STRATEGIC MARKET PERSPECTIVE

Customer Satisfaction With Systems Integration Vendors

U.S. Systems Integration and Professional Services Program

Customer Satisfaction With Systems Integration Vendors

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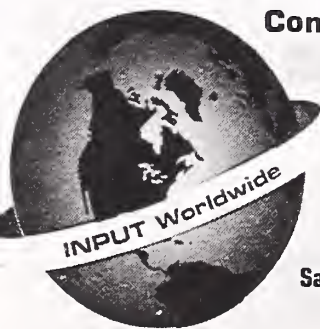
Abstract

This report examines the business benefits derived from using an outside vendor for systems integration services, the criteria used to determine customer satisfaction, customer satisfaction ratings in a number of areas, and the reasons a particular vendor is chosen. The report compares what customers as well as vendors believe are the benefits of using a systems integrator; reasons a particular vendor is chosen; and what criteria are important in customer satisfaction. Recommendations for improving the level of service are also included in the report.

Research for this report consisted of gathering data from a group of representative North American companies who have completed a systems integration project during the past three years. Data from fifteen leading systems integration vendors was also collected in order to determine how closely aligned vendors and customers are in their perceptions of the areas outlined above.

Generally, customers and vendors are in alignment concerning the benefits of using a systems integrator, the criteria used in determining customer satisfaction, and the reasons a particular vendor was chosen. The analysis provided in the report does however provide input to the marketing and sales campaigns for systems integrators.

The overall ratings of vendor performance given by customers also parallels the overall ratings given by the vendors themselves. Many of the recommendations made by both groups are similar, although it is useful to note the differences that exist due to their differing perspectives.

**U.S. Systems Integration and
Professional Services Program**

*Customer Satisfaction with Systems
Integration Vendors*

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Exhibits

I

Introduction

A

Scope and Purpose

1. Scope

This report was produced as part of INPUT's research program on the systems integration market. It is an analysis of customer satisfaction levels with systems integration projects and focuses on commercial companies and government organizations based in North America that have undertaken a systems integration project within the past three years. If a company was involved in more than one project during the past three years, the respondent was asked to refer to only one specific contract and vendor when answering questions.

2. Purpose

This report examines both vendors' and customers' views on the business benefits of using a systems integrator, criteria used to determine customer satisfaction levels with a project, customer satisfaction ratings in a number of areas, and the reasons a particular vendor was chosen. Recommendations that each group made for improved levels of service satisfaction are included.

Specific topics addressed in this report are:

- The types of products and services that comprise systems integration contracts and additional services that integrators provide.

- How customers rate their vendor's performance.

- Business benefits customers expect when using a vendor for systems integration services and how they match the benefits vendors promote to their use of a systems integrator.

- The degree to which customers believe these benefits are achieved.

- The satisfaction criteria customers consider important and vendors' attention to these areas.

- The most important business reasons for choosing a vendor.

- The degree to which vendors emphasize these areas when selling their own services.

- Customer and vendor recommendations to improve levels of service.

Readers of this report will benefit from it in the following ways:

- Vendors can use it to identify and focus on areas important to customers.

- Vendors can use it to identify areas in which to educate customers and prospects about the benefits of systems integration.

- Vendors can use it to increase their competitive advantage as well by better understanding their customers' needs and objectives.

- Users will develop better criteria for evaluating a vendor's strengths and weaknesses.

- Users will be better prepared to negotiate improved services and performance levels from existing or prospective vendors.

B
Methodology

Research for this report included data gathered from 56 North American companies that have completed a systems integration project within the past three years. Telephone interviews were conducted with company representatives who were actively involved with the project. Data from 15 of the leading systems integration vendors in the United States was also collected in order to determine how closely aligned vendors and customers were in their views on the topics covered.

Systems integration customers who were interviewed operate in all the major industry groups. A breakdown of customers by industry is shown in Exhibit I-1.

Exhibit I-1

Systems Integration Customers Interviewed by Industry

Industry	Percentage
Banking/Finance	11%
Communications	2%
Discrete Manufacturing	13%
Education	5%
Federal Government	2%
Health Care	4%
Process Manufacturing	11%
Retail	5%
Services	13%
State/Local Government	15%
Transportation	4%
Utilities	11%
Other	4%

Survey of 56 customers   Source: INPUT

Exhibit I-2 shows a breakdown by title of customer respondents. As shown in the exhibit, people in a wide range of positions, actively involved in systems integration contracts, were interviewed for this study.

Exhibit I-3 shows a breakdown by size of the systems integration contracts cited by customer respondents.

Exhibit I-4 shows a breakdown by type of contract based on pricing methods.

Exhibit I-5 lists the systems integration vendors interviewed for this report, including the Big Six accounting firms, systems vendors, and companies whose primary focus is on systems integration, professional services, and outsourcing.

Exhibit I-6 provides an analysis of the total number of systems integration contracts completed during the past three years by the vendors researched.

Exhibit I-2

Customer Respondent Titles

Title	Percentage
Analyst	6%
Applications/SW Mgr.	10%
CFO	4%
CIO/VP MIS	16%
IT Supervisor	8%
Mgr. IT	18%
Mgr. Networks/Comm.	6%
Network Engineer	2%
Pres./EVP	6%
Project Mgr.	8%
Sr. Proj. Specialist	2%
System Admin.	6%
Other	8%

Survey of 56 customers   Source: INPUT

Exhibit I-3

Size of Systems Integration Contracts
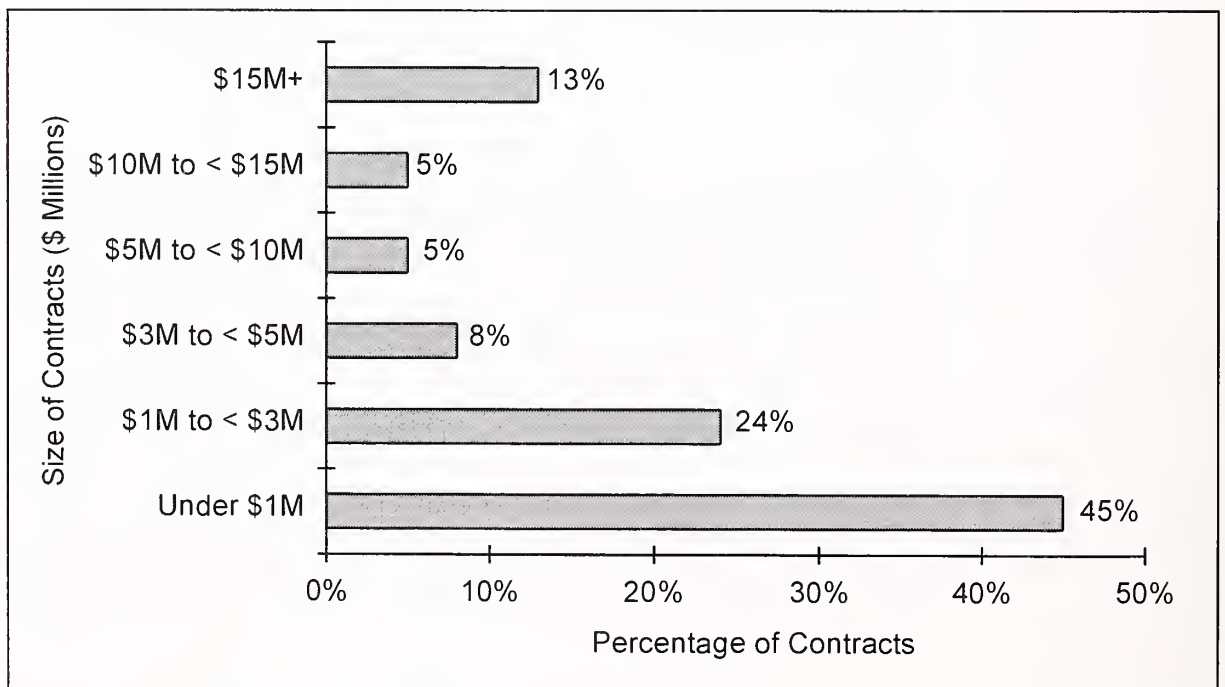
Source: INPUT

Exhibit I-4

Type of Contract Based on Pricing

Bar chart showing Percentage of Contracts:
- Fixed-price: 58%
- Value-based: 14%
- Value-based and T&M: 11%
- Fixed-price and T&M: 7%
- Don't know/No response: 4%
- All contract types: 4%

X-axis: Percentage of Contracts (0%, 20%, 40%, 60%)
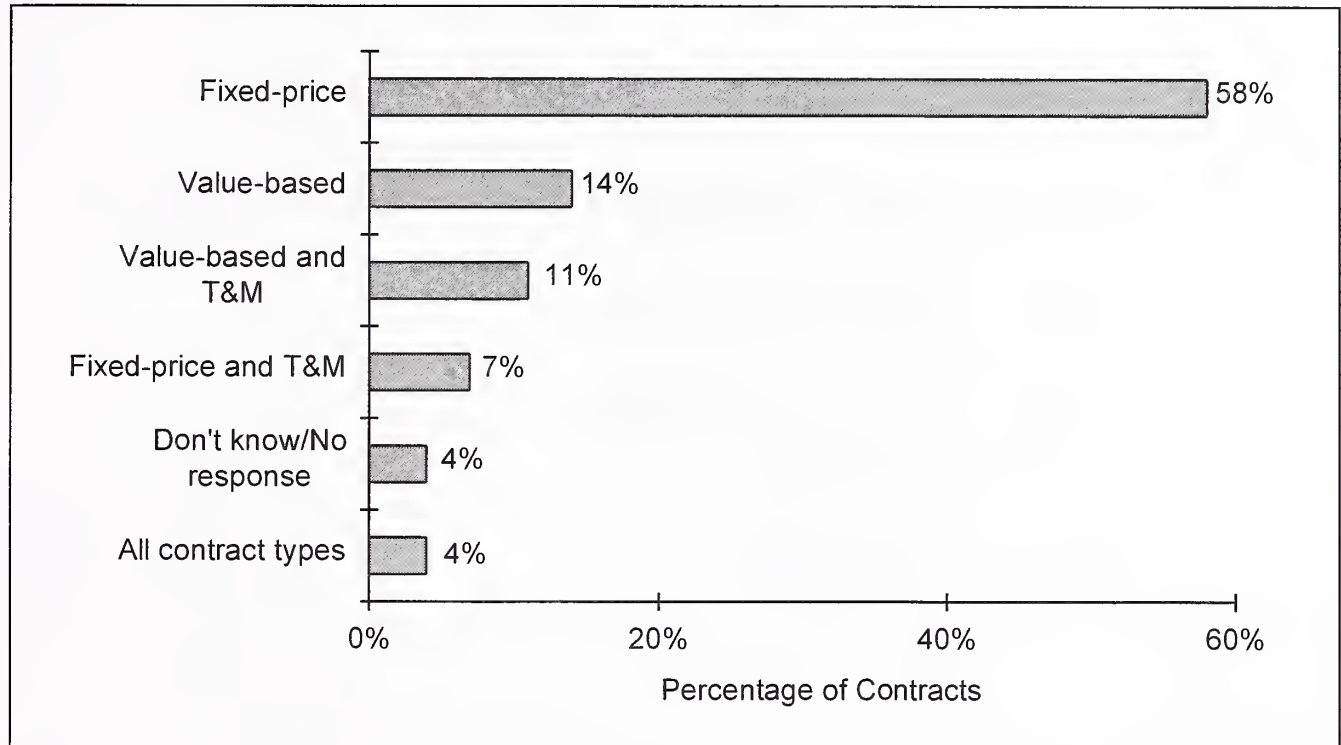
Exhibit I-5

Systems Integration Vendors Interviewed

Andersen Consulting	Digital Equipment
AT&T GIS (Now NCR Worldwide Services)	EDS (Electronic Data Systems)
	Hewlett-Packard
Automated Concepts	IBM
CACI	KPMG Peat Marwick
CAP Gemini America	Price Waterhouse
Coopers & Lybrand	The Registry
Deloitte & Touche	Unisys

Exhibit I-6

Total Number of Contracts per Vendor during Past Three Years

Horizontal bar chart titled "Percentage of Respondents":
- 1000+: 27%
- 100 to <1,000: 33%
- 50 to <100: 13%
- Less than 50: 13%
- Don't Know: 7%
- No Response: 7%

X-axis: 0%, 10%, 20%, 30%, 40%
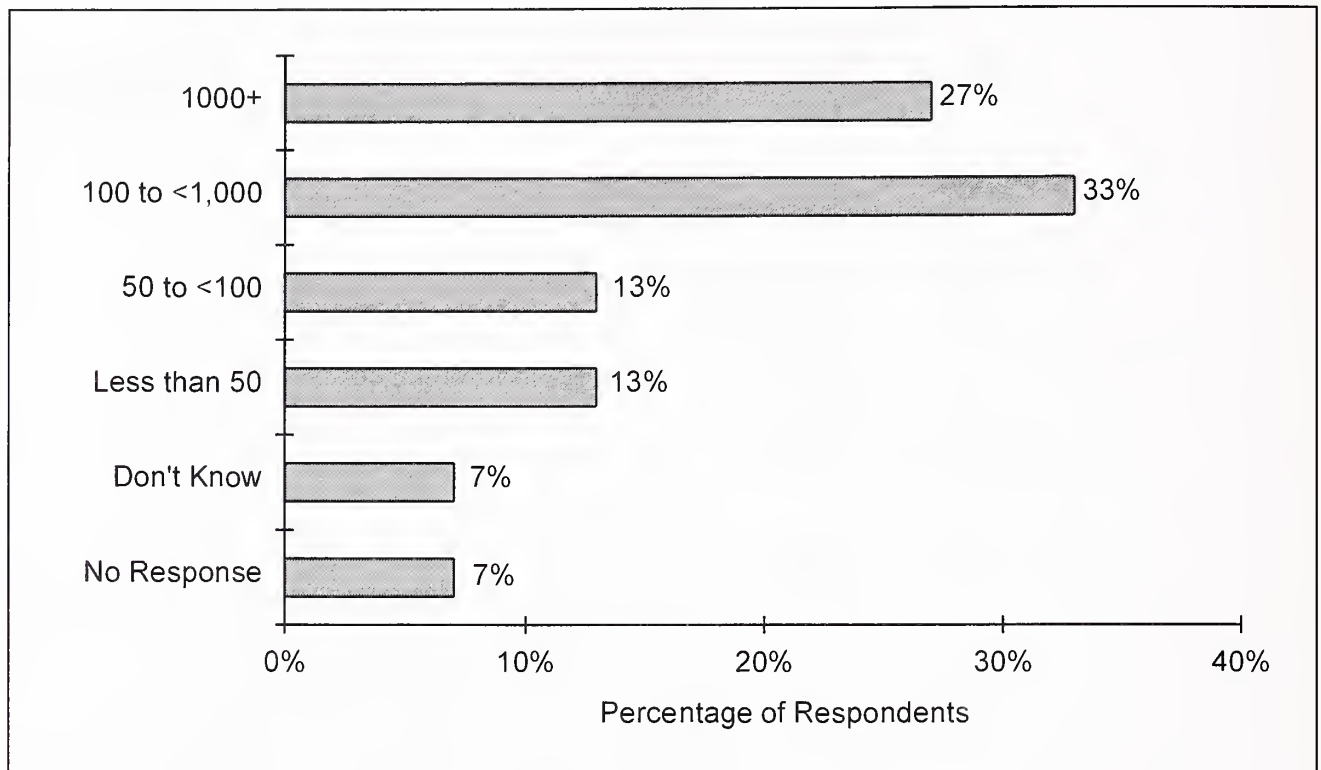
Source: INPUT

C

Report Organization

The remaining chapters of this report are organized as follows:

- Executive Overview—Chapter II—provides a summary of the analysis derived from the research project.

- Systems Integration Customer Satisfaction— Chapter III—includes an analysis of business benefits, satisfaction criteria, and reasons for choosing a specific vendor from the systems integration customer perspective.

- Vendor Perspective on Customer Satisfaction—Chapter IV—provides an analysis similar to that of Chapter III but from the vendor perspective and includes a comparison of vendor and customer views in the areas of business benefits gained through systems integration, customer satisfaction criteria, business reasons used to select a specific vendor, and overall ratings given to integrators.

- Client and Vendor Recommendations—Chapter V—includes study conclusions, as well as recommendations from vendors and customers for improved systems integration services.

- Appendix A provides a definition of terms used in this report.

- Appendix B provides background notes to the interpretation of the rating scales and customer satisfaction index used in this report.

- Appendix C includes a copy of the questionnaire used to interview systems integration customers.

- Appendix C includes a copy of the questionnaire used to interview systems integration vendors.

D
Related INPUT Reports

Other publications from INPUT that are of related interest in relation to this report include:

- *Impact of the Internet on Systems Integration and Professional Services Markets*

- *Outsourcing Vendor Performance Analysis*

- *Pricing and Marketing of Professional Services*

- *System Integration Competitive Analysis*

Company Profiles (from the Vendor Analysis Program)

- *Andersen Consulting Profile*

- *AT&T GIS Profile (Now NCR Worldwide Services)*

- *CACI Profile*

- *CAP Gemini America Profile*

- *Coopers & Lybrand Profile*

- *Computer Sciences Corporation Profile*

- *Deloitte & Touche Profile*

- *Digital Equipment Corporation Profile*

- *EDS (Electronic Data Systems) Profile*

- *Ernst & Young Profile*

- *Hewlett-Packard Company Profile*

- *IBM ISSC Profile*

- *KPMG Peat Marwick Profile*

- *Price Waterhouse Profile*

- *Unisys Profile*

II

Executive Overview

A

Constant Vigilance Required on Professional Services Skills

The Systems Integration business is built on core skill sets related to the design and management of projects, consulting and other related tasks.

The Systems Integration industry comprises many vendors with excellent skills in these areas delivering a high level of value added to their customers.

However, there exist exceptions to this general situation as instanced by the *disaster projects* referenced relatively frequently in the media. To gain a balanced picture of the overall market, INPUT conducted a research study specifically targeted to measure overall customer attitudes to Systems Integration services in North America.

This study examined these fundamental areas related to overall customer attitudes and perceptions related to Systems Integration services:

- Customer Satisfaction—the research covered levels of satisfaction for the delivery of the various products and services provided as part of a customer's System's Integration contract:

    - Hardware and software products

    - Professional services

    - Miscellaneous products and services

- Business Benefits—the research examined the specific business benefits that Systems Integration customers were expecting to gain from using an outside vendor and the degree to which they felt that their benefits were being achieved.

- Buying Criteria—the research study analyzed the leading criteria that customers use to select vendors and compared this with the business reasons that vendors use to promote their services.

B
Customer Satisfaction

The research survey covered the following areas of Systems Integration delivery:

- Hardware and software products.

- Professional services.

- Miscellaneous products and services.

Customer satisfaction ratings were all measured on a one to five scale, where five represents complete satisfaction and one complete dissatisfaction.

Explanatory notes on the interpretation of these scales are provided in Appendix B.

Exhibit II-1 summarizes the overall level of satisfaction for three broad areas of systems integration activity referred to above.

Exhibit II-1

Overall Customer Satisfaction with Systems Integration Projects

Hardware and Software   4.0

Professional Services   3.8

Miscellaneous Products and Services   3.4

1.0   2.0   3.0   4.0   5.0

Average Satisfaction Rating (1 - 5 Scale)

Average Standard Error 0.1
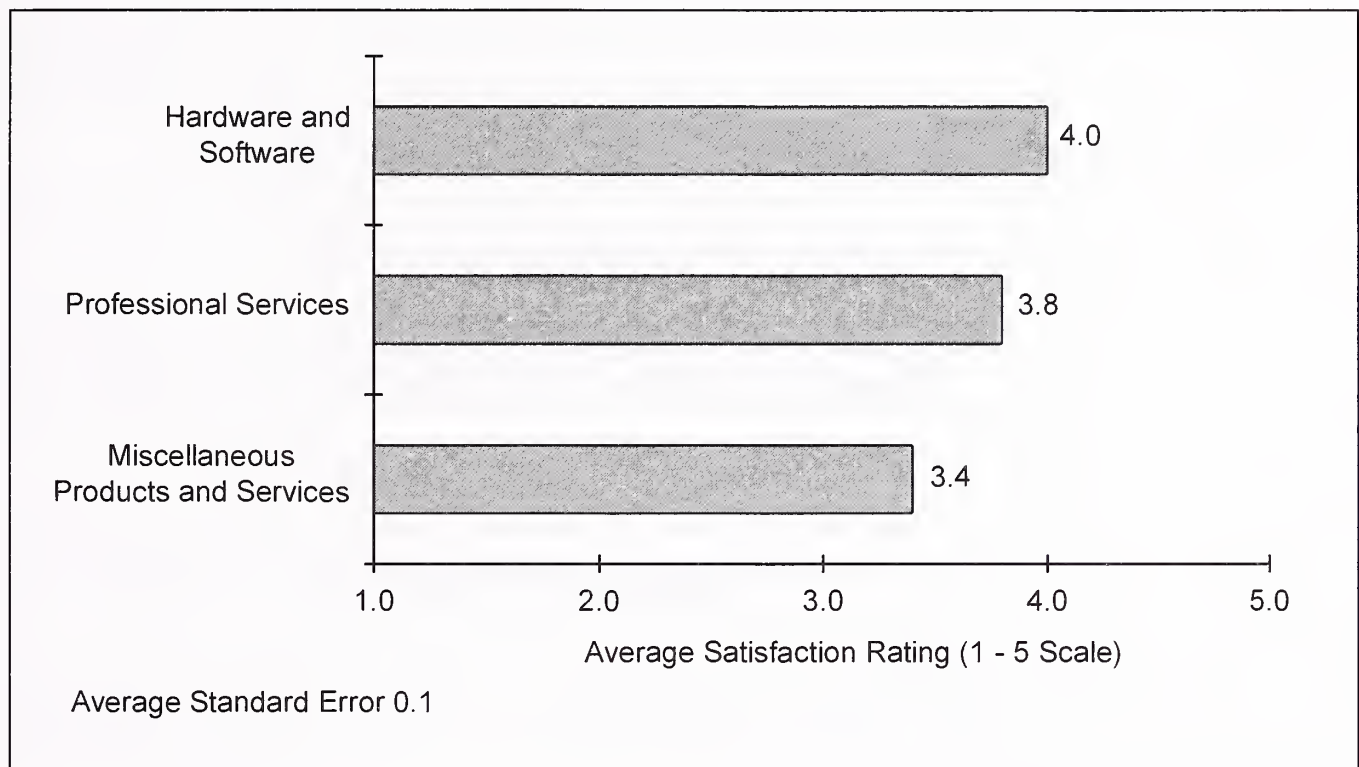
Source: INPUT

- Satisfaction with hardware and software products delivered is very positive.

