DECEMBER 1991

USER SATISFACTION IN WESTERN EUROPE

MEDIUM SYSTEMS

1991

INPUT®

Piccadilly House, 33/37 Regent Street, London SW1Y 4NF, U.K. +44 71 493 9335
24, avenue du Recteur Poincaré, 75016 Paris, France +33 1 46 47 65 65
Sudetenstrasse 9, D-6306 Langgöns-Niederkleen, Germany +49 6447 7229

Researched and Published by
INPUT
Piccadilly House
33/37 Regent Street
London SW1Y 4NF
England

Customer Services Programme - Europe

User Satisfaction, Medium Systems, 1991

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CE-UM1 - 1991

Abstract

This study presents data relating user perceptions of vendor service performance and user satisfaction with the servicing of medium range computer systems.

The data presented in this study has been collected by INPUT between April and September 1991 in a survey of computer users in nine European countries.

The study contains an analysis of the key findings that emmerge from the results of the 1991 survey of mid-range computer systems users.

Analysis related to the mid-range computer systems service performance of specific equipment vendors includes:

- Bull
- Digital
- Hewlett-Packard
- IBM
- ICL
- NCR
- Stratus
- Unisys

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I Introduction

A
Objectives and Scope

This INPUT 1991 study on user requirements for customer service in Western Europe presents the medium systems computer user's view of many aspects of computer system service and support.

The report is intended to enable service vendors to assess the service performance levels achieved by their organisations in 1991. Data, which relates to user perception of major vendor service performance, is presented in simple tabulated form together with a summary of the key findings that emmerge. Trends relating to service performance can be assessed by comparing the data contained in this report with previous INPUT reports.

The report contains tabulated data relating to Western Europe overall and seven individual European country markets to enable vendors to compare their performance with overall mean values of Western European vendor performance and assess the characteristics of individual country markets.

B
Methodology

The data presented in this report was compiled from interviews with 377 medium systems computer users throughout Western Europe. Users were chosen at random and interviewed by telephone in their native language when necessary. The basis of user interviews was a questionnaire relating to over 100 aspects of service and support, compiled from discussions with major service vendors. A copy of the user questionnaire is included as Appendix A.

Details of the user sample analysed in this report are given in Exhibits I-1 and I-2.

Exhibit I-1

1991 User Interview Programme
User Sample by Country

COUNTRY	SYSTEM RANGE			TOTAL
	LARGE	MEDIUM	SMALL	
BELGIUM	7	15	4	26
FRANCE	27	52	16	95
GERMANY	30	42	12	84
ITALY	33	35	19	87
SPAIN	13	38	12	63
SWITZERLAND	9	19	8	36
NETHERLANDS	13	20	10	43
NORWAY	7	13	4	24
SWEDEN	5	20	14	39
UK	78	123	55	256
OTHER EUROPEAN COUNTRIES	3	-	-	3
TOTAL	**225**	**377**	**154**	**756**

Exhibit I-2

1991 User Interview Programme
User Sample by Vendor

	SYSTEM RANGE			
VENDOR	LARGE	MEDIUM	SMALL	TOTAL
AMDAHL	111	-	-	111
BULL	12	27	27	66
DIGITAL	18	30	34	82
HEWLETT-PACKARD	-	50	12	62
IBM	39	77	15	131
ICL	22	49	20	91
NCR	8	29	1	38
STRATUS	-	53	-	53
UNISYS	11	55	31	97
OTHER VENDORS	4	7	14	25
TOTAL	**225**	**377**	**154**	**756**

C
Report Structure

The remaining chapters of this study are structured as follows:

- Chapter II explains the basis of the statistics, the correct method of interpretation and ways of doing simple comparisons.
- Chapter III is an Executive Overview which highlights the key findings that emerge from the survey.
- Chapter IV contains tabulated data relating to mid-range systems user perception of vendor service performance in Western Europe overall.
- Chapter V contains tabulated data relating to mid-range systems user perception of vendor service performance in seven European country markets.
- Chapter VI contains tabulated data relating to mid-range systems user perception of major equipment vendors service performance.
- Appendix A contains the questionnaire used for user interviews.

