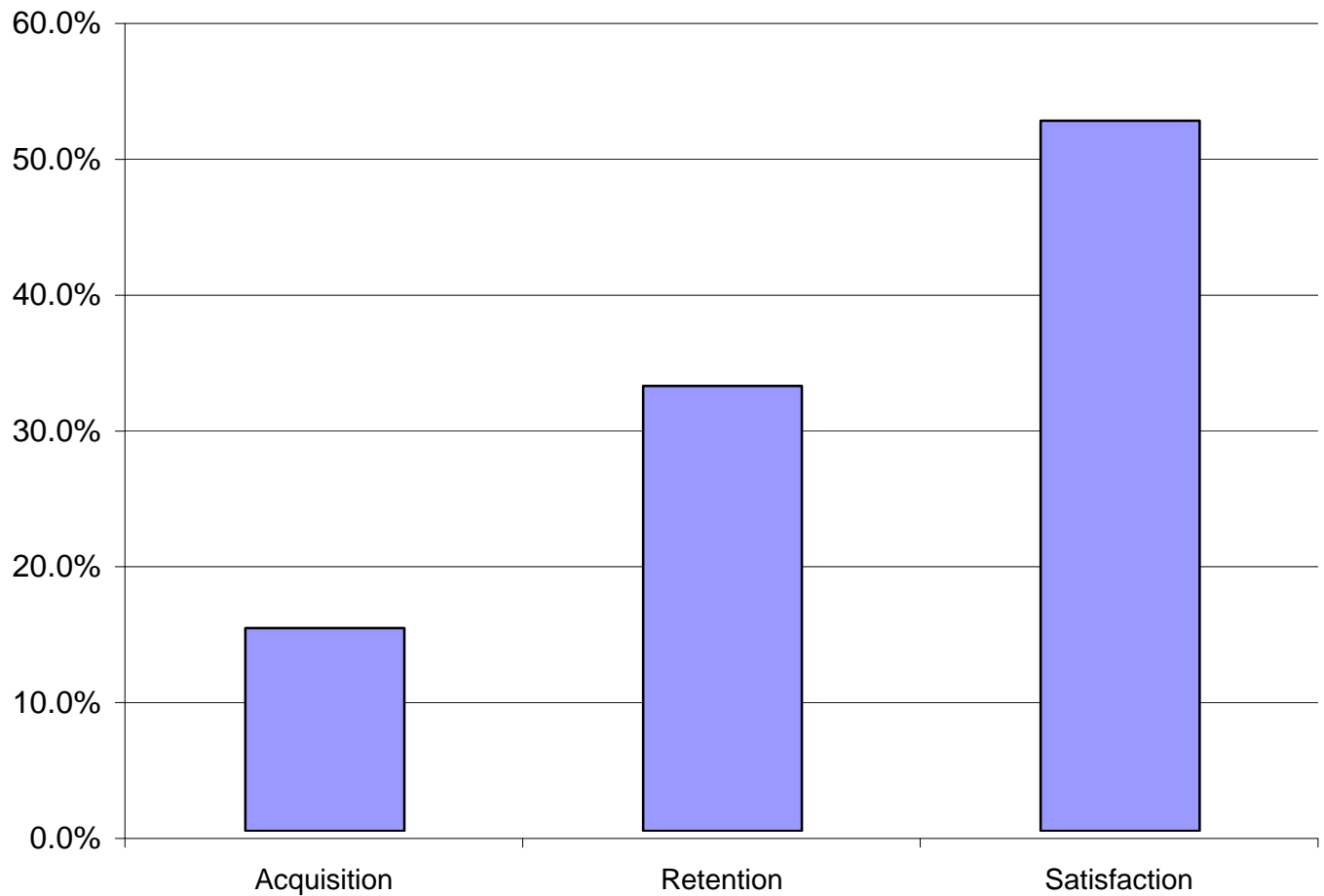


**Predictable order to ship cycle time**

*Improvements Have Led to Measureable Results in Customer:*

	<u>2003</u>
Acquisition	14.9%
Retention	32.8%
Satisfaction	52.3%
Total	100%

**2003**

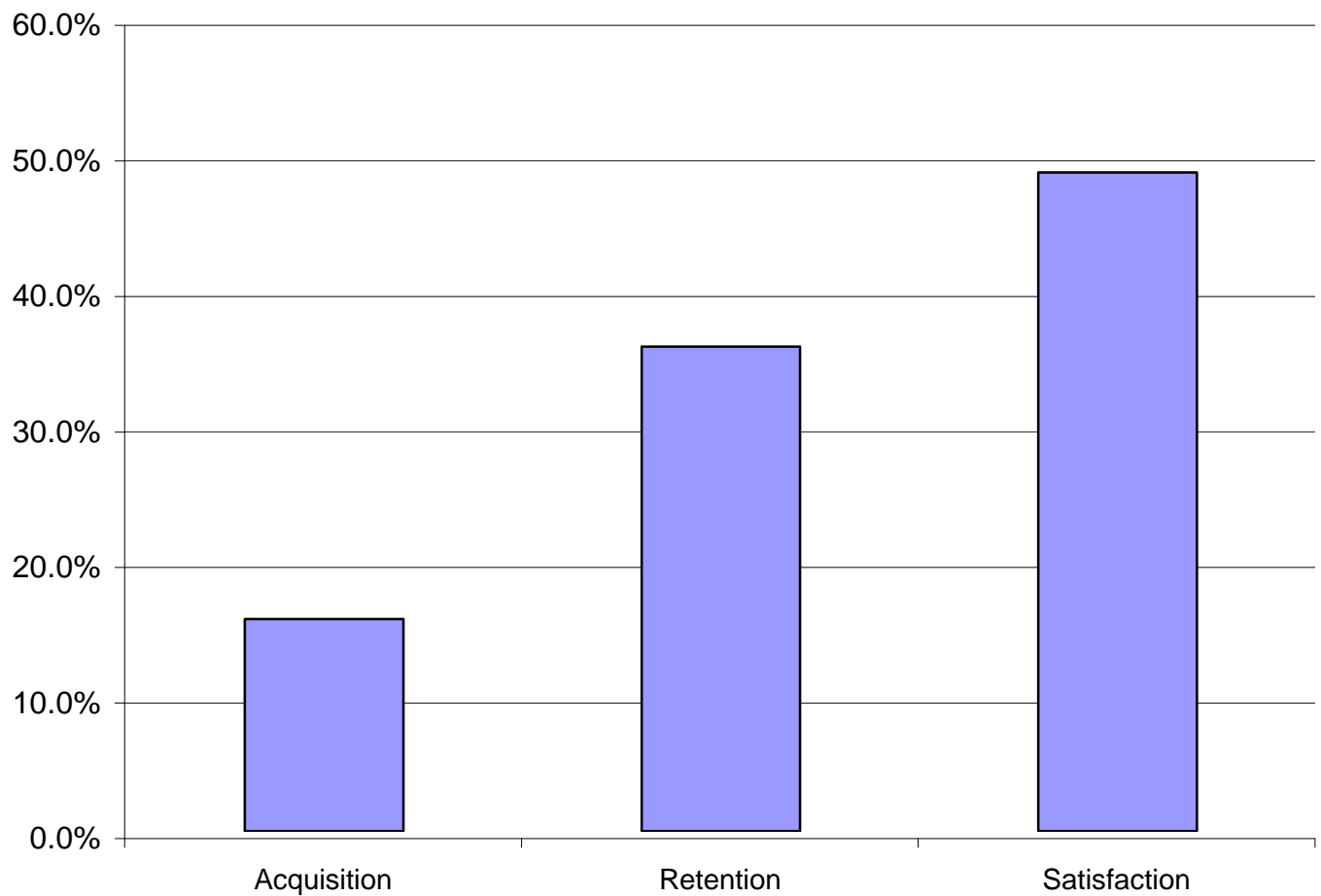


**Responsive to changing requirements**

*Improvements Have Led to Measureable Results in Customer:*

	<u>2003</u>
<b>Acquisition</b>	15.6%
<b>Retention</b>	35.8%
<b>Satisfaction</b>	48.6%
Total	100%

**2003**

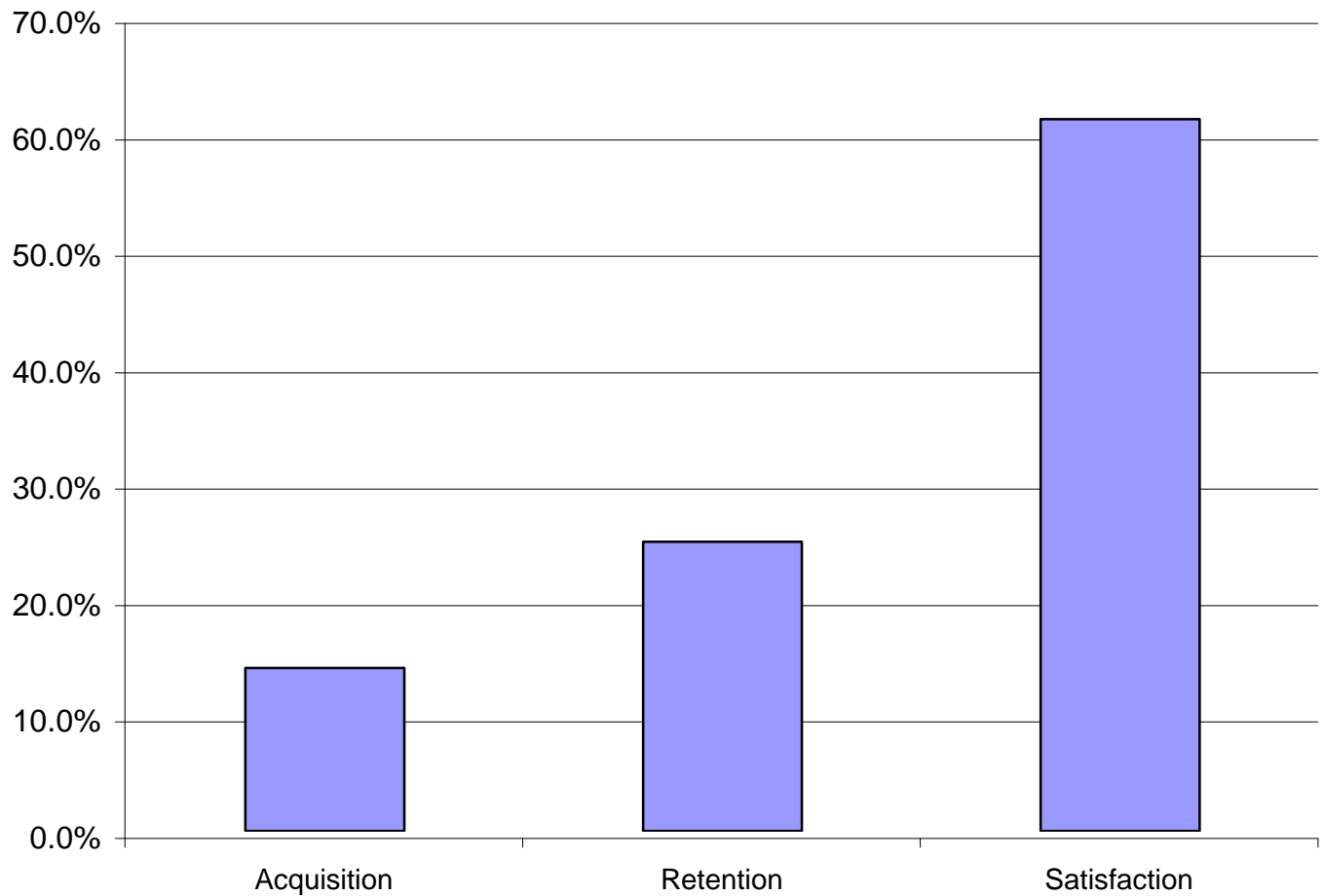


**Visibility of the order**

*Improvements Have Led to Measureable Results in Customer:*

	<u>2003</u>
<b>Acquisition</b>	14.0%
<b>Retention</b>	24.8%
<b>Satisfaction</b>	61.1%
Total	100%

**2003**

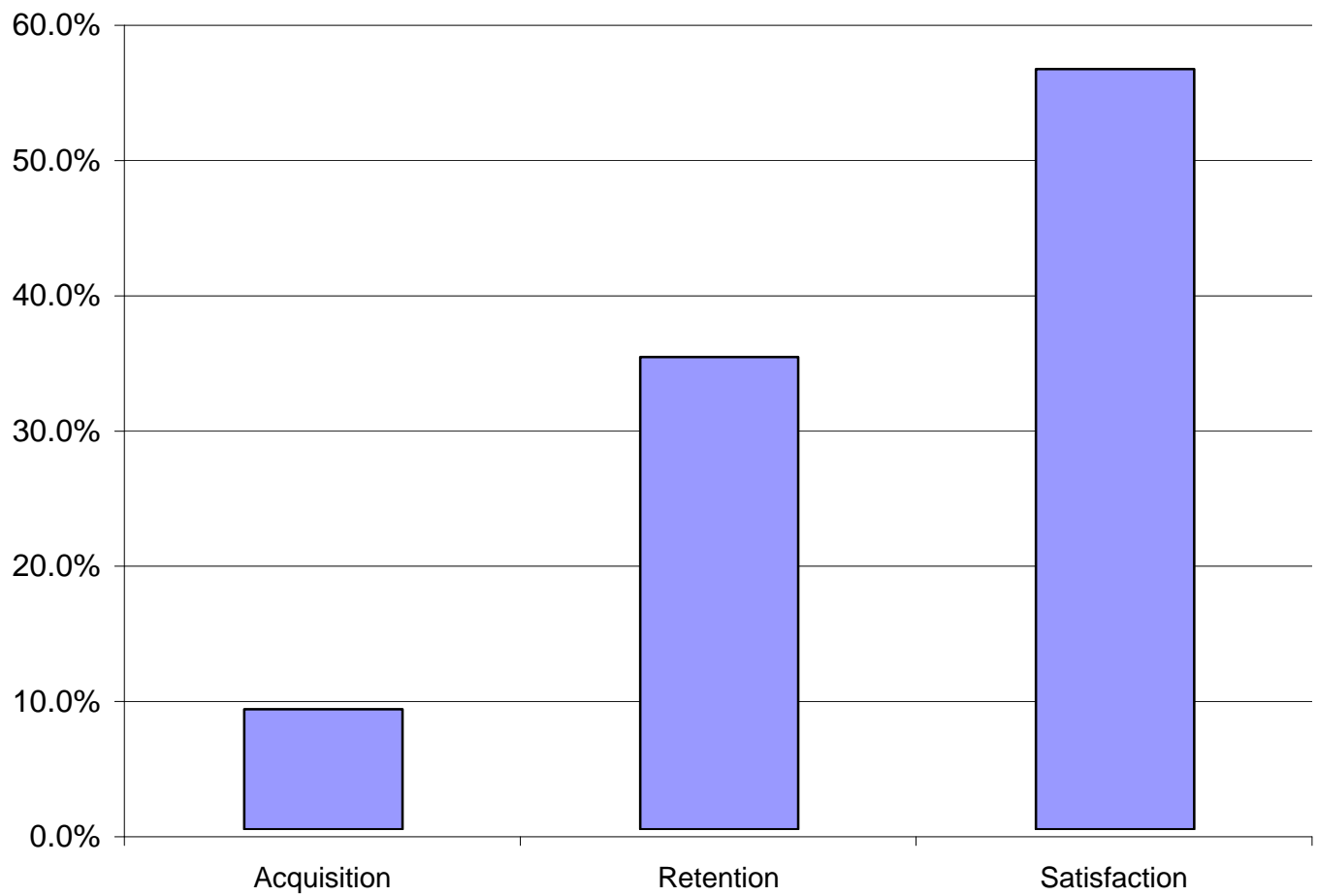


**Fill Rate**

*Improvements Have Led to Measureable Results in Customer:*

	<u>2003</u>
<b>Acquisition</b>	8.9%
<b>Retention</b>	34.9%
<b>Satisfaction</b>	56.2%
Total	100%