- Satisfaction with the professional service element is only on the margin of the strongly positive category. Some dissatisfaction exists within the sample population.

- There exists significant dissatisfaction with the delivery of miscellaneous products and services provided as part of systems integration contracts.

The average satisfaction rating of individual elements of hardware and software products ranged from 3.9 to 4.2. Information systems (computer hardware) was most highly rated at 4.2 in contrast to communications hardware with the lowest rating in the category, 3.9.

Applications software products were rated at 4.1 and systems software products at 4.0 indicating no statistical difference between these two categories.

The average customer ratings for professional services included in systems integration contracts ranged from 3.7 to 4.0. The highest average rating was given for program and project management; the lowest average rating for

education, training and documentation. This is a surprising result for solution providers.

In the area of miscellaneous products and services, the ratings ranged from 3.2 to 3.7. The highest rating was given to processing and network services. The lowest to the provision of data processing supplies.

All of the ratings for items in the miscellaneous category indicate areas of dissatisfaction amongst the sample.

Vendors of systems integration services need to examine carefully how they might improve the prevision of these miscellaneous services, since although not viewed as *mainstream* to the project they can all contribute to overall customer dissatisfaction.

Many of these miscellaneous services may be subcontracted, in consequence better control of service levels provided by third-party firms will become the critical issue.

Customers were also requested to select the top five criteria they used to determine their overall level of satisfaction with a Systems Integration project.

The survey results are shown in Exhibit II-2.

Exhibit II-2

Top Five Systems Integration Customer Satisfaction Criteria

Criteria	Percentage	ΔSI*
Technical capability	50%	(0.8)
Job timeframe	43%	(0.6)
Total solution compatability	41%	(1.3)
Price	36%	(0.5)
Performance guarantees	30%	(1.0)

Percentage of Respondents

0%   10%   20%   30%   40%   50%

(Average Standard error 0.1)
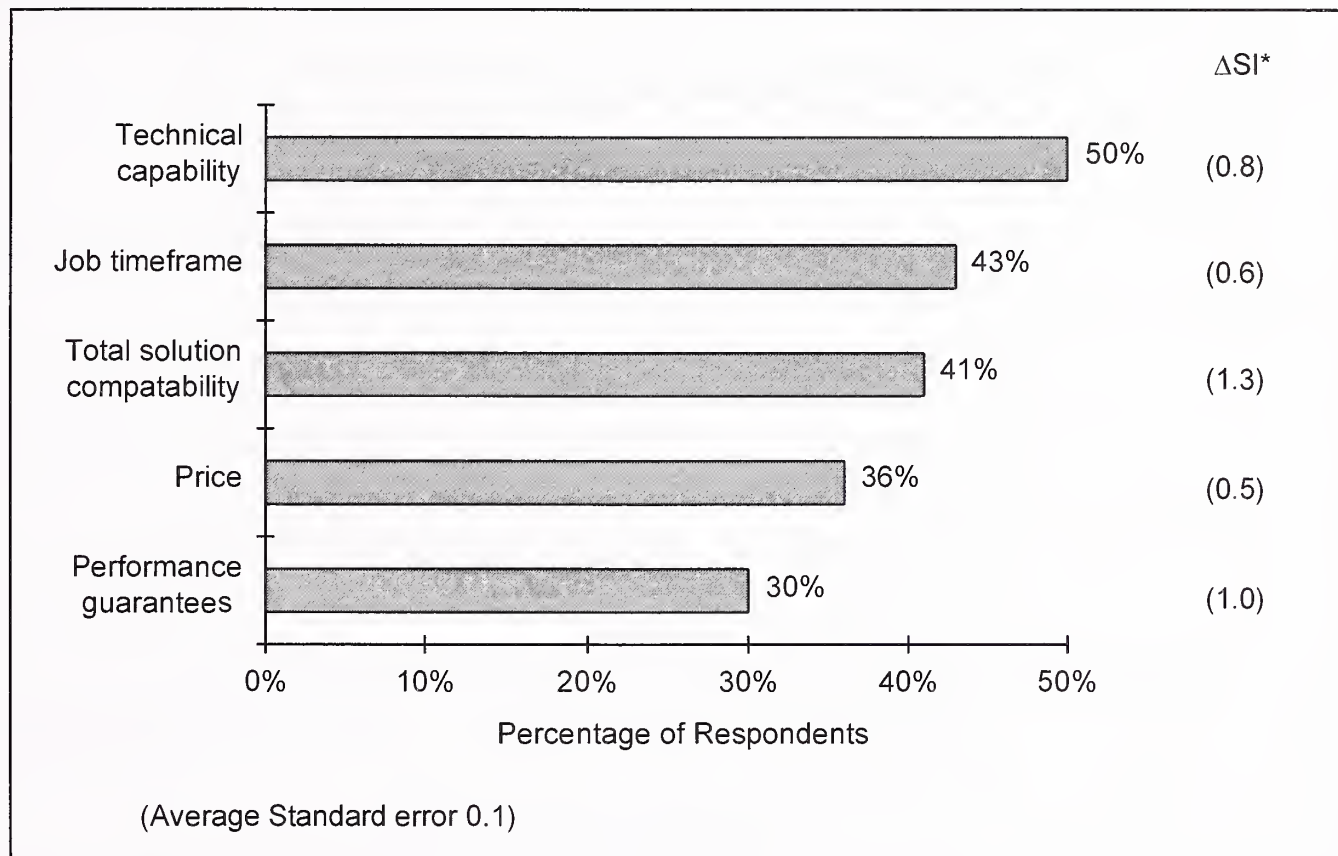
* Satisfaction Index - see Appendix B

Source: INPUT

The data shown in Exhibit II-2 indicates significant areas of customer dissatisfaction notably for:

- Total solution capability

- Performance guarantees

- Technical Capability.

The two elements most closely attuned to the Systems Integration mantra of "on time, within budget" namely "job timeframe" and "price" were the elements with the least level of dissatisfaction in relation to their perceived importance.

This clearly indicates that vendors seeking to differentiate themselves more clearly in the market should emphasize the other factors of importance, i.e., total solution capability, performance guarantees and technical competence.

Systems integrators and their customers volunteered recommendations for improving systems integration services and consequently customer satisfaction. In many cases suggestions were quite similar, reflecting a

common awareness of problems. It is interesting to note however, the differences resulting from the differing perspectives of vendors and customers.

Both groups emphasized the following:

- View the relationship as a partnership.

- Establish effective communications channels, including several levels on both sides.

- Include high quality people from both sides on the team.

- Detail specifications in the contract. Include performance guarantees and measure performance often during the process.

- Develop a plan for change management.

Some of the difference included :

- Vendors stressed focusing on business benefits gained through systems integration rather than "chasing technology"; clients wanted integrators who can implement the latest technology.

- Vendors believed they added value that was more important than the price; clients wanted integrators to stay on budget and reduce costs.

- Vendors wanted to reduce the number of changes that occur after the project has begun; customers wanted more flexibility in the contract in order to accommodate changes.

Professional services are the added value of a systems integration contract and vendors should place their primary efforts on improving client satisfaction on this area.

Vendors should develop improved methodologies to design and manage projects, review consulting practices, systems operations and maintenance procedures, and software development practices from the customers perspective to see what could be changed.

Education/training and documentation should be given particular attention.

Even though the satisfaction ratings in the area of hardware and software product delivery were high, ranging from 3.9 to 4.2 with an average rating of 4.0, there is always room for improvement. Vendors are advised to work with their hardware and software partners and internal staffs on methods to improve satisfaction levels, particularly in the area of communications.

C

Business Benefits

The customer survey for this study measured the following elements relating to the business benefits of Systems Integration contracts:

- What specific business benefits customers expected to gain by using an outside vendor.

- Customer ratings for the importance of these expected business benefits.

- Customer ratings of the degree to which these business benefits were being achieved.

Exhibit II-3 lists the key benefits identified by Systems Integration customers, their relative importance and their satisfaction index.

Exhibit II-3

Key Business Benefits—Importance and Achievement Ratings

(Average standard error 0.1)
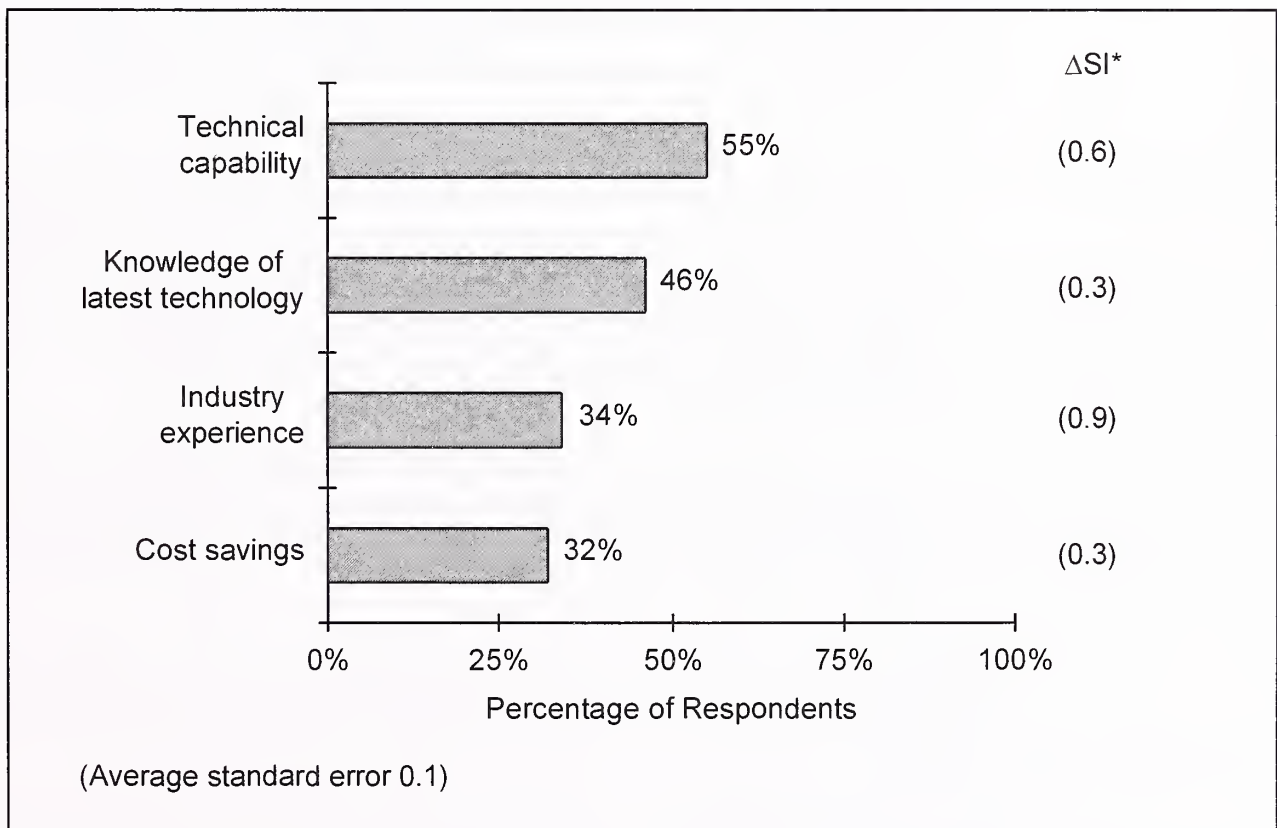
*Satisfaction Index - see Appendix B   Source: INPUT

The criteria set identified in Exhibit II-3, differs from those previously indicated in Exhibit II-2 for the following reason.

Exhibit II-2 shows the data resulting from asking Systems Integration customers to identify the criteria upon which they established their overall satisfaction with the project and the vendor.

Exhibit II-3 shows the data resulting from asking Systems Integration customers to identify the business benefits they expected to receive from the development of a Systems Integration contract.

Exhibit II-3 indicates a short fall in vendor delivery on two key expected business benefits, technical capability and industry expertise.

Systems integration vendors need to recruit project participants with deeper industry experience to fully convince their customers of their ability to deliver on industry specific benefits.

A lower rated, but associated, factor identified was that of industry knowledge. On this measure the Satisfaction Index (0.2) was not significant. It is clearly possible to have industry knowledge without a corresponding level of industry experience.

Some other factors were identified for vendor attention, albeit that they were not related to the most frequently mentioned business benefits. These included:

- Performance guarantees. The average importance rating for performance guarantees, 4.8, was the highest of all criteria rated, yet the level of benefit achieved rating was only 3.9, a Satisfaction Index of (0.9).

- Competitive advantage received an importance rating of 4.4 while the satisfaction rating was only 3.7.

- Contract flexibility was measured at 2.9 for satisfaction against an overall importance level of 3.9, a Satisfaction Index of (1.0). The Satisfaction Index and the absolute satisfaction rating clearly signaling a major concern for this item.

In the area of business benefits expected from a systems integration project, vendors should re-examine how they currently deliver each benefit to their clients.

Particular attention should be focused on methods to improve contract flexibility, provide or improve performance guarantees, and obtain a higher level of experience in the client's industry.

Vendors should also promote application understanding rather than industry expertise when marketing their services. It could make the difference between winning or losing a contract.

D
Buying Criteria

A critical issue for vendors is to gain as much insight as possible into the buying criteria actively being considered by potential customers.

Exhibit II-4 lists the top five business reasons for systems integration contracts as ranked by both customers and vendors.

Exhibit II-4

Buying Criteria—Customer and Vendor View

Customers	Vendors
• Total solution capability	• Total solution capability
• Knowledge of latest technology	• Firm's reputation/expertise
• Price	• Knowledge of latest technology
• Firm's reputation/expertise	• Industry expertise
• Application understanding	• Price

Source: INPUT

Vendors and customers agreed on most of the business reasons used to promote and select a particular integrator. This points to the general success of Systems Integration marketing efforts matching client-perceived needs.

Differences between the customer and the vendor view relate to:

• Customers rate "knowledge of the latest technology" more highly than vendors.

• Customers rate "price" more importantly than vendors.

• Vendors rate their reputation and expertise more highly than customers.

• Customers cited "application understanding" whilst vendors cited "Industry expertise."

In addition to these key criteria the quality of the Systems Integration team was also stated by both groups to be an important choice determinant. Almost certainly the personal chemistry between the groups involved is a far more important factor than people are generally prepared to admit.

Discrepancies between vendor and customer selection criteria, their importance weightings and customer satisfaction levels should guide vendors to modify both their focus when promoting systems integration and their attention to certain service areas.

More must be done to improve client satisfaction, particularly in the areas of technical capability and total solution capability.
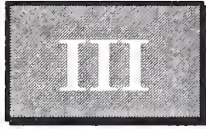
III

Systems Integration Customer Satisfaction

This chapter provides an analysis of business benefits, satisfaction criteria, and reasons for choosing a specific vendor from the systems integration customer perspective. Included in the analysis are the following:

- The types of products and services currently being included in SI contracts.

- Customer satisfaction ratings by type of product and/or service.

- Business benefits expected by customers from using a systems integration vendor.

- Customer importance ratings for each business benefit.

- Customer ratings of the level of benefit achieved.

- Criteria customers use in determining satisfaction with the project.

- Customer importance ratings for these criteria.

- Customer satisfaction ratings for the criteria.

- Business reasons used by customers in selecting a specific vendor.

- Customer importance ratings for each business reason.

- Overall ratings by customers of their vendor's performance.

- Customer ratings of the likelihood of using the same vendor again.

A
Products and Services Included in SI Contracts

Systems integration clients were asked what types of products and services were included as part of the systems integration contract in order to gather information about the types of contracts covered. The three major categories of products were:

- Hardware and software products.

- Professional services.

- Miscellaneous products and services.

1. Hardware and Software Products

Exhibit III-1 shows the percentages of the main types of hardware and software products in SI contracts. The applications software category refers to cross-industry and industry-specific packaged applications; systems software refers specifically to systems control, data center management, and application development tools; information systems and communications include the information processing and communications equipment required to build the systems solution.

INPUT sees one of the defining characteristics of systems integration as the inclusion of hardware as a component of the project. The fact that only 26 out of the 55 respondents indicated that information systems or communications were part of their projects indicates some confusion among customers about what defines a systems integration contract.

There will be a significant increase in the percentage of systems integration contracts containing communications as an element of the project. This is because of the rapidly expanding demand for network-centric computing systems, particularly for Internet and Intranet applications.

Exhibit III-1

Hardware and Software Products Included in SI Contracts
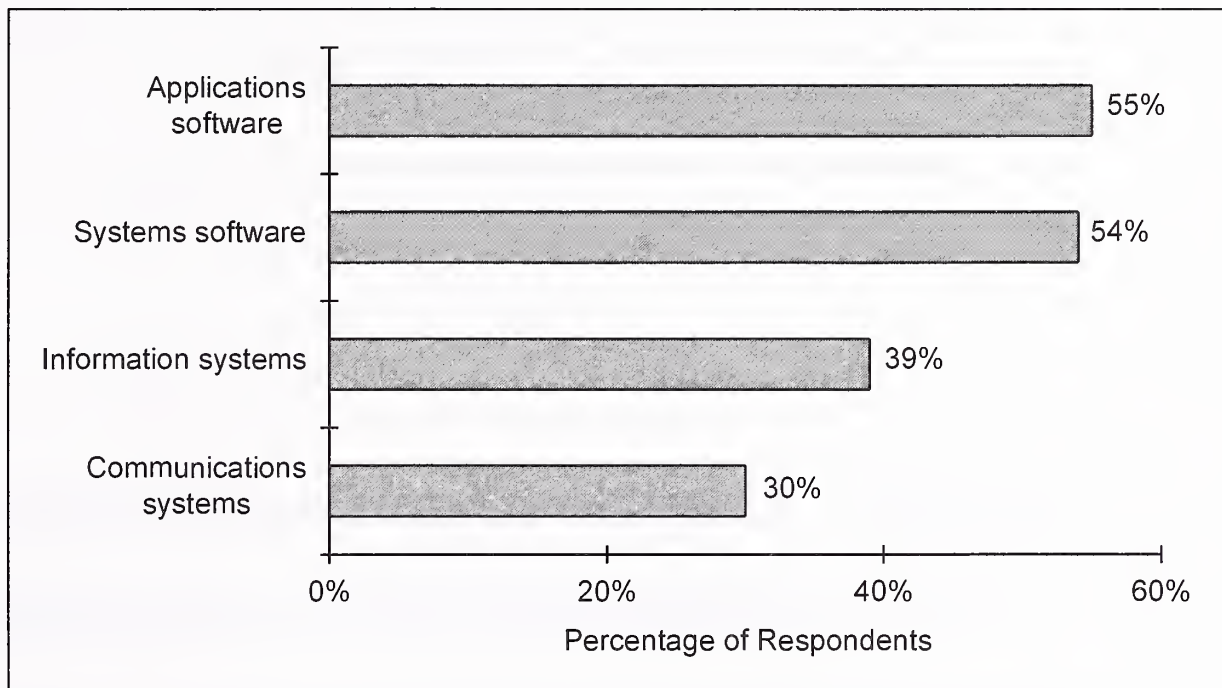
Source: INPUT

2. Professional Services

Exhibit III-2 shows an analysis of the different categories of professional services in the SI contracts researched for this project. These include:

- *Consulting services.* INPUT's definition of consulting services includes: management consulting (related to information technology), information systems re-engineering, information systems consulting, feasibility analysis and cost-effectiveness studies, and project management assistance.

- *Software development.* Software development services include: user requirements definition, systems design, contract programming, documentation, and implementation of software performed on a custom basis. Here, design and implementation were considered separately. The low percentage assigned to software development, a defining characteristic of a systems integration project, can be attributed to a cross-over between software development and design/implementation.

- *Systems operation and maintenance.* Systems operations and maintenance involves the operation and management of all or a significant part of the client's information systems functions under a contract lasting less than one year so as to differentiate it from outsourcing. These services can be provided in any of four distinct submodes: platform systems operations, applications systems operations, network management, and desktop services.

An interesting feature to note about Exhibit III-2 is the percentage of the sample that includes program/project management. This indicates that many SI customers (over 50%) view themselves as the project managers. This implies that many vendors are mis-applying the popular term "Systems Integration" (SI) to projects that do not justify it.