II Interpretation of the Data

A

Definitions

- Hardware: any computer system or peripheral system.
- Software: operating systems software, NOT applications.
- Large system: a system that is considered by the vendor part of that vendor's large system product range - for example IBM 309X and 308X, Bull DPS 8, or Digital VAX 8XXX.
- Medium system: a system that is considered by the vendor part of that vendor's medium system product range - for example IBM 43XX and AS/400, Bull DPS 7, or Digital VAX 6XXX.
- Small system: a system that is considered by the vendor part of that vendor's small system product range - for example IBM S34 and S36, Bull DPS6, or Digital Microvax.
- Documentation: user documentation, provided by the product vendor, which relates to operation and use of the computer system hardware or systems software.
- Standard Error: (of the mean): is the standard deviation (SD) of the sample divided by the square root of the sample size.

B

Statistics

Mean values are used throughout the tabulated data presented in this report. These mean values refer to either the mean value of user sample ratings for specific aspects of service performance, or to the overall mean value for a range of service performance factors. In either case the mean value calculation is weighted according to the number of user responses recorded.

The standard error for each set of tabulated data has been estimated and is included in each exhibit within the report. In 1991 INPUT's user interview programme included interviews with users of large, medium and small systems, a total 756 interviews. Calculation of standard error presented in this report is based on the estimated standard deviation that relates to this total sample.

For example, the standard deviation of user satisfaction with hardware service is estimated to be 2.2 for the total sample of 756 interviews. Therefore, the related standard error would be 2.2 divided by the square root of the sample size (2.2 divided by the square root of 756), giving a standard error of 0.08. For smaller sample sizes, for example the overall results obtained from interviews with 377 medium systems users, the standard error would increase to 0.1 as a consequence of reduced sample size.

In analysing the data presented in this report, INPUT has carefully scanned all the answers given during the interviews; when these answers were considered to be a gross departure from the norm, the data has been discounted. The objective of this exercise was to eliminate the worst effects of skew on distributions due to gross distortions.

Statistically, small sample sizes create difficulties due to the fact that they may not be totally representative of the population they represent. INPUT has chosen a minimum sample size of 20 to represent reasonable valid statistical result.

C

Ratings and Satifaction Index

In this report, ratings for importance and satisfaction are on a scale of 0 to 10 where:

- Importance
  - 0 = of no importance whatsoever
  - 5 = of average importance
  - 10= extremely important
- Satisfaction
  - 0 = total and absolute dissatisfaction
  - 5 = average satisfaction
  - 10= total satisfaction.

The satisfaction index throughout this report is based on the difference between the importance and satisfaction ratings for specific aspects of service. The questions concerning importance and satisfaction were asked at the same time and the answers therefore reflect the respondent's value judgement at that time.

- Ratings of 10 and 10, or 6 and 6, etc., give a difference value of zero, indicating that the importance needs are fully satisfied.
- Ratings of importance 8 and satisfaction 9 would indicate overfulfilment of the importance needs, and would give a satisfaction index of -1. In INPUT's analysis, overfulfilment of -1 is represented as (1).

- Ratings of importance of 6 and satisfaction 5 indicate underfulfilment of the importance needs and would give a satisfaction index of 1, the degree of underfulfilment being related to the magnitude of this difference.

- Satisfaction index can thus be interpreted as follows:

  - (1) = overfulfilled or oversatisfied
  - 0 = completely satisfied
  - 1 = concerns and worries
  - 2 = real dissatisfaction
  - 3 = pain level.

III Executive Overview

A
Vendors Achieve Overall User Satisfaction with Medium Systems Service

In overall terms, medium range computer systems users in Western Europe indicate a relatively high degree of satisfaction with vendor customer services.

Medium range systems users in seven countries were surveyed in 1991. Users in three country markets Benelux, Scandinavia and the United Kingdom indicate that needs for hardware service are oversatisfied. Users in two country markets, Benelux and the United Kingdom, indicate that needs for systems software support are oversatisfied.

However, medium range systems users in Germany express a relatively high degree of concern with the level of service received to support hardware and systems software. Users in the Italian and Spanish markets express a marginal degree of concern with the level of service received from vendors primarily systems software support.

Analysis of the results of the 1991 user survey suggest that user attitudes to service may be changing. For example relatively dramatic improvements in user satisfaction with documentation are indicated, this aspect of service now indicating oversatisfaction of user needs compared with relatively high levels of dissatisfaction expressed in previous years.

INPUT considers that the impact of economic recession in Western Europe may have influenced user priorities in judging vendor service performance. It is reasoned that these effects are causing users to focus more on their own businesses and less on the detailed nature of vendor service performance. Also that users tend to focus more on the critical aspects of service and less on the non-critical aspects.