**2003**

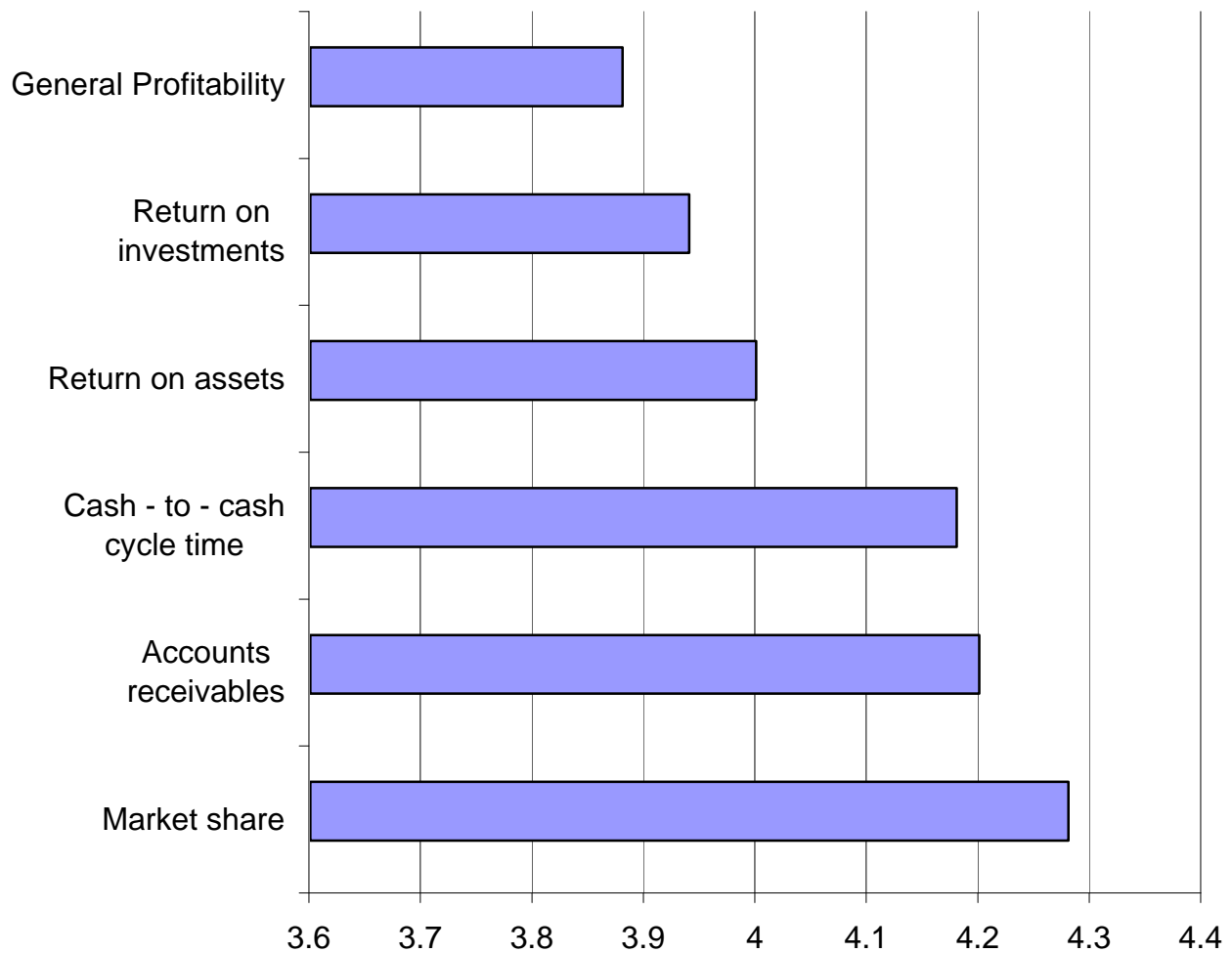


**Business unit's performance over the last year**

	<u>Mean</u>
Market share	4.28
Accounts receivables	4.2
Cash - to - cash cycle ti	4.18
Return on assets	4
Return on investments	3.94
General Profitability	3.88

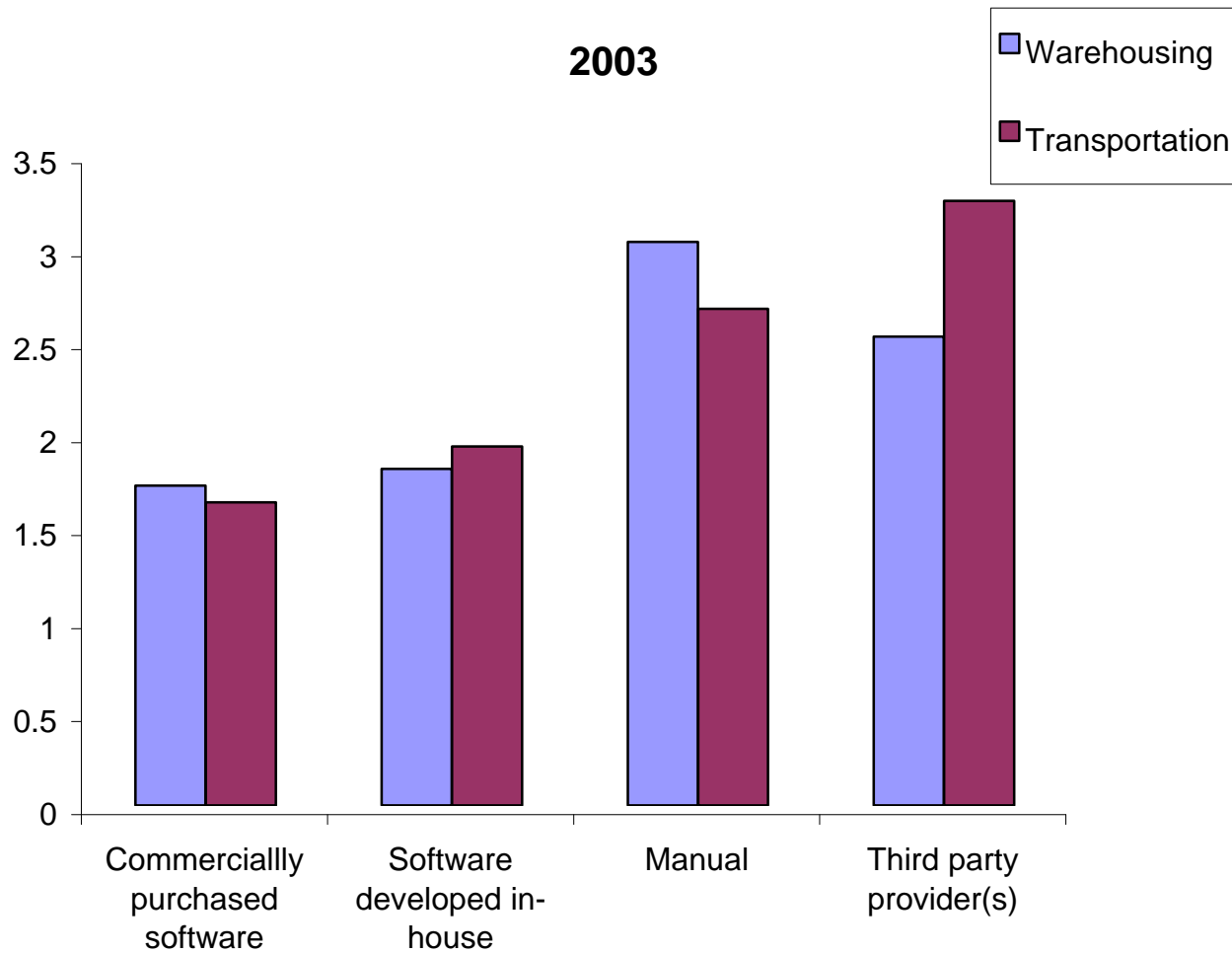
1= Much Worse, 4= On target, 7= Much Better

**2003**



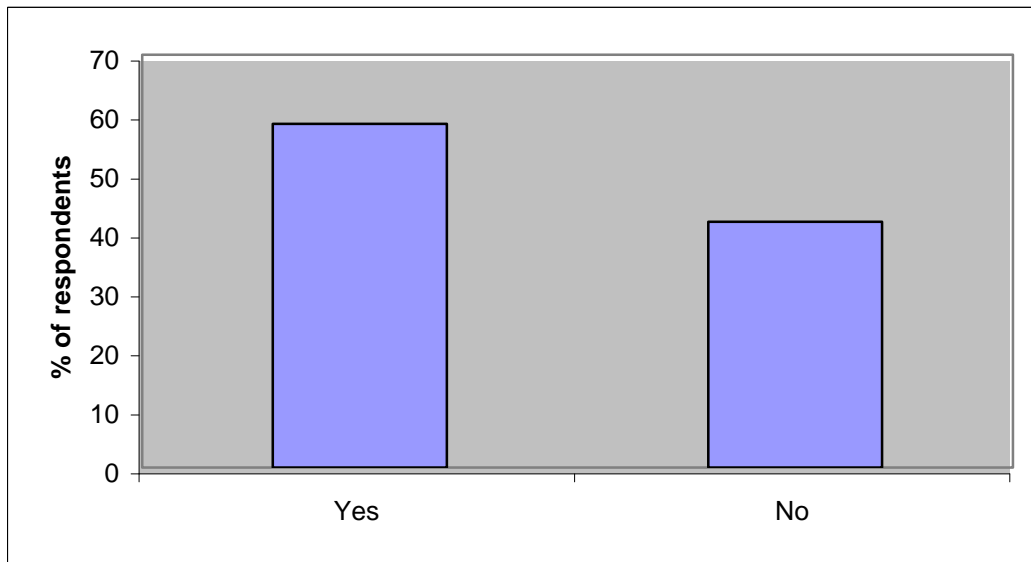
**Number of different tools used to manage the following:**

	Warehousing	Transportation
Commercially purchased software	1.72	1.63
Software developed in-house	1.81	1.93
Manual	3.03	2.67
Third party provider(s)	2.52	3.25



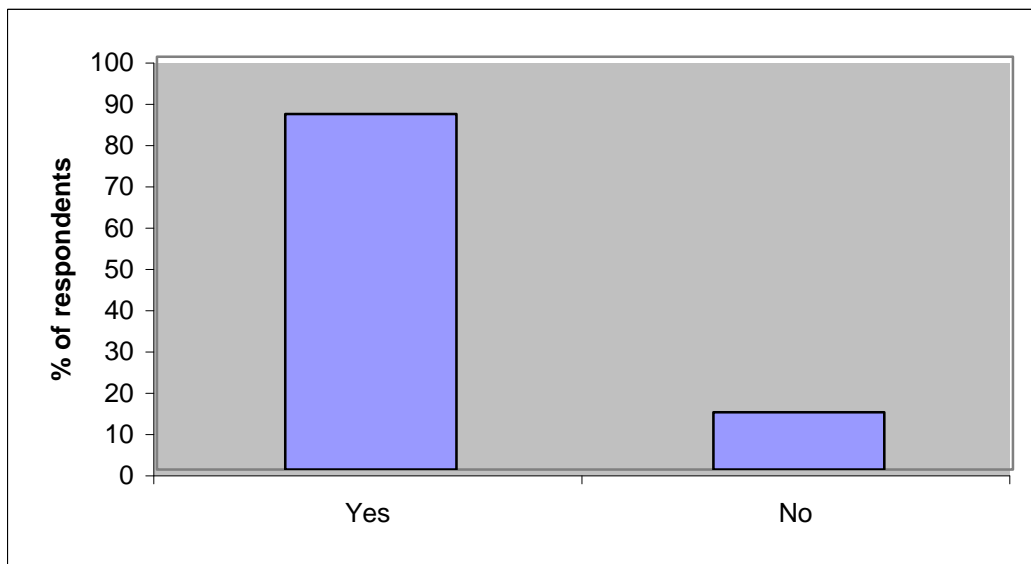
**Does firm have a formal technology strategy?**