However, this also points to an opportunity for vendors to more aggressively sell project management services to customers who currently only seek their services for other elements of the overall project.

Exhibit III-2

Professional Services Included in SI Contracts

Service	Percentage
Education/training and documentation	59%
Consulting	59%
Design/ implementation	52%
Systems operation/ maintenance	48%
Program/project management	46%
Software development	39%

Percentage of Respondents
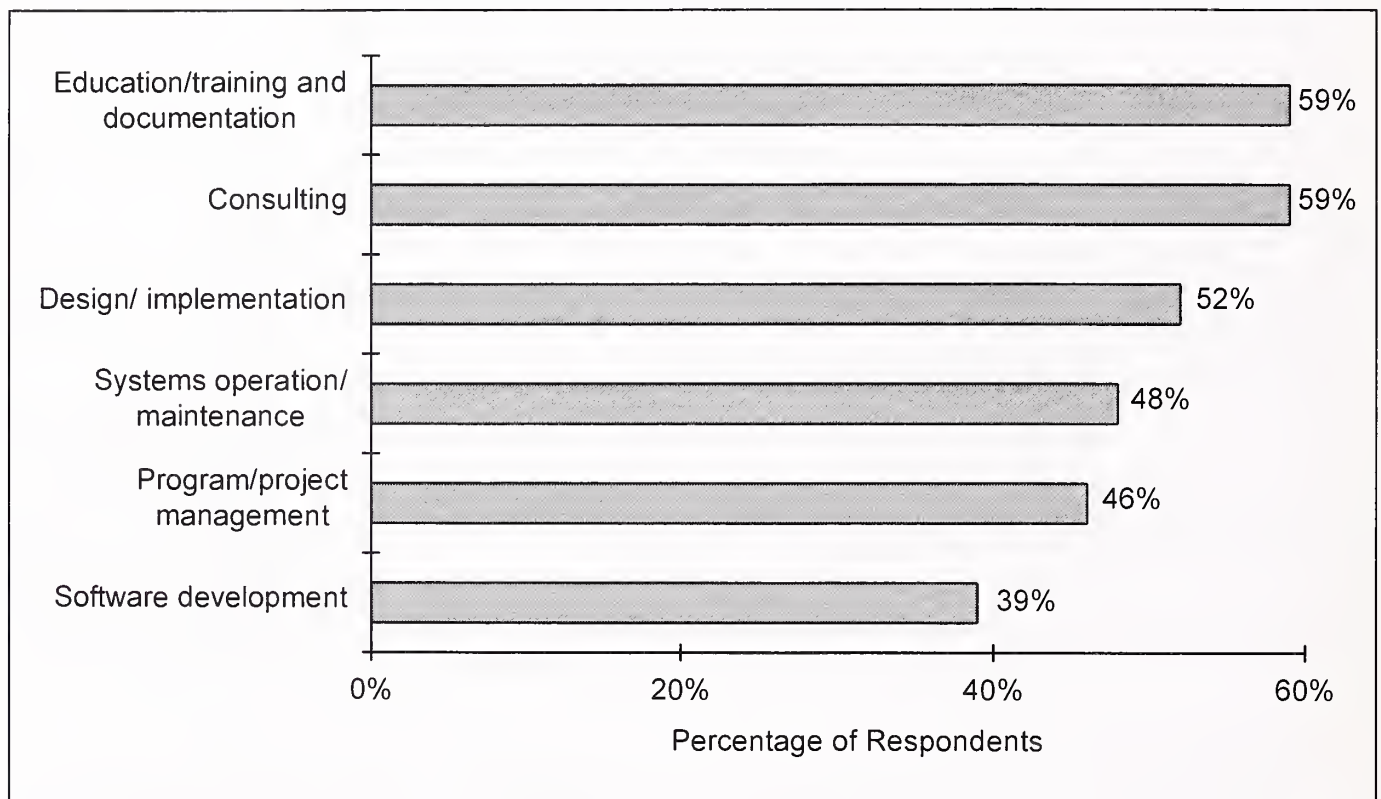
Source: INPUT

3. Other Miscellaneous Products/Services

Exhibit III-3 shows the analysis of miscellaneous products and services covered in SI contracts.

Other miscellaneous products and services perceived by clients as part of their SI contracts include:

- Programming tools

- Software updates and application management

- Hardware and software support

- 24-hour hotline support

- Initial installation

- PCs and workstations

- Peripherals

- On-site support

- Remote access dial-in capabilities

- Subcontracted network wire installation

- Outsourcing.

Exhibit III-3

Miscellaneous Products and Services Included in SI Contracts

Data processing supplies — 90%

Processing/network services — 23%

Site preparation — 18%

Data/voice communications services — 13%

Other — 11%

0%   25%   50%   75%   100%

Percent of Respondents
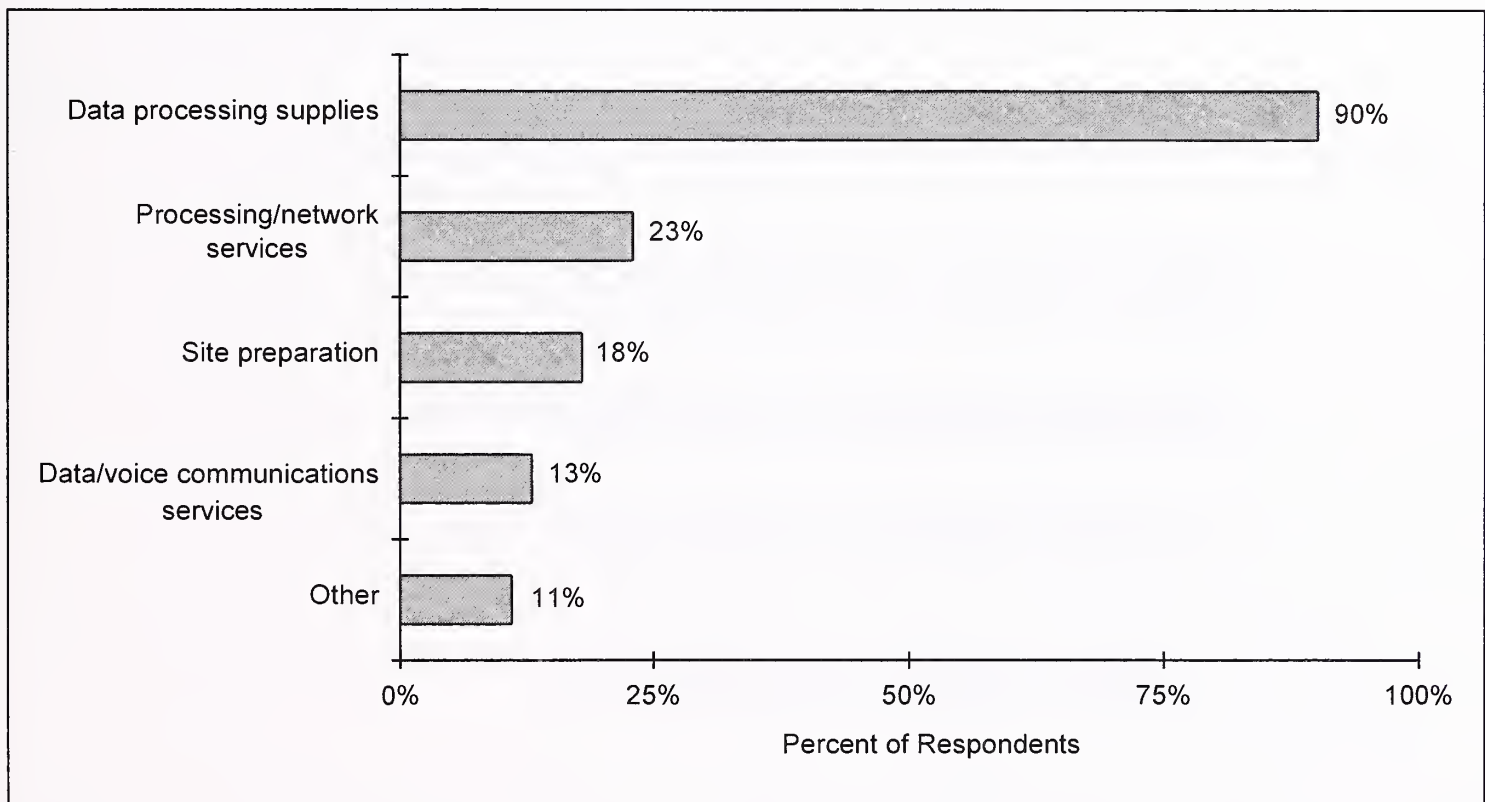
Source: INPUT

B

Satisfaction Ratings by Type of SI Product/Service

Customers were asked to rate (on a 1–5 scale, with 5 being completely satisfied and 1 being completely dissatisfied) their satisfaction level with their system integration vendor's performance in a number of areas:

– Hardware and software

– Professional services

– Other products and services

As a guideline for interpreting these research results it should be borne in mind that any rating of 3.9 or above indicates a very high level of overall satisfaction with the provided service being measured. Ratings under 3.0 indicates a high-level of dissatisfaction with the relevant service.

1. Hardware and Software Products

Exhibit III-4 shows average customer satisfaction ratings for the hardware and software products that were part of the contract. The average rating for the category was an above-average 4.0.

These ratings indicate high levels of customer satisfaction with the hardware and software products being delivered as part of SI contracts.

In the hardware and software products category, systems software is what enables the computer/communications system to perform basic machine-oriented or user interface functions and refers specifically to systems control, data center management, and application development tools.

Applications software enables a user or group of users to support an operational or administrative process within an organization and includes cross-industry applications, such as accounting and word processing software, and industry-specific packaged applications, such as medical record keeping and automobile dealer parts inventory software.

Exhibit III-4

Customer Satisfaction Ratings for Hardware and Software Products

Category	Rating
Information systems	4.2
Applications software	4.1
Systems software	4.0
Communications	3.9

Average Satisfaction Rating (1.0 - 5.0 scale)
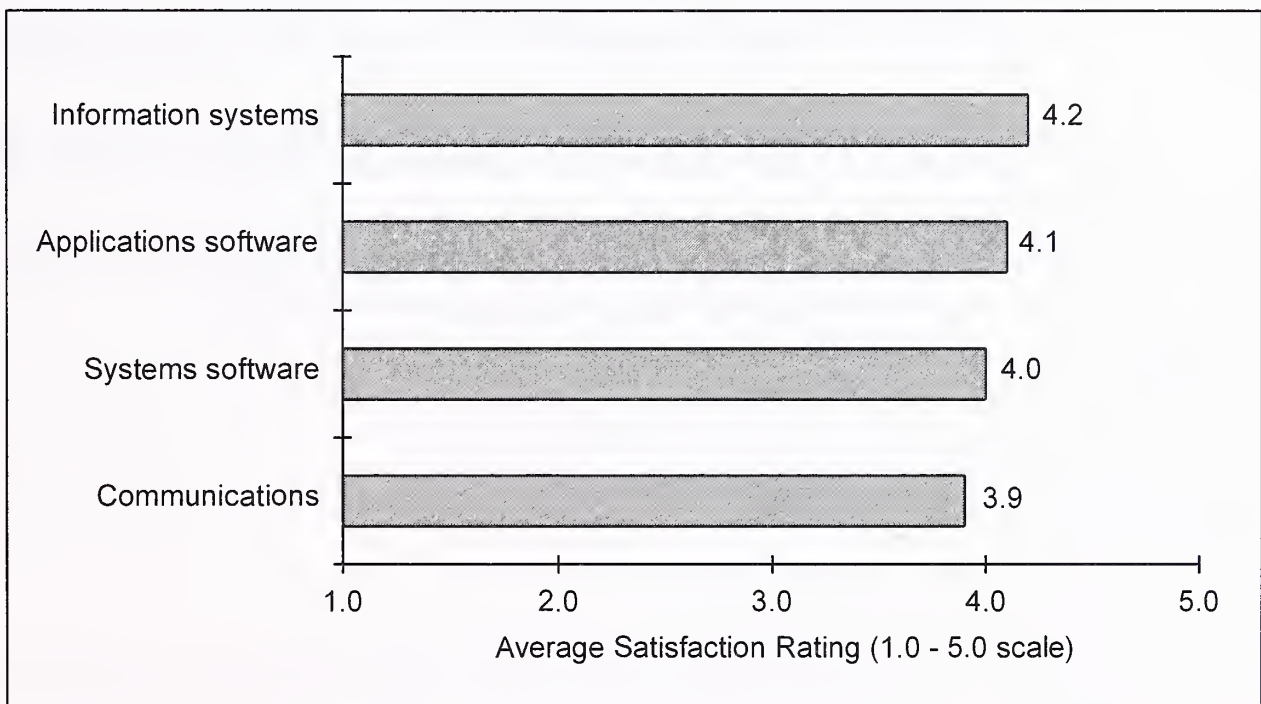
Source: INPUT

2. Professional Services

Exhibit III-5 shows average customer satisfaction ratings for professional services included in the contract.

The average rating for the category was 3.8. Although a relatively high rating, this area is let down by *interalia* education, trading, and documentation.

Vendors should pay special attention to this and other relatively low-scoring service delivery areas.

Exhibit III-5

Customer Satisfaction Ratings for Professional Services

Service	Rating
Program/project management	4.0
Design/implementation	3.9
Consulting	3.9
Systems operation/maintenance	3.8
Software development	3.8
Education/training and documentation	3.7

Average Satisfaction Rating (1.0 - 5.0 Scale)

Source: INPUT

3. Other Miscellaneous Products/Services

Exhibit III-6 shows average customer satisfaction ratings for miscellaneous products and services that were part of an SI contract:

- The average rating for this category was 3.4, clearly indicating significant problems.

- Data processing supplies, which was included in 90% of the projects surveyed, received the lowest rating of all the categories. Vendors should look at this area in their projects to see if improvements can be made easily, since it generally represents only a fraction of the contract's value but could lead to overall dissatisfaction with the vendor.

Exhibit III-6

Customer Satisfaction Ratings for Miscellaneous Products and Services

Category	Rating
Processing/network services	3.7
Data/voice communications services	3.4
Site preparation	3.4
Data processing supplies	3.2

Average Satisfaction Rating (1.0 - 5.0 Scale)
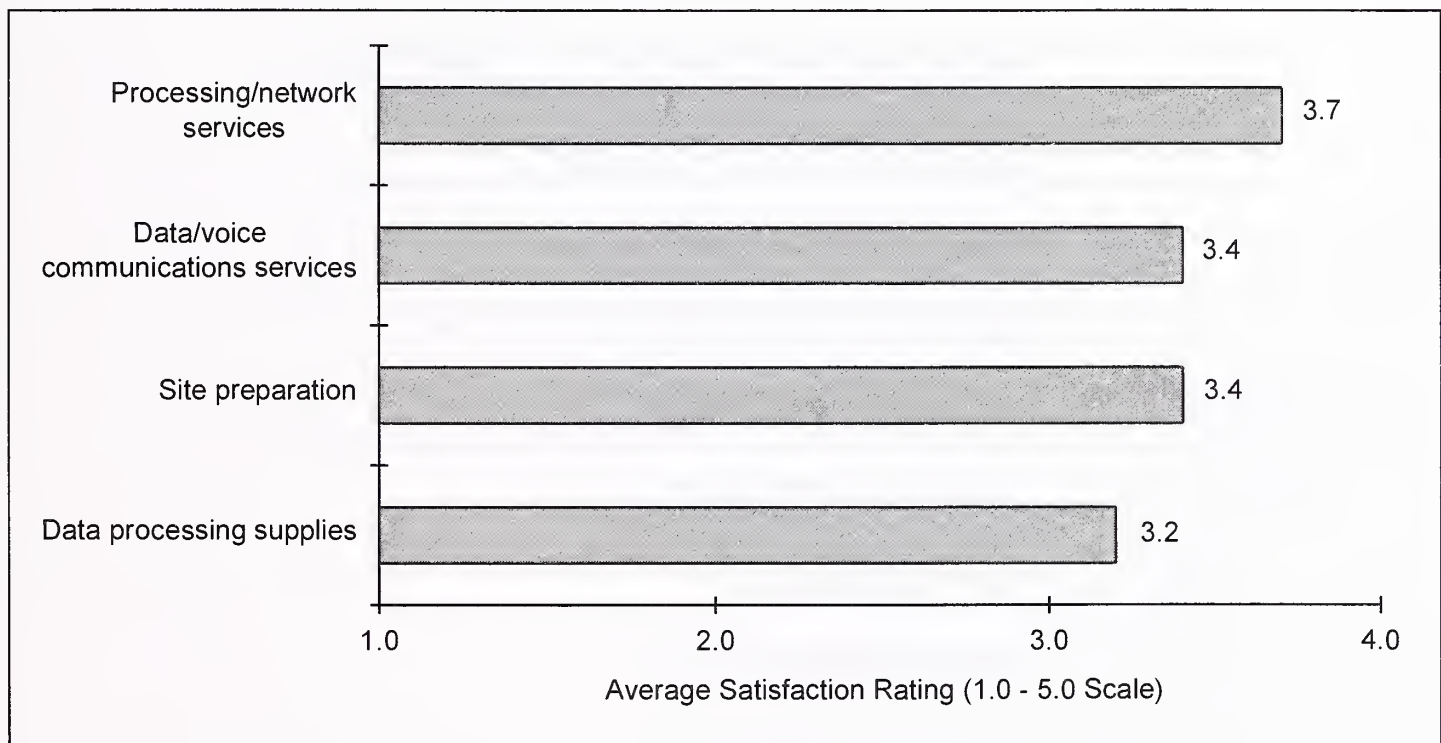
Source: INPUT

C

Business Benefits of SI Services—Customer Perspective

1. Business Benefits Expected by Customers

Customers were questioned about the top five business benefits they expected to receive by using a systems integrator. Exhibit III-7 shows the percentage of respondents who selected particular benefits amongst their top five.

It is interesting to note that 45% of the respondents identified fewer than five benefits they expected to receive from using an integrator.

This reflects the narrow range of benefits customers expect from using integrators, principally technical capability and knowledge of the latest technology.

Vendors should make sure that their sales and marketing personnel are aware of this fact and are focused on these specific areas since they represent the primary areas of benefit customers expect.

Exhibit III-7

Top Business Benefits Expected by Customers

Percentage of Respondents
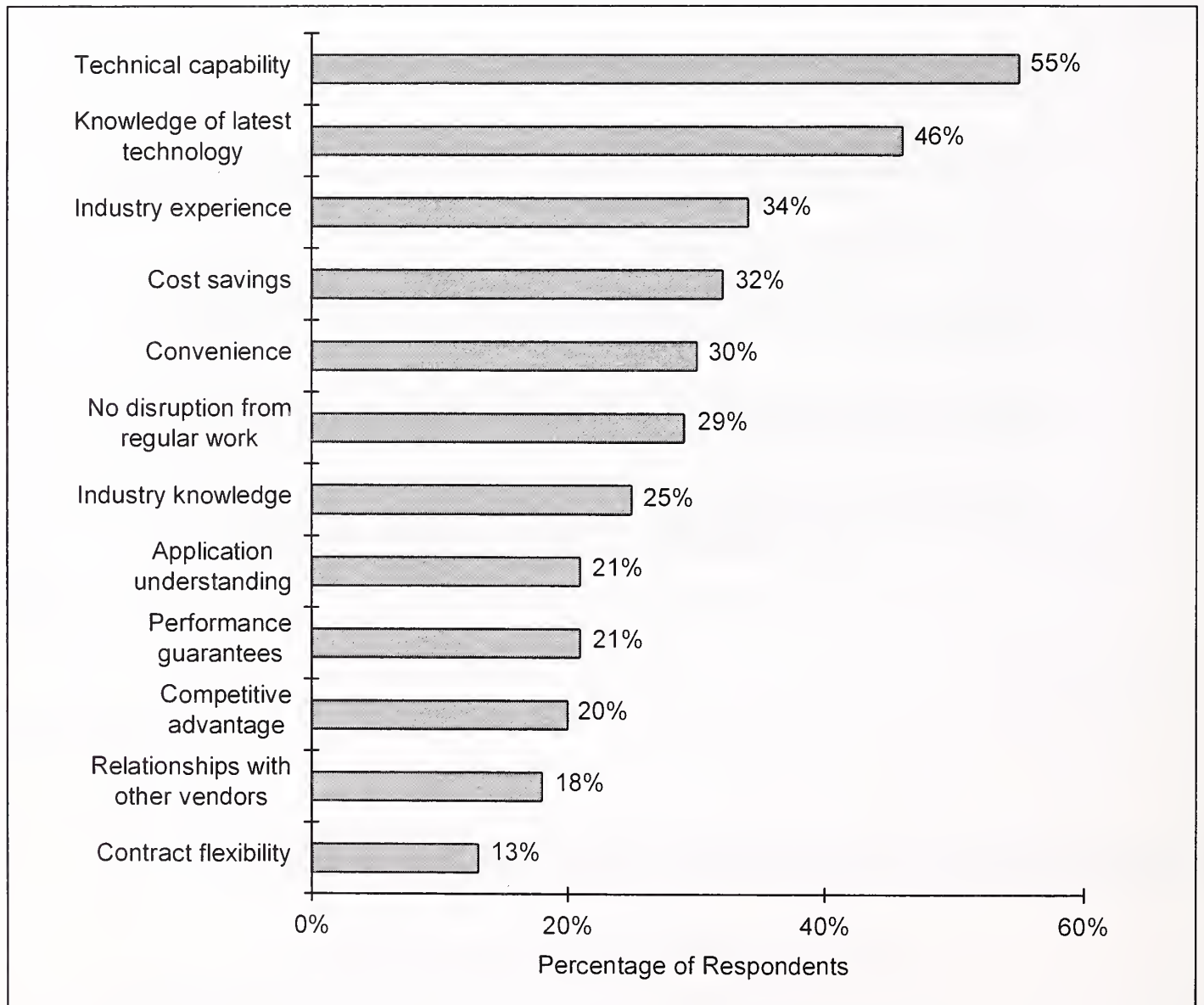
Source: INPUT

In addition to the benefits mentioned above, clients referenced the following as additional business benefits of using a systems integrator:

- Customer service and support.

