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Customer Service Program (CSP)

Innovative Service Offerings

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Abstract

This report from INPUT focuses on new and innovative customer service offerings within the computer and information services industry. The objective is to review how end-user requirements are changing and how vendor offerings are accommodating those changed requirements.

Additionally, the report addresses how these changed requirements and offerings are impacting the business of the customer services firm or organization within a computer manufacturer.

The report contains 82 pages and 34 exhibits.







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Introduction







Introduction

A

Purpose and Scope

Service organizations have developed beyond the traditional definitions of maintenance and repair activities to offer users a variety of new products. Some of these products are based upon the repackaging of existing services to provide a new look to the company's products; others constitute services and products leveraged from expertise in new technologies and areas of practice such as systems planning, network management and general consulting services.

Exhibit I-1 offers a loose model of the current service market behavior with regard to user demand and economic influences, and shows the types of maneuvers currently being designed and implemented by vendors to gain market advantage.

As the information systems marketplace moves toward—and displays more of the characteristics associated with—a solutions-driven market, there is tremendous pressure on the service vendor to differentiate the services provided and to leverage any and all expertise into salable products.

Exhibits I-2 and I-3 illustrate the kinds of services available in the marketplace and attempts to differentiate the repackaging of traditionally defined service options from products definable as newly created, extended or non-traditional products.

The restructuring of an existing service/product mix emphasizes the needs and requirements of the customer base and the concurrent requirement for the vendor to maintain profitability and market position. The competitive assumption is that expansion has slowed to zero, and market share must be taken from another vendor—and well defended.



EXHIBIT I-1

**Application/Technology-Driven
Service Market**Service Market Characteristics

- Traditional aspects plateaued/margins being squeezed
- Leverage relevant expertise to expanded service products
- Leveraging expertise into niche and cross-industry markets

Service Contract Issues

- Decisions focusing on bundling/un-bundling of services
- Roll-out of value-adding professional/ancillary services

Internal Operations

- Development/implementaion of real-time response capabilities
- Implementation of problem/resolution information pipeline
- Overall development of a proactive service infrastructure



EXHIBIT I-2

**Directions in Service/Product Innovation:
Repackaged/Restructured Services****Examples of Repackaged Services**

- Discounts
- Vertical market specialization
- Guaranteed response times
- Guaranteed uptimes
- Strategic user partnerships

The development of extended/non-traditional service products is based on an environment of expansion; the decision to proceed is based on the idea that there is less risk involved in the development and roll-out of a new type of service in an expansion market than in battling for market share in a relatively flat market with well-established competitors.

EXHIBIT I-3

**Directions in Service/Product Innovation:
Extended/Non-Traditional Services****Examples of Extended/Non-Traditional Services**

- Systems integration
- Disaster recovery
- General business consulting
- Network management
- Human resources
- Turnkey systems hardware and software (training)



This report is designed to investigate the types of non-traditional services being offered by service organizations. Is there a real trend toward redefining the customer service company; are ISOs expanding their product portfolios to remain competitive; and are service divisions within manufacturing companies beginning to develop broader functions?

More precisely, this report is designed to answer the following questions:

1. What new products and services are being implemented by computer and information services companies? How far from the traditional aspects of maintenance and repair are these new services?
2. In which extended service area(s) do customer service organizations have the greatest potential for success?
3. How responsive is the user community to the availability of non-traditional services from service organizations?

B

Methodology

This report is based upon structured telephone interviews with 30 users and 20 service vendors. Sampling was distributed across geographic and industry segments. The overall study methodology was designed to provide insight regarding how identified concepts and trends were being accepted and implemented within the computer and information services marketplace.

Exhibit I-4 provides the demographics of the user respondents. Although a modest majority are manufacturing companies, the sample does represent the more dominant vertical sectors used by INPUT in its industry-specific market definitions.

Exhibit I-5 provides the demographics of the vendor respondents. This sample generally represents the demographics of the customer service industry.



EXHIBIT I-4

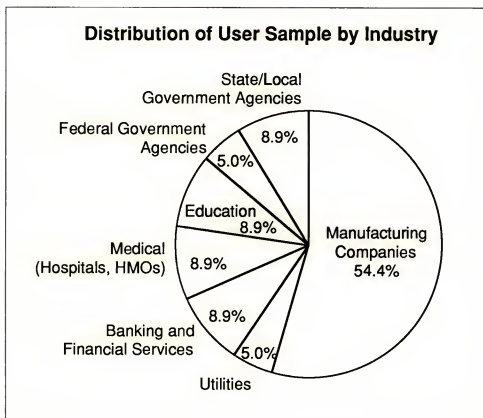
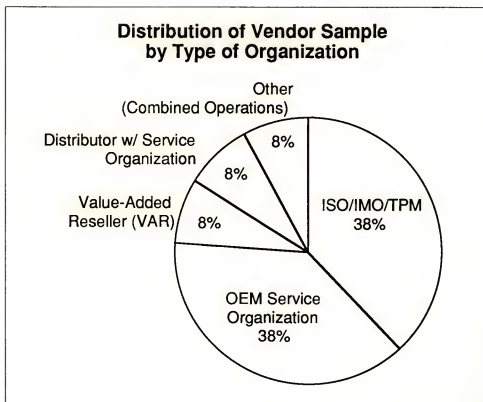


EXHIBIT I-5





C**Report Organization**

This report is organized as follows:

- Chapter II—Executive Overview—provides a brief summary of the report's findings and recommendations.
- Chapter III—Issue Background and Definition—provides a framework for contrasting traditional customer services offerings and newer innovative or extended services offerings.
- Chapter IV—User Requirements and Issues—presents the research findings regarding user interests and issues regarding extended services requirements.
- Chapter V—Vendor-Extended Services Offerings—Implementation Status—looks at the current state of vendor activity regarding innovative service offerings.
- Chapter VI presents conclusions and recommendations.

D**Related Reports**

Related 1991 reports include:

- *U.S. Customer Services Market, 1991-1996*
- *Single-Point-of-Contact Customer Service*
- *Impacts of New Support Technologies*





Executive Overview







Executive Overview

A

Scope and Definition

Service organizations are developing capabilities beyond the traditional definitions of maintenance and repair to offer users a variety of new products. These service products are based upon:

- The restructuring of an existing service/product mix. The competitive assumption is that expansion has slowed to zero and market share must be taken and, conversely, well defended. This strategy emphasizes the needs and requirements of the customer base and the concurrent requirement for the vendor to maintain profitability and market position.
- Services and products leveraged from expertise in new technologies and areas of practice such as systems planning, network management and general consulting services. This development of extended/non-traditional service products is based on an environment of expansion. The decision to proceed accepts that there is less risk involved in developing and offering a new type of service in an expansion market than in battling for market share in a relatively flat market with well-established competitors.

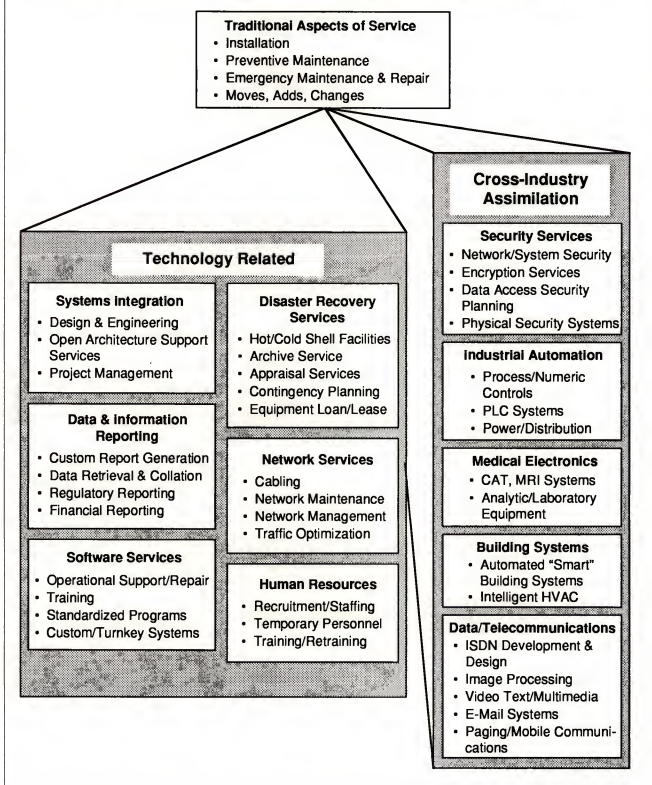
Exhibit II-1 illustrates the current, broadly defined extended/non-traditional services market.

This report is designed to investigate the types of extended/non-traditional services being offered by service organizations. Is there a real trend toward the redefinition of the customer service company; are ISOs expanding their product portfolios to remain competitive; and are service divisions within manufacturing companies beginning to develop broader functions?



EXHIBIT II-1

Status of Current Extended/Non-Traditional Services Market



The first part of the paper discusses the importance of understanding the underlying mechanisms of the observed phenomena. This is followed by a detailed analysis of the data, which reveals several key findings. The results indicate that the proposed model is highly effective in capturing the essential features of the system under study. Furthermore, the analysis shows that the model's performance is robust across different parameter settings and data distributions. The final section of the paper concludes with a summary of the findings and suggests directions for future research.

The second part of the paper focuses on the theoretical aspects of the problem. It begins by defining the key concepts and terms used throughout the study. This is followed by a rigorous proof of the main theorem, which establishes the validity of the proposed model. The proof is based on a series of lemmas and propositions, which are carefully derived and verified. The final part of the section discusses the implications of the results and their potential applications in various fields.

The third part of the paper presents a series of experiments designed to evaluate the performance of the proposed model. These experiments are conducted using a variety of datasets and parameter configurations. The results show that the model consistently outperforms existing methods in terms of accuracy and efficiency. Additionally, the experiments demonstrate the model's ability to handle complex and noisy data, which is a significant advantage in many real-world applications.

The fourth part of the paper provides a detailed discussion of the model's architecture and its components. This section describes the various layers and modules that make up the model, as well as the specific algorithms used in each component. The discussion also highlights the model's flexibility and its ability to be adapted to different tasks and datasets. Finally, the section concludes with a comparison of the model's performance against other state-of-the-art methods, showing its superior results.

More precisely, this report is designed to answer the following questions:

1. What new products and services are being implemented by computer and information services companies? How far from the traditional aspects of maintenance and repair are these new services?
2. In what extended service area(s) do customer service organizations have the greatest potential for success?
3. How responsive is the user community to the availability of non-traditional services from service organizations?

B

User Demographics

Exhibit II-2 shows the distribution of the user segment by equipment class in mean number of units and percentage breakdown.

EXHIBIT II-2

Distribution of User Installed Base by Equipment Class

Type/Class of Equipment	Overall		Small User		Large User	
	Mean Number of Units	Percent Distribution	Mean Number of Units	Percent Distribution	Mean Number of Units	Percent Distribution
Mainframe	2	0.3	1	0.7	2	2
Minicomputer	3	0.5	3	2	3	3
Workstation	163	31	10	7	265	29
PC	173	33	45	34	256	28
Terminal Network (Number of Nodes)	63	12	29	22	88	9
LAN (Number of Nodes)	69	13	13	10	101	11
Printers	68	13	28	21	112	12



The smaller user (see Exhibit IV-1 for segmentation methodology), though from a smaller absolute user population, has an installed base that uses roughly the same mix of processing technologies as the larger user.

The results of this study show that users attribute considerable value to products that, whether innovative and new or available as a commodity, contribute to system integrity and uptime. Traditionally defined services represent a basic and very important requirement for all classes of users, independent of the availability of extended/non-traditional services.

Virtually all (95.5%) of the users received some extended or non-traditional services from their associated service vendors.

An important consideration in the assessment of non-traditional services is illustrated in Exhibit II-3, which shows the overall mean importance rating of traditional and extended/non-traditional services and provides a ranking of these services for the overall, large-, and small-user segments.