Yes	58.3
No	41.7



**Is formal technology strategy linked to overall business strategy?**

Yes	86.1
No	13.9



***Do you have the following capabilities?***

**Attributes**

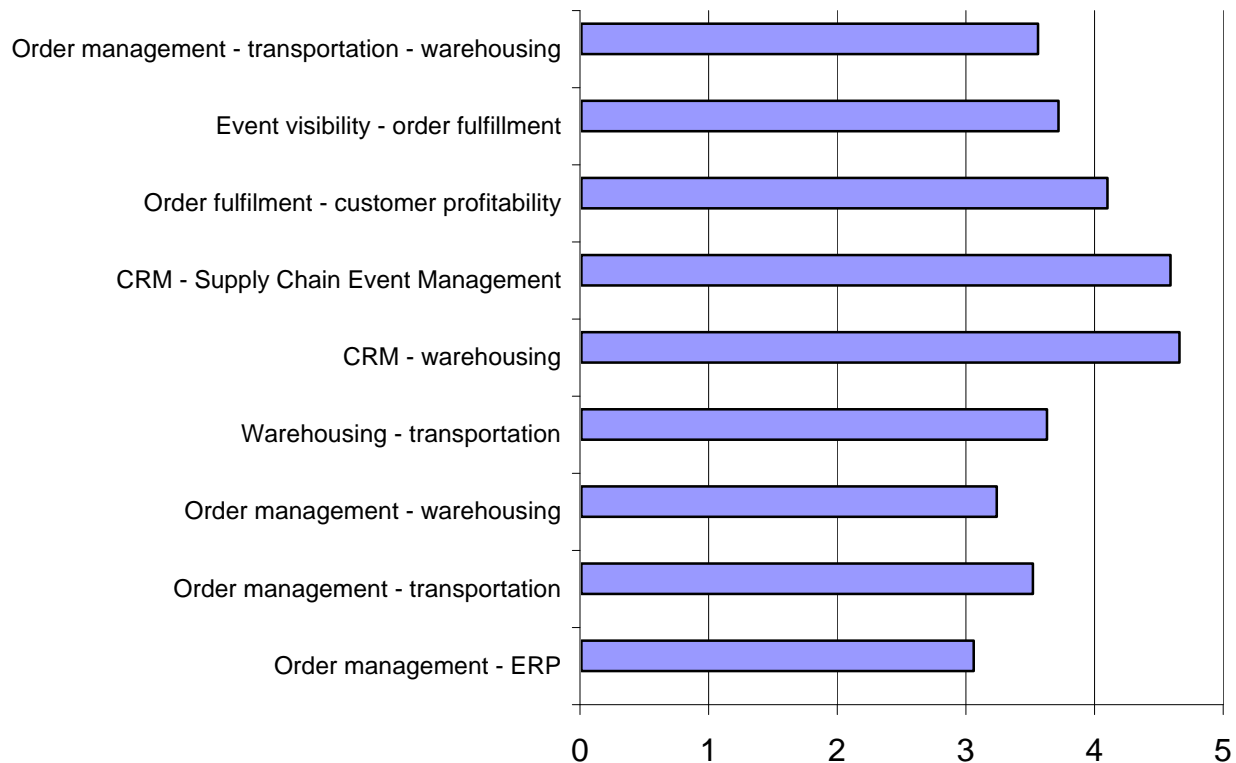
Tracking inbound shipments	102
Alerts to late or delayed shipments	80
Appointment scheduling	86
Domestic visibility of orders	97
Internal visibility of orders	114
Global visibility of orders	57
Consolidation of orders	83
Carrier selection	117
24 hour customs notification	64
Divergence of shipments	33
Routing and scheduling optimization	91
Electronic tendering of shipments	62
In-transit merges	22
Continuous moves	44
Rating/contract management	88
Tracking outbound shipments	124
Vendor compliance	84

**How well integrated are these various processes?**

	Mean
Order management - ERP	3.05
Order management - transportation	3.51
Order management - warehousing	3.23
Warehousing - transportation	3.62
CRM - warehousing	4.65
CRM - Supply Chain Event Management	4.58
Order fulfillment - customer profitability	4.09
Event visibility - order fulfillment	3.71
Order management - transportation - warehousing	3.55

1= Very integrated, 4= Neutral, 7= Not very integrated

**2003**

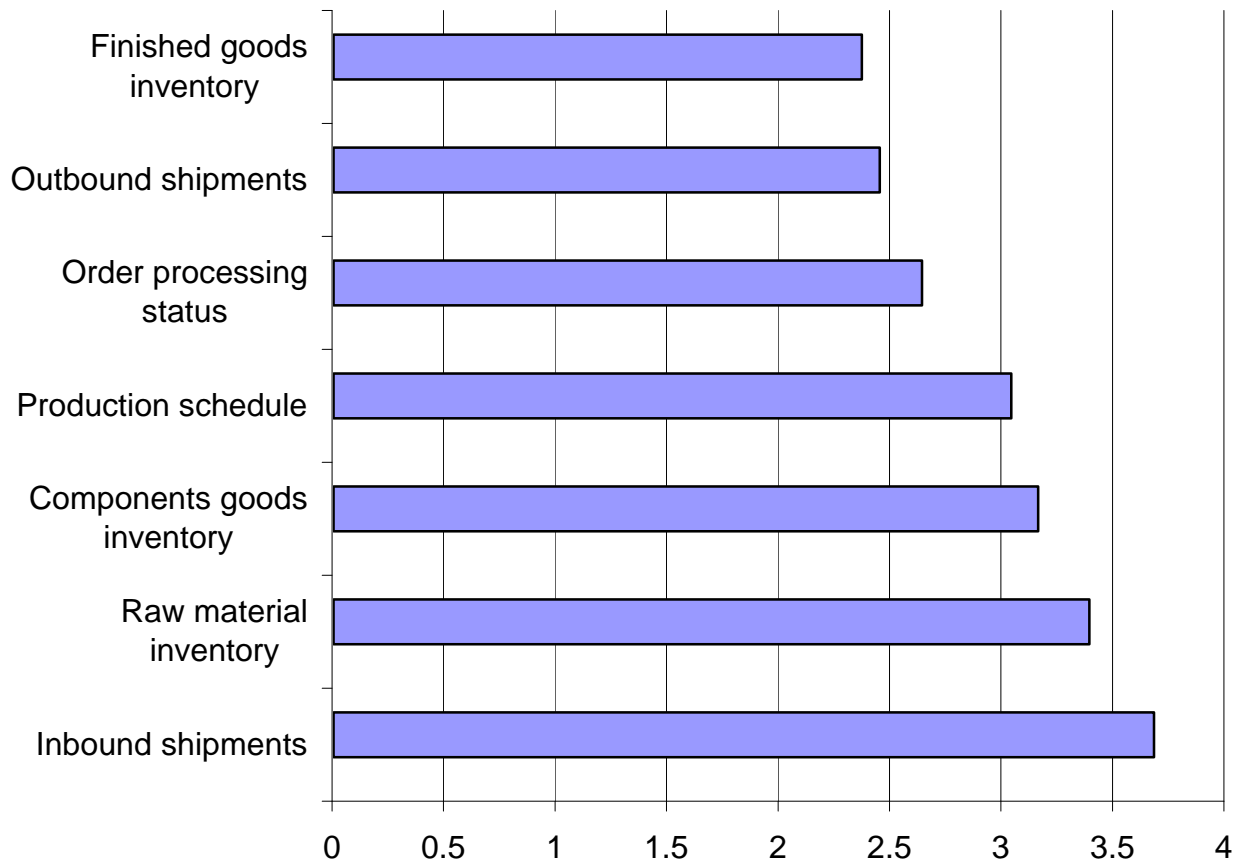


**How visible is the information in the following areas?**

	Mean
Inbound shipments	3.68
Raw material inventory	3.39
Components goods invent	3.16
Production schedule	3.04
Order processing status	2.64
Outbound shipments	2.45
Finished goods inventory	2.37

1= Very visible, 7= Not visible

**2003**



**What are the three most important logistics issues facing your organization in the coming year?**

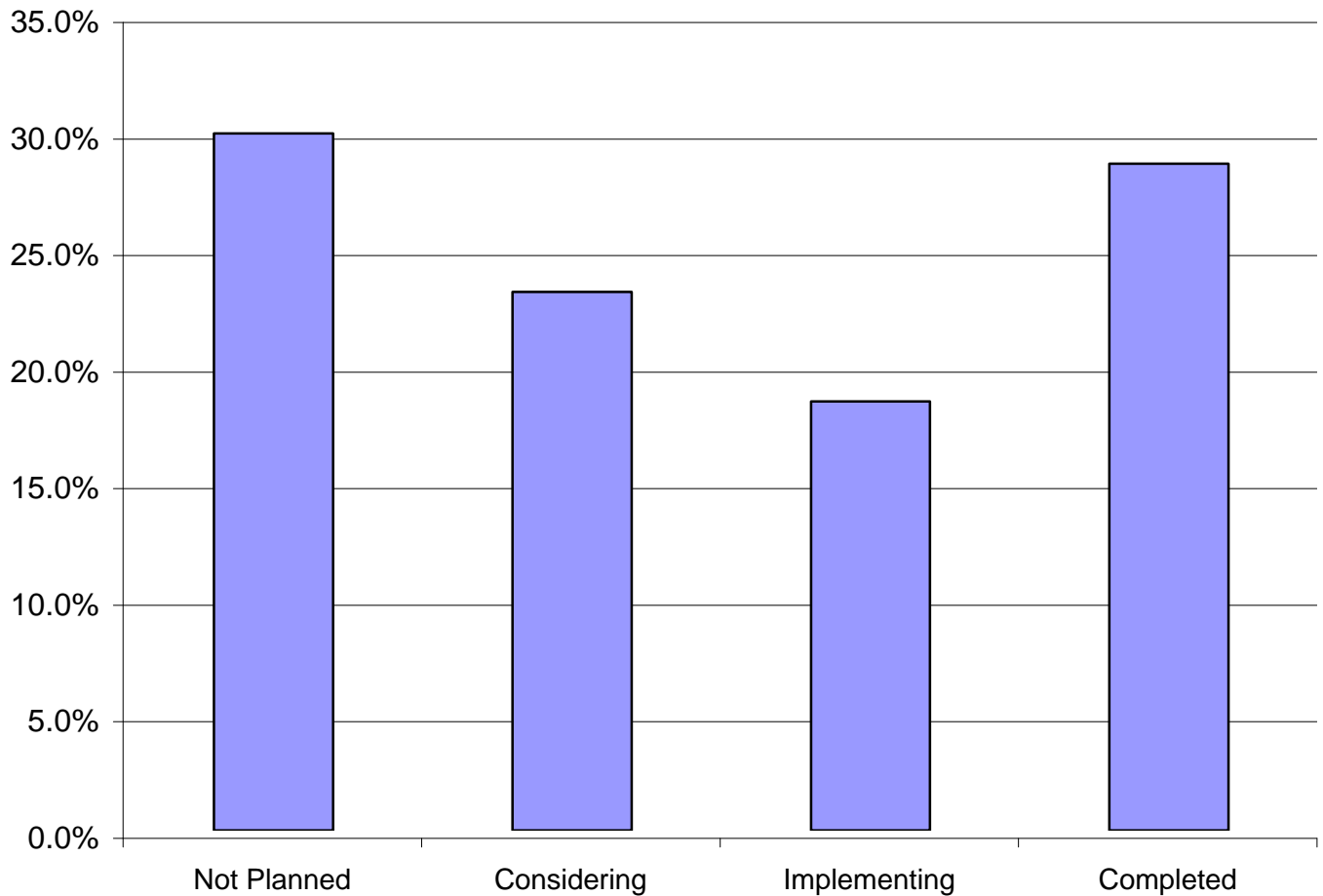
**Attributes**

Order to ship cycle time reduction	34
Cost control/cost reduction	96
Improving customer service processes	45
Logistics measurement within the company	42
Changing organizational structure	31
Information technology utilization / optimization	52
Logistics support for global market expansion	17
Quality improvement	17
Outsourcing	14
Strategic alliances with customers / suppliers	30
Logistics measurement between company and customers / suppliers	14
Expanding distribution into new channels / markets	19
Integrating with Internet-based customer ordering systems	6
Leadership development	17

**ERP**  
*Implementation*

	<u>2003</u>
<b>Not Planned</b>	29.9%
<b>Considering</b>	23.1%
<b>Implementing</b>	18.4%
<b>Completed</b>	<u>28.6%</u>
Total	100%

**2003**

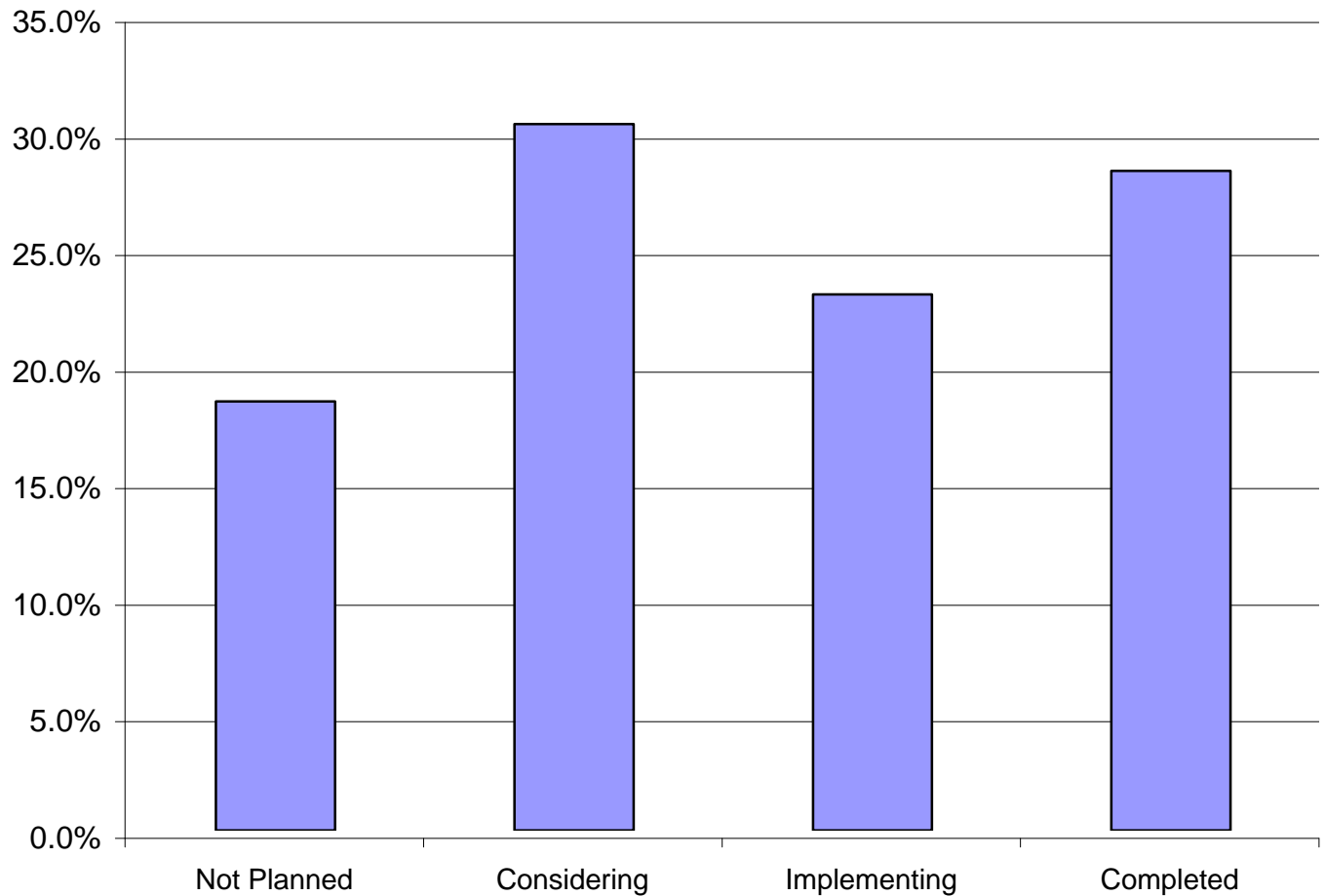


**Transportation Management System**

*Implementation*

	<u>2003</u>
<b>Not Planned</b>	18.4%
<b>Considering</b>	30.3%
<b>Implementing</b>	23.0%
<b>Completed</b>	<u>28.3%</u>
Total	100%