Exhibit III-1 highlights the key findings that emerge from analysis of the medium range user satisfaction survey results.

Exhibit III-1

Key Findings

- Overall, medium systems user satisfaction with vendor service performance is achieved
- User priorities for service and attitudes to service may be changing
- German Users remain dissatisfied with vendor service performance
- Spanish User satisfaction indicates marginal degrees of user concern.

B
Changing User Priorities

INPUT considers that the relatively dramatic improvements in specific aspects of user satisfaction with service are being influenced by the effects of economic recession in Western Europe. The reasoning behind this opinion is that in times of economic recession:

- Users tend to focus on their own business and personal survival rather than on less critical aspects of computer system service.
- Users tend to focus on the more qualitative aspects of service rather than on the quantitative aspects, or on the mechanics of service.

Supporting evidence of the dramatic changes in user satisfaction that have occurred in 1991 is provided by the following examples.

- Systems Software Support Documentation; Survey results indicate that, overall, medium range systems users are fully satisfied with this aspect of service. By comparison, 1990 results indicated a relatively high degree of dissatisfaction. Medium range users also rate the importance of this aspect much lower, 7.3 in 1991 compared with 8.4 in 1990.
- Hardware Service Problem Escalation; Survey results indicate that a relatively high degree of user oversatisfaction was achieved in 1991, compared with a moderate degree of satisfaction recorded in 1990. Over the same time period the importance rating for this aspect of service has reduced from 8.3 in 1990 to 6.8 in 1991.

The first example quoted indicates that a less critical aspect of service has reduced in terms of user priority. The second example quoted suggests that the mechanics of service delivery have become secondary to the provision of service when needed.

By comparison, user satisfaction with software support engineer skills has improved only marginally between 1990 and 1991. This factor suggests continuing user focus on critical aspects of service.

C
User Satisfaction in Western Europe

User satisfaction is assessed by INPUT using a satisfaction index. Satisfaction index is calculated as the difference between importance ratings and satisfaction ratings, with both ratings being given by users on a scale of 0 to 10. Interpretation of satisfaction index is as follows:

(1) or higher = Oversatisfied
0 = Fully satisfied
1 = Concerns and worries
2 = Real dissatisfaction
3 = Pain level.

At the overall Western Europe level user satisfaction with vendor service in 1991 is summarised in the following paragraphs.

1. Hardware Service

Results of the medium range systems user satisfaction survey indicate that users are marginally oversatisfied with vendor hardware service.

This level of oversatisfaction is supported by a satisfaction index of (0.2). Within the framework of hardware service five specific aspects of service were surveyed and no single aspect indicated any signs of user concerns and worries at the overall European level. The five aspects of hardware service included in the 1991 survey were:

- Spares Availability
- Engineer Skills
- Problem Escalation
- Documentation
- Remote Diagnostics

A summary of user satisfaction with hardware service in Western Europe is provided by Exhibit III-2.

2. Systems Software Support

Exhibit III-3 indicates that, overall in Western Europe, user requirements for systems software support are relatively well satisfied. In 1991 five specific aspects of systems software support were surveyed, no single aspect indicates any degree of user concern. The five aspects of systems software support surveyed were:

- Engineer Skills
- Documentation
- Software Installation
- Provision of Updates
- Remote Diagnostics.

Exhibit III-3 provides a summary of user satisfaction with the five aspects of systems software support.

One word of caution concerning the results provided in Exhibit III-3 is appropriate. User satisfaction with software support engineer skills remains close to the level at which user concerns start to show concern (satisfaction index 1.0) and it is recommended that vendors note the marginal degree of user satisfaction obtained. Any degradation of user satisfaction in this area would most likely be unacceptable to users.

Exhibit III-2

User Satisfaction with Hardware Service in Western Europe, 1991
Medium Systems

SERVICE ASPECT	SATISFACTION INDEX
SPARES AVAILABILITY	0.5
ENGINEER SKILLS	0.4
PROBLEM ESCALATION	(1.0)
DOCUMENTATION	(0.9)
REMOTE DIAGNOSTICS	0.1
OVERALL LEVEL OF USER SATISFACTION	(0.2)

Sample size: 377

Exhibit III-3

User Satisfaction with Systems Software Support in Western Europe, 1991 Medium Systems

SERVICE ASPECT	SATISFACTION INDEX
ENGINEER SKILLS	0.8
DOCUMENTATION	0.1
SOFTWARE INSTALLATION	0.3
PROVISION OF UPDATES	0.4
REMOTE DIAGNOSTICS	0.6
OVERALL LEVEL OF USER SATISFACTION	0.3

Sample size: 377

D
Country Market User Satisfaction

1. Hardware Service

Exhibit III-4 provides a summary of user satisfaction with hardware service in seven Western European country markets. This exhibit indicates that in three country markets Benelux, Scandinavia and the United Kingdom user requirements for hardware service are being oversatisfied by a relatively large margin, supported by a satisfaction index of greater than (1.0).