EXHIBIT II-3

Perceived Importance of Extended/ Non-Traditional Services to Users

Type of Service	Mean Rating of Importance	End-User Ranking of Services by Level of Importance		
		Overall	Large User	Small User
<u>Traditionally Defined Service Feature</u>				
4-Hour Guaranteed Response	4.7	1	1	1
On-site Field Engineer	4.7	2	3	2
Uptime Guarantee	4.5	3	4	3
1-Hour Guaranteed Response	4.5	4	5	4
2-Hour Guaranteed Response	4.5	5	6	5
7-Day/24-Hour Service	4.2	6	8	6
Unlimited Service Calls	4.2	7	9	7
Loaner/Replacement Units	4.1	10	10	8
Preventive Maintenance	4.1	11	11	9
Telephone Support	3.9	13	13	11
Depot Service	3.6	14	15	14
Install/Moves/Adds	3.4	16	16	16
<u>Extended/Non-Traditional Services (By Category)</u>				
Network Services	4.1	8	7	15
Disaster Recovery	4.1	9	2	12
Security Services	4	12	12	10
Software Services	3.5	15	14	17
Planning & Design Services	3.2	17	18	13
Human Resources	2.5	18	17	18



C

Vendor Considerations

Vendors clearly indicate consensus that traditional services are perceived as having a low potential for continued growth. Vendor perceptions are that delivery of non-traditional services is key to market expansion.

Considering this strong emphasis on non-traditional services, it is notable that, on the average, 83% of business done by the service organization is still comprised of traditional services, as shown in Exhibit II-4.

EXHIBIT II-4

**Mean Proportion of Service Business
Attributable to Extended/Non-Traditional
Service Offerings**

Percent Business Attributable to Extended/Non-Traditional Services	Percent Distribution of Vendor Sample
4 - 10	50
11 - 20	25
21 - 25	8
26 - 40	17

The primary vendor activity in delivering extended services is in the network services and disaster recovery categories. Exhibit II-5 illustrates that roughly 65% of the vendor sample currently delivers some network and disaster recovery services, and that an additional 20%+ have indicated they are in the process of developing such services.



EXHIBIT II-5

Summary of Vendor Product Innovation and Roll-Out

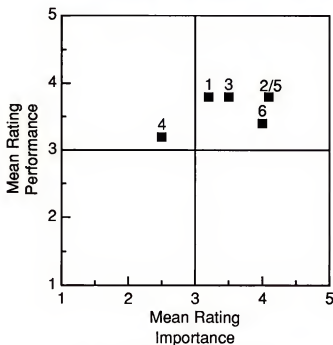
Expanded Service/ Product Category	Offers	Currently Adding	Planning to Add	Does Not Offer/ Consider
<u>Planning & Design Services</u>				
Design & Engineering	62	—	—	38
Site Planning	77	—	—	23
Purchase Consultation	69	—	—	31
<u>Network Services</u>				
Cabling	69	15	8	8
Configuration Management	69	15	8	8
Capacity Planning	69	15	15	—
Network Maintenance	62	15	15	8
Network Management	69	15	15	—
<u>Software & Services</u>				
Applications Training	85	—	—	15
Standard Software Products	77	—	—	23
Custom Software Development	53	—	8	46
Disaster Recovery Services	69	8	15	8
<u>Security Services</u>				
Network Security	38	8	—	54
Security Planning	38	—	8	54
<u>Human Resources</u>				
Recruitment/Staffing	15	—	—	85
Temporary Personnel	23	—	—	77

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Vendor performance in delivering extended services to the user is generally good (overall mean rating of 3.8). Exhibit II-6 assesses the performance ratings for each extended services category against users' perceptions of each category's importance. The resulting graph gives a relative indication of how well vendors' services are being received in the user community.

EXHIBIT II-6

Assessment of Vendor Performance Compared to User Rating of Category Importance



Rating: 1 = No Importance/Low Performance
5 = Extreme Importance/Excellent Performance

Legend: 1 = Planning & Design
2 = Network Services
3 = Software Services
4 = Human Resources
5 = Disaster Recovery
6 = Security Services

D**Summary**

The market emphasis on the technologies and design of information movement and the shift away from the more fundamental nature of the underlying computing infrastructure have created many new opportunities and risks for the service vendor.

The response-sensitive nature of the traditionally defined service operation is well-suited as a foundation for development of new service products focused on maintaining system integrity.

Investments necessary when targeting network or software services in a maintenance and support role are in training, test/diagnostic equipment, and inventory maintenance. Within these specific categories, profitability still resides in short-term service visits, and the terms of the service contract.

The traditionally defined service operation is geared to work profitably in this response-sensitive type of business. INPUT's report *Impacts of New Support Technologies* investigates the large body of knowledge and technologies available to refine the service delivery infrastructure to better respond to user service demands.

The greatest threats are from competitors and industry segments that have established practices in project-oriented solutions or applications development.

It is INPUT's general recommendation that the vendor conduct a systematic audit of its core business components and current operational effectiveness prior to any serious consideration of a new service offering. It will be necessary to build a carefully considered feasibility determination, assess the role of traditional services, and establish an actionable and profitable balance between the delivery of hard and soft services.

- If there are gaps or inconsistencies in the operational aspects of the vendor delivery infrastructure, these should be investigated and resolved in an effort to produce the greatest profits from existing operations.
- Identify current users who may serve as a base for moving into extended/non-traditional service categories. Incorporate measures to retain current user loyalties, and that have potential for bundling new services with high value-in-use traditional services.







Issue Background and Definition







Issue Background and Definition

A

Background and Definition

The emergence of the third-party maintenance concept approximately ten years ago foreshadowed the role that product and delivery innovation would play in the computer and information services marketplace. Such innovation created an alternate market and permanently changed the dynamics and legalities of the computer and information services industry.

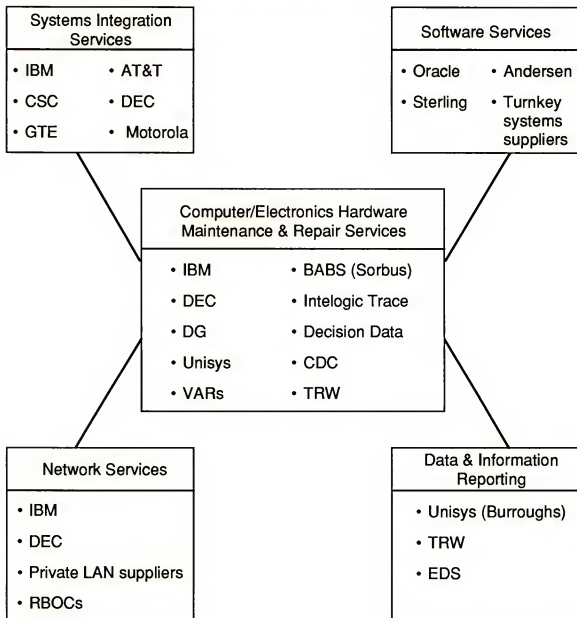
As microprocessor and digital technology continues to be configured in new industries and applications, traditionally defined computer customer service companies will find their expertise requested—and challenged—from new sources.

Technological advancement in the computer and information services industry and the increase in user dependence on this technology can be directly tied to many spin-off markets associated with non-traditional services. These are summarized in Exhibit III-1.



EXHIBIT III-1

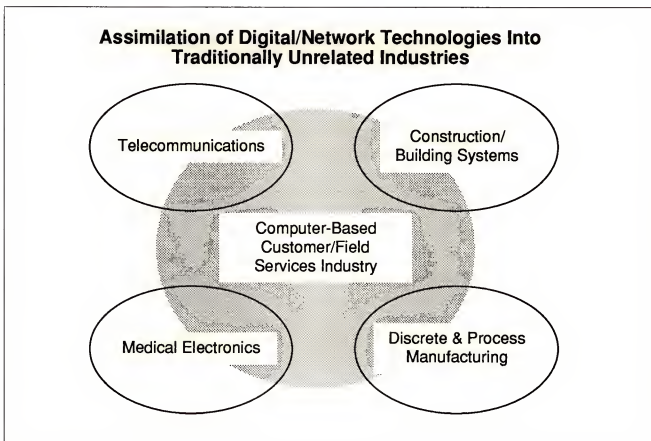
Summary of Extended/Non-Traditional Services Environment—User Perspective





Additionally, the assimilation of digital and network technologies into previously unassociated industries, illustrated by Exhibits III-2 and III-3, produces a conduit for cross-industry market penetration. The potential for entry is very high for companies that can develop or purchase the required expertise.

EXHIBIT III-2



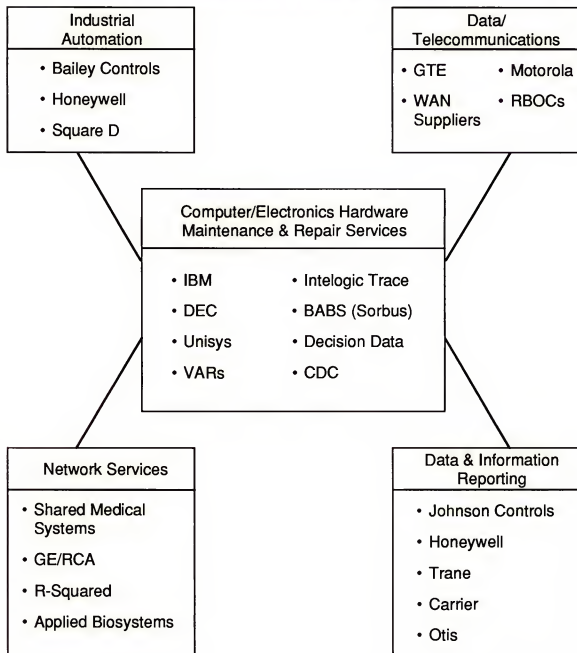
1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. The text outlines various methods for organizing and storing data, including digital databases and physical filing systems. It also mentions the need for regular audits and reviews to ensure the integrity of the information.

2. The second section focuses on the role of communication in achieving organizational goals. It highlights the importance of clear and concise communication channels, both internally and externally. The text suggests implementing regular meetings and reports to keep all stakeholders informed and engaged. It also discusses the benefits of open communication, such as improved collaboration and faster problem-solving.

3. The third part of the document addresses the challenges of managing a large and diverse team. It provides strategies for effective leadership, including setting clear expectations, providing support and resources, and fostering a positive work environment. The text also touches upon the importance of conflict resolution and the need for a fair and equitable management style.

4. The final section discusses the importance of continuous learning and development. It encourages organizations to invest in training and development programs for their employees. The text mentions various methods for assessing employee performance and identifying areas for improvement. It also discusses the benefits of a learning culture, such as increased innovation and adaptability.

EXHIBIT III-3

Summary of Cross-Industry Extended Services Environment



This potential for cross-industry expansion will have an impact on competition in two ways:

- Competition within the traditionally defined computer and information services industry will focus on the customer services companies that have the specific applications expertise necessary to competently perform within a given market segment or niche.
- As telecommunications, building systems, manufacturing systems, and medical electronics, etc. become digitized and more intelligent, the crucial competitive question becomes whether:
 - Companies like the RBOCs, Johnson Controls, United Technologies, or Applied Biosystems, respectively, assimilate the systems and network expertise required to develop and service these more broadly defined systems, or
 - The customer services companies acquire the expertise necessary to completely understand the requirements of specialized systems and the associated industry and user population.

It is evident in the organizational shufflings of the customer services giants IBM and DEC that response to the fluid nature of this competitive environment is a complex issue. The assessment of risk should be a priority for any service organization attempting to develop products that differ from its core service offerings.

Competitive balances between hard and soft services will be key in successfully extracting profits from the total extended services marketplace, as illustrated in Exhibit III-4.

The remainder of this report investigates the need and requirements for extended/non-traditional services in the user community and the levels of corresponding delivery by service vendors.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. The text outlines various methods for organizing and storing data, including digital databases and physical filing systems. It also mentions the need for regular audits and reviews to ensure the integrity of the information.