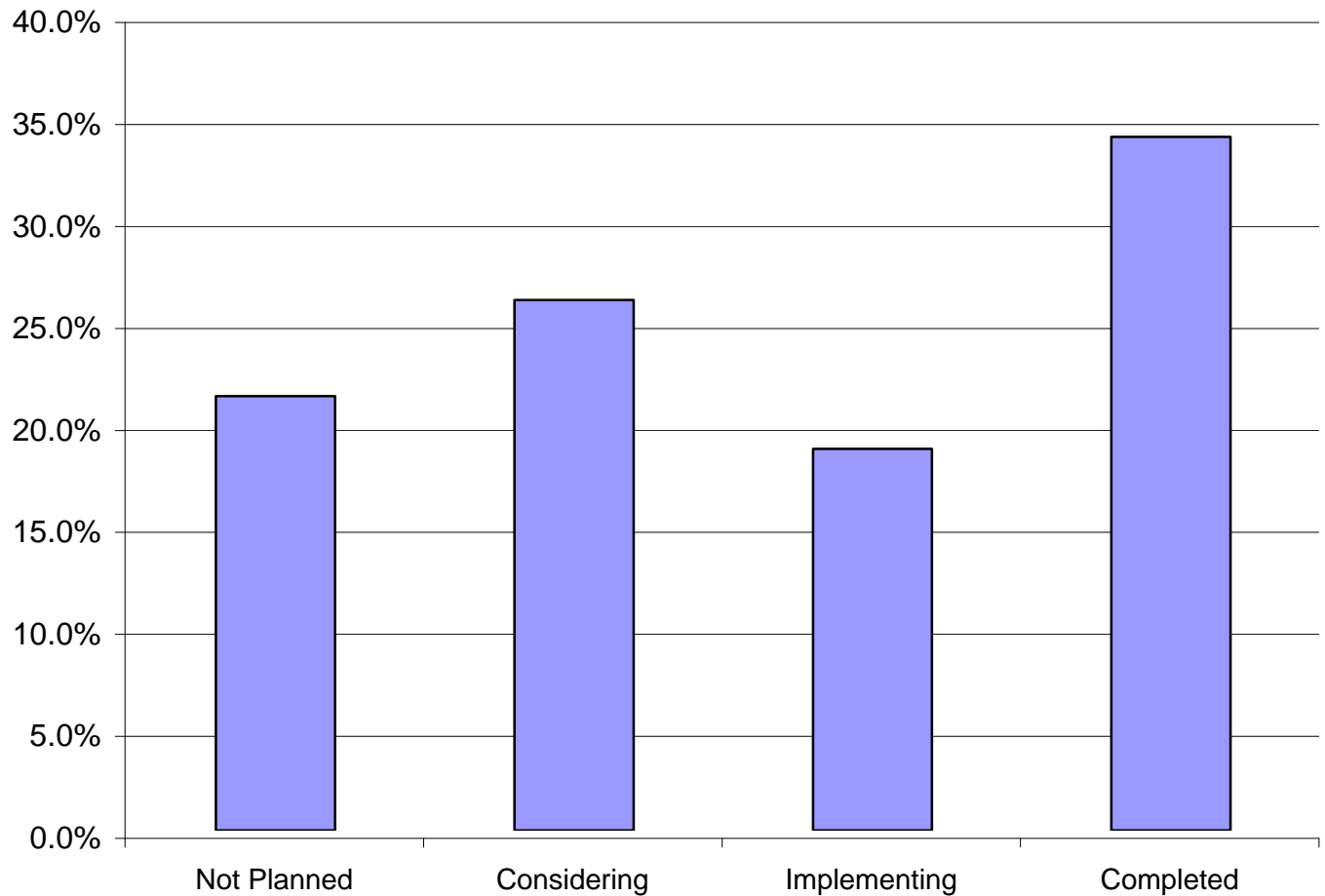
**2003**



**Warehouse Management System  
Implementation**

	<u>2003</u>
<b>Not Planned</b>	21.3%
<b>Considering</b>	26.0%
<b>Implementing</b>	18.7%
<b>Completed</b>	<u>34.0%</u>
Total	100%

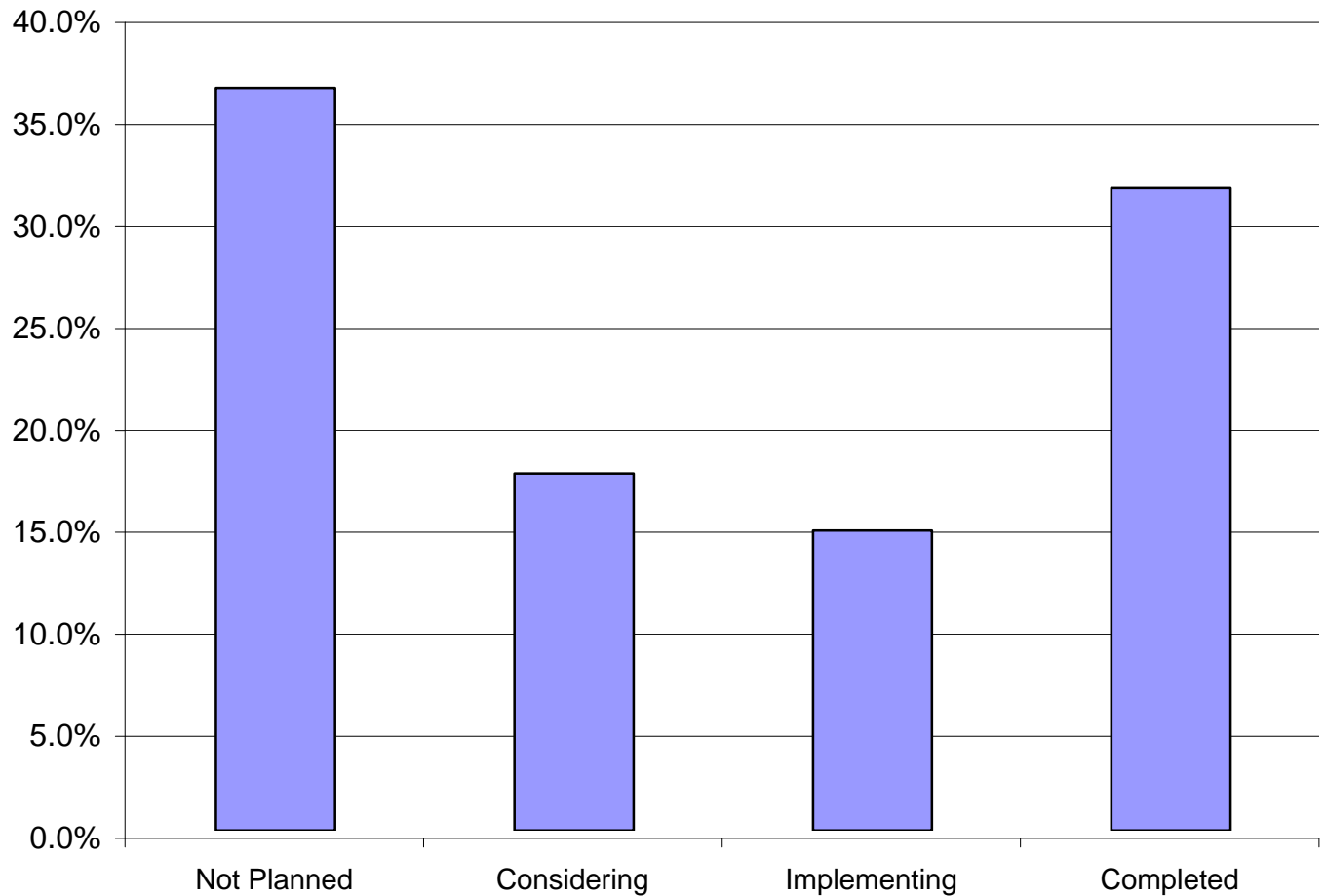
**2003**



**MRP / DRP System**  
*Implementation*

	<u>2003</u>
Not Planned	36.4%
Considering	17.5%
Implementing	14.7%
Completed	31.5%
Total	100%

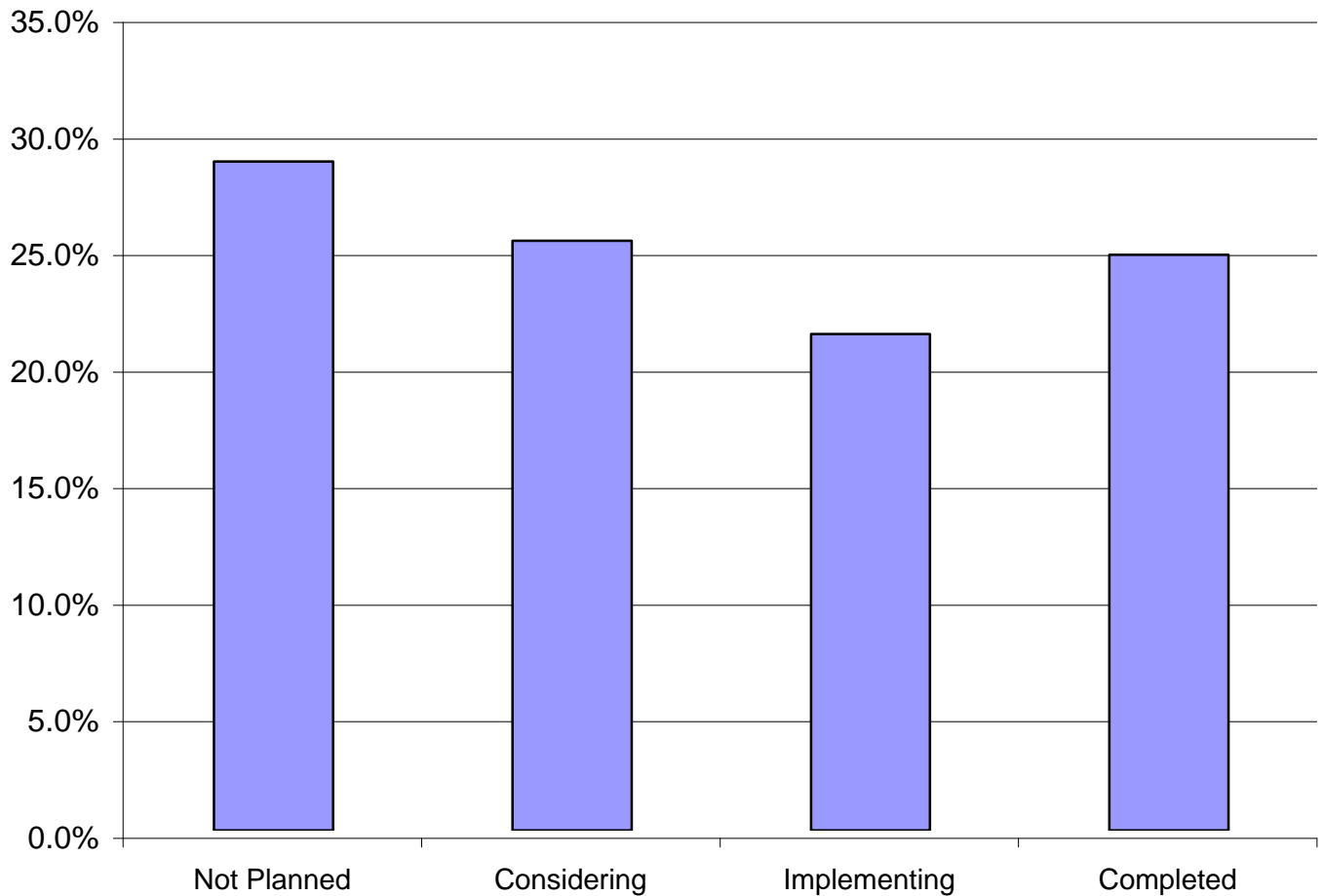
**2003**



**Advanced Planning and Scheduling  
Implementation**

	<u>2003</u>
Not Planned	28.7%
Considering	25.3%
Implementing	21.3%
Completed	24.7%
Total	<u>100%</u>

**2003**

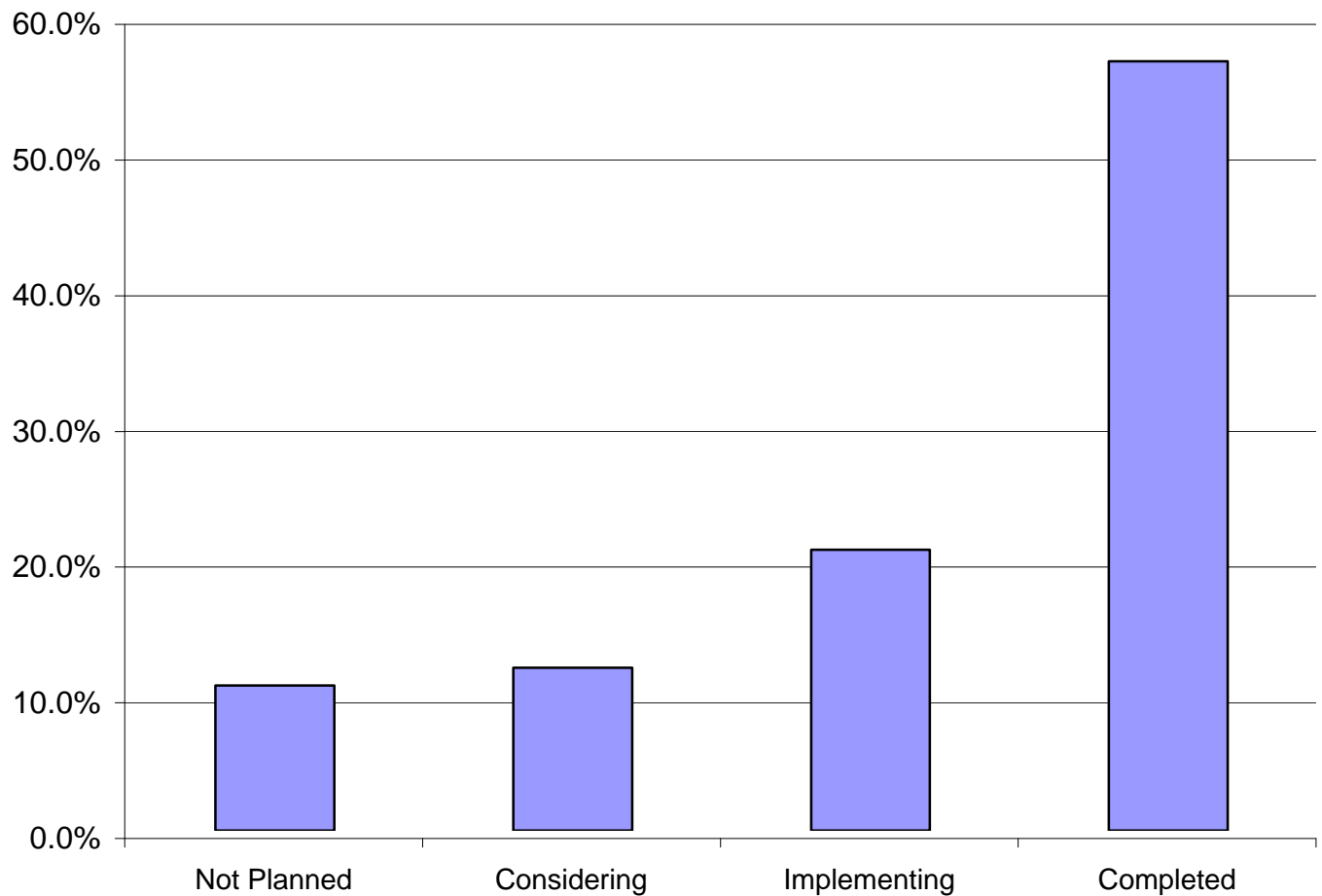


**EDI**

*Implementation*

	<u>2003</u>
<b>Not Planned</b>	10.7%
<b>Considering</b>	12.0%
<b>Implementing</b>	20.7%
<b>Completed</b>	<u>56.7%</u>
Total	100%