- Ability to move an application to a new system.

- Ability to get application up and running faster.

- Vendor being responsible for total integration process allowed client to focus on core business.

- No additional staff required.

- Data warehousing capabilities.

- Vendor provided business expertise.

- Vendor's global experience.

2. Importance of Business Benefits and Degree Achieved

Customers interviewed were requested to rate the importance of each of the business benefits they selected and to apply a rating to those same benefits that represented the degree to which they felt each benefit was achieved.

Exhibit III-8 shows the average importance rating assigned to each benefit and the level to which that benefit was achieved, in order of importance.

Exhibit III-8

Customer Ratings of Importance of Business Benefits Expected and Degree Achieved

Benefit	Importance	Level of Benefit Achieved
Performance guarantees	4.8	3.9
Competitive advantage	4.4	3.7
No disruption from regular work	4.3	3.8
Technical capability	4.3	3.7
Application understanding	4.3	3.7
Cost savings	4.2	3.9
Industry experience	4.2	3.3
Knowledge of latest technology	4.1	3.8
Convenience	3.9	3.9
Industry knowledge	3.9	3.7
Contract flexibility	3.9	2.9
Relationships with other vendors	3.5	3.5

1 - 5 Scale, (1=Low 5=High)

Source: INPUT

All perceived benefits, with the exception of relationships with other vendors, were assigned a high importance rating (3.9 or above).

Each represents an area that vendors fell short in and should work to improve upon. These areas should also be examined by clients with the aim of including provisions in integration contracts that will improve the level of achievement for each criteria.

Areas to focus on in the near term include technical capability and industry experience.

D
Customer Satisfaction Criteria and Importance and Satisfaction Levels

Customers were asked to select the top five criteria they use to determine their level of satisfaction with a systems integration project.

Customers were then asked to rate (on a 1–5 scale, with 5 being extremely important and 1 of very low importance) the importance level they attached to each of the criteria they selected and to rate their satisfaction levels (also on a 1–5 scale, with 5 being completely satisfied and 1 being completely dissatisfied) with specific criteria. Comparisons between user importance and satisfaction levels allows analysis by the *satisfaction index* as described in Appendix B.

Exhibits III-9 and III-10 list respectively the most significant and least significant performance gaps.

These exhibits reveal some striking gaps between the criteria which are important to clients when determining their satisfaction with a project and how satisfied they were with those criteria.

It is even more remarkable that some of the largest gaps are found among criteria that are the most important to clients and those most commonly used to rate satisfaction: total solution capability, technical capability, and timeframe to do the job.

Systems integrators should review current and pending contracts with the goal of improving satisfaction with each of these criteria:

- Talk with clients to determine exactly what their expectations are and how they might best be met.

- Modify marketing efforts to focus on areas in which vendors are able to achieve high satisfaction levels on important criteria and use those clients for references.

- Sales teams should be made aware of these strengths and weaknesses and use them accordingly in sales efforts.

Users of systems integration would do well to focus on the following:

- Incorporate benchmarks for these criteria in contracts in order to increase satisfaction.

- Be very clear with vendors on exactly what is required in order to achieve complete satisfaction with a project.

Efforts by both parties to improve satisfaction will lead to better relationships between vendors and clients and ultimately more work for vendors.

Exhibit III-9

Most Significant Performance Gaps—User Ratings

ΔSI*

Category	Avg. Satisfaction Level	Avg. Importance Rating	ΔSI*
Total solution capability	4.7	3.4	(1.3)
Proposal quality	3.8	2.5	(1.3)
Performance guarantees	4.7	3.7	(1.0)
Support performance	4.3	3.3	(1.0)
Technical capability	4.4	3.6	(0.8)
Consultant expertise	4.2	3.5	(0.7)
Job timeframe	4.6	4.0	(0.6)

(1 - 5 Scale, 1=Low 5=High)

*Satisfaction Index (See Appendix B)

Avg. Satisfaction Level
Avg. Importance Rating
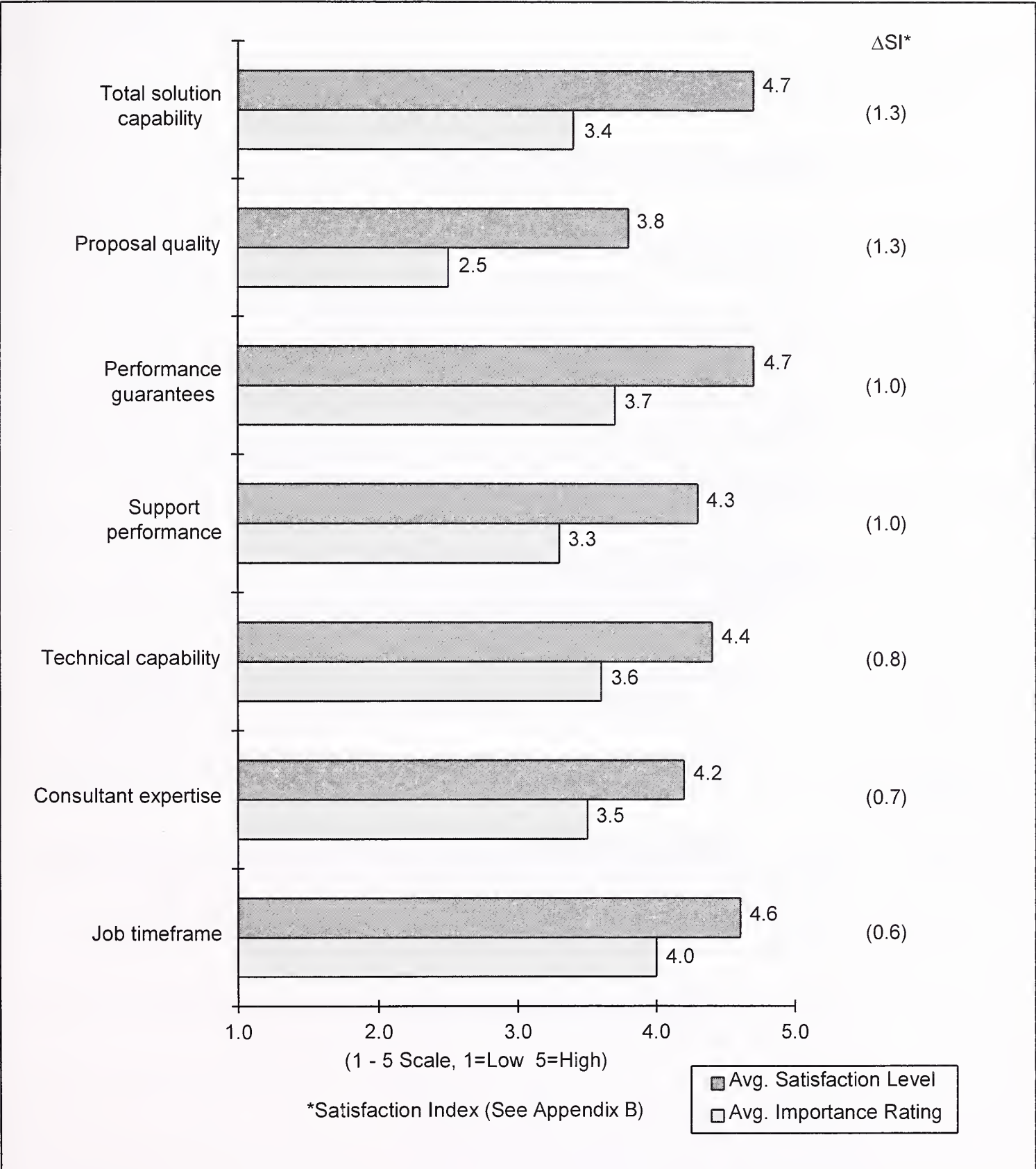
Source: INPUT

Exhibit III-10

Least Significant Performance Gaps—User Ratings

ΔSI*

Criteria	ΔSI*
Quality of proposal team	0.0
Convenience	(0.1)
Contract flexibility	(0.1)
Application understanding	(0.2)
No disruption from regular work	(0.3)
Industry experience	(0.5)
Price	(0.5)

1 - 5 Scale (1=low, 5=high)
* Satisfaction Index (see Appendix B)

☐ Avg. Importance Rating
☐ Avg. Satisfaction Level
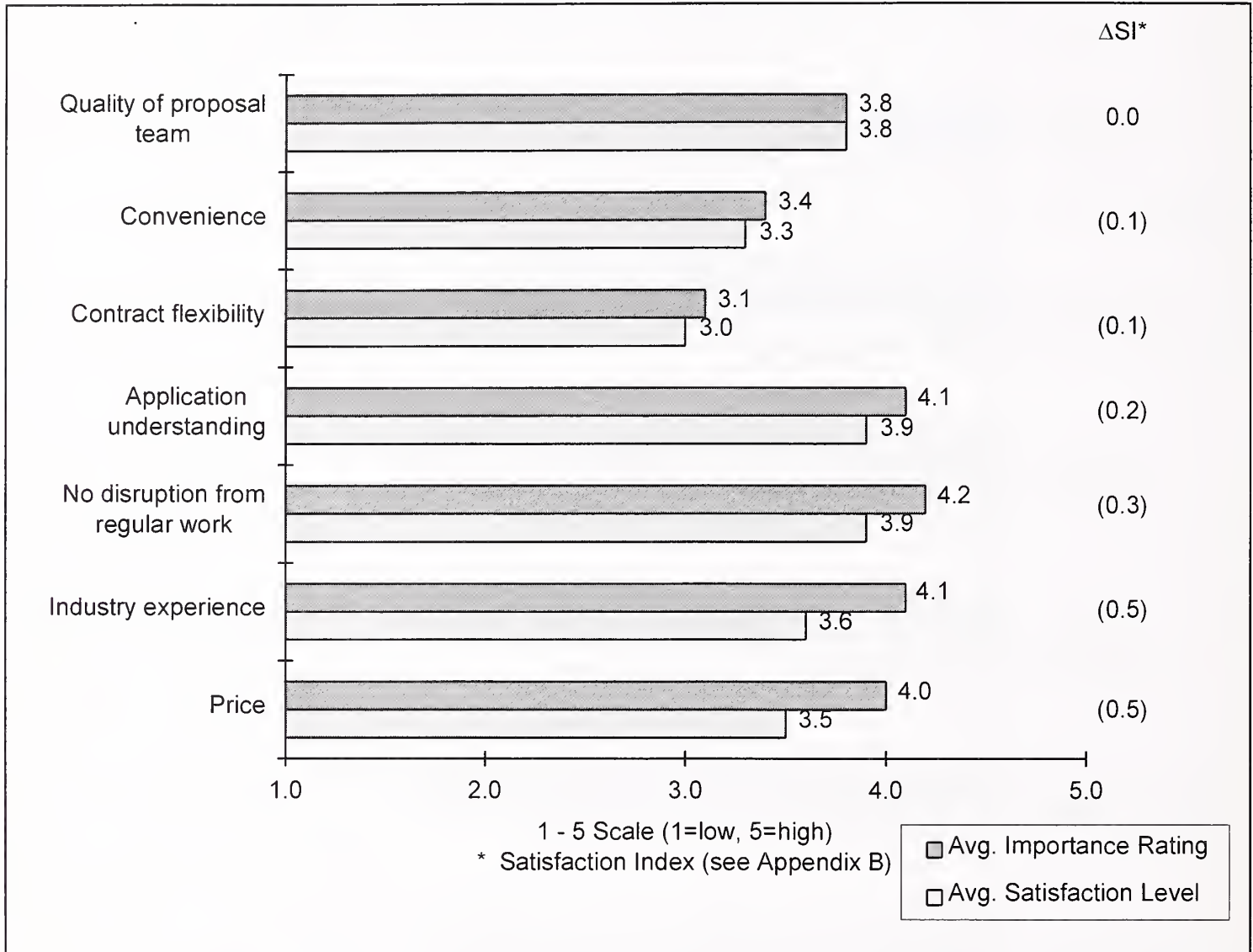
Source: INPUT

Exhibit III-11 lists all criteria rated at 4.0 or above for importance (no aspect was actually rated on average at 3.9) together with the associated satisfaction rating and the percentage of user respondents who cited each criteria.

Exhibit III-12 is an associated chart that lists all criteria rated for 3.8 or less for importance.

Exhibit III-13 lists the criteria which achieved the highest satisfaction scores in descending order.

Exhibit III-14 lists the criteria which were rated the lowest for satisfaction in ascending order.

Exhibit III-15 lists the most frequently cited customer satisfaction criteria (in descending order) with the level of importance attributed in each case.

Exhibit III-16 is complementary to Exhibit III-15 and lists the least frequently cited customer satisfaction criteria (in ascending order) with the level of importance attributed in each case.

Exhibit III-11

Satisfaction with Most Important Criteria—User Ratings

% Respondents

Criteria	Avg. Importance Rating	Avg. Satisfaction Level	% Respondents
Total solution capability	4.7	3.4	41%
Performance guarantees	4.7	3.7	30%
Timeframe to do the job	4.6	4.0	43%
Technical capability	4.4	3.6	50%
Support performance	4.3	3.3	16%
No disruption from regular work	4.2	3.9	16%
Consultant expertise	4.2	3.5	20%
Industry experience	4.1	3.6	29%
Application understanding	4.1	3.9	27%
Price	4.0	3.5	36%

1 - 5 Scale (1=low, 5=high)

Avg. Importance Rating
Avg. Satisfaction Level

Source: INPUT

Exhibit III-12

Satisfaction with Least Important Criteria—User Ratings

% Respondents

Criteria	Rating	% Respondents
Quality of proposal team	3.8 / 3.8	13%
Proposal quality	3.8 / 2.5	5%
Convenience	3.4 / 3.3	11%
Contract flexibility	3.1 / 3.0	35%

1 - 5 Scale (1=low, 5=high)

■ Avg. Importance Rating
□ Avg. Satisfaction Level
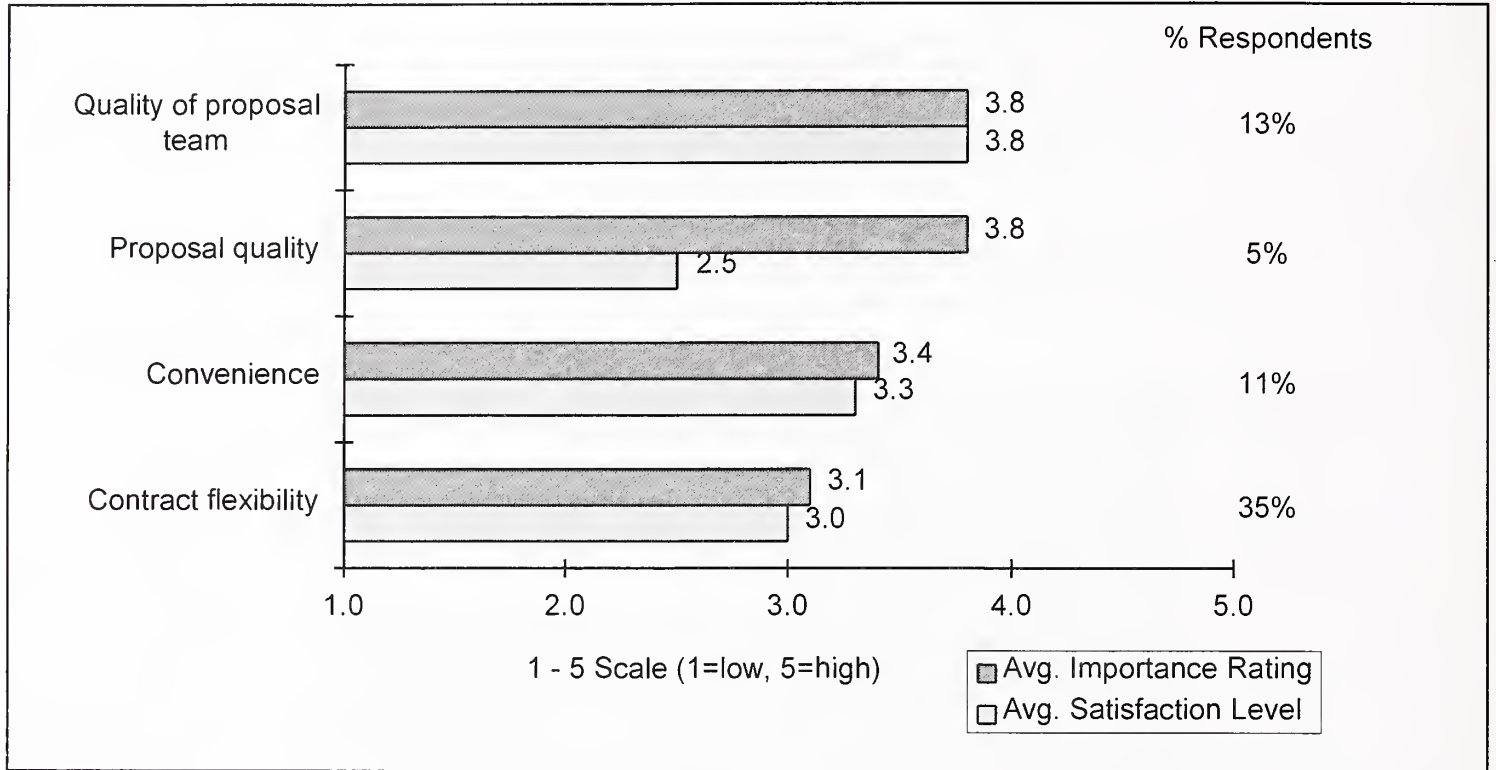
Source: INPUT

Exhibit III-13

Most Satisfied Criteria—User Ratings

% Respondents

Criteria	Rating	% Respondents
Timeframe to do the job	4.0	43%
Application understanding	3.9	27%
No disruption from regular work	3.9	16%
Quality of proposal team	3.8	13%
Performance guarantees	3.7	30%
Technical capability	3.6	50%
Industry experience	3.6	29%

1 - 5 Scale (1=low, 5=high)
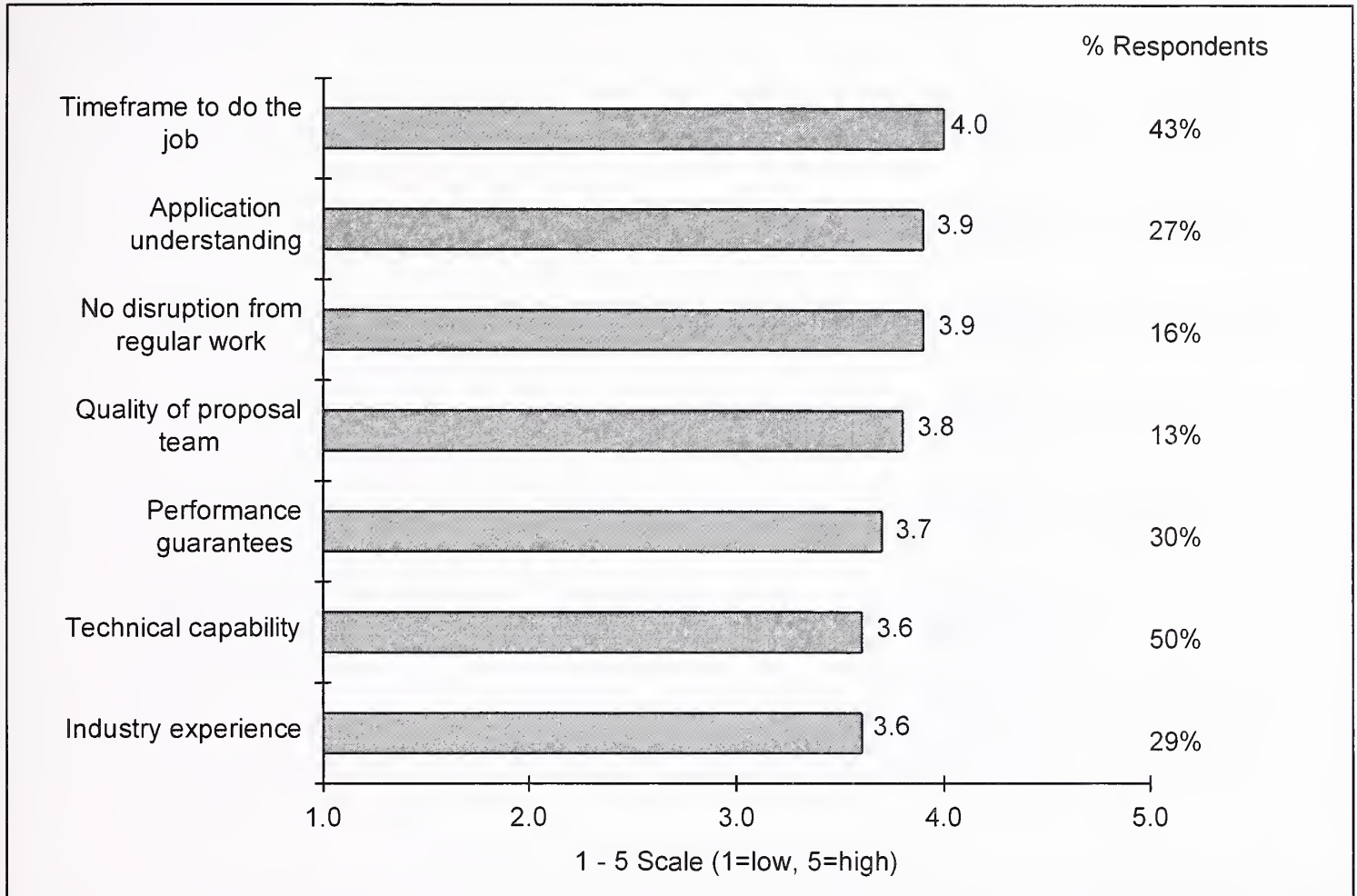
Source: INPUT