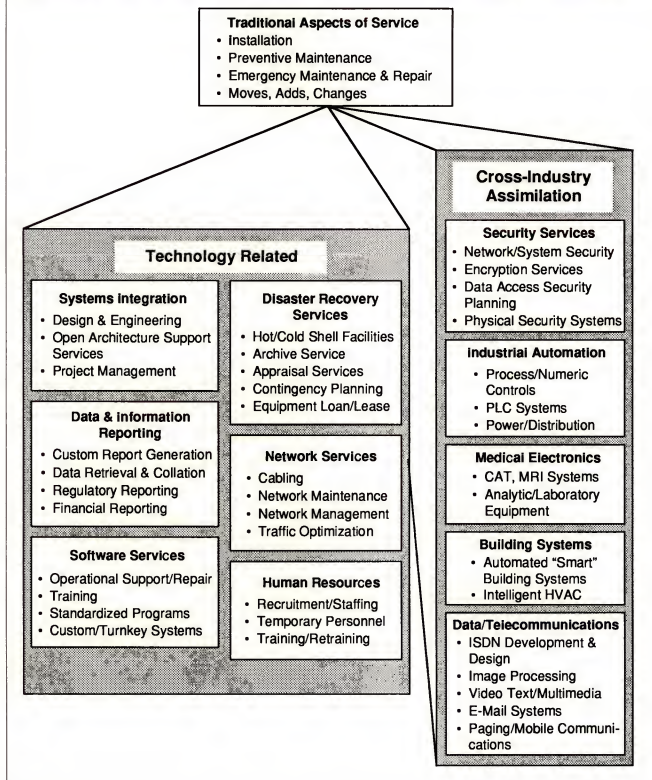
2. The second section focuses on the role of communication in achieving organizational goals. It highlights the importance of clear and concise communication, both internally and externally. The text provides guidelines for effective communication, such as using appropriate language, listening actively, and providing feedback. It also discusses the benefits of open communication, including improved collaboration and decision-making.

3. The third part of the document addresses the issue of resource management. It discusses the importance of identifying and allocating resources effectively to support the organization's mission. The text outlines various strategies for resource management, including budgeting, prioritization, and delegation. It also mentions the need for regular monitoring and evaluation of resource usage to ensure efficiency and effectiveness.

4. The final section discusses the importance of continuous improvement and innovation. It emphasizes that organizations must constantly seek ways to improve their processes and services to remain competitive. The text outlines various methods for fostering innovation, such as encouraging creativity, providing training and development opportunities, and implementing change management processes. It also mentions the need for a culture of continuous learning and improvement.

EXHIBIT III-4

Summary of Overall Extended/Non-Traditional Services Environment





IV

User Requirements and Issues



IV

User Requirements and Issues

A

User Demographics: Installed Base of Equipment

The aggregate user sample utilizes a diverse mixture of computer hardware and configurations. Exhibit IV-1 illustrates the common usage of multiple computer hardware classes within the user base.

Unplanned study results have allowed the segmentation of the user sample into small and large user categories (see footnote for segmentation methodology). Variations of greater than 15% in utilization for the small versus large user exist in the standalone workstation, PC, terminal network and LAN categories. However, the intermediate percentages (36% to 81%, the requirement for printers acknowledged as universal) seen in Exhibit IV-1 do not support any generalizations on how a user may configure its installed base.

the 1990s, the number of people in the UK who are employed in the public sector has increased by 1.5 million, from 2.5 million in 1980 to 4 million in 1995 (Department of Health 1996). The number of people employed in the health service has increased by 1.2 million, from 2.2 million in 1980 to 3.4 million in 1995.

There is a growing emphasis on the need to improve the efficiency of the health service, and to ensure that the health service is able to meet the needs of the population. This has led to a number of initiatives, including the introduction of the Health Service Act 1990, which introduced a new framework for the health service, and the introduction of the Health Service Act 1997, which introduced a new framework for the health service. The Health Service Act 1990 introduced a new framework for the health service, which was based on the principle of 'patient choice'. The Health Service Act 1997 introduced a new framework for the health service, which was based on the principle of 'patient choice'.

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EXHIBIT IV-1

**Percent Utilization of Equipment
Type in User Sample**

Type/Class of Equipment	Percent Usage		
	Overall	Small	Large
Mainframe	68	63	72
Minicomputer	50	45	54
Workstation	45	36	54
PC	68	54	81
Terminal Network	54	45	63
LAN	63	45	81
Printer	100	100	100

Small users are defined as respondents having 100 or less of each type of station; the largest possible user population for the small-user segment is therefore 400.

(SMALL USER = #workstations \leq 100; #PCs \leq 100; #Network Nodes (Terminal Network or LAN workstations) \leq 100)

Large users were defined as having more than 100 units in any of these categories of stations; the smallest possible large user therefore may have 104 user stations.

(LARGE USER = #workstations >100 or #PCs >100 or #Network Nodes >100)

IMPORTANT: Theoretically this definition is flawed and would allow an overlap of almost 300 user stations. However, no respondents fell into this overlap segment—that is, no large user had less than 400 separable user stations regardless of the distribution between the unit categories and all had at least one category with over 100 units, which allows an exclusive segmentation and an opportunity to assess basic differences in the characteristics of these segments.



Exhibit IV-2 builds a model of the user segments as defined by the distribution of each equipment class in mean number of units and percentage breakdown.

EXHIBIT IV-2

Distribution of User Installed Base by Equipment Class						
Type/Class of Equipment	Overall		Small User		Large User	
	Mean Number of Units	Percent Distribution	Mean Number of Units	Percent Distribution	Mean Number of Units	Percent Distribution
Mainframe	2	0.3	1	0.7	2	2
Minicomputer	3	0.5	3	2	3	3
Workstation	163	31	10	7	265	29
PC	173	33	45	34	256	28
Terminal Network (Number of Nodes)	63	12	29	22	88	9
LAN (Number of Nodes)	69	13	13	10	101	11
Printers	68	13	28	21	112	12

The installed base represented suggests a distributed overall computing style. For the overall user sample, just under two-thirds (64%) of the equipment units are classified as standalone workstation and PCs.

In the small-user segment, the results indicate that roughly half of the operating workstations and PCs are on either a terminal network or a LAN. This coincides with the mounting importance of delivery of network-related maintenance and management to the user regarding extended/non-traditional services, seen in section C of this chapter.

The large-user segment indicates that less than one-quarter of the operating workstations and PCs are configured into a terminal network or LAN. Large users do comprise a much greater absolute volume in all these categories of user stations.

Table 1. Mean (SD) age, height, weight, and body mass index (BMI) of the participants in each group

Group	Age (years)	Height (cm)	Weight (kg)	BMI (kg m ⁻²)
Control	12.1 (0.4)	150.5 (6.5)	42.5 (10.5)	18.9 (3.2)
Low-dose	12.1 (0.4)	150.5 (6.5)	42.5 (10.5)	18.9 (3.2)
High-dose	12.1 (0.4)	150.5 (6.5)	42.5 (10.5)	18.9 (3.2)

Control = no treatment; low-dose = 10 mg/kg/day; high-dose = 20 mg/kg/day.

the control group. The mean (SD) age, height, weight, and BMI of the participants in each group are shown in Table 1.

There were no significant differences between the groups in the number of participants who were able to complete the 10-min test. The mean (SD) number of correct responses for the control group was 10.5 (2.5), for the low-dose group 10.5 (2.5), and for the high-dose group 10.5 (2.5).

There were no significant differences between the groups in the number of participants who were able to complete the 20-min test. The mean (SD) number of correct responses for the control group was 10.5 (2.5), for the low-dose group 10.5 (2.5), and for the high-dose group 10.5 (2.5).

There were no significant differences between the groups in the number of participants who were able to complete the 30-min test. The mean (SD) number of correct responses for the control group was 10.5 (2.5), for the low-dose group 10.5 (2.5), and for the high-dose group 10.5 (2.5).

There were no significant differences between the groups in the number of participants who were able to complete the 40-min test. The mean (SD) number of correct responses for the control group was 10.5 (2.5), for the low-dose group 10.5 (2.5), and for the high-dose group 10.5 (2.5).

There were no significant differences between the groups in the number of participants who were able to complete the 50-min test. The mean (SD) number of correct responses for the control group was 10.5 (2.5), for the low-dose group 10.5 (2.5), and for the high-dose group 10.5 (2.5).

There were no significant differences between the groups in the number of participants who were able to complete the 60-min test. The mean (SD) number of correct responses for the control group was 10.5 (2.5), for the low-dose group 10.5 (2.5), and for the high-dose group 10.5 (2.5).

There were no significant differences between the groups in the number of participants who were able to complete the 70-min test. The mean (SD) number of correct responses for the control group was 10.5 (2.5), for the low-dose group 10.5 (2.5), and for the high-dose group 10.5 (2.5).

There were no significant differences between the groups in the number of participants who were able to complete the 80-min test. The mean (SD) number of correct responses for the control group was 10.5 (2.5), for the low-dose group 10.5 (2.5), and for the high-dose group 10.5 (2.5).

There were no significant differences between the groups in the number of participants who were able to complete the 90-min test. The mean (SD) number of correct responses for the control group was 10.5 (2.5), for the low-dose group 10.5 (2.5), and for the high-dose group 10.5 (2.5).

There were no significant differences between the groups in the number of participants who were able to complete the 100-min test. The mean (SD) number of correct responses for the control group was 10.5 (2.5), for the low-dose group 10.5 (2.5), and for the high-dose group 10.5 (2.5).

There were no significant differences between the groups in the number of participants who were able to complete the 110-min test. The mean (SD) number of correct responses for the control group was 10.5 (2.5), for the low-dose group 10.5 (2.5), and for the high-dose group 10.5 (2.5).

Size and utilization characteristics of terminal networks and LANs offer no insights to preference, but the dual existence may suggest that the perceived and/or real differences in processing characteristics of each configuration has exclusive benefits to applications users.

The relative similarity in mean number of mainframe and minicomputer units being used in the small- and large-user segments is noteworthy, as it provides evidence that small users utilize systems capable of high processing volumes. This raises the issue for service vendors of how to segment and classify their own user base: is service demand a function of MIPS characteristics and transaction volumes or more a function of the real number of users dependent upon the system?

Exhibit IV-3 shows the distribution of mainframe processors within the user sample and provides evidence that, reasonably, the large-user segment incorporates the greatest number of mainframes. However, there is no indication that mainframe configurations are less likely in small-user systems. Exhibit IV-1 noted that the percent utilization of mainframes for both segments is fairly close (within 10%).

EXHIBIT IV-3

**Distribution of Mainframe Processors
in the User Sample**

Number Separable Mainframe Processors	Percent Distribution		
	Overall	Small User	Large User
1	71	83	63
2	21	17	25
3	7	-	12

The distribution of minicomputers across the segments shows that small users actively use this processing option. Exhibit IV-4 suggests no significant variation in usage patterns between small and large users.



EXHIBIT IV-4

**Distribution of Minicomputers
in the User Sample**

Number Separable Minicomputers	Percent Distribution		
	Overall	Small User	Large User
1	36	60	17
2	27	-	50
3-5	18	20	17
5-10	18	20	17

These findings provide evidence for a basic conclusion: the smaller user, though from a smaller absolute user population, has an installed base that uses roughly the same mix of processing technologies as the larger user.

This suggests that the large user will produce a higher service demand by the sheer number of users, not necessarily by any inherent difference in the types of services required.

B**User Service Needs and Requirements—Traditionally Defined Services**

Citing the general advancement of product and networking technologies, users were asked to rate if, compared to two years ago, there was an overall increase in their sensitivity to service and support issues. Responding on a 1-5 scale—where 1 indicated a low or reduced sensitivity and 5 indicated a high or increased sensitivity—the user sample rated a mean of 3.7

This sensitivity rating is not significantly high, but may reflect a general recognition by the corporate user community of the service and support role in maintaining application productivity and, consequently, dependent personnel productivity.

Associated verbatim responses regarding the effects of advanced product and network technology included the following comments:

- There is a requirement to competently increase the capacity of networks without bottlenecks, without an increase in net downtime.
- Improvements, and standards, in connectivity are needed—a requirement for a dominant open standard
- Level of FE expertise lags behind the equipment technology

Comments were consistently made associating the basic service requirements of responsive service, reliable repairs, and high levels of equipment uptime to the newer technologies. These considerations recur, independent of the levels of installed base technology, as highly important to the user community.