**2003**

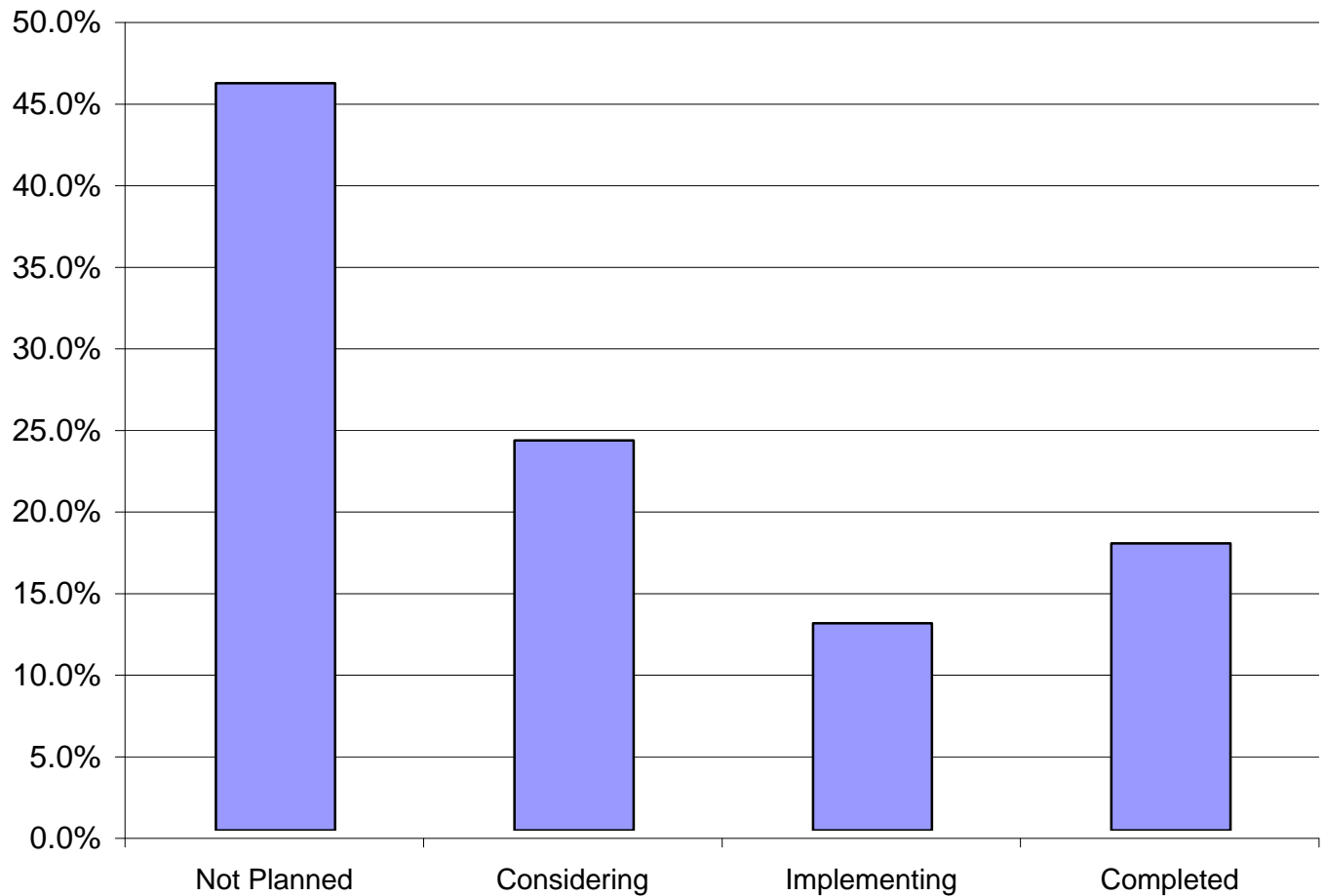


**Distributive order management**

*Implementation*

	<u>2003</u>
<b>Not Planned</b>	45.8%
<b>Considering</b>	23.9%
<b>Implementing</b>	12.7%
<b>Completed</b>	17.6%
Total	<u>100%</u>

**2003**



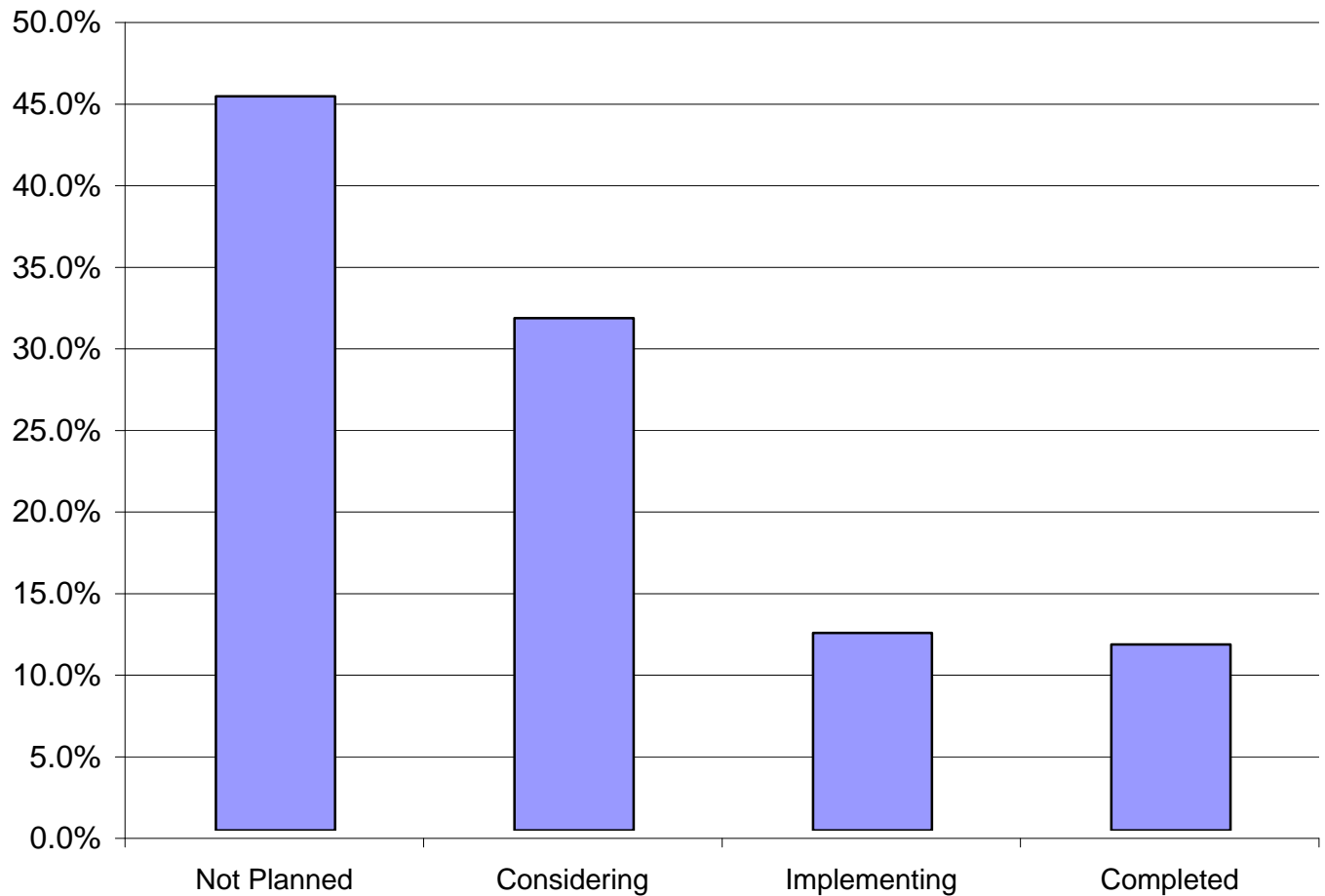
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**CRM System**  
Implementation

	<u>2003</u>
Not Planned	45.0%
Considering	31.4%
Implementing	12.1%
Completed	11.4%
Total	<u>100%</u>

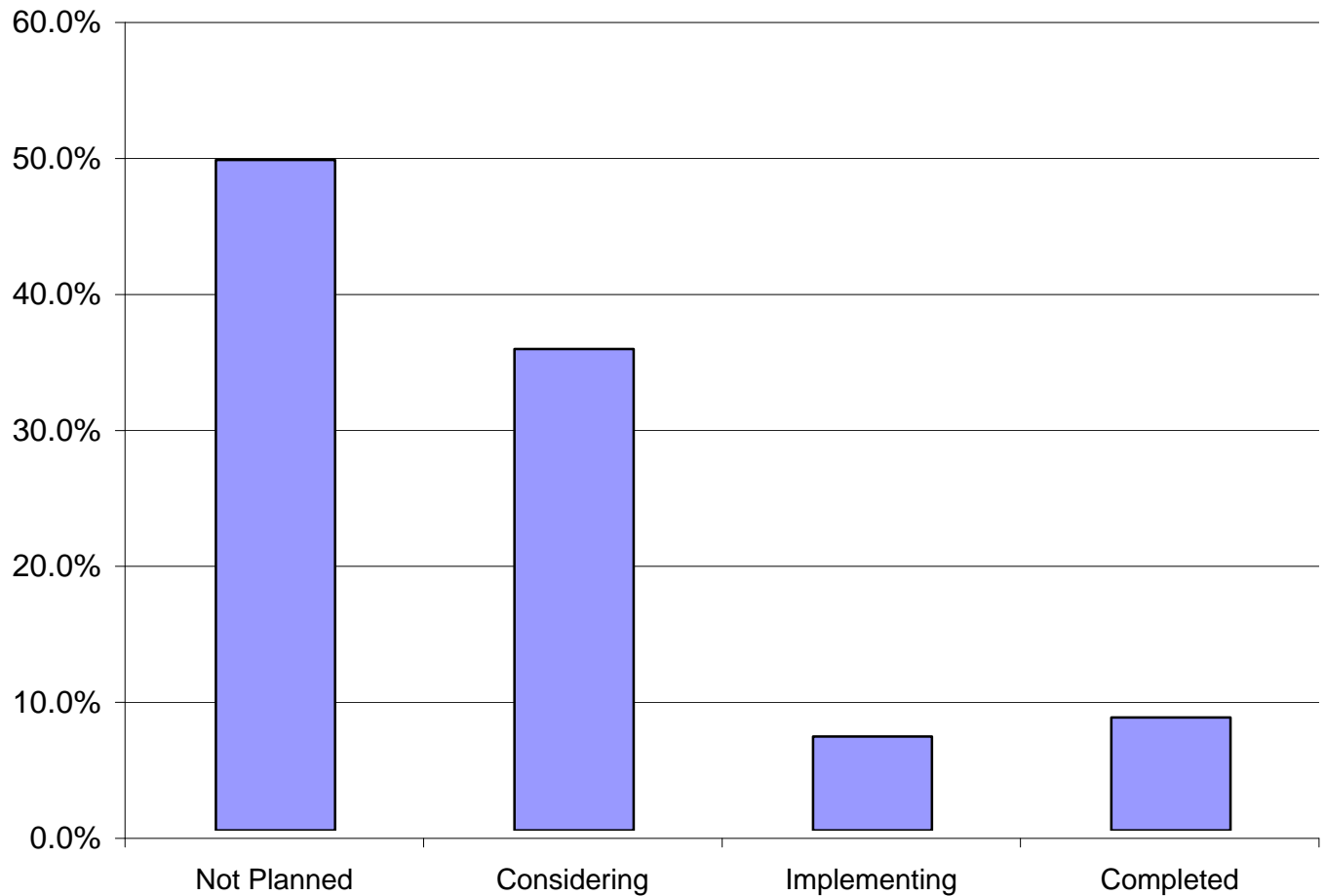
**2003**



**RFID**  
*Implementation*

	<u>2003</u>
<b>Not Planned</b>	49.3%
<b>Considering</b>	35.4%
<b>Implementing</b>	6.9%
<b>Completed</b>	8.3%
Total	<u>100%</u>