Exhibit III-14

Least Satisfied Criteria—User Ratings

Criteria	Rating	% Respondents
Proposal quality	2.5	5%
Contract flexibility	3.0	15%
Support performance	3.3	16%
Convenience	3.3	11%
Total solution capability	3.4	41%
Price	3.5	36%
Consultant expertise	3.5	20%

1 - 5 Scale (1=low, 5=high)
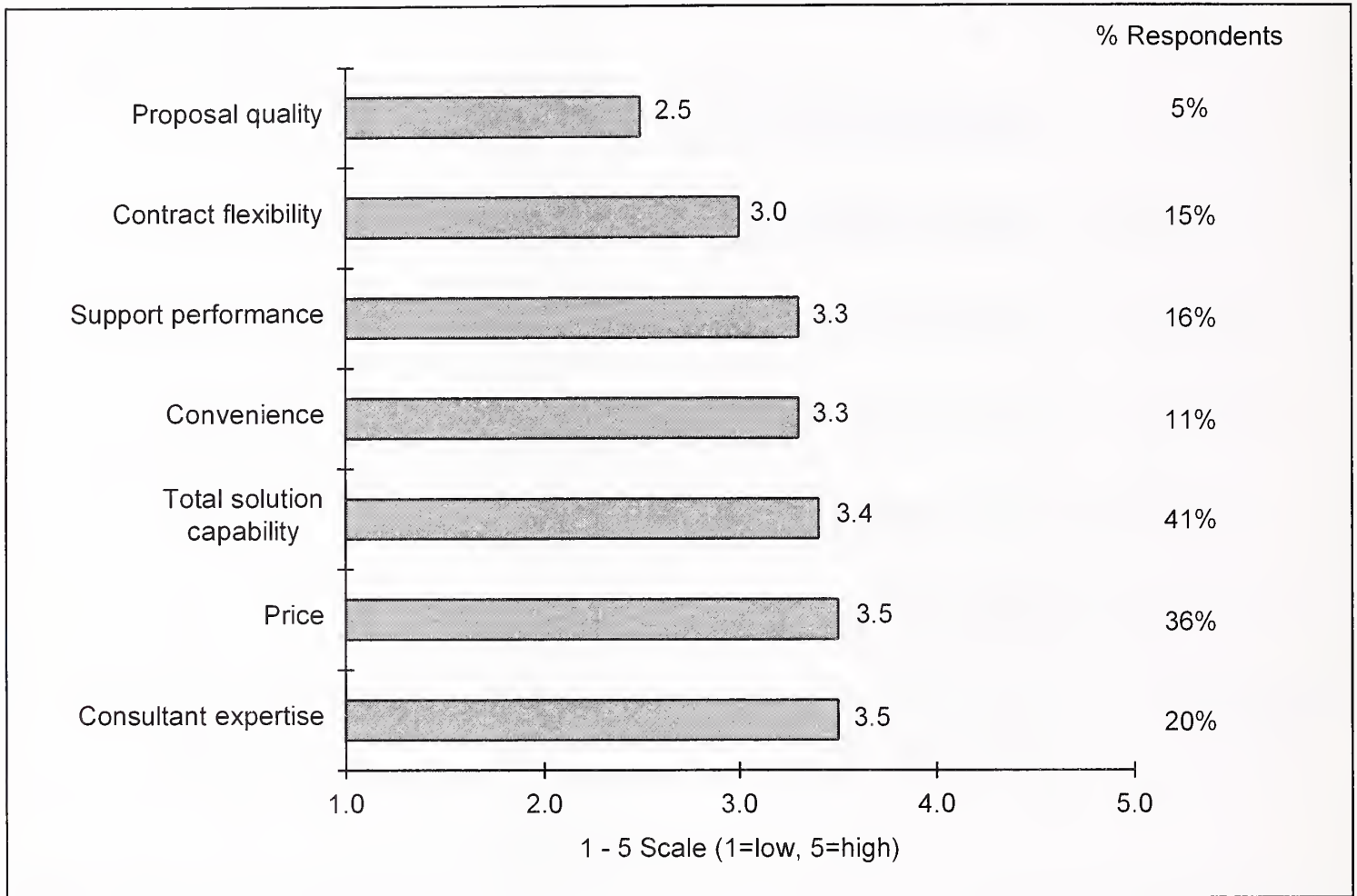
Source: INPUT

Exhibit III-15

Most Frequently Cited Customer Satisfaction Criteria—User Importance Ratings

Criteria	Rating	% Respondents
Technical capability	4.4	50%
Timeframe to do the job	4.6	43%
Total solution capability	4.7	41%
Price	3.5	36%
Contract flexibility	3.1	35%
Performance guarantees	4.7	30%
Industry experience	4.1	29%

1 - 5 Scale (1=low, 5=high)
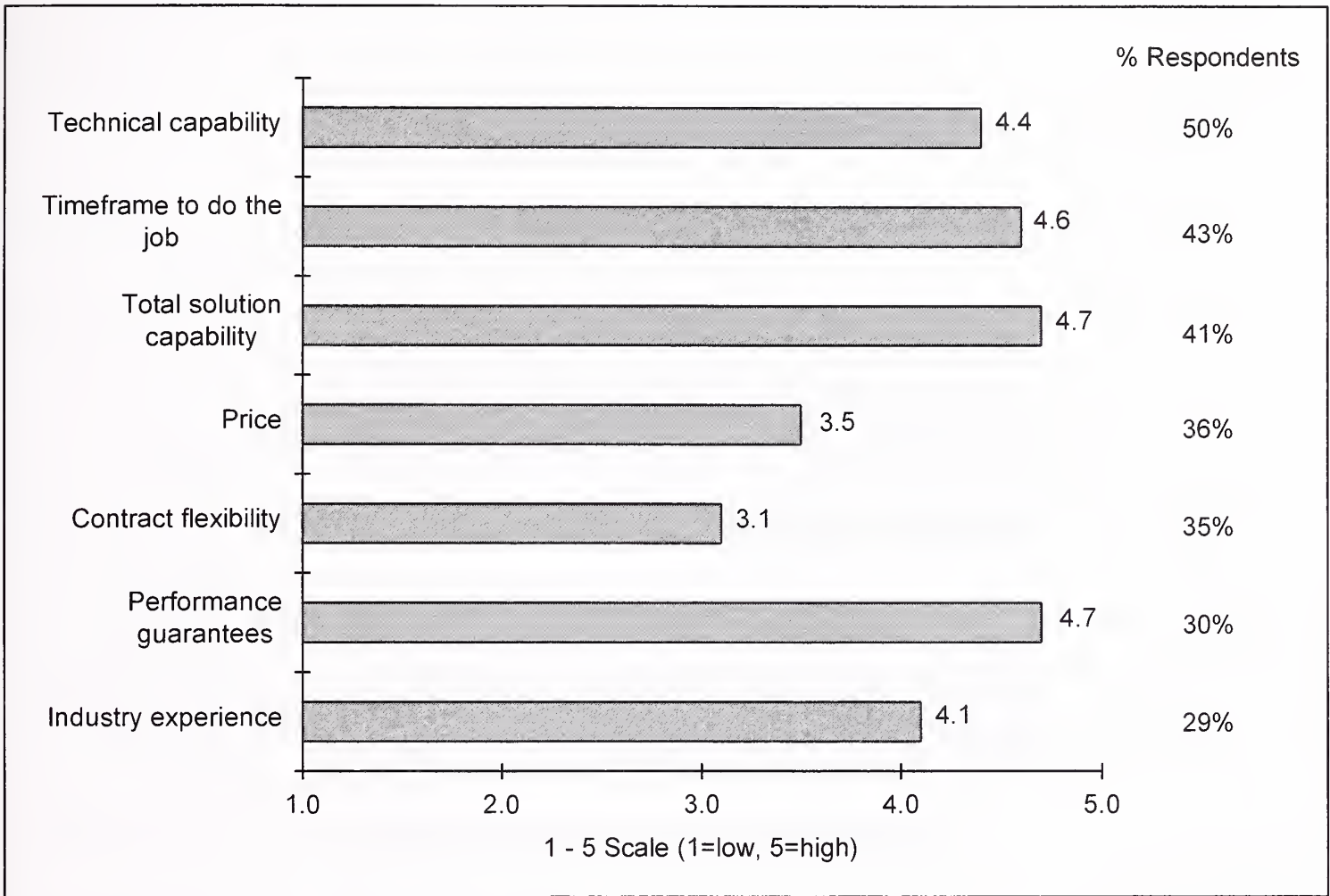
Source: INPUT

Exhibit III-16

Least Frequently Cited Customer Satisfaction Criteria—User Importance Ratings

% Respondents

Criteria	Rating	% Respondents
Proposal quality	3.8	5%
Convenience	3.4	11%
Quality of proposal team	3.8	13%
Support performance	4.3	16%
No disruption from regular work	4.2	16%
Consultant expertise	4.2	20%
Application understanding	4.1	27%

1 - 5 Scale (1=low, 5=high)
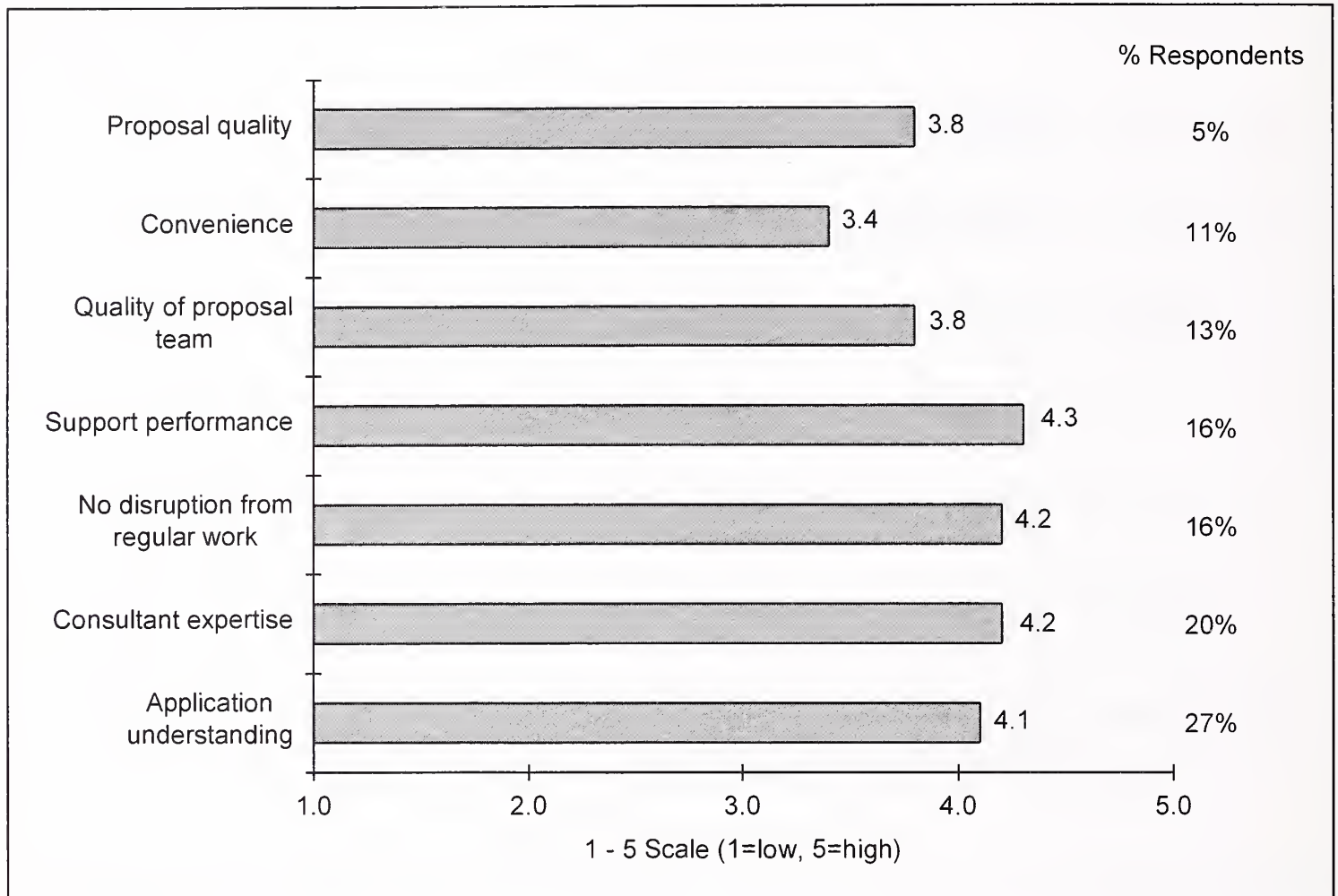
Source: INPUT

E

Business Reasons Used In Selecting Vendors–Customer Perspective

1. Business Reasons for Selecting a Vendor and Importance Ratings

SI customers interviewed were asked to indicate the top five business reasons they used in selecting a particular vendor for a systems integration project and to assign an importance rating (on a scale of 1–5, with 1 being "somewhat important" and 5 being "extremely important") to each of the reasons they chose.

Exhibit III-17 lists the reasons chosen by 10 percent or more of the respondents as one of their top five, with the average importance rating attributed to each.

SI customers interviewed were asked about criteria used in determining satisfaction and business reasons used when selecting vendors.

Some correlation between these two sets of data was observed, but there were also some interesting shifts in importance.

Total solution capability stood out as the most important benefit and satisfaction criterion, but performance guarantees moved from second place as a satisfaction criterion to seventh, while price moved up from tenth in the satisfaction criteria ranking to second in terms of business benefits.

Exhibit III-17

Business Reasons Used Selecting Vendor and Importance Ratings

Reason	Rating
Total solution capability	4.3
Knowledge of latest technology	4.3
Price	4.0
Firm's reputation/expertise	4.0
Acceptability of solution	4.0
Quality of proposal teams	3.9
Performance guarantees	3.6
Industry experience	3.5
Application understanding	3.5
Prior knowledge of vendor	3.4
Credibility with management	3.2
Financial stability	2.9

Importance (1.0 - 5.0 Scale)
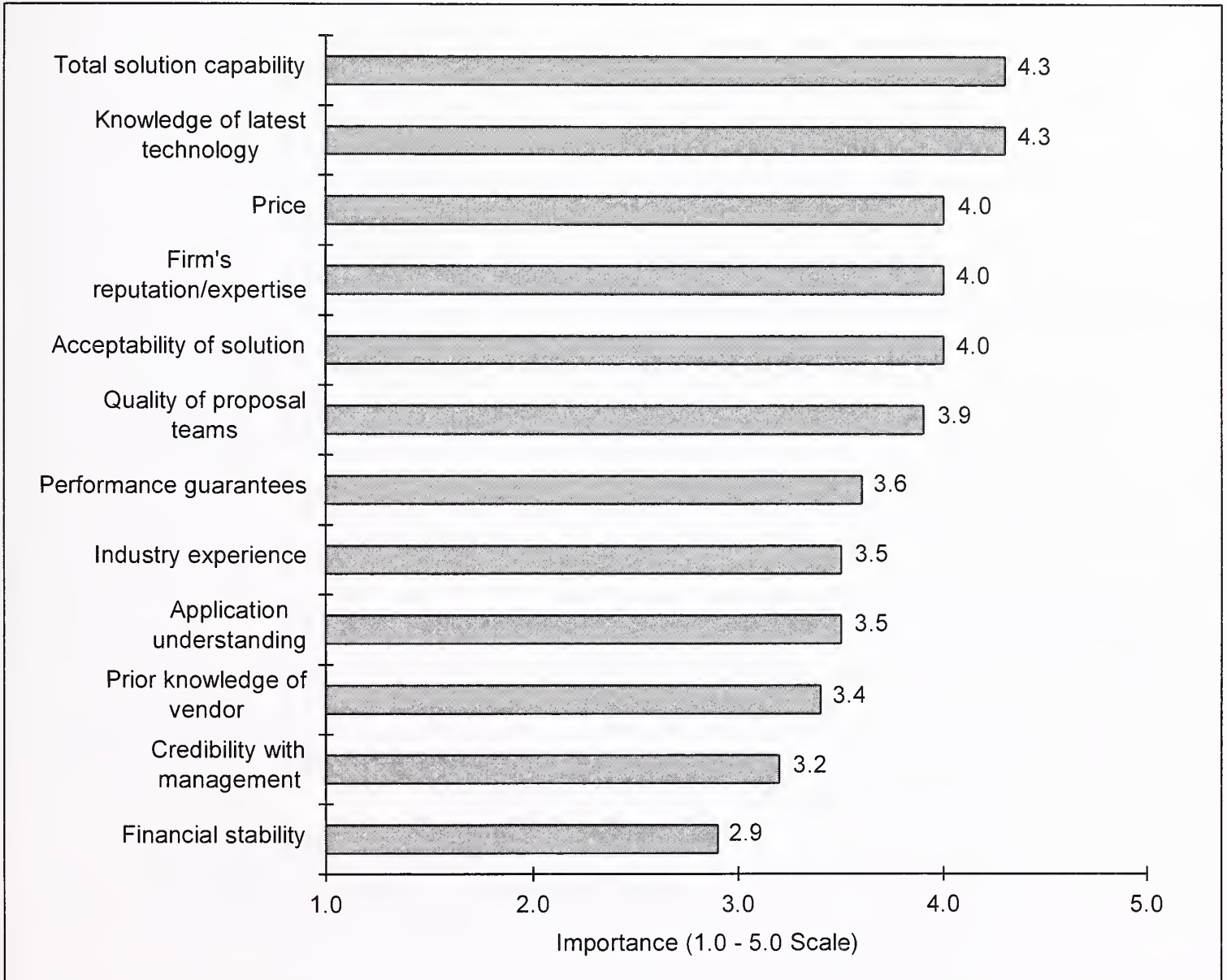
Source: INPUT

In addition to the benefits listed, respondents also offered the following additional reasons for selecting a systems integrator:

- Small firm offered personalized service.

- Convenience.

- Implied partnering.

- Employee integrity.

- Scope of contract.

- Maintenance agreement.

INPUT predicts that there will be strong growth in the area of maintenance agreements as more companies look to outside vendors for application maintenance responsibilities through outsourcing relationships.

2. Most Important Reason for Selecting the Vendor

In a separate question put to SI customers, respondents were asked to choose, from the reasons they listed, which was the most important one for using their particular vendor. This was done to verify the importance ratings assigned to each benefit identified earlier. Of all reasons, the following were chosen most often by customers as the most important for selecting their vendor:

- Total solution capability.

- Knowledge of latest technology.

- Prior knowledge of the company.

Interestingly, prior knowledge of the company did not appear as one of the top five business reasons a particular vendor was chosen, nor was it given as high an importance rating as other criteria.

SI customers interviewed were also asked if they would change their views on the most important reason for selecting a systems integrator once the contract was over. Two respondents said that they changed their views for the following reasons:

- The vendor failed to deliver what was promised in a timely manner.

- Software performance and technical knowledge became the most important reasons to select a vendor.

- The customer became familiar with the offerings of other systems integrators.

3. Likelihood of Choosing the Same Vendor for Future Projects

Finally, SI customers were asked how satisfied they were overall with their systems integrator and how likely they were to use that same integrator again.

The average overall rating for satisfaction with the current systems integrator was 3.8. While this is above average, there are areas indicating some dissatisfaction.

The average rating by respondents of the likelihood of using the same systems integrator again was only 3.5 (on a 1–5 scale).

This lower rating supports the argument that vendors need to improve client satisfaction levels or risk losing clients to competitors.

In a few cases, respondents gave an overall satisfaction rating with their current vendor of 4 or 5, yet still plan to switch to another systems integrator in the future. Explanations for this discrepancy included:

- The client is switching to a new application, one with which the new vendor is more knowledgeable.

- The client has become familiar with other vendors who may be able to meet the requirements more fully.

This type of response stresses the need for vendors to develop a strong relationship with clients in order to understand their concerns and obtain future SI opportunities.

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IV

Vendor Perspective on Customer Satisfaction

This chapter provides an analysis similar to that in Chapter III, but from the vendor's perspective. It includes a comparison of vendor and customer views in the areas of:

- Business benefits gained through systems integration.

- Customer satisfaction criteria.

- Business reasons used to select a specific vendor.

- Overall ratings given to integrators.

A

Business Benefits of SI Services

1. Business Benefits Used to Promote Systems Integration

Systems integration vendors were asked for the top five business benefits they promoted when marketing systems integration contracts. Exhibit IV-1 shows the analysis of vendor responses.