Results obtained in the German market suggest a relatively high degree of user concern and those obtained from the Spanish market indicate a marginal degree of user concern.

With the framework of the five specific aspects of hardware service surveyed, responses in individual country markets can be summarised as follows:

- Benelux: User requirements for engineer skill levels are indicated as being fully satisfied and other aspects of hardware service indicate a relatively large degree of oversatisfaction, supported by satisfaction indices ranging between (1.1) and (2.1).

- France:
  - User satisfaction with documentation indicates that user needs are fully satisfied supported by a satisfaction index of (0.1).
  - Spares availability indicates that a marginal degree of user satisfaction is being achieved, supported by a satisfaction index of 0.8.
  - User requirements in other aspects of hardware service indicate that user requirements are reasonably well satisfied, supported by satisfaction indices ranging from 0.4 to 0.6.
- Germany: User satisfaction in the German market is a key issue:
  - User requirements for remote diagnostics are being relatively well satisfied, supported by a satisfaction index of 0.2.
  - User satisfaction with vendor problem escalation performance received poor ratings, a satisfaction index of 3.6 indicates very serious problems and reflects that users are subject to the "pain" level of dissatisfaction.
  - Other aspects of hardware service in Germany attract ratings suggesting a relatively high degree of user concern, supported by satisfaction indices ranging between 1.3 and 1.6.
- Italy:
  - User satisfaction with spares availability and problem escalation indicate that marginal degrees of user satisfaction are being achieved, supported by satisfaction indices of 0.7 and 0.8 respectively.
  - User satisfaction with engineer skills indicates that an acceptable level of performance is being achieved, supported by a satisfaction index of 0.5.
  - The aspect of remote diagnostics indicates a marginal degree of user concern, supported by a satisfaction index of 1.0.
- Scandinavia:
  - The aspects of engineer skills and spares availability indicate that user requirements are being fully satisfied, supported by satisfaction indices of 0.1 in both cases.
  - User satisfaction with problem escalation and documentation indicates that substantial oversatisfaction of user requirements is being achieved supported by satisfaction indices of (4.9) and (4.0) respectively.

- Spain:
    - The aspects of engineer skills, problem escalation and documentation indicate that marginal user satisfaction is being achieved, supported by satisfaction indices of 0.9 in each case.
    - User satisfaction with spares availability and remote diagnostics suggests a degree of user concern, supported by a satisfaction index of 1.3 in each case.
- United Kingdom: All five aspects of hardware service surveyed indicate that user requirements are being oversatisfied, supported by satisfaction indices ranging from (0.2) to (2.9).

2. Systems Software Support

Exhibit III-5 provides a summary of user satisfaction with systems software support in seven Western European country markets. Overall comments are as follows:

- Users in Benelux and the United Kingdom indicate that their needs are being oversatisfied.
- Users in France and Scandinavia indicate that acceptable levels of vendor performance are being achieved.
- Users in Germany, Italy and Spain indicate varying degrees of concern with the level of systems software support being provided.

With the framework of the five aspects of systems software support surveyed, individual country markets can be summarised as follows:

- Benelux: Results obtained indicate that user requirements for systems software support, in all five aspects, are either fully satisfied or oversatisfied, supported by satisfaction indices ranging from 0.1 to (1.6).
- France:
    - User satisfaction with the provision of updates and remote diagnostics indicates that reasonably good levels of satisfaction are being achieved, supported by satisfaction indices of 0.2 and 0.4 respectively.
    - The aspect of engineer skills indicates that a marginal degree of user satisfaction is being achieved, supported by a satisfaction index of 0.9.
    - User satisfaction with documentation indicates a relatively high degree of concern, supported by a satisfaction index of 1.4.