The current portfolio of traditional services provided to the user details a variety of service items in addition to the provision of parts and labor. The most important service items deal with the response capabilities and overall availability of the field representative and the service organization in general.

- As shown in Exhibit IV-5, five of the top eight services features deal with response-related aspects of the service relationship.
- No service feature received an average rating of importance of less than 3.4 on a scale of 1 to 5 (with 5 being extremely important).
- Nine of the 12 features listed received an average rating of 4 (very important) or greater.

When asked if they receive these individual service items from vendors as part of their service agreement(s) the respondents indicated that there are specific items that are not consistently delivered in the industry. The ability to provide the user with an uptime guarantee for its installed base, the availability of a full-time, on-site field engineer, and a guaranteed one-hour response time rank in the top of this category.

The emphasis of traditionally defined services, through the itemized service features listed, is upon maintaining a high level of day-to-day performance for users' installed base of equipment. The results of this study show that users attach considerable value to those products, whether innovative and new or available as a commodity, that contribute to system integrity and uptime.



EXHIBIT IV-5

**Traditionally Defined Service Items
Ranking by Mean Rating of Importance**

Service Features	Mean Rating of Importance
4-Hour Guaranteed Response	4.7
On-site Field Engineer	4.7
Uptime Guarantee	4.5
1-Hour Guaranteed Response	4.5
2-Hour Guaranteed Response	4.5
7-Day/24-Hour Service	4.2
Unlimited Service Calls	4.2
Loaner/Replacement Units	4.1
Preventive Maintenance	4.1
Telephone Support	3.9
Depot Service	3.6
Install/Moves/Adds	3.4

Rating: 1 = Not Important, 5 = Extremely Important

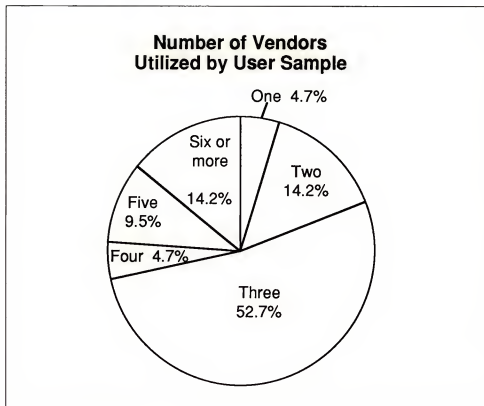
C**User Participation In and Perceptions of Extended/Non-Traditional Service Offerings**

Virtually all (95.5%) of the users had received some extended or non-traditional services from their associated service vendors.



The user sample indicates that each utilizes an average of three service suppliers to support the installed base of equipment and overall systems (see Exhibit IV-6). Each user recognizes a primary vendor, responsible for the majority of components in the user's system, and typically solicits additional vendors for specific product technologies and service roles. For users contracting with 1-5 vendors, there was no significant correlation between the size of the user and the number of vendors that user utilized for service coverage. The largest users in the sample (1,000+ users) indicated using between 5-12 vendors to establish adequate coverage for their installed base of equipment.

EXHIBIT IV-6



Companies identified often as primary vendors by the user sample include the following (IBM receiving the most mentions as users' primary vendor):

- IBM
- Data General
- DEC
- HP
- Unisys

Other major customer services companies identified within the user sample as being considered users' primary vendor include:

- TRW
- Bull
- Tandem
- Bell Atlantic Business Systems (Sorbis)
- Cray

Bell Atlantic was the only ISO mentioned in the sample as a primary vendor. Other traditionally defined ISOs, LAN suppliers, and office automation companies were typical in the vendor mix.

Regarding the delivery of extended/non-traditional services, the majority of users had received planning and design services from their associated vendors. Exhibit IV-7 suggests that services associated with the initial stages of the purchase cycle—design and engineering, site planning, and purchase consultation—are most common within the user segment.

Reception of other non-traditional services is consistent, with roughly 20%-30% of users receiving these services. Human resources consistently showed low levels of activity throughout this study, which seems to indicate that this will remain a specialized area of practice.

Exhibit IV-7 shows that large users receive the highest levels of network and software services and small users require the highest levels of planning and design services. Overall, the smaller users appear to more readily accept and utilize the service organization as a source for initial systems consultation.

The large user utilizes the service organization's expertise in maintaining overall systems and systems operation integrity.



EXHIBIT IV-7

Summary of Extended/Non-Traditional Services Received by Users

Expanded Service/ Product Category	Percent Total Receiving Item	Percent Small End User	Percent Large End User
<u>Planning & Design Services</u>			
Design & Engineering	50	60	40
Site Planning	70	80	60
Purchase Consultation	65	50	80
<u>Network Services</u>			
Cabling	45	30	60
Configuration Management	N/A*	—	—
Capacity Planning	N/A*	—	—
Network Maintenance	40	30	50
Network Management	30	30	40
<u>Software & Services</u>			
Applications Training	35	30	40
Standard Software Products	40	30	50
Custom Software Development	35	20	50
<u>Human Resources</u>			
Recruitment/Staffing	10	20	—
Temporary Personnel	5	10	—
<u>Disaster Recovery Services</u>	45	50	40
<u>Security Services</u>			
Network Security	15	20	10
Security Planning	20	30	10

*Data not available from user segment.

Note: See Exhibit IV-1 for segmentation methodology.



When asked to rate the level of importance of the major categories of non-traditional services—utilizing a scale of 1-5 where 1 indicates the item is of no importance and 5 indicates the item is of extreme importance—users responded as illustrated in Exhibit IV-8.

EXHIBIT IV-8

**User Rating of Importance of
Extended/Non-Traditional Service Categories**

Major Service Category	Mean Rating of Importance
Network Services	4.1
Disaster Recovery	4.1
Security Services	4.0
Software & Services	3.5
Planning & Design Services	3.2
Human Resources	3.2

The relatively high rating for security services amplifies the importance of network access control issues. The recent incidents involving unauthorized access into UNIX nets and the DEC corporate net stress the importance of these issues in the current and future marketplace.

An important consideration in the assessment of non-traditional services is illustrated in Exhibit IV-9, which identifies the overall mean rating of importance of traditional and extended/non-traditional services and provides a ranking of these services for the overall, large- and small-user segments.

Compared to users' assessment of traditional services, the non-traditional service categories scored in the intermediate range, with network and disaster recovery services scoring consistently high in level of importance.

Network services and disaster recovery are the only extended/non-traditional categories to be ranked within the top ten service features by the overall and large-user segment. It is important to note that the large-user segment ranks disaster recovery second only to four-hour guaranteed response time.



EXHIBIT IV-9

Perceived Importance of Extended/ Non-Traditional Services to Users

Type of Service	Mean Rating of Importance	End-User Ranking of Services by Level of Importance		
		Overall	Large User	Small User
<u>Traditionally Defined Service Feature</u>				
4-Hour Guaranteed Response	4.7	1	1	1
On-site Field Engineer	4.7	2	3	2
Uptime Guarantee	4.5	3	4	3
1-Hour Guaranteed Response	4.5	4	5	4
2-Hour Guaranteed Response	4.5	5	6	5
7-Day/24-Hour Service	4.2	6	8	6
Unlimited Service Calls	4.2	7	9	7
Loaner/Replacement Units	4.1	10	10	8
Preventive Maintenance	4.1	11	11	9
Telephone Support	3.9	13	13	11
Depot Service	3.6	14	15	14
Install/Moves/Add	3.4	16	16	16
<u>Extended/Non-Traditional Services (By Category)</u>				
Network Services	4.1	8	7	15
Disaster Recovery	4.1	9	2	12
Security Services	4.0	12	12	10
Software Services	3.5	15	14	17
Planning & Design Services	3.2	17	18	13
Human Resources	2.5	18	17	18



The small-user segment displays relative apathy toward the provision of extended/non-traditional services, with no associated category ranking significantly high compared to traditionally defined services.





Vendor-Extended Service Offerings—Implementation Status





Vendor-Extended Service Offerings—Implementation Status

A

Implementation of Extended/Non-Traditional Services

When vendors were asked to indicate their level of agreement with four different market growth scenarios, as described in Exhibit V-1, the responses clearly showed consensus by the vendors that traditional services are perceived as having little potential for continued growth.

Vendor perceptions are that the delivery of non-traditional services is key to market expansion, the attributable scenario receiving a significantly high level of agreement within the vendor sample (mean rating of 3.7).

The close scores given to the scenarios outlining innovative marketing and niche mechanisms indicate strong preferences by the vendors. However, the variance in the scores indicates that the vendor community is less certain of the growth potential in these models.



EXHIBIT V-1

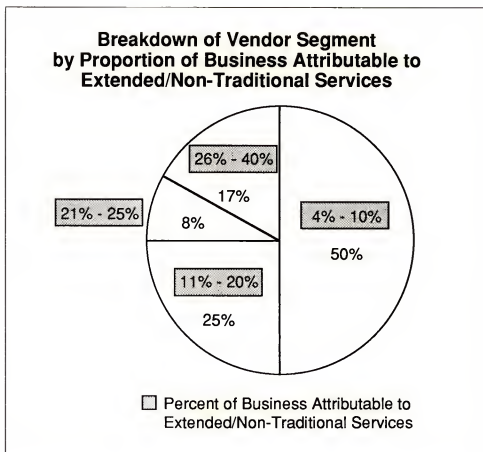
**Vendor Perceptions of Current
Customer/Field Services Market**

Market Growth Statement	Mean Rating of Agreement
Significant growth will develop through the delivery of allied, non-traditional services by customer service organizations.	3.7
Significant growth in traditional customer service markets will be seen through innovative marketing and/or the restructuring of service delivery mechanisms.	3.5
Overall market growth cannot be assessed in the aggregate. Technology and vigorous end-user demands have brought the competition to the segment and niche level. Significant growth will be seen in specific areas not in the overall market.	3.4
There will be significant growth in the traditional services (10%+ annually).	2.4

Considering the emphasis suggested in Exhibit V-1, it is notable that, on the average, only 17% of business done by the service organization is comprised of non-traditional services, as shown in Exhibit V-2.



EXHIBIT V-2



There was no consistent trend indicating that manufacturer-based service organizations or ISOs were more or less likely to participate in extended services.

Primary vendor activity in delivering extended services exists in the network services and disaster recovery categories. Exhibit V-3 shows that roughly 65% of the vendor sample currently delivers network and disaster recovery services, and that another 20%+ have indicated they are in the process of developing such services. Vendors not currently offering planning and design services and/or software services do not indicate any plans to begin offering such services.

The first part of the paper discusses the importance of understanding the underlying mechanisms of the observed phenomena. This is followed by a detailed analysis of the data, which reveals several key findings. The results suggest that the proposed model is highly effective in capturing the essential features of the system under study. Furthermore, the analysis highlights the need for further research in certain areas, particularly regarding the long-term behavior of the system. The paper concludes with a summary of the main findings and a discussion of the implications for future work.

In the second part of the paper, we explore the potential applications of the findings. This section provides a comprehensive overview of the various ways in which the results can be used to inform decision-making and policy development. The authors argue that the insights gained from this study are crucial for understanding the complex interactions within the system and for developing effective strategies to address the challenges it presents. The paper also discusses the limitations of the current study and offers suggestions for future research to build upon the existing work.

The third part of the paper focuses on the practical implementation of the proposed model. This section details the steps involved in the development and validation of the model, as well as the challenges encountered during the process. The authors provide a thorough explanation of the data collection methods and the statistical techniques used to analyze the data. They also discuss the results of the model validation, which demonstrate the model's ability to accurately predict the system's behavior. The paper concludes with a discussion of the model's performance and its potential for use in real-world applications.