Some of the top benefits mentioned by vendors to promote systems integration services include: industry experience; technical capability; competitive advantage; knowledge of the latest technology; application understanding; and industry knowledge.

Exhibit IV-1

Top Business Benefits Vendors Use to Market Systems Integration

Benefit	Percentage
Industry experience	87%
Technical capability	73%
Competitive advantage	47%
Knowledge of latest technology	40%
Industry knowledge	40%
Application understanding	40%
Relationships with other vendors	33%
Cost savings	27%
Performance guarantees	20%
No disruption from regular work	13%
Contract flexibility	7%

Percentage of Respondents
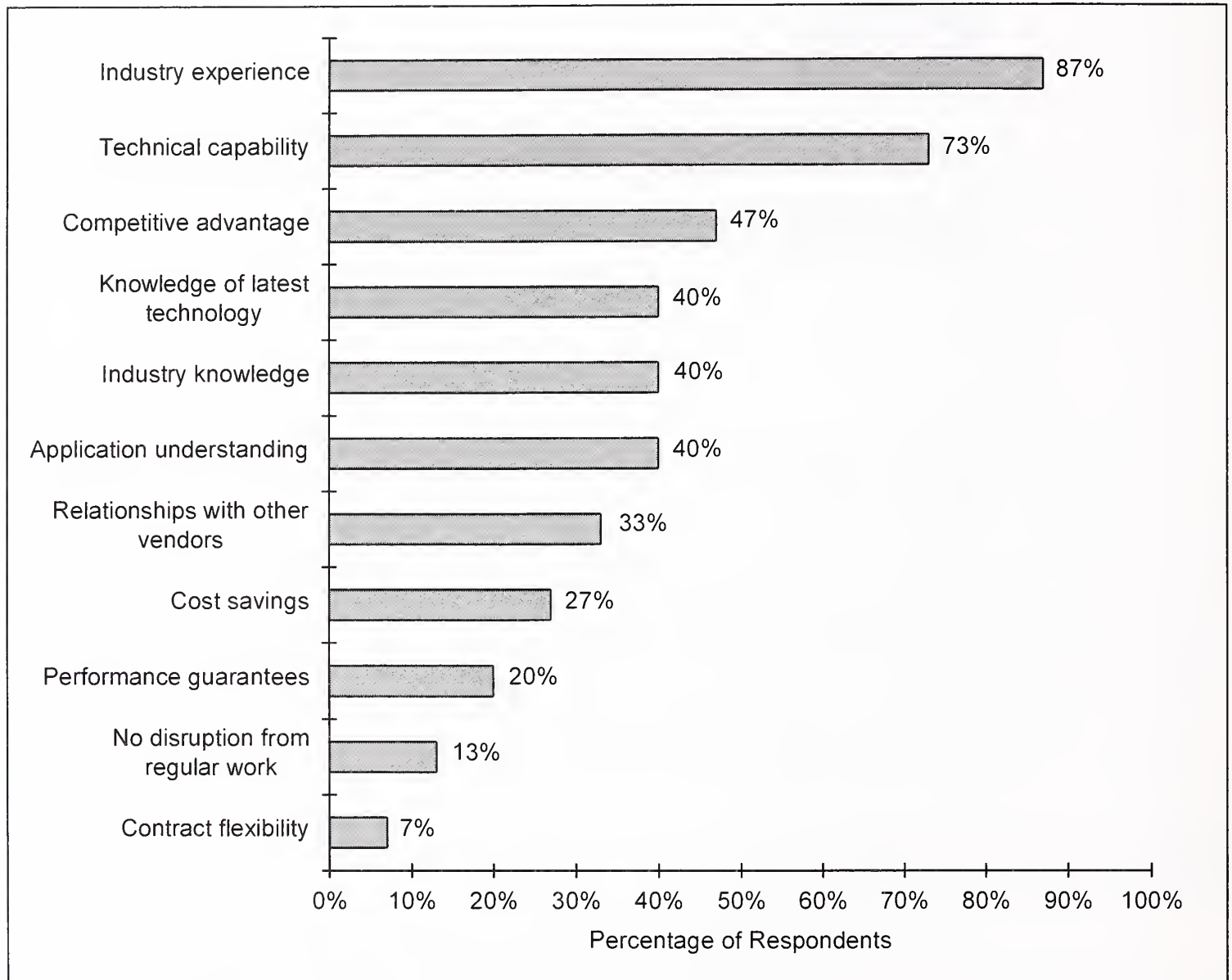
Source: INPUT

In addition to items listed on the questionnaire, vendors identified the following other business benefits for clients who use systems integrators:

- Systems integrators have specialized knowledge.

- Systems integrators offer best practices to integrate change into the entire organization.

- Systems integrators offer an objective business perspective, as well as industry and technology expertise.

- A systems integrator provides greater flexibility by having access to a wider scope of people, technology, ideas, and often global capabilities.

- Systems integrators offer reduced risk and reduced cycle time.

2. Comparison of Business Benefits—Vendors and Customers

Exhibit IV-2 provides a comparison of the most frequently mentioned benefits of using systems integrators according to customers and vendors.

Exhibit IV-3 lists in order of frequency of mention the business benefits expected by customers.

Of the items listed on the questionnaire, technical capability, knowledge of the latest technology, and industry experience ranked high on both the vendor and customer lists of the top five benefits.

Customers also view cost savings, convenience, and no disruption from regular work as top benefits.

Vendors focus more on competitive advantage gained, the integrator's understanding of the specific application, knowledge of the latest technology, and industry knowledge.

Vendors should review their marketing and sales methodologies to ensure that they are not focusing on benefits that clients do not view as important, particularly if more important benefits of using an integrator are being overlooked.

In addition to items provided on the questionnaire, customers identified the following as other business benefits of systems integration:

- Ability to move an application to a new system and get it up and running quickly.

- Customer service and support provided.

- Increased customer satisfaction among the client's customers.

Vendors identified the following as additional benefits:

- Access to resources.

- Best practices.

- Reduced risk.

- Reduced cycle time.

When promoting the use of a systems integrator, vendors will want to include the benefits of convenience, cost savings, and no disruption from regular work in their discussions with prospects.

Vendors should continue to review a list of the primary benefits clients consider and modify it to suit specific clients. Other topics to consider in discussions include:

- Getting systems operational quickly.

- Service and support.

- Increased satisfaction for the client's own customers and users.

Vendors should explore ways to make clients more aware of the benefits they believe and perceive are important, such as increased competitive advantage for clients and understanding of specific applications.

These benefits relate, respectively, to SI clients' reported desire to increase satisfaction for their own customers and users and to get systems up and running quickly.

Exhibit IV-2

Vendor Perspective—Comparison of Business Benefits

Percentage of Respondents
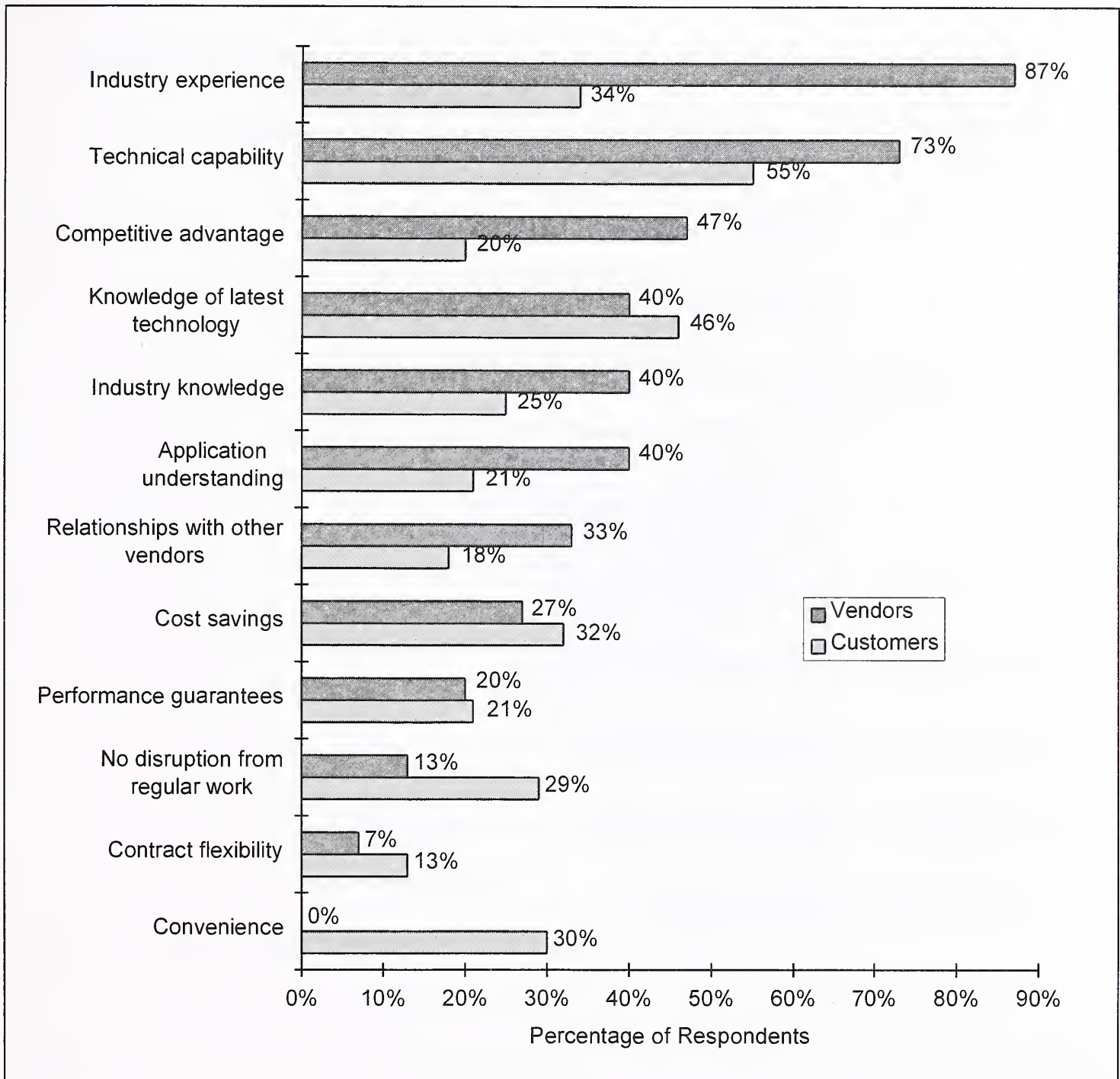
Source: INPUT

Exhibit IV-3

Customer Perspective—Comparison of Business Benefits

Technical capability — 55%
Knowledge of latest technology — 46%
Industry experience — 34%
Cost savings — 32%
Convenience — 30%
No disruption from regular work — 29%
Industry knowledge — 25%
Application understanding — 21%
Performance guarantees — 21%
Competitive advantage — 20%
Relationship with other vendors — 18%
Contract flexibility — 13%

Percentage of Respondents
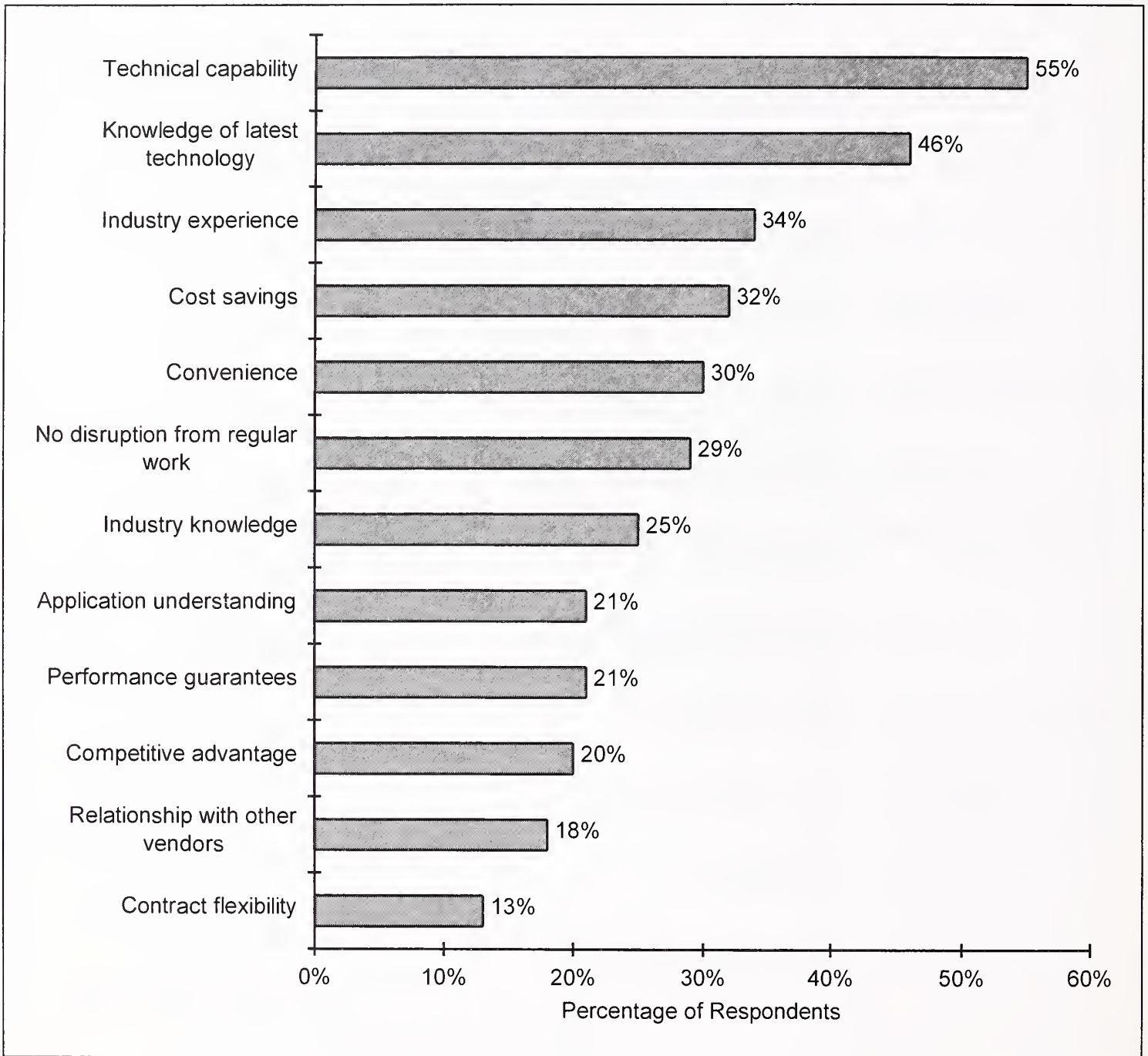
Source: INPUT

B

Customer Satisfaction Criteria

1. Satisfaction Criteria—Vendor Perspective

Vendors were asked for the criteria they believe customers consider in determining their satisfaction with systems integration contracting. Exhibit IV-4 shows the analysis of responses.

Exhibit IV-4

Top Criteria Vendors Use to Determine Customer Satisfaction

Criteria	Percent
Total solution capability	93%
Technical capability	67%
Consultant expertise	60%
Timeframe to do the job	60%
Price	53%
Industry experience	40%
Support performance	20%
Performance guarantees	20%
Contract flexibility	13%
Proposal quality	13%
Application understanding	7%

Percent of Respondents Selecting as One of Top Five Criteria
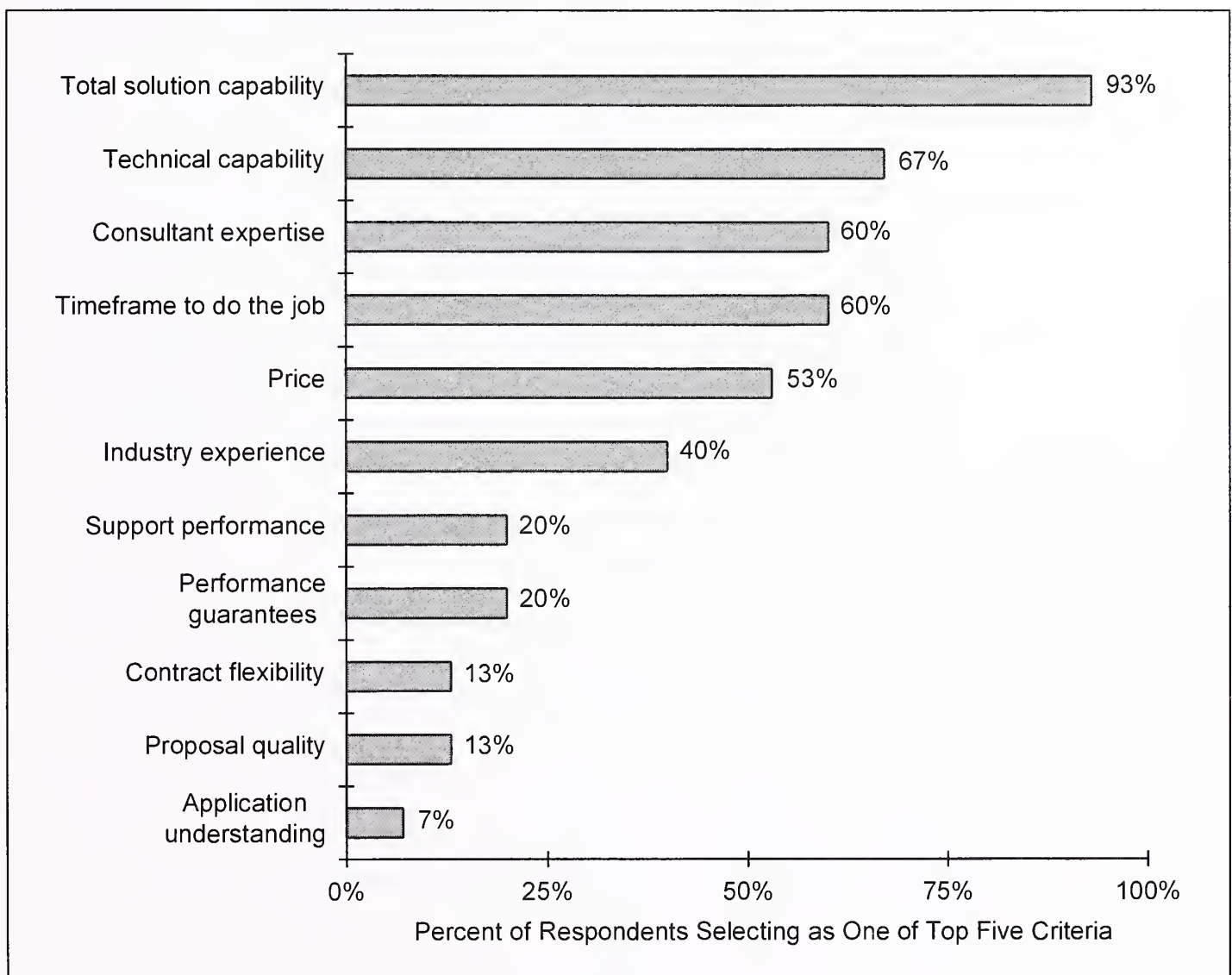
Source: INPUT

2. Comparison of Satisfaction Criteria—Vendors and Customers

Exhibit IV-5 shows a comparison of satisfaction criteria used by vendors and by customers.

Note that not all customers chose five top satisfaction criteria, which is why total percentages of respondents shown in the exhibit are not as high for customers as for vendors. This reflects the narrower range of benefits customers expect from using integrators, principally technical capability and knowledge of the latest technology.

If criteria that vendors believed customers used to determine satisfaction are ranked and compared to the ranking of criteria customers identified as important, the following similarities and differences become apparent:

- Both vendors and customers identified total solution capability, technical capability, timeframe to do the job, and price as leading criteria.

- In addition to items listed on the questionnaire, both groups identified employee integration, ability to perform, and quality of the solution as important satisfaction criteria.

- Application understanding ranked lower on the vendor list than on the customer list. Vendors believe that application understanding is an important benefit in using systems integration services, but did not rank it as high as did customers on the list of satisfaction criteria.

- Consultant expertise is ranked higher on the vendor list of satisfaction criteria than on the customer list.

Interestingly, no vendors selected convenience or no disruption from regular work as one of the top five satisfaction criteria, although a few customers selected these items as important satisfaction criteria.

Vendors will want to increase efforts in areas customers have identified as important, but which have rated lower in their own evaluation. Marketing and sales staff should be made aware of these discrepancies and appropriate efforts should be made to modify the focus on criteria in order to match client ratings.