- Germany:
  - User satisfaction with remote diagnostics indicates that an acceptable degree of user satisfaction is being achieved, supported by a satisfaction index of 0.7.
  - All other aspects of user satisfaction with systems software support indicate either user concern or dissatisfaction, supported by satisfaction indices ranging between 1.0 and 2.1.
- Italy:
  - User satisfaction with software installation indicates that a marginal degree of user satisfaction is being achieved, supported by a satisfaction index of 0.9.
  - Other aspects of systems software support in the Italian market indicate varying degrees of user concern, supported by satisfaction indices ranging from between 1.0 and 1.6.
- Scandinavia:
  - User satisfaction with the provision of updates and software installation indicates that user needs are being reasonably well satisfied, supported by satisfaction indices of 0.2 and 0.1 respectively.
  - The aspect of engineer skills indicates that an acceptable level of user satisfaction is being achieved, supported by a satisfaction index of 0.6.
  - User satisfaction with documentation indicates a substantial degree of oversatisfaction, supported by a satisfaction index of (3.2).
- Spain: In the Spanish market all aspects of systems software support are the subject of varying degrees of user concern, supported by satisfaction indices ranging between 1.1 and 1.4. In the main, the levels of user concern expressed are considered marginal.
- United Kingdom: Within this market all aspects of systems software support are either fully satisfied or over satisfied, supported by satisfaction indices ranging between 0.1 and (1.0).

Exhibit III-4

Country Market User Satisfaction with Hardware Service, 1991
Medium Systems

COUNTRY MARKET	SATISFACTION INDEX
BENELUX	(1.2)
FRANCE	0.4
GERMANY	1.3
ITALY	0.5
SCANDINAVIA	(2.0)
SPAIN	1.0
UNITED KINGDOM	(1.2)

Sample sizes		
	BENELUX	- 35
	FRANCE	- 52
	GERMANY	- 42
	ITALY	- 35
	SCANDINAVIA	- 33
	SPAIN	- 38
	UNITED KINGDOM	- 123

Exhibit III-5

Country Market User Satisfaction with Systems Software Support, 1991 Medium Systems

COUNTRY MARKET	SATISFACTION INDEX
BENELUX	(0.6)
FRANCE	0.6
GERMANY	1.4
ITALY	1.2
SCANDINAVIA	0.6
SPAIN	1.1
UNITED KINGDOM	(0.3)

Sample sizes		
	BENELUX	- 35
	FRANCE	- 52
	GERMANY	- 42
	ITALY	- 35
	SCANDINAVIA	- 33
	SPAIN	- 38
	UNITED KINGDOM	- 123

E
The German Market

Within the German market user satisfaction compares poorly with the levels achieved in other European countries.

In order to gain a better understanding of this characteristic of the German market, the views of twelve senior customer services representatives were sought at a closed meeting during September 1991. These representatives represented a good cross section of equipment vendors including:

- IBM
- Siemens Nixdorf
- ICL
- Debis
- Hewlett-Packard
- NCR
- Prime.

The conclusion reached at this meeting can be summarised as follows:

- German users are very demanding of service. An example of this characteristic is that user expectation for vendor hardware service response time in Germany is about 2.8 hours, compared with the overall European average of 4.2 hours. A second example is provided by a user importance rating for system availability of 9.9, on a scale of 0 to 10, compared with the overall European average of 9.3.
- Service is considered expensive in Germany and users feel that value relative to the price paid is not being achieved. This comment is supported by poor user satisfaction with service prices in the German market.

Therefore, INPUT concludes that the key issue in Germany is that users perceive service as not providing value rather than simply user satisfaction with service.

F

Vendor Performance Achievements

Exhibits III-6 and III-7 provide a ranking of the user satisfaction achievements of the leading three medium systems vendors, Stratus, ICL and Digital. These exhibits also provide a comparison between the achievements of these vendors relative to the overall sample of 377 medium systems users surveyed throughout Western Europe in 1991.

All three vendors whose performance levels are highlighted achieved acceptable levels of user satisfaction.

The performance level achieved by Stratus indicates a significant margin of achievement compared with the other vendors listed.

Further, all individual aspects of service performance in the Stratus results indicates oversatisfaction of user needs.

The only incidence of user concern that occurs in the user samples of these leading vendors relates to Digital. The Digital user sample suggests a marginal degree of user concern with hardware and systems software diagnostics.