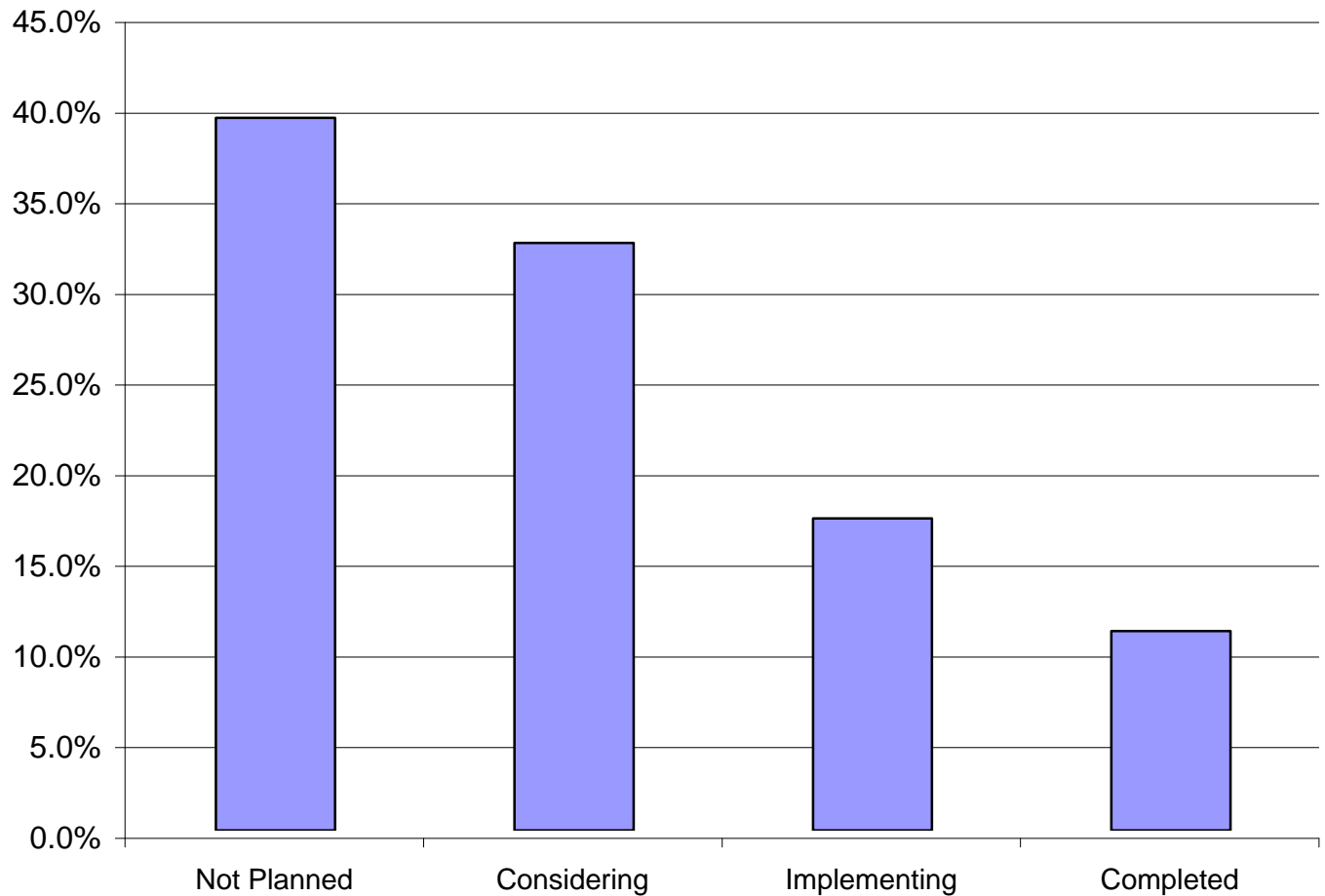
**2003**



**Supply Chain Event Management**  
*Implementation*

	<u>2003</u>
<b>Not Planned</b>	39.3%
<b>Considering</b>	32.4%
<b>Implementing</b>	17.2%
<b>Completed</b>	11.0%
<b>Total</b>	<u>100%</u>

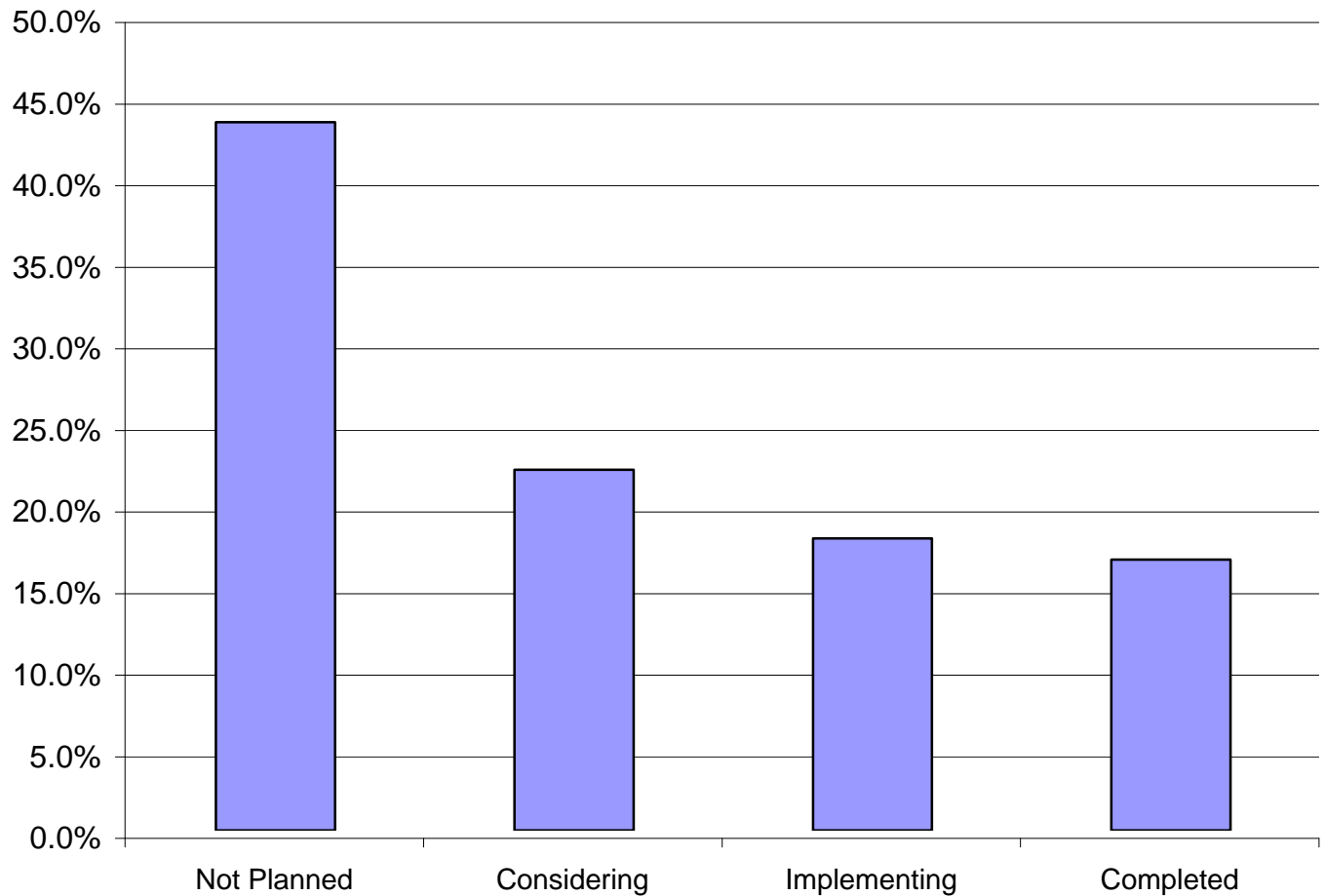
**2003**



**Six Sigma**  
*Implementation*

	<u>2003</u>
<b>Not Planned</b>	43.4%
<b>Considering</b>	22.1%
<b>Implementing</b>	17.9%
<b>Completed</b>	16.6%
Total	<u>100%</u>

**2003**



***Has Six Sigma been applied to the following areas?***

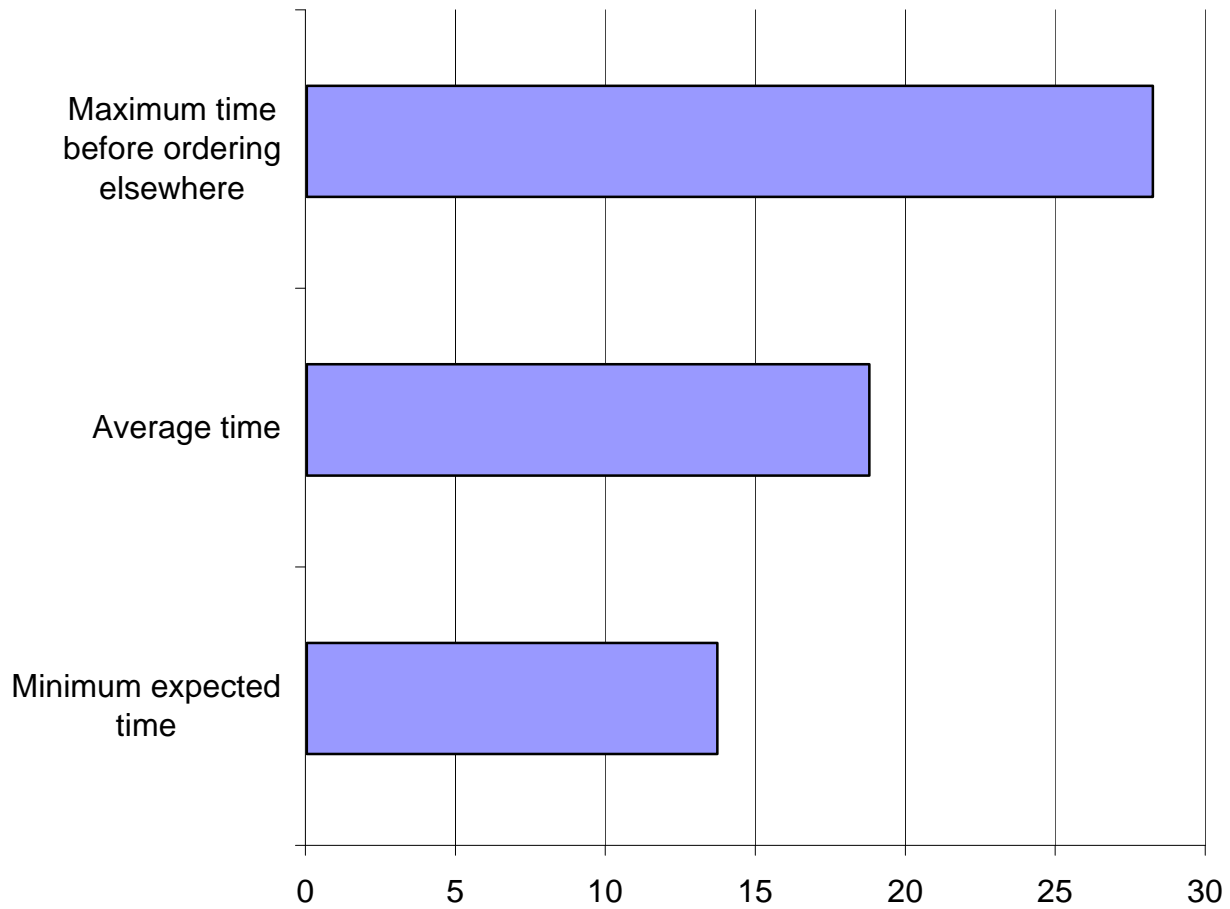
**Area**

Manufacturing	39
Transportation	24
Customer management	25
Forecasting	16
Warehousing	25
Order management	23

**Time it takes to acquire raw materials or goods**

	<u>Mean days</u>
Minimum expected time	13.69
Average time	18.76
Maximum time before ordering elsewhere	28.21

**2003**

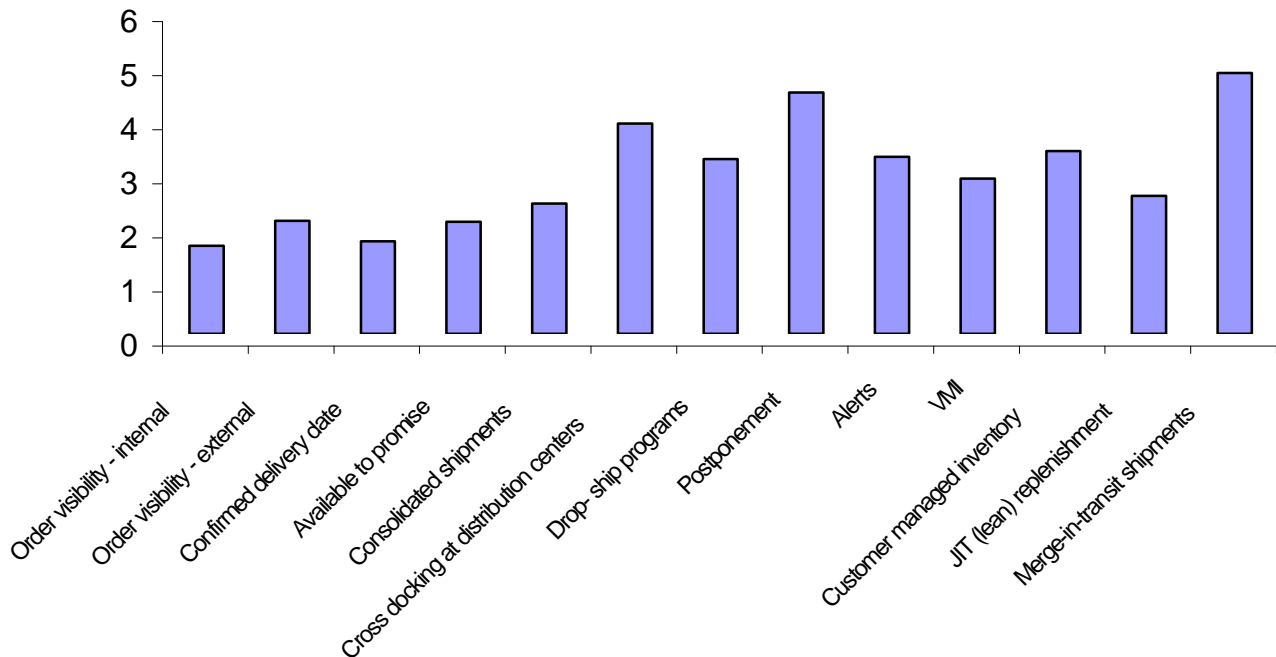


**Emphasis placed on each as it relates to distributors**

<b>Distribution integration</b>	<b>Mean</b>
Order visibility - internal	1.63
Order visibility - external	2.09
Confirmed delivery date	1.71
Available to promise	2.07
Consolidated shipments	2.41
Cross docking at distribution centers	3.89
Drop- ship programs	3.23
Postponement	4.46
Alerts	3.27
VMI	2.87
Customer managed inventory	3.38
JIT (lean) replenishment	2.55
Merge-in-transit shipments	4.82