Exhibit IV-5

Comparison of Satisfaction Criteria Used by Vendors and Customers

Percentage of Respondents
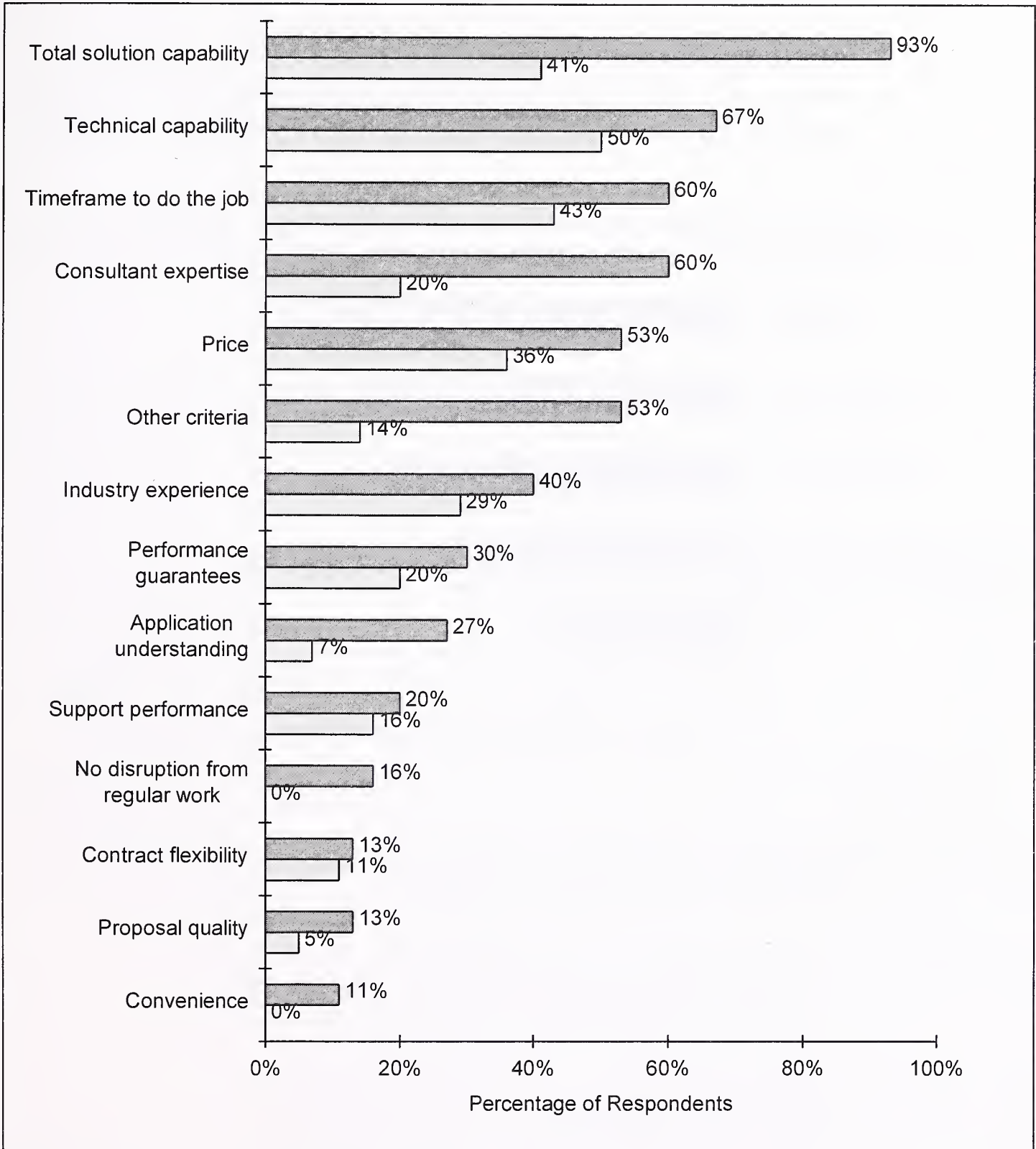
Source: INPUT

C

Business Reasons for Selecting an SI Vendor

1. Business Reasons Vendors Use to Promote Their SI Services

Vendors were asked for the top five business reasons they used to promote their own firm's services. Exhibit IV-6 shows the breakdown of responses.

Exhibit IV-6

Top Business Reasons Vendors Use to Promote Own Firm's Services

Percent of Respondents Selecting as One of Top Five Reasons
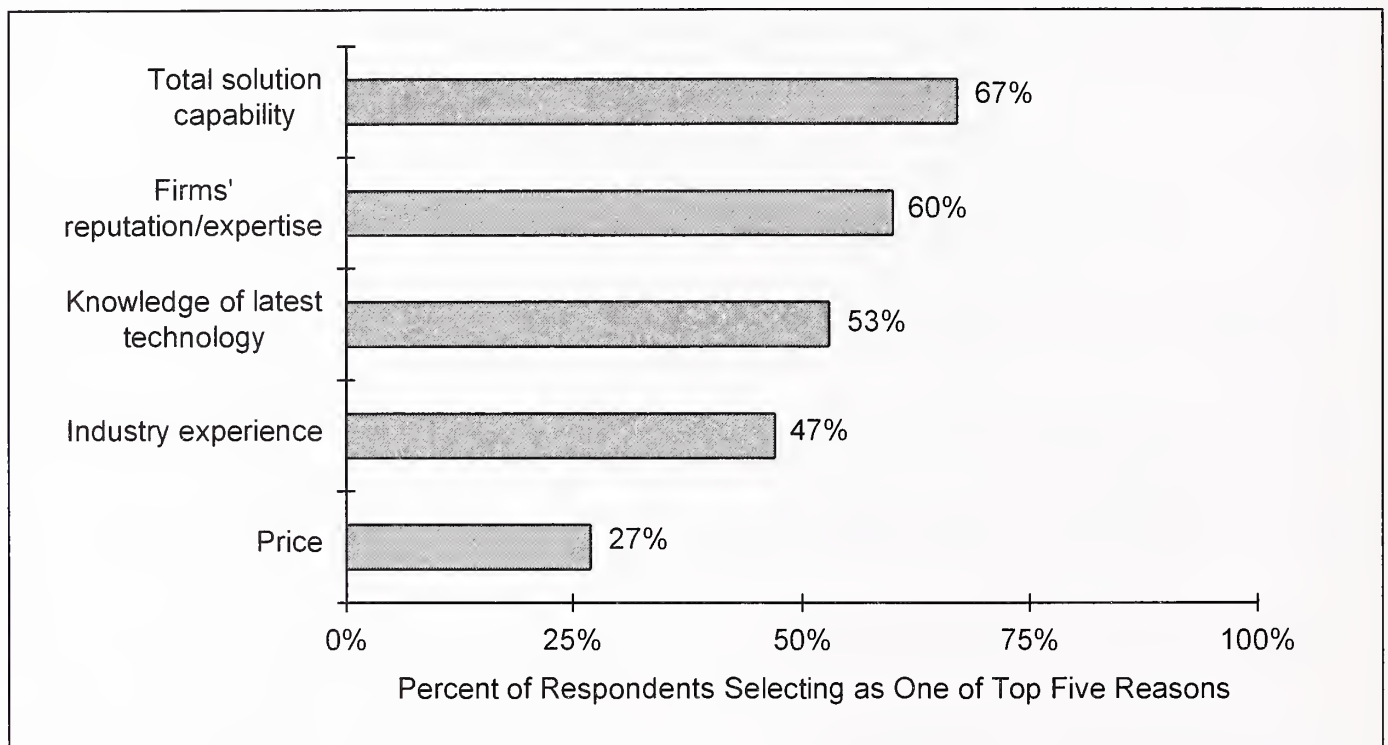
Source: INPUT

The following categories were selected by twenty percent of respondents as one of their top five reasons promoted:

- Relationships with other vendors.

- Geographic proximity.

- Financial stability.

- Competitive advantage.

- Contract flexibility.

- Credibility with management.

Categorized amongst the top five reasons by 13% of respondents were the following:

- Size of SI firm.

- Application understanding.

- Individual's reputation/expertise.

- Acceptability of solution.

Categorized amongst the top five reasons by 7% of respondents were the following:

- Policies.

- Prior knowledge of client's company.

- Service culture.

- Performance guarantees.

In addition to items listed on the questionnaire, vendors offered the following as other reasons they use when promoting their firms' systems integration services:

- Quality of the SI team.

- Adequate knowledge transfer.

- Global capabilities.

The quality of the proposal team is particularly important—23% of vendors cite it as one of the top reasons used to promote their particular service over that of their competition.

If the reasons used by vendors used to promote their own firm's services are ranked and compared to a similar ranking of customers' reasons for selecting vendors, the following similarities and differences appear:

- Vendors and customers agreed on several of the top business reasons for selecting a particular systems integrator. These included: total solution capability, the firm's reputation/expertise, knowledge of the latest technology, and price.

- Industry expertise, competitive advantage, contract flexibility, and relationships with other vendors were higher on the vendor list.

- Application understanding, performance guarantees, and proposal quality were higher on the customer list.

Note that customers ranked contract flexibility fairly low as a reason for relating a vendor (1.6 average).

However, when customers were asked to rate the importance of certain benefits they expected to receive by using an outside vendor for systems integration services (reported in Chapter III), contract flexibility was rated high (3.9 average).

Customers may believe that no vendors provide a high level of flexibility in their SI contracts. Vendors who offer and promote such flexibility in the future will gain a competitive edge over others.

The rating of the level that this benefit actually achieved (also reported in Chapter III) was low (2.9 average), offering additional evidence that this area represents an opportunity to vendors.

Note also that using the size of the SI firm as a reason to select a particular vendor does not mean the customer necessarily preferred a larger firm—one customer reported selecting a small firm, believing it offered more personalized service.

2. Comparison of Business Reasons—Vendors and Customers

Exhibits IV-7 and IV-8 show respectively comparisons between the business reasons used by vendors to promote their services and the reasons customers cite as their decision criteria.

- Vendors and customers generally agreed on several of the top business reasons for selecting a particular systems integrator. These include total solution capability, the firm's reputation/expertise, knowledge of the latest technology, and price.

- Industry experience, contract flexibility, and relationships with other vendors were higher on the vendor list.

- Application understanding, performance guarantees, and proposal quality were higher on the customer list

Note that customers infrequently mentioned contract flexibility as a reason their particular vendor was selected. However, when customers were asked to rate the importance of certain benefits they expected to receive by using an outside vendor for systems integration services (reported in Chapter III), contract flexibility was rated high (3.9 average).

Customers may believe that no vendors provide a high level of flexibility in their SI contracts.

Vendors who offer and promote such flexibility in the future will gain a competitive edge over others. The average rating on the level of benefit actually achieved for contract flexibility (also reported in Chapter III) was a low—2.9—average. This offers additional evidence that contract flexibility represents an opportunity for vendors to improve satisfaction.

It should also be noted that using the size of the SI firm as a reason to select a particular vendor does not necessarily mean the customer prefers a larger firm—one customer reported selecting a small firm because he believed it offered more personalized service.

Large vendors should consider promoting the level of personalized service they are capable of delivering when marketing their services. Personalized service is usually preferred.

Exhibit IV-7

Business Reasons for Vendor Selection—Vendor Perspective

Percentage of Respondents
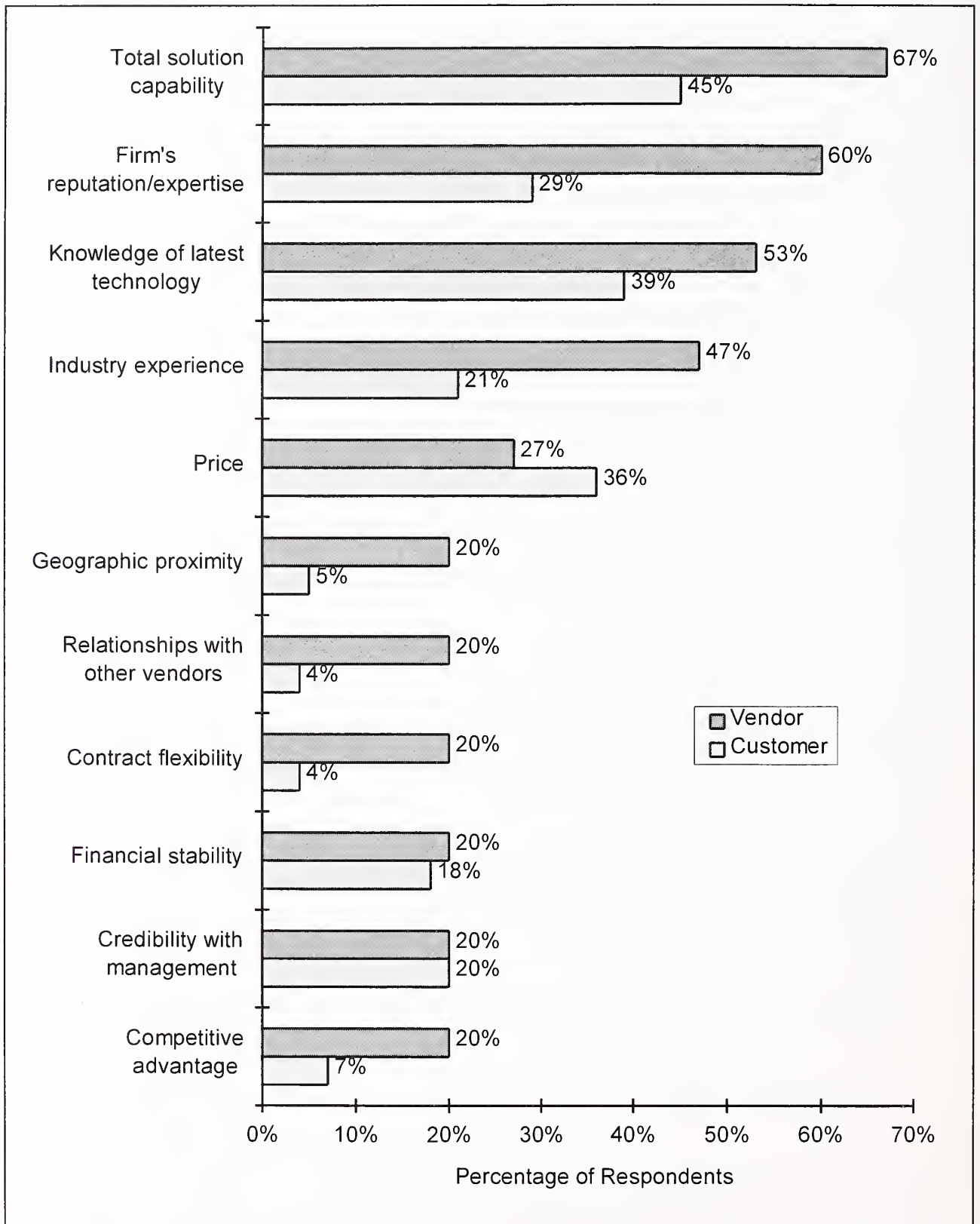
Exhibit IV-8

Business Reasons for Vendor Selection—Customer Perspective

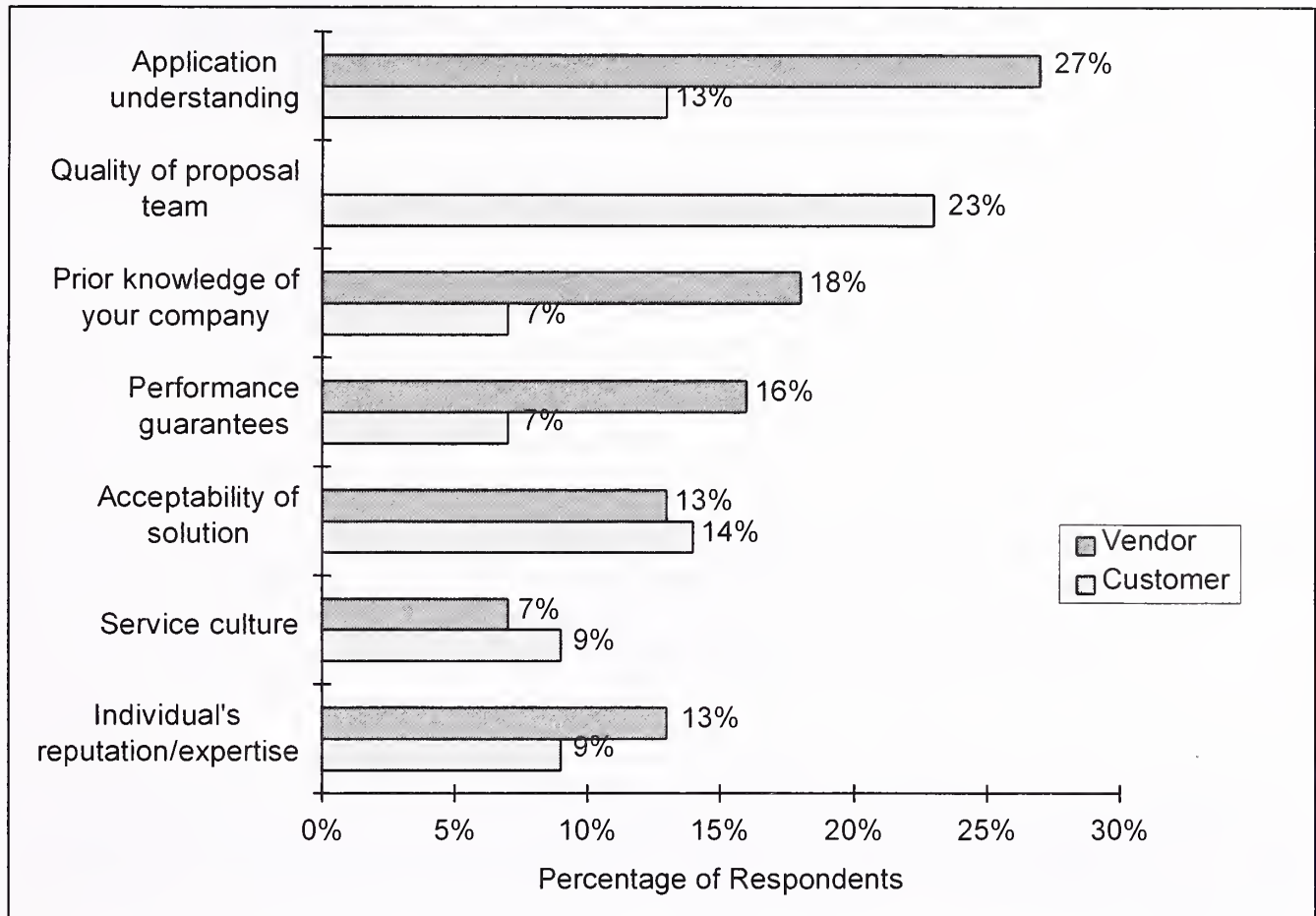Business Reasons for Vendor Selection — bar chart. Categories (Vendor and Customer percentages):
- Application understanding: Vendor 27%, Customer 13%
- Quality of proposal team: Customer 23%
- Prior knowledge of your company: Vendor 18%, Customer 7%
- Performance guarantees: Vendor 16%, Customer 7%
- Acceptability of solution: Vendor 13%, Customer 14%
- Service culture: Vendor 7%, Customer 9%
- Individual's reputation/expertise: Vendor 13%, Customer 9%

Legend: Vendor, Customer

X-axis: Percentage of Respondents (0% to 30%)

D
Overall Rating of Vendors' Performance

Vendors were asked which competitors they most frequently came up against when bidding a systems integration project.

The high number of mentions that Andersen Consulting, CSC, IBM, and EDS received in the survey indicate they are viewed by vendors as the predominant players in the systems integration industry. SHL (now MCI Systemhouse) is also considered a strong player.

Vendors were also asked to rate (on a 1—5 scale, with 5 being completely satisfied) their own company's overall systems integration capabilities against others in the market.

The average overall rating was 3.9, with most rating their capabilities at 4. Two companies were completely satisfied with their overall systems integration capabilities against others in the market, a rating of 5; one company gave itself a rating of less than satisfied, a 2.

The average rating by customers of overall satisfaction with their systems integration vendors was slightly lower, at 3.8. Both groups were in alignment—there was above-average satisfaction with the current delivery of systems integration services, while at the same time recognition that there is room for improvement.

V

Client and Vendor Recommendations

Vendors and customers were asked what recommendations they would make to improve systems integration services. Exhibit V-1 compares their responses. Vendors can incorporate this data into their overall plan to improve the level of systems integration services to customers.

Exhibit V-1

Comparison of Recommendations Provided by Vendors and Customers

Vendors	Customers
• View the relationship as long-term relationship and partnership.	• Establish a vendor/client partnership.
• Establish effective ongoing communications—include executive level to ensure continued support.	• Establish effective communications—communicate the benefits of using an outside systems integrator throughout the client organization. As a vendor, be accessible.
• Form joint project teams.	• Introduce all employees involved on both sides to each other.
• Create consensus among senior managers, MIS, and user organizations regarding requirements.	
• Work with a high-level manager within the client organization who is influential, credible, knowledgeable, and has decision-making capability.	• Maintain high quality of team members.

Source: INPUT

Exhibit V-1 (cont.)

Vendors	Customers
• Plan the big picture and implement the project in phases in order to better manage changes.	
• Conduct process redesign/business assessment before proposal development to reduce project change requests and "scope creep."	• As a vendor, be more flexible and responsive to changing needs.
• Conduct rigorous project planning.	• Improve the planning process.
• Detail specifications in the contract.	• Detail specifications in the contract.
• Define roles, measure performance often, and understand contractual obligations.	• Include performance guarantees in the contract.
• Link the solution to business benefits—do what is best for the client rather than "chasing technology."	• Develop a true client/server application rather than porting an existing mainframe application. Recognize what is needed and acquire the necessary resources, or bow out of the assignment. Develop more integrated solutions and support more platforms.
• Compete on the basis of added value rather than price.	• Stay on budget.
• As a customer, rely on the integrator's experience rather than dictating the process.	• As an integrator, provide quality assurance in software and improve the testing process, support, installation, documentation, and the upgrade process.
	• Provide user training in addition to implementation training.
	• Maintain geographic presence in areas served.

Source: INPUT

Many of the recommendations made by both groups for improving systems integration services are in the same vein, although it is interesting to note the differences due to differing perspectives.