EXHIBIT V-3

Summary of Vendor Roll-Out in Extended/Non-Traditional Services

Expanded Service/ Product Category	Offers	Currently Adding	Planning to Add	Does Not Offer/ Consider
<u>Planning & Design Services</u>				
Design & Engineering	62	—	—	38
Site Planning	77	—	—	23
Purchase Consultation	69	—	—	31
<u>Network Services</u>				
Cabling	69	15	8	8
Configuration Management	69	15	8	8
Capacity Planning	69	15	15	—
Network Maintenance	62	15	15	8
Network Management	69	15	15	—
<u>Software & Services</u>				
Applications Training	85	—	—	15
Standard Software Products	77	—	—	23
Custom Software Development	53	—	8	46
Disaster Recovery Services	69	8	15	8
<u>Security Services</u>				
Network Security	38	8	—	54
Security Planning	38	—	8	54
<u>Human Resources</u>				
Recruitment/Staffing	15	—	—	85
Temporary Personnel	23	—	—	77



Applications training and the delivery of standardized software are currently major areas of focus for the vendor community. One hundred percent of the manufacturer-based service organizations in the vendor sample indicated they do provide these software services as a part of their portfolios.

The weakest participation is in developing human resources options; as stated earlier, this type of service appears to remain a cloistered area of practice for specialized companies.

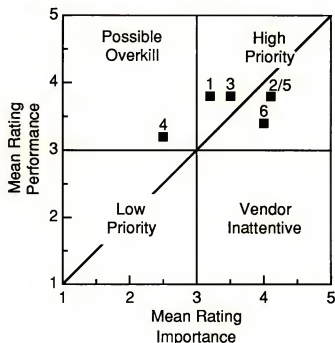
B

Vendor Performance in Delivering Extended Services

Vendor performance in delivering extended services to the user is generally good (overall mean rating of 3.8). Exhibit V-4 assesses the performance ratings for each extended services category against users' perception of each category's importance. The resulting graph presents a relative indication of how well vendors' services are being received in the user community.



EXHIBIT V-4

Assessment of Vendor Performance Compared to User Rating of Extended/Non-Traditional Services Category Importance—Overall

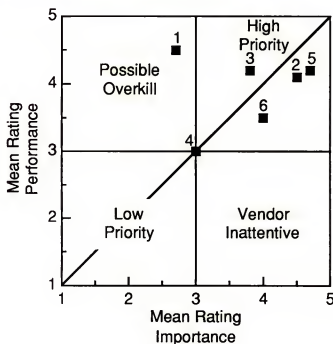
Legend: 1 = Planning & Design
2 = Network Services
3 = Software Services
4 = Human Resources
5 = Disaster Recovery
6 = Security Services

Although performance scores are generally positive overall, network and disaster recovery services display a slight performance gap regarding users' perception of their importance. Human resources shows recurring low scores throughout this study and can effectively be discounted as a viable channel for serious development.



EXHIBIT V-5

Assessment of Vendor Performance Compared to User Rating of Extended/Non-Traditional Services Category Importance—Large User



- Legend:
- 1 = Planning & Design
 - 2 = Network Services
 - 3 = Software Services
 - 4 = Human Resources
 - 5 = Disaster Recovery
 - 6 = Security Services

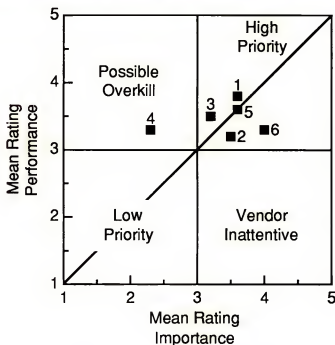
The large-user segment, referring to Exhibit V-5, appears to receive a higher general level of performance from the extended services vendor than does the small-user segment, shown in Exhibit V-6.

Results indicate, however, that planning and design services may be overdone by the vendors. A reorientation is suggested for vendors wanting to mine the large-user segment more thoroughly.



EXHIBIT V-6

Assessment of Vendor Performance Compared to User Rating of Extended/Non-Traditional Services Category Importance—Small User



Legend: 1 = Planning & Design
 2 = Network Services
 3 = Software Services
 4 = Human Resources
 5 = Disaster Recovery
 6 = Security Services

Extended/non-traditional services are considered less important overall in the small user segment. Performance levels delivered by the associated vendors appear to complement the small-user segment's priorities, but are generally lower than the performance scores recorded in the large-user segment for these services.

C

Vendor Initiatives

A necessary initiative taken by the vendor community is the continuous training of the field service, technical support, and operational personnel. Exhibit V-7 summarizes the efforts of the vendor sample across five educational areas.

The first part of the paper discusses the importance of the research and the objectives of the study. It then presents a literature review of the existing research on the topic. The methodology section describes the research design and the data collection process. The results section presents the findings of the study, and the conclusion section summarizes the main points and provides recommendations for future research.

The study was conducted in a laboratory setting, and the participants were recruited from a local university. The data was collected using a series of questionnaires and interviews. The results of the study show that there is a significant relationship between the variables studied. The findings suggest that the proposed model is valid and can be used to predict the outcome of the study.

The study has several limitations, including a small sample size and a lack of control over the environment. Despite these limitations, the study provides valuable insights into the topic and contributes to the existing literature. The authors hope that the findings of this study will be useful to other researchers in the field.

EXHIBIT V-7

**Summary of Field Engineer/Technical Personnel
Education Practices**

Area of Educational Focus	Percent Requiring	Mean Days/Year
Software Maintenance/Support	92	10
Maintenance & Repair of New Technologies	100	12
Customer Relations/ Communications Skills	83	5
Sales (Cross-Sales) Development	33	3
Competitive Intelligence Gathering	25	9

Further breakdown of each educational area is not available, but the existence of such programs highlights the evolving requirements placed upon the customer/field service engineer as the resource for delivering solutions to the user.

The development of new services will require the customer/field personnel to add new responsibilities to their repertoire, as well as new tooling. The vendor evaluating the roll-out of extended/non-traditional services will need to determine and orchestrate a new mixture of skill levels and types. The division of labor in the service organization may evolve as more fluid and the required management methodology more sensitive to a matrix-style or team approach.





Conclusions and Recommendations



1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. The text outlines various methods for organizing and storing data, including digital databases and physical filing systems. It also mentions the need for regular audits and reviews to ensure the integrity of the information.

2. The second section focuses on the role of communication in achieving organizational goals. It highlights the importance of clear and concise communication channels, both internally and externally. The text suggests implementing regular meetings and reports to keep all stakeholders informed and aligned. It also discusses the benefits of open communication, such as improved collaboration and faster problem-solving.

3. The third part of the document addresses the challenges of managing a large and diverse team. It acknowledges that different team members may have varying skills, experiences, and backgrounds. The text provides strategies for fostering a cohesive team environment, such as providing training and development opportunities, encouraging cross-functional collaboration, and recognizing individual contributions. It also mentions the importance of setting clear expectations and roles for each team member.

4. The final section discusses the importance of innovation and continuous improvement. It states that organizations must stay up-to-date with the latest trends and technologies to remain competitive. The text encourages a culture of innovation, where employees are encouraged to think creatively and propose new ideas. It also mentions the importance of regularly evaluating and improving processes and systems to ensure the organization is always moving forward.



Conclusions and Recommendations

A

Summary

The results of this study support the following summary findings:

- Currently, 85% of the services delivered by vendors are defined as traditional services.
 - This tempers a strong consensus by the vendor sample that the traditional service market is not an area of significant growth. At present, even witnessing flat growth, this market cannot be discounted in strategic and tactical market planning.
 - The growth of extended/non-traditional services is difficult to define as a single market. However, acknowledged segments—systems integration, network management, disaster recovery, etc.—are anticipated to grow significantly over the next 2-5 years. The point at which extended services may comprise the majority of a service vendor's business is uncertain.
- The user community consistently rates service features that contribute to maintaining day-to-day systems and applications integrity as extremely important.
 - The service vendor must competently deliver service components that are response sensitive. This basic concept must be maintained by the vendor in any roll-out of more project-oriented or one-time service features.
 - The traditionally defined service vendor may leverage its existing service delivery infrastructure as the foundation for entering into response-oriented extended/non-traditional services—such as network maintenance, disaster recovery, and software support—and building from this extended service base. This corroborates information on service vendor activities, as seen in Chapter V.



- The small- and large-user segments utilize similar information processing technologies and configurations.
 - The small user has a need and requirement for the same service mix as does the large user. The vendor that structures premium services to only the large or highly visible user may be missing an opportunity.
 - It may be more appropriate for the vendor to assess a given user's configuration on the basis of user density rather than on processing volume.

B

Recommendations

Within the bounds of these findings, it may be stated that there are four basic mechanisms that have led to the development of extended/non-traditional services in the customer/field service vendor community:

- The slow/flat growth of traditionally defined services
- The explosive use of networks, and the subsequent demand for service and support
- Software/application considerations taking priority in the equipment/system purchase decision
- The overall user requirement to make diverse configurations work!

The market emphasis on the technologies and design of information movement and the shift away from the more fundamental nature of the underlying computing infrastructure have created many new opportunities and risks for service vendors.

The response-sensitive nature of the traditionally defined service operation is well suited as a foundation for developing new service products focused on maintaining system integrity. Investments necessary when targeting network or software services in a maintenance and support role are in training, test/diagnostic equipment, and inventory maintenance. Within these specific categories, the economics of the business would still rest in the short-term service visit, and the characteristics of the service contract. The traditionally defined service operation is geared to work profitably in this type of business. INPUT's report *The Impact of New Support Technologies* investigates the large body of knowledge and technologies available to refine the service delivery infrastructure to better respond to this type of business.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. The text outlines various methods for organizing and storing data, including digital databases and physical filing systems. It also mentions the need for regular audits and reviews to ensure the integrity of the information.

2. The second section focuses on the role of communication in achieving organizational goals. It highlights the importance of clear and concise communication, both internally and externally. The text provides guidelines for effective communication, such as using appropriate language, listening actively, and providing feedback. It also discusses the benefits of open communication, including improved collaboration and decision-making.

3. The third part of the document addresses the issue of resource management. It discusses the importance of identifying and allocating resources effectively to support the organization's mission. The text provides strategies for managing resources, such as prioritizing tasks, delegating responsibilities, and monitoring progress. It also mentions the need for flexibility and adaptability in resource management, as circumstances may change over time.

4. The final section discusses the importance of continuous improvement and innovation. It emphasizes that organizations should strive to improve their processes and services continuously. The text provides guidelines for implementing change, such as conducting regular assessments, seeking feedback, and encouraging innovation. It also mentions the importance of staying up-to-date with industry trends and best practices.

The greatest threats are from competitors and industry segments that have established practices in project-oriented solutions or applications development.

INPUT offers Appendix A to assist in the assessment of new services. This appendix shows the analysis necessary to form a well-considered feasibility determination.

It is INPUT's general recommendation that the vendor conduct a systematic audit of its core business components and current operational effectiveness prior to any serious consideration of new services roll-out.

- If there are gaps or inconsistencies in the operational aspects of the vendor delivery infrastructure, these should be investigated and resolved in an effort to produce the greatest profits from existing operations.
- Identify current users who may serve as a base for moving into extended/non-traditional service categories. Incorporate measures to retain current user loyalties, and that have potential for bundling new services with high value-in-use traditional services.

To use the methodology presented in Exhibit A-1, the reader should indicate the appropriate score for each of the identified service category or business strength characteristics. At the completion of each section it will be necessary to calculate the mean score for that section. This will provide the reader with a single mean score for each section (service category characteristic and business strength characteristic, respectively). These two scores can then be plotted on the X/Y matrix presented in Exhibit A-2, service category characteristics being plotted on the Y axis.

This exercise establishes a rudimentary comparison of the relative roll-out potential for selected service categories. This comparison can suggest movements or tactics that may be necessary for vendors to pursue in order to successfully begin offering a given service.