1=Very Important, 7= Not Important

**2003**



***Where do your inventory and accounts receivables stand?***

	<b>2003</b>	<b>2002</b>	<b>2001</b>
Inventory turns (finished goods only)	20.7	18.6	10.5
Days' worth of sales in inventory (finished goods only)	35.4	42.6	46.7
Days' worth of sales outstanding (accounts receivable)	37.9	41.6	40.3

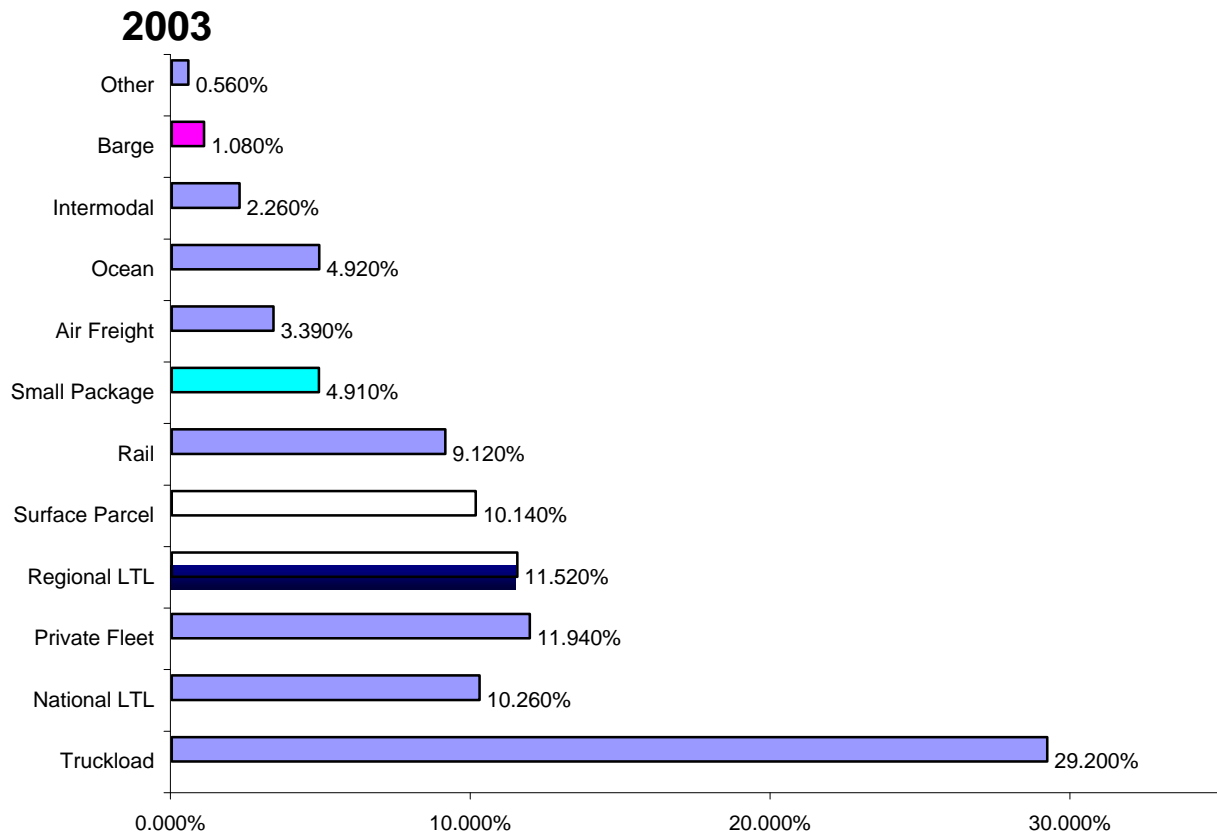
**Approximate days' supply on hand (finished goods only) in each of the stops / nodes in the supply chain:**

	Number of Facilities	Days' Supply on Hand		
		Average	Minimum	Maximum
Manufacturing	9.05	10.53	7.63	22.94
Central warehouse	1.92	15.41	9.75	30.53
Regional warehouse	19.46	31.9	17.9	42.07
Retail	5625.75	6.67	6.87	13.33
Amount your customer has on hand	N/A	26.38	10.14	65.86

**Percent of Domestic Transportation by Mode**

Overall total transportation costs

	Mean	
	2003	2002
Truckload	29.200%	31.2%
National LTL	10.260%	10.0%
Private Fleet	11.940%	14.2%
Regional LTL	11.520%	11.8%
Surface Parcel	10.140%	8.0%
Rail	9.120%	5.9%
Small Package	4.910%	4.3%
Air Freight	3.390%	2.9%
Ocean	4.920%	6.2%
Intermodal	2.260%	2.3%
Barge	1.080%	2.0%
Other	0.560%	1.2%
<b>Total</b>	<b>99.30%</b>	<b>100.0%</b>



***The level of performance of the best in the industry***

<b>Attribute</b>	<b>Below Average</b>	<b>Average</b>	<b>Above Average</b>
Fill rate	7.1	49.5	43.4
On time delivery	7.5	37.7	54.7
Over / short / damage	12.5	45.8	41.7
Cycle time (order lead time)	15.9	54.5	29.5
Responsive to changing requirements	9.9	46.2	44
Emergency order capability	3.6	45.2	51.2
Correct invoice	5.1	61.5	33.3
Perfect order	9.9	53.5	36.6
Availability to promise	10.4	57.1	32.5
Visibility of the order - inbound	27.8	54.4	17.7
Visibility of the order - outbound	14.1	54.1	31.8
Lines filled/lines ordered	6.1	48.5	45.5
Cases shipped/cases ordered	3.7	50	46.3
Dollars shipped/dollars ordered	3.5	54.4	42.1
Shipments that result in some form of a customer complaint	61.7	36.2	2.1
Orders that result in a back order	15.4	52.3	32.3

**Level of Performance By Various Providers**

<b>2003</b>					
<b>Measure</b>	<b>TL</b>	<b>National LTL</b>	<b>Regional LTL</b>	<b>Rail</b>	<b>Express Package</b>
Billing error rate	2.4%	3.0%	2.2%	4.9%	2.5%
Equipment availability	93.5%	98.0%	98.2%	90.6%	96.9%
On-time delivery ratio	96.8%	94.3%	96.2%	84.1%	96.2%
Freight loss and damage	1.0%	1.5%	1.5%	1.2%	0.8%
Turndown ratio	5.2%	0.9%	0.1%	1.5%	0.2%

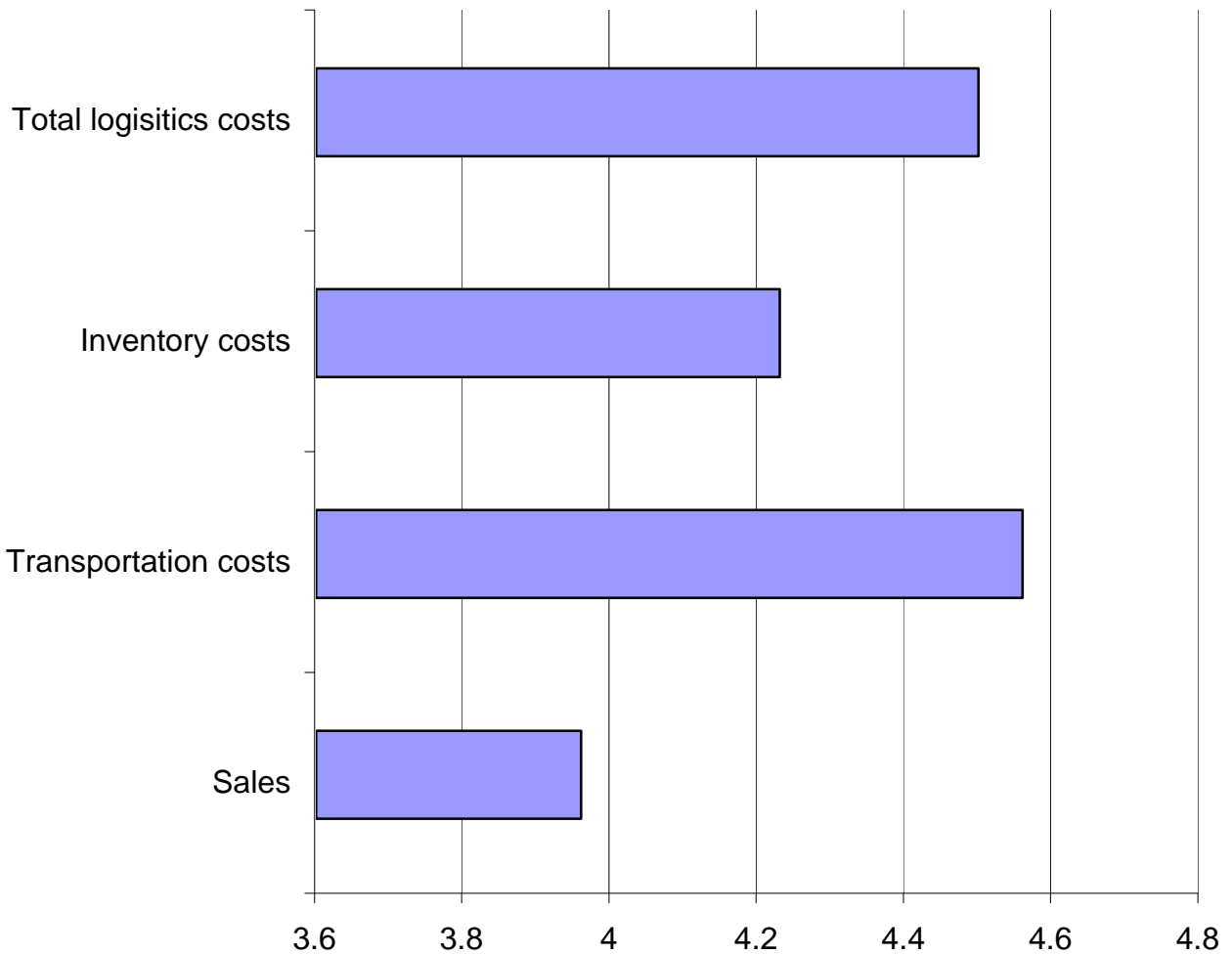
<b>2002</b>				
<b>Measure</b>	<b>TL</b>	<b>National LTL</b>	<b>Regional LTL</b>	<b>Rail</b>
Billing error rate	3.4%	5.5%	4.5%	5.2%
Equipment availability	94.7%	97.4%	98.3%	85.5%
On-time delivery ratio	95.6%	92.6%	95.2%	83.4%
Freight loss and damage	1.1%	2.0%	1.9%	1.5%
Turndown ratio	3.8%	1.0%	1.0%	1.0%

**How did firm's actual performance compare to budgeted performance?**

	<u>Mean</u>
Sales	3.96
Transportation costs	4.56
Inventory costs	4.23
Total logistics costs	4.5

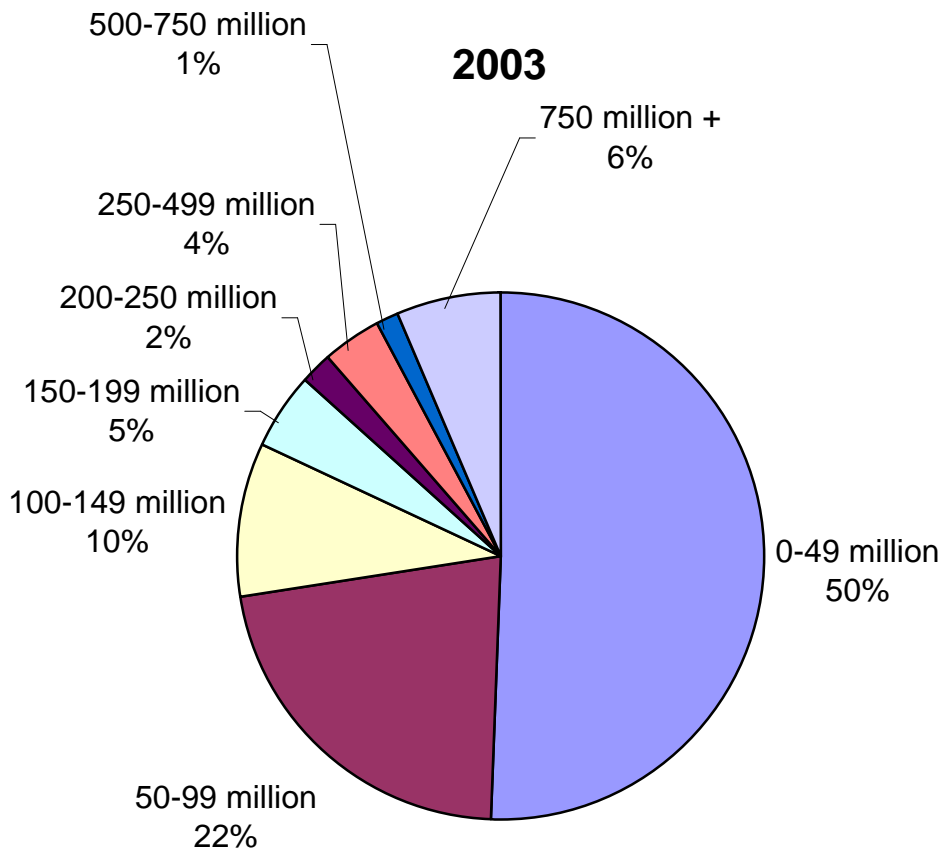
1= Much worse, 4= On target, 7= Much better

**2003**



**Total spent on domestic transportation:**

Dollar amount	Percent of Respondents
0-49 million	50.6
50-99 million	21.8
100-149 million	9.6
150-199 million	4.5
200-250 million	1.9
250-499 million	3.8
500-750 million	1.3
750 million +	6.4
Total	100%