Both groups recommended the following:

- View the relationship as a partnership.

- Establish effective communications channels, including several levels on both sides.

- Include high-quality people from both sides on the team.

- Detail specifications in the contract.

- Include performance guarantees and measure performance often during the process.

- Develop a plan for change management.

Differences include:

- Vendors stressed focusing on business benefits gained through systems integration rather than "chasing technology"; clients want integrators who can implement the latest technology.

- Vendors believe they provide added value that is more important than price; clients want integrators to stay on budget and reduce prices.

- Vendors want to reduce the number of changes that occur after the project has begun; customers want more flexibility in the contract in order to accommodate changes.

Vendors should consider these differences when designing their future marketing strategies.

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A

Definition of Terms

Systems Integration

Systems integration is a vendor service that provides a complete solution to an information system, networking or automation development requirement through the custom selection and implementation of a variety of information system products and services. A systems integrator is responsible for the overall management of a systems integration contract and is the single point of contact and responsibility to the buyer for the delivery of the specified system function, on schedule and at the contracted price.

The components of a systems integration project are the following:

- *Equipment* -- information processing and communications equipment required to build the systems solution. This component may include custom as well as off-the-shelf equipment to meet the unique needs of the project. The systems integration equipment category excludes turnkey systems by definition.

- *Software products* - prepackaged applications and systems software products.

- *Professional services* - the value-added component that adapts the equipment and develops, assembles, or modifies the software and hardware to meet the system's requirements. It includes all of the professional services activities required to develop, implement, and if included in the contract, operate an information system, including consulting, program/project management, design and integration, software development, education and training, documentation, and systems operations and maintenance.

- *Other services* - most systems integration contracts include other services and product expenditures that are not classified elsewhere. This category includes miscellaneous items such as engineering services, automation equipment, computer supplies, business support services and supplies, and other items required for a smooth development effort.

Professional services

This category includes four submodes: consulting, education and training, software development, and applications management.

- *Consulting*: Services include management consulting (related to information systems), information systems reengineering, information systems consulting, feasibility analysis and cost-effectiveness studies, and project management assistance. Services may be related to any aspect of the information system, including equipment, software, networks and systems operations.

- *Education and Training*: Services that provide training and education or the development of training materials related to information systems and services for the information systems professional and the user, including computer-aided instruction, computer-based education, and vendor instruction of user personnel in operations, design, programming, and documentation. Education and training provided by school systems is not included. General education and training products are included as a cross-industry market sector.

- *Software Development*: Services include user requirements definition, systems design, contract programming, documentation, and implementation of software performed on a custom basis. Conversion and maintenance services are also included.

- *Applications Management*: The vendor has full responsibility for maintaining and upgrading some or all of the application systems that a client uses to support business operations and may develop and implement new application systems for the client.

  An applications management contract differs from traditional software development in the form of the client/vendor relationship. Under traditional software development services the relationship is project based. Under applications management it is time and function based.

These services may be provided in combination or separately from platform systems operations.

B

Interpretation of Rating Scales

1. Values and Standard Error

Extensive experience of using ratings (1 low, 5 high) indicates that average scores of 3.9 and above represent very high levels of customer satisfaction.

Scores in the range of 3.4 up to 3.8 can be considered as average and generally contain some groups of dissatisfaction with the measured element within the sample.

Scores below 3.4 can be considered as generally unsatisfactory and almost certainly indicate very deep dissatisfaction with the element being measured for a significant group within the sample.

A further factor that need to be taken into account is the sensitivity of the data to sample error. This is measured by using the *standard error* metric.

The standard error metric provides a simple means of being able to judge comparative data to see whether a difference is statistically significant.

For example if we have two ratings, one of 3.8 and one of 3.9 and the standard error is 0.1, we are comparing one factor of 3.8 ± 0.1 and another of 3.9 ± 0.1. Clearly we can conclude that there is no statistical difference between these two elements.

However if we compared two factors of 3.0 and 4.0 and the standard error was 0.2 then we can conclude that there is a statistical difference between the two categories and appropriate conclusions can be drawn.

2. Satisfaction Index

The *satisfaction index* referred to in this report is based on the difference between the importance and satisfaction ratings for specific aspects of service.

- Identical ratings give a difference of zero, indicating that the importance needs are completely satisfied.

- Figures of importance 4 and satisfaction 5 would indicate overfulfillment of the importance needs and would give a satisfaction index of -1. In INPUT's analysis, an overfulfillment of -1 is represented as (1).

- Figures of importance 4 and satisfaction 3 indicate underfulfillment of the importance needs, the degree of underfulfillment being related to the magnitude of this difference.

- Satisfaction index can thus be interpreted as follows:

  - 1 = overfulfilled or oversatisfied.

  - 0 = completely satisfied.

  - (1) = customer concern.

  - 2 = real dissatisfaction.

  - 3 = pain level.

C

69

Customer Questionnaire

CONFIDENTIAL

INPUT Questionnaire - User

Study Title: CLIENT SATISFACTION   Project Code/Catalog No.:_____BICS_____
WITH SYSTEMS INTEGRATION   Interviewer Initials: _____
VENDORS   Interview Date: _____
                                                              QC Initials: _____
Type of Interview: QC Date: _____
    [ ] Vendor   [ ] Telephone   Data Entry Initials: _____
    [ ] User   [ ] On-Site   Data Entry Date: _____
    [ ] Other [ ] Mail

     Company: _____   Company Type: _____
     Address: _____   Sales: _____
     _____   # Employees: _____
City/State/ZIP:_____   E-mail address: _____
Main Phone: _____
     Fax: _____

Respondent(s):   Name   Title   Phone/Ext.
_____
_____
_____

Referrals:
_____
_____
_____

Industry (User Interviews Only):

[ ] Discrete Manufacturing   [ ] Wholesale   [ ] Federal Government
[ ] Process Manufacturing   [ ] Banking/Finance   [ ] State & Local Government
[ ] Transportation   [ ] Insurance   [ ] Consumer/Home
[ ] Utilities   [ ] Medical   [ ] Other Industry Specific:
[ ] Communications   [ ] Services
[ ] Retail   [ ] Education   _____
                                                          [ ] Cross
                                                          Industry

Comments:
_____
_____
_____

Study Title: Client Satisfaction with Systems Integration Vendors

Introduction

INPUT, an international research firm, is conducting a survey to determine the level of satisfactions users have with Systems Integration vendors they are using and to explore the metrics used in determining levels of satisfaction. The information you share on your levels of satisfaction will help vendors better serve your company in the future.

The information you share will be treated by us as confidential and will be averaged with the responses of other companies before the results are shared with vendors. We will be sending you an executive summary of the final report, in return for your cooperation.

For the purposes of this study, we define Systems Integration as a vendor service that provides a complete solution to an information system, networking or automation development requirement through the custom selection and implementation of a variety of information system products and services. A Systems Integrator is responsible for the overall management of a systems integration contract and is the single point of contact and responsibility to the buyer for the delivery of the specified system function, on schedule and at the contracted price. The components of a Systems Integration project include: equipment; software products; professional services and other miscellaneous services.

1a) Has your company completed a Systems Integration project within the past 3 years?

    [ ] Yes (continue)   [ ] No (terminate)

1b) If "Yes", What firm did you use?   Company: _____

                    Contact: _____

                    Phone: _____

                    [ ]   Did not want to supply name (check)

____ No (terminate)

NOTE: A separate survey should be filled out for each Systems Integration firm used.

2a) Were you involved with the selection process?

 [ ] Yes (go to question 3)   [ ] No (go to question 2b)

2b) If "No" could you refer me to someone who was involved in the selection process?

(Interviewer: continue interview process with new contact person or terminate)

    Name: _____

    Title: _____

    Phone number: _____

3a) Were other people involved in the selection process

[ ] Yes   [ ] No

3b) If "Yes", what are their positions/titles?   _____

                    _____

                    _____

                    _____

4) What type of contract pricing was used in the project?

    [ ] Fixed Price

    [ ] Time and materials

    [ ] Value based

5a) Which of the following products or services did your vendor provide as part of this contract?

5b) On a scale of 1-5 with 1 being "not satisfied" and 5 being "extremely satisfied," how would you rate your satisfaction with the Systems Integrator's performance on these functions?

Hardware/Software   Satisfaction Rating   (circle)

[ ] Information systems   1   2   3   4   5
[ ] Communications   1   2   3   4   5
[ ] Software products   1   2   3   4   5
[ ] Systems software   1   2   3   4   5
[ ] Applications software   1   2   3   4   5

Professional Services

[ ] Consulting   1   2   3   4   5
[ ] Program/project management   1   2   3   4   5
[ ] Design/implementation   1   2   3   4   5
[ ] Software development   1   2   3   4   5
[ ] Education/training and documentation   1   2   3   4   5
[ ] Systems operation/maintenance   1   2   3   4   5

Other Miscellaneous Products/Services
[ ] Site preparation   1   2   3   4   5
[ ] Data processing supplies   1   2   3   4   5
[ ] processing/network services   1   2   3   4   5
[ ] Data/voice communications services   1   2   3   4   5
[ ] Other _____   1   2   3   4   5
[ ] Other _____   1   2   3   4   5
[ ] Other _____   1   2   3   4   5

6a) Was anything else included as a part of this contract? (e.g. applications management., outsourcing, etc.)

        [ ] Yes   [ ] No

6b) If "Yes", What? _____

6c) On a scale of 1-5 with 1 being "not satisfied" and 5 being "extremely satisfied," how would you rate your satisfaction with the Systems Integrator's performance?

                                (circle)   1   2   3   4   5

NOTE: Questions 7, 8, and 9 refer to the grids following each question. The questions are open ended. Indicate with a check if an item from the list was given by the respondent, add it under "Other" if not on the list. Do not review the entire list with the respondent.

BENEFITS OF USING A SYSTEMS INTEGRATOR

7a) What were the **top 5 business benefits** you expected to receive from using a Systems Integrator? (see grid below)

7b) On a scale of 1-5 with 1 being "somewhat important" and 5 being "extremely important," how would you rate the importance of expected **benefits you selected**? (fill in grid below)

7c) Now that the contract is over, to what degree do you feel this **benefits were achieved**? Use a scale of 1-5 with 1 being "not achieved" and 5 being "completely achieved."

7a) Benefit Expected(check)	7b) Importance (1-5)	7c) Degree Achieved(1-5)
[ ] Competitive advantage	_____	_____
[ ] Knowledge of latest technology	_____	_____
[ ] No disruption from regular work	_____	_____
[ ] Convenience	_____	_____
[ ] Cost savings	_____	_____
[ ] Technical capability	_____	_____
[ ] Performance guarantees	_____	_____
[ ] Application understanding	_____	_____
[ ] Industry experience	_____	_____
[ ] Contract flexibility	_____	_____
[ ] Relationships with other vendors	_____	_____
[ ] Industry knowledge	_____	_____
[ ] Others(list)		
[ ] _____	_____	_____
[ ] _____	_____	_____
[ ] _____	_____	_____
[ ] Don't know		
[ ] Did not respond		

CRITERIA USED TO RATE THE SATISFACTION OF YOUR VENDOR'S PERFORMANCE

8a) What were the **top 5 criteria** used to determine the level of satisfaction with this project? (open ended, fill in grid below)

8b) On a scale of 1-5 with 1 being "somewhat important" and 5 being "extremely important," how would you **rate the importance of the criteria you used** for selecting this vendor? (fill in grid)

8c) Now that the contract is over, on a scale of 1-5 with 1 being "not satisfied" and 5 being "completely satisfied," how do you **rate your systems integrator on each of the satisfaction criteria you selected?**

8a) Satisfaction Criteria	8b) Importance (1-5)	8c) Satisfaction Rating
[ ] Time frame to do the job	_____	_____
[ ] No disruption from regular work	_____	_____
[ ] Convenience	_____	_____
[ ] Technical capability	_____	_____
[ ] Total solution capability	_____	_____
[ ] Price	_____	_____
[ ] Performance guarantees	_____	_____
[ ] Application understanding	_____	_____
[ ] Industry experience	_____	_____
[ ] Proposal quality	_____	_____
[ ] Quality of proposal team	_____	_____
[ ] Consultant expertise	_____	_____
[ ] Contract flexibility	_____	_____
[ ] Support performance	_____	_____
[ ] Others(list)		
[ ] _____	_____	_____
[ ] _____	_____	_____
[ ] Don't know		
[ ] Did not respond		

REASONS FOR SELECTING THIS SYSTEMS INTEGRATOR

9a) What were the **top 5 business reasons** you used in selecting this vendor to team with? (open ended, fill in grid below)

9b) On a scale of 1-5 with 1 being "somewhat important" and 5 being "extremely important," how would you rate the **importance of the reasons you chose** for selecting this Systems Integrator?

9a) Reason for Selecting   9b) Importance Rating (1-5)

[ ] Competitive advantage   _____
[ ] Credibility with management   _____
[ ] Knowledge of latest technology   _____
[ ] Prior knowledge of your company   _____
[ ] Politics   _____
[ ] Total solution capability   _____
[ ] Price   _____
[ ] Acceptability of solution   _____
[ ] Performance guarantees   _____
[ ] Application understanding   _____
[ ] Industry experience   _____
[ ] Financial stability   _____
[ ] Proposal quality   _____
[ ] Quality of proposal team   _____
[ ] Firm's reputation/expertise   _____
[ ] Individual's reputation/expertise   _____
[ ] Size of S/I firm   _____
[ ] Contract flexibility   _____
[ ] Relationships with other vendors   _____
[ ] Geographic proximity   _____
[ ] Cross functional ability   _____
[ ] Service culture   _____
[ ] Others(list)
[ ] _____   _____
[ ] _____   _____
[ ] _____   _____
[ ] Don't know
[ ] Did not respond

10) From the reasons you selected above, which do you think was the most important reason for using this Systems Integrator? _____

11a) Now that the contract is over, would you change your views on any of these?

[ ] Yes (explain)   [ ] No

11b) If "Yes", explain:

12) On a scale of 1-5 with 1 being "not satisfied" and 5 being "very satisfied," how satisfied are you <u>overall</u> with your Systems Integration vendor?

                   (circle)   1   2   3   4   5

13) On a scale of 1-5 with 1 being not likely and 5 being definitely, what is the likelihood of you using this Systems Integrator again?
                   (circle)   1   2   3   4   5

14) If the answer to question <u>12</u> was "4" or "5" and the answer to question <u>13</u> was "1" or "2", why do you feel this way?

15) What recommendations do you have that would improve your satisfaction with this vendor?

16a) What is the value of the contract? $_____

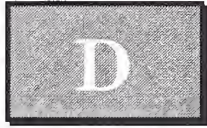16b) If amount in 16a was not given, ask respondent to select a range of contract size:

    ____ Under $1 million   ____ $1 million $\geq$ and < $3 million

    ____ $3 million $\geq$ and < $5 million   ____ $5 million $\geq$ and < $10 million

    ____ $10 million $\geq$ and < $15 million   ____ Over $15 million

Thank you

(Blank)

D

Vendor Questionnaire

CONFIDENTIAL

INPUT Questionnaire - Vender

Study Title: CLIENT SATISFACTION   Project Code/Catalog No.:   _____
WITH SYSTEMS INTEGRATION VENDORS   Interviewer Initials: _____
Interview Date: _____

Type of Interview: QC Initials: _____
[ ] Vendor   [ ] Telephone   QC Date: _____
[ ] User   [ ] On-Site   Data Entry Initials: _____
[ ] Other [ ] Mail   Data Entry Date: _____

Company: _____   Company Type: _____
Address: _____   Sales: _____
_____   # Employees: _____
City/State/ZIP:_____   E-mail address: _____
Main Phone: _____
Fax: _____

Respondent(s):   Name   Title   Phone/Ext.

_____

_____

_____

Referrals:

_____

_____

_____

Industry (User Interviews Only):

[ ] Discrete Manufacturing   [ ] Wholesale   [ ] Federal Government
[ ] Process Manufacturing   [ ] Banking/Finance   [ ] State & Local Government
[ ] Transportation   [ ] Insurance   [ ] Consumer/Home
[ ] Utilities   [ ] Medical   [ ] Other Industry Specific:
[ ] Communications   [ ] Services   _____
[ ] Retail   [ ] Education   [ ] Cross Industry

Comments:

_____

_____

_____

Study Title: Client Satisfaction with Systems Integration Vendors

Introduction

INPUT, an international information technology research firm, is conducting a survey to determine the level of satisfactions users have with Systems Integration vendors they are using and to explore the types of criteria used in determining levels of satisfaction. The information you share about marketing Systems Integration services and the users of your services will help your company's marketing efforts in the future by comparing current efforts against client expectations and areas of concern.

The information you share will be treated by INPUT as anonymous and confidential. It will be averaged with the responses of other vendors before the results are shared. User names will not be shared. We will be sending you an executive summary of the final report, in return for your cooperation.

For the purposes of this study, we define Systems Integration as a vendor service that provides a complete solution to an information system, networking or automation development requirement through the custom selection and implementation of a variety of information system products and services. A Systems Integrator is responsible for the overall management of a systems integration contract and is the single point of contact and responsibility to the buyer for the delivery of the specified system function, on schedule and at the contracted price. The components of a Systems Integration project include: equipment; software products; professional services and other miscellaneous services.

1) How many Systems Integration projects has your firm completed in the past three years?

    ____ 1 to 2   ____ 3 to 5

    ____ 6 to 8   ____ 9 to 10

    ____ 10 to 15   ____ Over 15 - How many? _____

2) Would you be willing to provide a list of clients who have used you as a Systems Integrator?

_____ Yes Company: _____

Name: _____

Title: _____

Phone number: _____

_____ No

NOTE: Questions 3, 4, and 5 refer to the grids following each question. The questions are open ended. Indicate with a check if an item from the list was given by the respondent, add it under "Other" if not on the list. Do not review the entire list with the respondent.

BENEFITS USED WHEN MARKETING SYSTEMS INTEGRATION AS A SOLUTION

3a) What are the top 5 business benefits you use when marketing systems integration as a solution?

3b) On a scale of 1-5 with 1 being "somewhat important" and 5 being "extremely important," how would you rate the importance of these benefits?

3a) Business Benefit   3b) Importance (1-5)

_____	Competitive advantage	_____
_____	Knowledge of latest technology	_____
_____	No disruption from regular work	_____
_____	Convenience	_____
_____	Cost savings	_____
_____	Technical capability	_____
_____	Performance guarantees	_____
_____	Application understanding	_____
_____	Industry experience	_____
_____	Contract flexibility	_____
_____	Relationships with other vendors	_____
_____	Industry knowledge	_____
_____	Others(list)	
_____	_____	_____
_____	_____	_____
_____	Don't know	
_____	Did not respond	

CRITERIA YOU EXPECT CLIENTS TO USE TO RATE LEVELS OF SATISFACTION WITH A SYSTEMS INTEGRATION SOLUTION

4a) What are the top 5 criteria you believe your customers consider when rating their satisfaction levels with your systems integration services? (fill in grid below)

4b) On a scale of 1-5 with 1 being "somewhat important" and 5 being "extremely important," how would you rate the importance of these criteria? (fill in grid)

4a) Satisfaction Criteria   4b) Importance (1-5)

_____ Time frame to do the job   _____
_____ No disruption from regular work   _____
_____ Convenience   _____
_____ Technical capability   _____
_____ Total solution capability   _____
_____ Price   _____
_____ Performance guarantees   _____
_____ Application understanding   _____
_____ Industry experience   _____
_____ Proposal quality   _____
_____ Consultant expertise   _____
_____ Contract flexibility   _____
_____ Support performance   _____
_____ Others(list)
_____ _____   _____
_____ _____   _____
_____ Don't know
_____ Did not respond

REASONS FOR SELECTING YOUR SYSTEMS INTEGRATION SERVICES

5a) What are the top 5 business reasons you use with clients to promote using <u>your</u> Systems Integration services? (fill in grid below)

5b) On a scale of 1-5 with 1 being "somewhat important" and 5 being "extremely important," how would you rate the importance of the reasons you chose for selecting this Systems Integrator?

5a) Reason for Selecting   5b) Importance (1-5)

	5a) Reason for Selecting	5b) Importance (1-5)
_____	Competitive advantage	_____
_____	Credibility with management	_____
_____	Knowledge of latest technology	_____
_____	Prior knowledge of your company	_____
_____	Politics	_____
_____	Total solution capability	_____
_____	Price	_____
_____	Acceptability of solution	_____
_____	Performance guarantees	_____
_____	Application understanding	_____
_____	Industry experience	_____
_____	Financial stability	_____
_____	Proposal quality	_____
_____	Firm's reputation/expertise	_____
_____	Individual's reputation/expertise	_____
_____	Size of S/I firm	_____
_____	Contract flexibility	_____
_____	Relationships with other vendors	_____
_____	Geographic proximity	_____
_____	Cross functional ability	_____
_____	Service culture	_____
_____	Others(list)	
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	Don't know	
_____	Did not respond	

6) On a scale of 1-5 with 1 being "poor" and 5 being "excellent," how would you rate your company's overall Systems Integration capabilities against others in the market? (Remember answers are anonymous)

(circle)   1   2   3   4   5

7) Who are the 5 competitors you most frequently come up against when bidding a Systems Integration contract? Please list in order of importance?

_____

_____

_____

_____

_____

8) What recommendations do you have for customers that would improve their levels of satisfaction with your products and services? (Example: More clearly define what is expected from the relationship so that the customer really wants what he says.)

Thank you