Exhibit III-6

Leading Vendor Ranking - Hardware Service, 1991
Medium Systems

VENDOR	OVERALL SATISFACTION INDEX
1 STRATUS	(1.4)
2 ICL	(0.5)
3 DIGITAL	(0.4)
EUROPEAN AVERAGE (MEDIUM SYSTEMS)	(0.2)

Sample sizes:		
	STRATUS	- 53
	ICL	- 49
	DIGITAL	- 30

Exhibit III-7

Leading Vendor Ranking - Systems Software Support, 1991
Medium Systems

VENDOR	OVERALL SATISFACTION INDEX
1 STRATUS	(0.8)
2 DIGITAL	(0.0)
3 ICL/HEWLETT PACKARD	0.4 EACH
EUROPEAN AVERAGE (MEDIUM SYSTEMS)	0.3

Sample sizes:		
	STRATUS	- 53
	DIGITAL	- 30
	ICL	- 49
	HEWLETT PACKARD	- 50

IV User Satisfaction in Western Europe - Medium Systems

A
Introduction

This section of the study contains analysis of INPUT's 1991 medium systems user survey sample of 377 users in Western Europe overall.

Analysis is presented in the form of tabulated data by Exhibits IV-1 to IV-7:

- Exhibit IV-1 provides a breakdown of the user sample by industry sector.
- Exhibit IV-2 provides details of user satisfaction with vendor service on five specific aspects of hardware service:
    - Spares availability
    - Engineer skills
    - Problem Escalation
    - Documentation
    - Remote diagnostics.
- Exhibit IV-3 provides details of user satisfaction with vendor service on five specific aspects of systems software support:
    - Engineer skills
    - Documentation
    - Software Installation
    - Provision of updates
    - Remote diagnostics.
- Exhibit IV-4 presents data relating to user perception of system performance:
    - Incidence of major failures
    - Cause of failure
    - Satisfaction with systems availability.
- Exhibit IV-5 presents data relating to user perception of vendor response time performance and vendor performance in remedial activities to resolve problems and failures.
- Exhibit IV-6 presents data identifying which type of vendor is providing service to the user sample.
- Exhibit IV-7 provides analysis of data relating to questions 10 (hardware service) and question 21 (systems software support) on the user questionnaire. The user satisfaction data presented in this exhibit is considered by INPUT to be a measure of the vendors service quality image. A copy of the user questionnaire is included in Appendix A.

Each individual exhibit contains an estimate for the standard error of the sample analysed.

Exhibit IV-1

Western Europe 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	146
DISTRIBUTION	44
TRANSPORTATION	10
UTILITIES	5
BANKING & FINANCE	42
INSURANCE	9
GOVERNMENT	20
SERVICES	71
OTHER/DON'T KNOW	30
TOTAL SAMPLE	**377**

Exhibit IV-2

Western Europe 1991
User Satisfaction with Hardware Service
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	8.9	8.4	0.5
Engineer Skills	9.1	8.7	0.4
Problem Escalation	6.8	7.8	(1.0)
Documentation	6.7	7.6	(0.9)
Remote Diagnostics	7.8	7.7	0.1
AVERAGE	7.9	8.1	(0.2)

Sample Size:	377
Standard Error:	0.1

Exhibit IV-3

Western Europe 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.2	8.4	0.8
Documentation	7.3	7.4	0.1
Software Installation	8.6	8.3	0.3
Provision of Updates	8.5	8.1	0.4
Remote Diagnostics	7.8	7.2	0.6
AVERAGE	8.3	8.0	0.3

Sample Size:	377
Standard Error:	0.1

Exhibit IV-4

Western Europe 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS SOFTWARE	OTHER
2.2	60	10	4	26

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.3	8.9	0.4

Sample Size: 377
Standard Error:
  Failure Rate: 0.15
  Systems Availability: 0.1

Exhibit IV-5

Western Europe 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	4.2	3.3	(0.9)
SYSTEMS SOFTWARE SUPPORT	5.5	5.2	(0.3)

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	5.7	4.1	(1.6)
SYSTEMS SOFTWARE SUPPORT	6.8	5.2	(1.6)

Sample Size: 377
Standard Error: 0.4

Exhibit IV-6

Western Europe 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
94	1	4	3	-

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
85	8	2	1	30	1

Sample Size: 377
Standard Error: 0.08

Note: Multiple Responses Allowed

Exhibit IV-7

Western Europe 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.2	8.6	0.6

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.1	9.2	0.9

Sample Size:	377
Standard Error:	0.1

V Country Market Service Performance Data - Medium Systems

A
Introduction

This section of the study contains analysis of INPUT's 1991 medium systems user survey sample segmented by Western European country market.