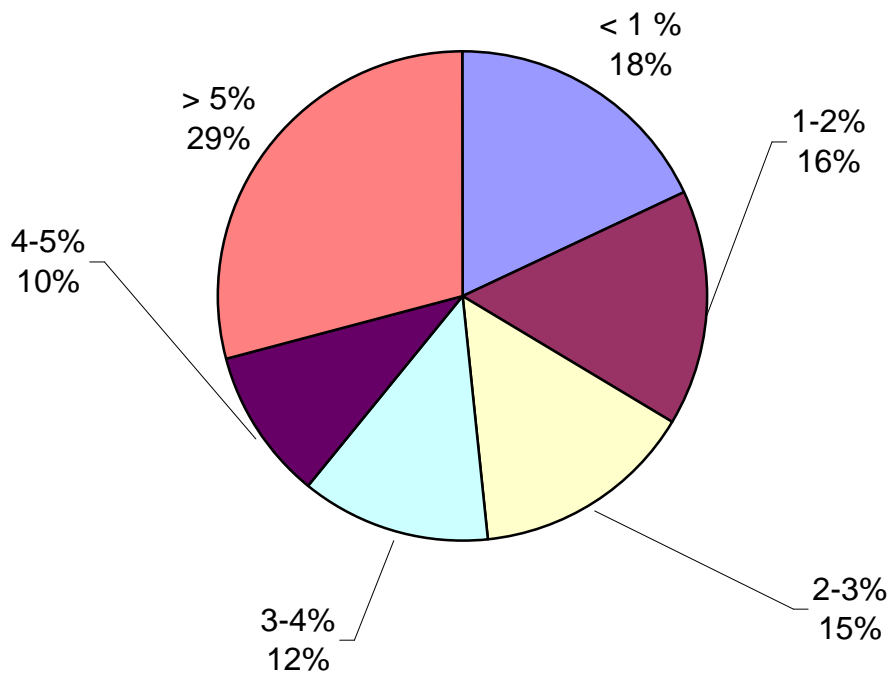


**Total spent on transportation:**  
 As a percent of cost of goods sold

**Dollar amount**

	<u>2003</u>
< 1 %	18
1-2%	15.7
2-3%	14.6
3-4%	12.4
4-5%	10.1
> 5%	<u>29.2</u>
Total	100%

**2003**

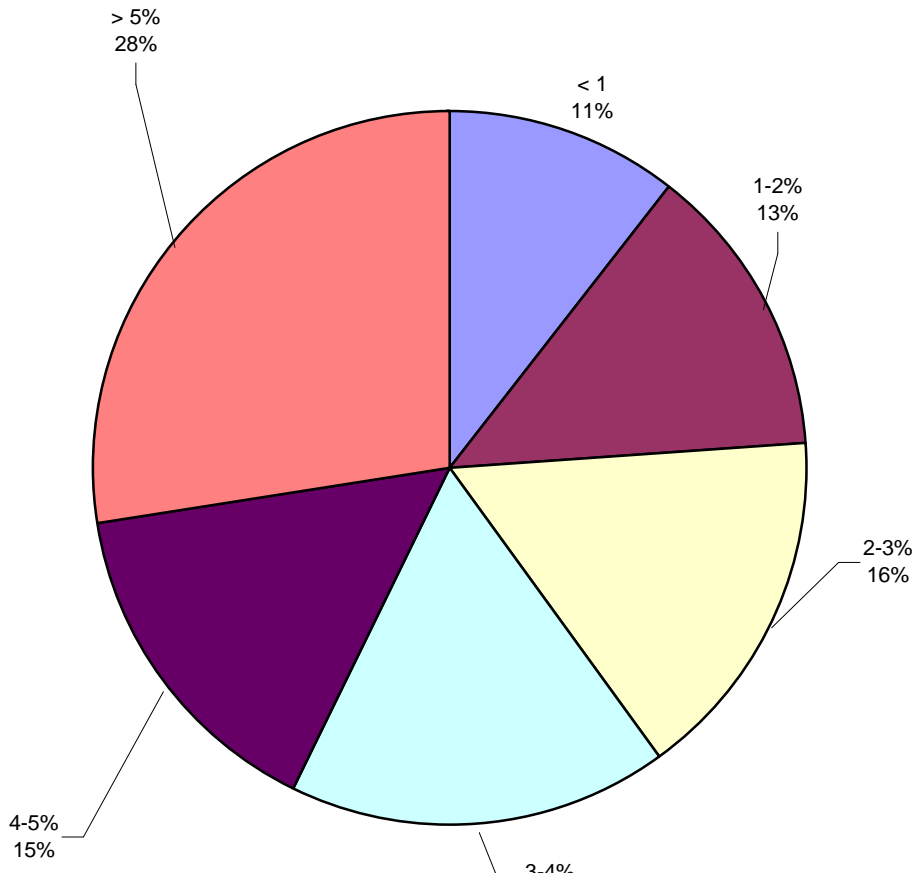


**Total spent on transportation:**  
 As a percent of Sales

**Dollar amount**

	<u>2003</u>
< 1	10.5
1-2%	13.3
2-3%	16.2
3-4%	17.1
4-5%	15.2
> 5%	27.6
Total	100%

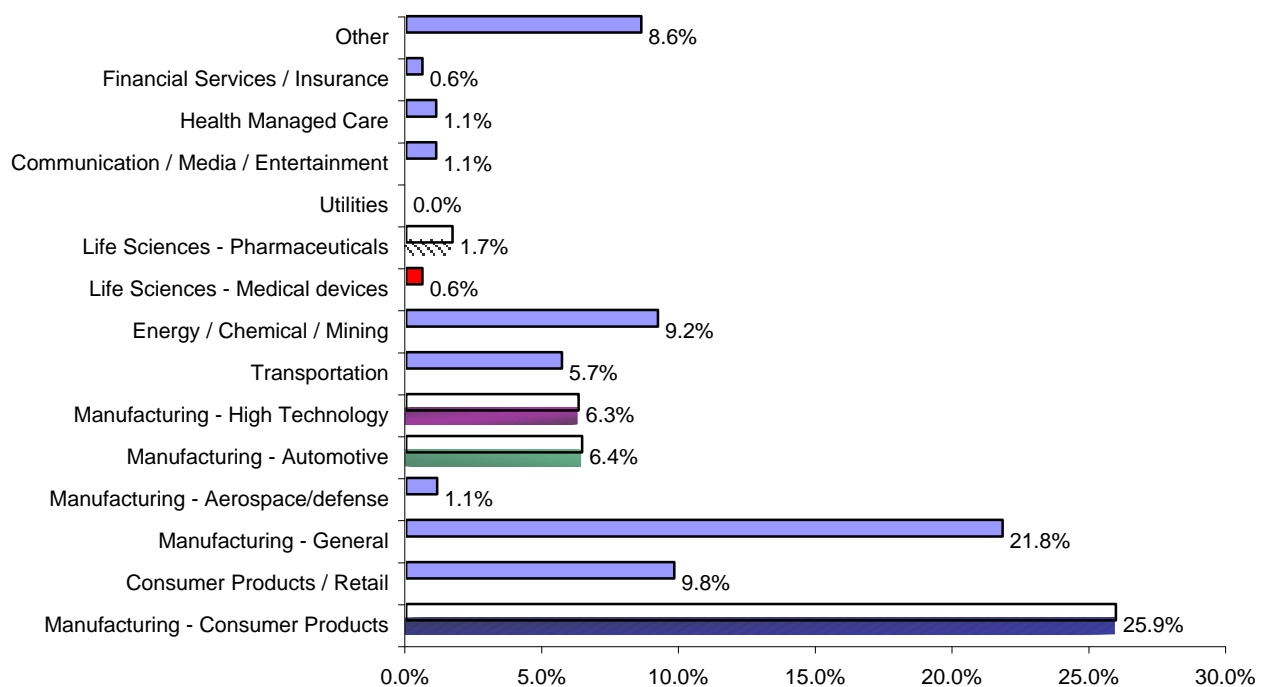
**2003**



<b>Total Annual Sales of the Organization</b>		
	<b>2003</b>	<b>2002</b>
< \$250 million	17.8%	24.0%
\$250 - \$500 million	12.6%	13.0%
\$500 - \$1 billion	17.8%	13.0%
\$1 - \$2 billion	16.7%	12.0%
\$2 - \$3 billion	8.6%	10.0%
\$3 - \$5 billion	7.5%	6.0%
\$5 - \$9 billion	4.6%	5.0%
> \$9 billion	14.4%	17.0%
Total	100.0%	100.0%

**Primary Business of Firms**

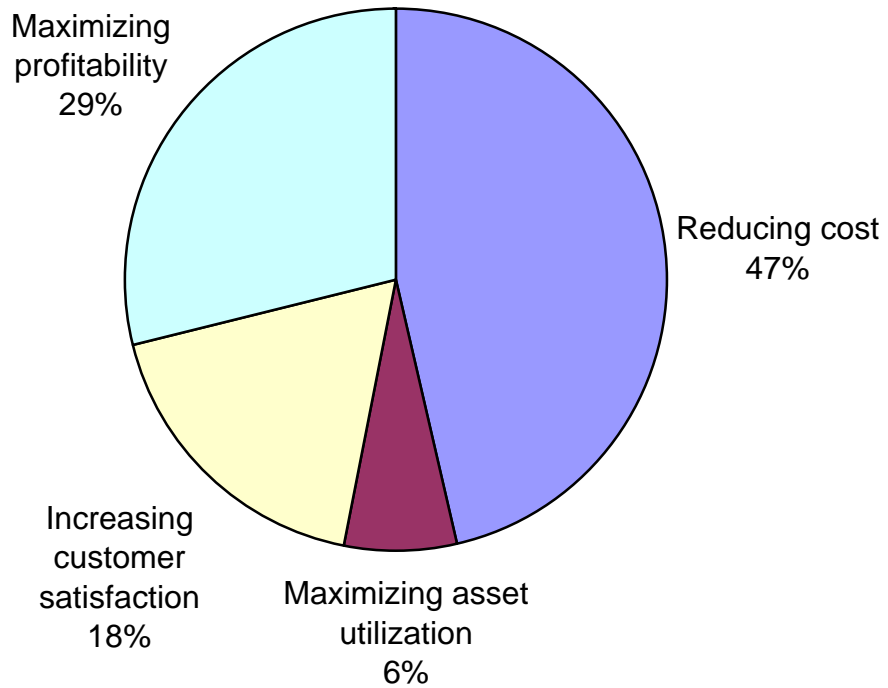
	<b>2003</b>	<b>2002</b>
Manufacturing - Consumer Products	25.9%	17.5%
Consumer Products / Retail	9.8%	15.7%
Manufacturing - General	21.8%	15.7%
Manufacturing - Aerospace/defense	1.1%	16.0%
Manufacturing - Automotive	6.4%	
Manufacturing - High Technology	6.3%	8.9%
Transportation	5.7%	8.0%
Energy / Chemical / Mining	9.2%	7.4%
Life Sciences - Medical devices	0.6%	
Life Sciences - Pharmaceuticals	1.7%	3.1%
Utilities	0.0%	
Communication / Media / Entertainment	1.1%	2.2%
Health Managed Care	1.1%	
Financial Services / Insurance	0.6%	1.5%
Other	8.6%	4.0%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>



**Primary goals and objectives for the past year**

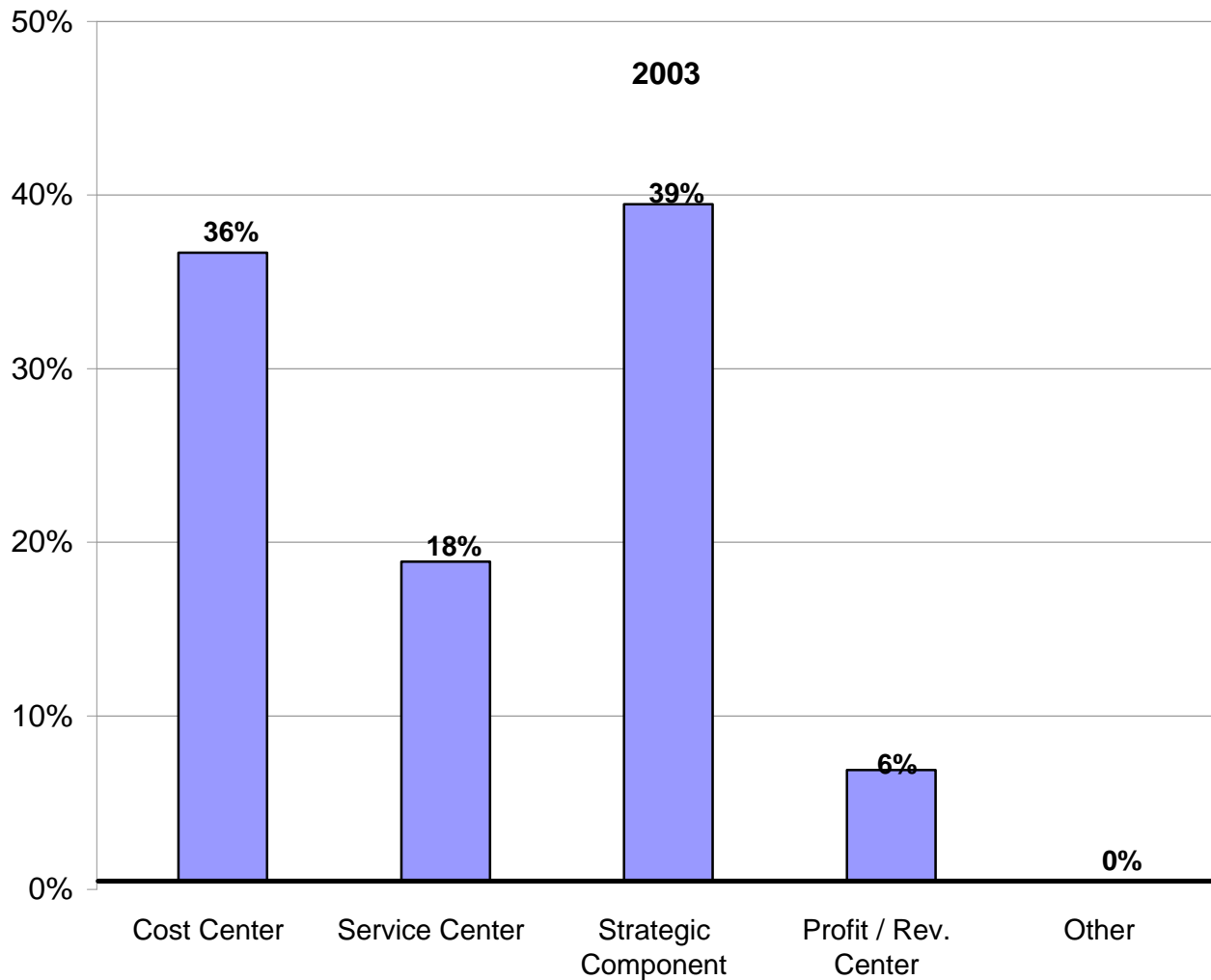
	2003
Reducing cost	47
Maximizing asset utilization	7
Increasing customer satisfaction	18
Maximizing profitability	29
Total	100%

**2003**



**Organizational View of Logistics / Supply Chain Management**

	<b>2003</b>	<b>2002</b>
Cost Center	36%	52%
Service Center	18%	15%
Strategic Component	39%	25%
Profit / Rev. Center	6%	6%
Other	0%	2%
Total	100%	100%



**Best Description of Overall Strategy of Division**

	<b>2003</b>
Leadership through customer service	29.9
Leadership through product/market innovation	16.6
Be all things to all people	30.6
Low cost leader	22.9
Total	100%