Appendixes





Services Roll-Out Checklist



EXHIBIT A-1

Rudimentary New Services Roll-Out Assessment Worksheet

Service Category Characteristics	Rating	Reader Score
<u>Segment Size—Total</u>		
Very Small	1	
Small	2	
Medium	3	_____
Large	4	
Very Large	5	
<u>Segment Size—Reasonable Potential</u>		
(Added Gross Revenue/Year)		
Very Small	1	
Small	2	_____
Medium	3	
Large	4	
Very Large	5	
<u>Segment Growth Rate—Total</u>		
Declining	1	
Stable	2	_____
Slow Growth	3	
Medium Growth	4	
Fast Growth	5	
<u>Competitive Intensity</u>		
Superior Competition	1	
Strong/Active Competition	2	_____
Moderate Competition	3	
Slight/Some Competition	4	
No Competition	5	
<u>Required Penetration/Expansion Investment</u>		
Very High	1	
High	2	_____
Moderate	3	
Low	4	
None	5	
<u>Frequency of Purchase</u>		
Infrequent User	1	
	2	_____
Moderate User	3	
	4	
Heavy User	5	

the 1990s, the number of people in the UK who are aged 65 and over has increased by 1.5 million, and the number of people aged 75 and over has increased by 1 million (Office for National Statistics 2000).

There is a growing awareness of the need to address the needs of older people in the community. The Department of Health (1999) has published a strategy for older people, which sets out a vision for the future of older people's services. The strategy is based on the following principles:

- Older people should be able to live independently in their own homes for as long as possible.
- Older people should be able to access the services they need to live independently.
- Older people should be able to participate in the decisions that affect their lives.
- Older people should be able to live in a safe and secure environment.

The strategy also sets out a number of key objectives for the future of older people's services, including:

- To ensure that older people have access to the services they need to live independently.
- To ensure that older people are able to participate in the decisions that affect their lives.
- To ensure that older people live in a safe and secure environment.
- To ensure that older people are able to live independently for as long as possible.

The strategy is a key document for the development of older people's services in the UK. It sets out a vision for the future of older people's services, and provides a framework for the development of policies and practices to achieve this vision.

The strategy is based on the following principles:

- Older people should be able to live independently in their own homes for as long as possible.
- Older people should be able to access the services they need to live independently.
- Older people should be able to participate in the decisions that affect their lives.
- Older people should be able to live in a safe and secure environment.

The strategy also sets out a number of key objectives for the future of older people's services, including:

- To ensure that older people have access to the services they need to live independently.
- To ensure that older people are able to participate in the decisions that affect their lives.
- To ensure that older people live in a safe and secure environment.
- To ensure that older people are able to live independently for as long as possible.

EXHIBIT A-1 (CONT.)

Rudimentary New Services Roll-Out Assessment Worksheet

Service Category Characteristics	Rating	Reader Score
<u>Probable Margin on Purchase</u>		
Very Low	1	_____
Low	2	
Moderate (Acceptable)	3	
High	4	
Very High	5	
<u>Substitutes/Dependency</u>		
Many Active Substitutes	1	_____
Few Active Substitutes	2	
Few Substitutes	3	
Sub-Standard Substitutes	4	
No Substitutes	5	
Mean Score for Category/Segment Section		_____

EXHIBIT A-1 (CONT.)

Rudimentary New Services Roll-Out Assessment Worksheet

Business Strength Characteristics	Rating	Reader Score
<u>Relative Share in Market</u>		
Under 10%	1	_____
10 - 25%	2	
26 - 50%	3	
51 - 75%	4	
Over 75%	5	
<u>Share Growth</u>		
Declining	1	_____
	2	
Stable	3	
	4	
Growing (Or >90%)	5	
<u>Price Competitiveness—Operating Cost</u>		
Product/Service Cost High	1	_____
	2	
Product/Service Cost Competitive	3	
	4	
Product/Service Cost Low	5	
<u>Product/Service Quality—Performance</u>		
Below That of Competition	1	_____
	2	
Same as Competition	3	
	4	
Better Than Competition	5	
<u>Knowledge of Customer's/Market</u>		
Not Knowledgeable/Less than Competition	1	_____
Not Very/Incomplete Information	2	
Same Information as Competition	3	
More Information than Competition	4	
Very Knowledgeable/Better than Competition	5	
<u>Brand/Vendor Recognition</u>		
(Virtually) Unknown	1	_____
Not as Well Known as Competition	2	
As Well Known as Competition	3	
Better Known than Competition	4	
Preferred to Competition/No Competition	5	



EXHIBIT A-1 (CONT.)

Rudimentary New Services Roll-Out Assessment Worksheet

Business Strength Characteristics	Rating	Reader Score
<u>Delivery/Distribution Infrastructure</u>		
No Delivery Infrastructure Exists	1	_____
Infrastructure Exists, Favors Competition	2	
Infrastructure Exists and Neutral	3	
Infrastructure Exists, Favors Vendor	4	
Superior/Captive Infrastructure Exists	5	
<u>Sales Effectiveness</u>		
(Ability to Gain Share)		
Not at All	1	_____
Not Very Effective	2	
Somewhat Effective	3	
Effective	4	
Very Effective	5	
<u>Fit With Current (Core) Business/Services</u>		
None (Dissimilar)	1	_____
Poor	2	
Fair	3	
Good	4	
Very Good (Complementary)	5	
<u>Unique Marketing Advantage</u>		
No/Strong Disadvantage	1	_____
Minor Disadvantage	2	
Neutral	3	
Minor Advantage	4	
Yes/Major Advantage	5	
Mean Score for Business Strength Section		_____



EXHIBIT A-2

Rudimentary Model for Assessment of Extended/Non-Traditional Services Roll-Out

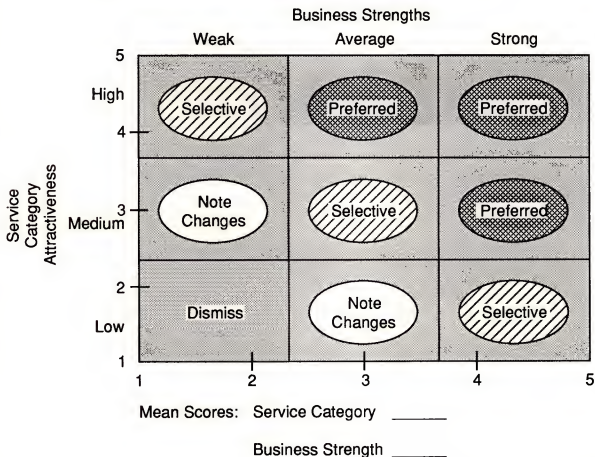
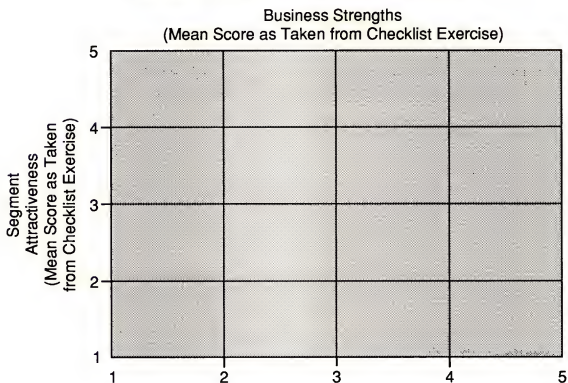




EXHIBIT A-3

**Rudimentary Model for Assessment of
Extended/Non-Traditional Services Roll-Out:
Reader Worksheet for Plotting Results**







User Questionnaire

The following two questionnaires have been used by INPUT during 1991 to conduct research in the customer support and services area. The findings from these interviews form much of the underlying research for this report.

INTRODUCTION; USER QUESTIONNAIRE

(ASK FOR SPECIFIC CONTACT IF AVAILABLE FROM SAMPLE. IF NONE EXISTS, ASK TO BE CONNECTED WITH THE PERSON RESPONSIBLE FOR THE ACQUISITION OF MAINTENANCE, REPAIR, AND SUPPORT SERVICES FOR THEIR COMPANY'S INSTALLED BASE OF COMPUTER AND ELECTRONIC SYSTEMS AND EQUIPMENT, INCLUDING NETWORKS.)

(INTRODUCTION TO OPERATOR); (IF NECESSARY):

Good morning/afternoon/evening. I'm Mr./Ms. _____ calling long distance from INPUT in _____, and we are conducting a study about the support services available for computer and electronic systems and equipment, including networks.

(WHEN MANAGER COMES TO PHONE: INTRODUCTION TO MANAGER/EQUIPMENT SERVICE MANAGER)

Good morning/afternoon/evening. I'm Mr./Ms. _____ calling from INPUT in _____. We are conducting a study to assess overall service quality with regard to computer and information-processing equipment and systems.

- A. Just to check, do you have computer and information processing equipment operating or otherwise installed at this location?
- ☐ Yes (CONTINUE)
☐ No (THANK RESPONDENT AND TERMINATE)
- B. Do you have managerial responsibility for the ongoing operation and support of these systems and equipment at your company?
- ☐ Yes (GO TO INTRODUCTION)
☐ No (CONTINUE)
- C. May I please speak with that person? (OBTAIN NAME/TITLE/DEPARTMENT AND ASK TO BE CONNECTED)



(NOTE: BEFORE CONTINUING TO MAIN QUESTIONNAIRE, RESPONDENT MUST ANSWER "YES" TO QUESTIONS A AND B)

(INTRODUCTION)

As part of INPUT's continuing research programs, we are conducting a survey of users to assess their service needs and requirements and investigate the sensitivity to developing service issues. Your response will ultimately lead to better support options in the future. We would be happy to supply you with a summary of our findings from the subsequent report.

Would you have a few minutes at this time, or would you prefer I call back at a more convenient time?

☐ IF AVAILABLE, CONTINUE WITH MAIN QUESTIONNAIRE, Q.6

☐ IF NOT AVAILABLE, ARRANGE FOR CALLBACK

Callback Date: _____

Specific Time: _____ AM/_____ PM

MAIN USER QUESTIONNAIRE

I. BACKGROUND (TO BE VERIFIED AND RECORDED AS INTRODUCTION IS CONDUCTED)

A. Known Systems/Equipment:

_____	_____
_____	_____
_____	_____

B. Title of Respondent: (DO NOT READ LIST)

- ☐ MIS Director
☐ Director Data Center Operations
☐ Director of Purchasing
☐ Other (Specify: _____)

(REMAINDER TO BE CONDUCTED AS QUESTIONS TO BE READ VERBATIM)



II. CURRENT SERVICE/SUPPORT STATUS

- For each of the following types of equipment that I list, please indicate approximately how many units are under your charge—that is, where you are responsible for the administration or management of service for that equipment.
- For the equipment categories you mentioned, do you service any of this equipment in-house? If so, exactly what kinds of service do you provide for this equipment?

TYPE OF EQUIPMENT	NUM. OF UNITS	IN- HOUSE SERVICE	KIND OF SERVICE DONE BY IN-HOUSE PERSONNEL
DATA PROCESSING:		Y N	
- Mainframe (MIPS/UNITS)	# _____	1 2	_____
- Minicomputers (MIPS/Unit)	# _____	1 2	_____
- Workstations (H.End PCs)	# _____	1 2	_____
- PCs	# _____	1 2	_____
- CRTs/Data Terminals	# _____	1 2	_____
NETWORKS:			
- Terminal Networks (Nodes)	# _____	1 2	_____
- LANs (# Nodes)	# _____	1 2	_____
PERIPHERALS:			
- Printers, other periphs,	# _____	1 2	_____
- Disk Drives (GigaBytes)	# _____	1 2	_____
OFFICE AUTOMATION:			
- Copiers	# _____	1 2	_____
- FAX machines	# _____	1 2	_____
OTHER:			
_____	# _____	1 2	_____
_____	# _____	1 2	_____
_____	# _____	1 2	_____

- What is the name of your **primary** external service supplier?
Primary Vendor: _____
- How many external service suppliers do you currently have providing service and support for your installed base of equipment?
Number of External Service Vendors # _____



5. Which of the following service features do you have provided to you for those types of equipment you have mentioned? (RECORD BELOW; READ THROUGH ENTIRE LIST)
6. Please rate the importance of each service feature provided to you on a scale from 1 to 5, where 1 = NOT IMPORTANT and 5 = EXTREMELY IMPORTANT. (READ BACK LIST OF SERVICE FEATURES THAT ARE BEING PROVIDED TO RESPONDENT. RECORD BELOW)

SERVICE FEATURE	CURRENTLY HAS W/ SERVICE (Q.5)	RATING OF IMPORTANCE (Q.6)
Parts	1	_____
Labor	1	_____
Preventive Maintenance	1	_____
7-Day/24-Hour Service	1	_____
Guaranteed 4-hour response time	1	_____
Guaranteed 2-hour response time	1	_____
Guaranteed 1-hour response time	1	_____
Unlimited Service Calls	1	_____
Factory Depot Service	1	_____
Replacement/Loaner units	1	_____
Uptime Guarantee	1	_____
On-Site Service Engineer	1	_____
Telephone Support/Help Desk	1	_____
Installations/Moves/Adds	1	_____
Remote Hardware Diagnostics	1	_____
Micro-Code Diagnostics/Repair	1	_____
Other Software Diag./Repair	1	_____

IF YES TO DIAG. QUESTIONS:

7. In the delivery of the software/hardware diagnostics and repair services, do you have access to the service vendor's problem/resolution data base?
- [] Yes [] No
8. Do you have the ability to upload or download problem or solution information to your service vendor?
- [] Yes [] No



9. Do you currently receive any of the following discounts off your service pricing? (RECORD BELOW)
10. If you do not presently receive any discounts, what is your level of interest in the mentioned discounts? Rate 1 to 5, where 1 indicates LOW INTEREST, and 5 indicates HIGH INTEREST.

TYPE OF DISCOUNT	RECEIVES	L.O.I.
Multiyear Contract/Agreement	1	_____
Prepayment	1	_____
Call Screening/Problem Manag. Dispatch Avoidance Meth.	1	_____
Deferred Response	1	_____
Other: (Specify: _____)	1	_____



III. PERCEPTIONS ON EXPANDED/INNOVATIVE SERVICES

11. Do the external customer service vendors provide you with any of the following expanded services or product offerings? (READ THROUGH LIST; RECORD BELOW IN COLUMN A)
12. Of the expanded services provided to you by your service vendors, please rate (on scale from 1 to 5) how important this service is to your company. 1 indicates that the service category is of LOW IMPORTANCE, and 5 indicates that the service category is of EXTREME IMPORTANCE to your company.
13. Please rate the level of performance you receive from your service organization in delivering these expanded services. Again use a scale from 1 to 5, where 1 indicates NOT AT ALL SATISFIED with the service performance and 5 indicates that you are EXTREMELY SATISFIED with the performance of the service organization in delivering these expanded services to you.

EXPANDED SERVICE PRODUCTS	RECEIVES SRV.ITEM (Q.11)	RATE IMP. (1 TO 5) (Q.12)	PERF.RATE (1 TO 5) (Q.13)
PLANNING/DESIGN SERVICES:			
- Design & Engineering	1	_____	_____
- Site Planning	1		
- Purchase Consultation	1		
NETWORK SERVICES:			
- Cabling	1	_____	_____
- Network Maintenance	1		
- Network Management	1		
SOFTWARE AND SERVICES:			
- Applications Training	1	_____	_____
- Standardized Software Products	1		
- Custom Applications Development	1		
HUMAN RESOURCES:			
- Recruitment/Staffing	1	_____	_____
- Temporary Personnel	1		
DISASTER RECOVERY SERVICES:	1	_____	_____
SECURITY SERVICES:		_____	_____
- Network/System Security	1		
- Security Planning	1		

14. Approximately when did your service vendor begin offering these expanded or non-traditional services?

Date expanded services received ____/____/____



IV. ONE-STOP CUSTOMER/FIELD SERVICE AND SUPPORT

15. Some service vendors are now in the practice of contracting to supply a single point of contact for all of the user's service needs—tying systems software support, applications support, and related services with the more traditional aspects of multivendor hardware services. Are you presently participating in this type of service agreement?
- ☐ Yes (skip to Q.18)
- ☐ No
16. On a scale of 1 to 5, what would be your level of interest in this type of "single-point-of-contact" service arrangement? 1 indicates NO INTEREST, and 5 indicates HIGH LEVEL OF INTEREST.
- | | |
|---------------|---|
| No Interest | 1 |
| | 2 |
| | 3 |
| | 4 |
| High Interest | 5 |
17. How much of a premium would you be willing to pay to have this "single point of contact"?
- | | |
|--|------------------|
| <input type="checkbox"/> Would not pay premium | } (skip to Q.20) |
| <input type="checkbox"/> Uncertain | |
| <input type="checkbox"/> Willing to pay additional 1-5% | |
| <input type="checkbox"/> Willing to pay additional 6-10% | |
| <input type="checkbox"/> Willing to pay more than 10% | |
18. When entering into this "single-point-of-contact" service agreement, was your company required to submit any type of application to be eligible to receive this service?
- ☐ Yes
- ☐ No (skip to Q.20)
19. Which, if any, of the following information was required on this application?
- ☐ Equipment Inventory: ("did this include")
- | |
|---|
| <input type="checkbox"/> Number of Units |
| <input type="checkbox"/> Location(s) of all units |
| <input type="checkbox"/> Manufacturer |
| <input type="checkbox"/> Model Numbers |
| <input type="checkbox"/> Serial Numbers |
| <input type="checkbox"/> Current Warranty Status |
- ☐ Overall Service Expenditure Information
- ☐ Availability of Equipment Service Records



20. Some service suppliers are in the practice of subcontracting certain services to third parties. Do you feel this:

- ☐ Has a negative impact on service quality
☐ Makes no difference
☐ Has a positive impact on service quality

V. PERCEPTIONS REGARDING SERVICE MARKET AND DEMAND TRENDS

21. Many industry sources cite the advancement of computer and electronics technologies and their applications, especially the expanding use of networks, as creating an increased sensitivity by the user for service and support of this equipment. Compared to, say, two years ago; how much more sensitive are you toward service and support issues in general? Rate with 1 indicating LOW SENSITIVITY and 5 indicating HIGH SENSITIVITY.

Low Sensitivity	1	} (skip to Q.23)
	2	
	3	
	4	
High Sensitivity	5	

22. What issues are most important to you?

☐ Response ☐ No Response

(Probe: network maintenance, response times, configuration design development)

23. Do you consider the support needs of "Open Architectures/Systems" and/or UNIX systems as different from those of other systems?

☐ Yes ☐ No (skip to Q.25)

24. Why?

☐ Response ☐ No Response



25. How much more would you be willing to pay for the exact features and level of service and support you need?

☐ Would not pay additional fees
☐ Uncertain
☐ Willing to pay 1-5% more
☐ Willing to pay 6-10% more
☐ Willing to pay 10% or more

26. **(RESPONDENTS WITH NO SERVICES PROVIDED IN Q.11)**

How likely is it that you will utilize your current service vendors to provide you with the expanded and non-traditional services we've been discussing?

☐ Very Likely
☐ Somewhat Likely
☐ Uncertain
☐ Somewhat Unlikely
☐ Very Unlikely

} skip to Q.29

27. **(RESPONDENTS WITH SOME/ALL SERVICES PROVIDED IN Q.11)**

How likely is it that you will switch service suppliers over the next 12 months?

☐ Very Likely
☐ Somewhat Likely
☐ Uncertain
☐ Somewhat Unlikely
☐ Very Unlikely

} skip to Q.29

28. Why?

☐ Response ☐ No Response

29. How much was paid to external service vendors over the course of 1990 for service and support on all of your establishment's installed equipment base?

[Note ALL exceptions, clarifications] \$ _____

30. How much do you expect this figure to change for 1991?

☐ Increase (by what percent? _____%)
☐ Remain the same (skip to Q.32)
☐ Decrease (by what percent? _____%)



31. Why?

☐ Response ☐ No Response

32. How much do you anticipate this figure to change in the next 5 years?

☐ Increase (by what percent? _____%)

☐ Remain the same

☐ Decrease (by what percent? _____%)

33. Compared to your fiscal year 1990, has the proportion of your total annual operating budget dedicated to service and support changed for 1991?

☐ Increased (by what percent? _____%)

☐ Remained the same

☐ Decreased (by what percent? _____%)

34. To wrap this up, may I ask what you would consider to be the single most important service and support issue for the computer systems user?

(THIS COMPLETES THE QUESTIONNAIRE. I WOULD LIKE TO THANK YOU ON BEHALF OF INPUT FOR HELPING US TO COMPLETE THIS STUDY. TO EXPRESS OUR APPRECIATION FOR YOUR TIME AND EFFORTS, WE WILL BE SENDING YOU A "THANK YOU" PACKAGE CONTAINING A SUMMARY OF THE RESULTS FROM OUR SURVEY. TO MAKE SURE YOU RECEIVE OUR COMPLIMENTARY REPORT SUMMARY, LET ME CHECK THE SPELLING OF YOUR NAME AND ADDRESS INFORMATION. **CONFIRM AND RECORD ON COVER SHEET**)





Vendor Questionnaire

INTRODUCTION/SCREENER; VENDOR QUESTIONNAIRE

(ASK FOR SPECIFIC CONTACT IF AVAILABLE FROM SAMPLE. IF NONE AVAILABLE, ASK TO BE CONNECTED WITH THE PERSON RESPONSIBLE FOR BUSINESS DEVELOPMENT AND MARKETING OF MAINTENANCE, REPAIR, AND SUPPORT SERVICES FOR THE COMPANY.)

(INTRODUCTION TO OPERATOR); (IF NECESSARY):

Good morning/afternoon/evening. I'm Mr./Ms. _____ calling long distance from INPUT in _____, and we are conducting a study about new trends in services delivery in the computer and electronic systems and equipment marketplace.

(WHEN MANAGER COMES TO PHONE: INTRODUCTION TO MANAGER / CUSTOMER SERVICE MANAGER)

Good morning/afternoon/evening. I'm Mr./Ms. _____ calling from INPUT in _____. We are conducting a study to assess new trends in service delivery with regard to computer and information-processing equipment and systems and their users.

- A. Just to check, do you have responsibility for business development and marketing of your company's service portfolio and organization?

☐ Yes (GO TO INTRODUCTION)
☐ No

- B. May I please speak with that person? (OBTAIN NAME/TITLE/DEPARTMENT AND ASK TO BE CONNECTED, THANK INITIAL CONTACT, AND TERMINATE.)

(NOTE: BEFORE CONTINUING TO MAIN QUESTIONNAIRE, RESPONDENT MUST ANSWER "YES" TO QUESTION A.)



(INTRODUCTION)

As part of INPUT'S continuing research programs, we are conducting a survey to investigate current and developing trends in service products and delivery innovations. Your response would lead to more-effective support options in the future. We would be happy to supply you with a summary of our findings from the subsequent report.

Would you have a few minutes at this time, or would you prefer I call back at a more convenient time?

☐ IF AVAILABLE, CONTINUE WITH MAIN QUESTIONNAIRE, Q.6

☐ IF NOT AVAILABLE, ARRANGE FOR CALLBACK

Callback Date: _____

Specific Time: _____AM/_____PM

MAIN VENDOR QUESTIONNAIRE

I. BACKGROUND (to be verified against sample information during the introduction process)

A. Sample Segment:

- ☐ TPM/ISO/IMO
- ☐ OEM Service Organization
- ☐ VAR
- ☐ Distributor

B. Title of Respondent: (DO NOT READ LIST)

- ☐ Director Customer/Field Service
- ☐ Director Marketing (Service)
- ☐ Director Business Development
- ☐ Other: (Specify: _____)

(BEGIN READING QUESTIONS. PLEASE READ VERBATIM)

1. How would you define your company? Would you consider it to be a:

- ☐ Independent Service Organization (ISO)
- ☐ OEM Service Organization
- ☐ VAR (Value-Added Reseller)
- ☐ Distributor with a service organization

(IF VOLUNTEERED)

☐ Other (Specify: _____)



2. Approximately how many field engineers and/or technicians do you have operating in your service organization in total? (within continental U.S.)?

Number of Field Engineers in U.S.: _____

3. In total, how many offices does your firm operate in the U.S.?

Total Number of Offices in U.S.: _____

II. ONE-STOP CUSTOMER/FIELD SERVICE AND SUPPORT

4. Some industry sources suggest a swing by the user toward contracting with a single company to meet all service requirements—tying systems software support, applications support, and related issues with the traditional aspects of multivendor hardware service. CONSIDERING YOUR CUSTOMER BASE, how strongly do you agree or disagree with this statement? Again use the scale where 1 indicates that you DO NOT AGREE AT ALL with the statement and a 5 indicates that you AGREE STRONGLY.

Do Not Agree 1

2

3

4

Agree Strongly 5

5. Does your service organization offer this type of “single-point-of-contact” service?

[] Yes (skip to Q.7) [] No

6. Do you plan on developing this type of service in the next 12 months?

[] Yes [] No (skip to Q.9)

7. What technology or operational changes, if any, have been implemented to deal with the increased service demand involved with the roll-out and delivery of these new services?

[] Response [] No Response (skip to Q.9)

8. Can you estimate the costs involved with these changes?

Costs of Roll-Out \$ _____



9. In delivering service to the user, have you subcontracted certain service activities to other service vendors?

☐ Have subcontracted
☐ Have not subcontracted (**skip to Q.14**)

10. Which types of services you are most likely to contract out?

☐ Response ☐ No Response

11. Is this subcontracting activity transparent to the user?

☐ Yes, subcontract is unknown to user
☐ No, the user is aware of subcontract

12. Has this subcontracting of service developed into any formal alliances or agreements with other service organizations?

☐ Formal alliances have been made
☐ No formal alliances have been made (**SKIP TO Q.14**)

13. Can you identify the name or type of company you have allied with? What are the general characteristics of the agreement?

Name/Type of Company

Agreement Characteristics

1. _____
2. _____
3. _____
4. _____

III. EXPANSION/INNOVATION OF SERVICES

14. Which of the following types of information-processing equipment do you presently provide service for? (READ LIST AND RECORD IN COLUMN A.)

Which, if any, of these services were recently added to your service portfolio—that is, within the last 6 months? (RECORD IN COLUMN B.)

15. Over the past 12 months, has your service organization voluntarily stopped supplying service on any of these, or other types, of equipment? (READ BACK THROUGH LIST AS NEEDED TO ASSIST RESPONDENT; RECORD IN COLUMN C.)



16. Of those categories of equipment you do not presently service, do you plan on adding this service in the next 12 months? (RECORD IN COLUMN D.)

TYPE OF EQUIPMENT	A	B	C	D
	CURRENTLY SERVICES	RECENTLY ADDED SERVICES	DROPPED SERVICES	PLANS TO ADD IN NEXT 12M
DATA PROCESSING:				
- Mainframes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Mini (Midrange) Comp.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Workstations/PCs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- CRTs/Data Terminals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Terminal Networks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LANs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peripherals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Disk Drives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OFFICE AUTOMATION:				
- Copiers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- FAX machines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER:				
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. In general, can you indicate the primary reason(s) your service organization chose to add or drop these equipment categories to your services? (RECORD APPROPRIATE EQUIPMENT TYPE WITH ASSOCIATED RESPONSE.)

RESPONDENTS WHO RECENTLY ADDED SERVICES

☐ Response

☐ No Response



RESPONDENTS WHO DROPPED SERVICES

☐ Response☐ No Response

18. The continuing delivery of systems and products utilizing advanced technologies to the user is evident. (e.g., CD ROM, virtual networks, image processing, extensive application of LANs)

Please explain any major effects these new technologies have on the service requirements of your customer base? (PROBE)

☐ Response☐ No Response

19. Which of the following service features do you provide to the user for those types of equipment you have mentioned. (RECORD BELOW IN COL. A.)
20. For each service feature you do offer, would you classify that feature as part of your "basic" services or as a "premium" feature?

SERVICE FEATURE	DOES PROVIDE TO USER	FEATURE PERCEIVED "BASIC"	FEATURE PERCEIVED "PREMIUM"
Parts	1	1	2
Labor	1	1	2
Preventive Maintenance	1	1	2
7-Day/24-Hour Service	1	1	2
4-Hour Response Time	1	1	2
2-Hour Response Time	1	1	2
1-Hour Response Time	1	1	2
Unlimited Service Calls	1	1	2
Uptime Guarantee	1	1	2
Depot Service Availability	1	1	2
On-Site Service Engineer	1	1	2
Telephone Support	1	1	2
Replacement/Loaner Units	1	1	2
Installations/Moves/Add	1	1	2



21. Does your company specifically target any vertical-market segments when selling and packaging the service products you have mentioned? If so, which?

Vertical Market Served

22. In addition to the service features traditionally offered by a customer service organization, do you provide any of the following services or products to the user?

EXPANDED SERVICE PRODUCTS	DOES OFFER	RECENTLY ADDED	PLANS TO ADD
PLANNING/DESIGN SERVICES:			
- Design & Engineering	1	2	3
- Site Planning	1	2	3
- Purchase Consultation	1	2	3
NETWORK SERVICES:			
- Cabling	1	2	3
- Configuration Planning	1	2	3
- Capacity Planning	1	2	3
- Network Maintenance	1	2	3
- Network Management	1	2	3
SOFTWARE AND SERVICES:			
- Applications Training	1	2	3
- Standardized Software Products	1	2	3
- Custom Applications Development	1	2	3
HUMAN RESOURCES:			
- Recruitment/Staffing	1	2	3
- Temporary Personnel	1	2	3
DISASTER RECOVERY SERVICES:	1	2	3
SECURITY SERVICES:			
- Network/System Security:	1	2	3
- Security Planning	1	2	3

23. What percentage of your service revenues would you estimate comes from the basic/traditional services, and what percentage comes from the delivery of expanded or non-traditional services?

Traditional/Basic % _____
 Non-traditional/Expanded % _____
 100%



IV. IMPACT OF NEW TECHNOLOGIES

24. Do you provide or require continuing education for your field engineers in any of the following areas? If so, approximately how much time in days or weeks is dedicated to that topic?
(RECORD TIME IN DAYS!!!!)

EDUCATIONAL FOCUS/TOPIC	Prov./Req.	Days/Year
Software Maintenance	1	# _____
Maintenance & Repair of New Hardware Technologies	1	# _____
Customer Relations/ Communications Skills	1	# _____
Sales Development (Cross-Sales Dev.)	1	# _____
Competitive Intelligence Gathering	1	# _____

25. Do you incorporate any level of field service information system in your organization?

☐ Yes (skip to Q.27) ☐ No

(NOTE: *field service information system* (FSIS) is defined as: a software application designed to provide service management with a high level of control over the service infrastructure by providing data regarding operations, performance, accounting, inventory movement, service call histories, field personnel activity, etc.)

26. Do you have plans to implement any level of field service information system within the next 12 months?

☐ Yes ☐ No (skip to Q.35)

27. On a scale of 1 to 5, how would you relate the degree of competitive advantage you feel you have received from the implementation of the FSMS in your service operation? 1 indicates that you believe the FSMS provides you with NO COMPETITIVE ADVANTAGE AT ALL, and 5 indicates that the implementation of the FSMS provides you with SIGNIFICANT COMPETITIVE ADVANTAGE

No Competitive Advantage 1
 2
 3
 4
 Significant Comp. Advan. 5



28. Was this field service information system developed as a custom application or was it purchased as a standardized applications package?

☐ Custom FSMS
☐ Standardized FSMS Package

29. Which of the following functions does your present/planned field service information system support?

☐ Call Handling and Dispatch
☐ Inventory Control
☐ Customer Information File/Database
☐ Service Billing
☐ Remote Hardware Diagnostics
☐ Remote Software Diagnostics/Repair

(DOES THIS SYSTEM SUPPORT ANY OTHER FUNCTIONS?)

☐ Other: (Specify: _____)

30. Were these functions implemented at the same time? If not, which function did you choose to implement first?

Function Implemented First: _____

31. Which, of the system functions you mentioned, do you feel provides the greatest benefit TO THE USER?

☐ Call Handling and Dispatch
☐ Inventory Control
☐ Customer Information File/Data Base
☐ Service Billing
☐ Other: (Specify: _____)

32. Approximately, what has been your total investment in implementing your FSIS to date?

Total FSIS Investment \$ _____



33. On a scale from 1 to 5, please rate the amount of hard cost savings each FSMS function has provided to your organization. 1 indicates NO HARD COST SAVINGS, and 5 indicates SIGNIFICANT HARD COST SAVINGS. You may use any number from 1 to 5.

FROM**Q.29**

	No Hard Savings	1
		2
[] Call Handling & Dispatch		3
		4
	Significant Savings	5

	No Hard Savings	1
		2
[] Inventory Control		3
		4
	Significant Savings	5

	No Hard Savings	1
		2
[] Customer Information File /Data Base		3
		4
	Significant Savings	5

	No Hard Savings	1
		2
[] Service Billing		3
		4
	Significant Savings	5

	No Hard Savings	1
		2
[] Remote Hardware Diagnostics		3
		4
	Significant Savings	5

	No Hard Savings	1
		2
[] Remote Software Diagnostics/Repair		3
		4
	Significant Savings	5



34. Which of these functions provides your service organization with the greatest soft benefits—that is, contributes the most to refining or improving your service delivery and quality? 1 indicates the function offers NO SOFT BENEFITS, and 5 indicates the function CONTRIBUTES SIGNIFICANT SOFT BENEFITS.

FROM**Q.29**

[] Call Handling & Dispatch

No Soft Benefits	1
	2
	3
	4
Significant Soft Benefits	5

[] Inventory Control

No Soft Benefits	1
	2
	3
	4
Significant Soft Benefits	5

[] Customer Information File

No Soft Benefits	1
	2
	3
	4
Significant Soft Benefits	5

[] Service Billing

No Soft Benefits	1
	2
	3
	4
Significant Soft Benefits	5

[] Remote Hardware Diagnostics

No Soft Benefits	1
	2
	3
	4
Significant Soft Benefits	5

[] Remote Software Diagnostics/Repair

No Soft Benefits	1
	2
	3
	4
Significant Soft Benefits	5



V. PERCEPTIONS ON CURRENT CUSTOMER/FIELD SERVICES MARKET

35. Considering the overall services market, how strongly would you agree or disagree with the following statements, where a 1 indicates that you DO NOT AGREE AT ALL and a 5 indicates that you AGREE STRONGLY. You may use any number from 1 to 5.

- A. There will be significant growth in the traditional services (10%+ annually).

Do Not Agree	1
	2
	3
	4
Agree Strongly	5

- B. Significant growth in traditional customer service markets will be seen through innovative marketing and/or the restructuring of service delivery mechanisms.

Do Not Agree	1
	2
	3
	4
Agree Strongly	5

- C. Significant growth will develop through the delivery of allied, non-traditional services by customer service organizations.

Do Not Agree	1
	2
	3
	4
Agree Strongly	5

- D. Overall market growth cannot be assessed in the aggregate. Technology and vigorous user demands have brought the competition to the segment and niche level. Significant growth will be seen in specific areas, not in the overall market.

Do Not Agree	1
	2
	3
	4
Agree Strongly	5

VI. ADDITIONAL CLASSIFICATION

(FINALLY, FOR CLASSIFICATION PURPOSES:)

36. Over the past 12 months, do you estimate that your company's service revenues have:

- ☐ Increased significantly (>10%)
☐ Increased, but at a rate less than 10%
☐ Remained about the same
☐ Decreased

37. To wrap this up, may I ask what you would consider to be the single most important issue for the service vendor in the current marketplace?

(THIS COMPLETES THE QUESTIONNAIRE. I WOULD LIKE TO THANK YOU ON BEHALF OF INPUT FOR HELPING US TO COMPLETE THIS STUDY. TO EXPRESS OUR APPRECIATION FOR YOUR TIME AND EFFORTS, WE WILL BE SENDING YOU A "THANK YOU" PACKAGE CONTAINING A SUMMARY OF THE RESULTS FROM OUR SURVEY. TO MAKE SURE YOU RECEIVE OUR COMPLIMENTARY REPORT SUMMARY, LET ME CHECK THE SPELLING OF YOUR NAME AND THE ADDRESS INFORMATION. CONFIRM AND RECORD ON COVER SHEET.)