Analysis presented is in the form of tabulated data and refers to the user sample in the following country markets:

- Data relating to the Benelux market is provided by Exhibits V-1 to V-7.
- Data relating to the French market is provided by Exhibits V-8 to V-14.
- Data relating to the German market is provided by Exhibits V-15 to V-21.
- Data relating to the Italian market is provided by Exhibits V-22 to V-28.
- Data relating to the Scandinavian market is provided by Exhibits V-29 to V-35.
- Data relating to the Spanish market is provided by Exhibits V-36 to V-42.
- Data relating to the market in the United Kingdom is provided by Exhibits V-43 to V-49.

Data analysed in this chapter of the study is restricted to those country markets in which the user sample size is considered to be statistically valid by INPUT (ie., the user sample is larger than 20).

Each individual exhibit contains an estimate for the standard error of the sample analysed.

Exhibit V-1

Benelux 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	8
DISTRIBUTION	6
TRANSPORTATION	0
UTILITIES	0
BANKING & FINANCE	2
INSURANCE	2
GOVERNMENT	2
SERVICES	5
OTHER/DON'T KNOW	10
TOTAL SAMPLE	35

Exhibit V-2

Benelux 1991
User Satisfaction with Hardware Service
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	8.1	9.2	(1.1)
Engineer Skills	9.2	9.2	0.0
Problem Escalation	6.8	8.6	(1.8)
Documentation	6.3	8.4	(2.1)
Remote Diagnostics	7.8	9.0	(1.2)
AVERAGE	7.7	8.9	(1.2)

Sample Size:	35
Standard Error:	0.35

Exhibit V-3

Benelux 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.1	9.0	0.1
Documentation	6.6	8.2	(1.6)
Software Installation	8.3	8.4	(0.1)
Provision of Updates	7.9	8.4	(0.5)
Remote Diagnostics	7.7	8.5	(0.8)
AVERAGE	7.9	8.5	(0.6)

Sample Size:	35
Standard Error:	0.35

Exhibit V-4

Benelux 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
0.9	67	17	0	16

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.0	9.4	(0.4)

Sample Size: 35
Standard Error:
Failure Rate: 0.45
Systems Availability: 0.35

Exhibit V-5

Benelux 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	6.8	2.9	(3.9)
SYSTEMS SOFTWARE SUPPORT	7.7	4.0	(3.7)

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	6.2	2.6	(3.6)
SYSTEMS SOFTWARE SUPPORT	7.1	4.2	(2.9)

Sample Size:	35
Standard Error:	1.4

Exhibit V-6

Benelux 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
94	-	-	6	-

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
94	9	0	0	49	0

Sample Size:	35
Standard Error:	0.25

Note: Multiple Responses Allowed

Exhibit V-7

Benelux 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
8.9	9.0	(0.1)

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
8.9	8.6	0.6

Sample Size:	35
Standard Error:	0.35

Exhibit V-8

France 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	16
DISTRIBUTION	11
TRANSPORTATION	3
UTILITIES	0
BANKING & FINANCE	5
INSURANCE	1
GOVERNMENT	3
SERVICES	9
OTHER/DON'T KNOW	4
TOTAL SAMPLE	**52**

Exhibit V-9

France 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	9.3	8.5	0.8
Engineer Skills	9.2	8.6	0.6
Problem Escalation	8.9	8.5	0.4
Documentation	6.2	6.3	(0.1)
Remote Diagnostics	8.5	8.1	0.4
AVERAGE	8.5	8.1	0.4

Sample Size: 52
Standard Error: 0.3

Exhibit V-10

France 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.3	8.4	0.9
Documentation	8.0	6.6	1.4
Software Installation	8.1	8.2	(0.1)
Provision of Updates	7.5	7.3	0.2
Remote Diagnostics	8.4	8.0	0.4
AVERAGE	8.3	7.7	0.6

Sample Size: 52
Standard Error: 0.3

Exhibit V-11

France 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
1.8	71	8	8	13

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.4	9.1	0.3

Sample Size: 52
Standard Error:
Failure Rate: 0.35
Systems Availability: 0.3

Exhibit V-12

France 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	3.6	3.8	0.2
SYSTEMS SOFTWARE SUPPORT	6.1	6.8	0.7

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	4.7	4.8	0.1
SYSTEMS SOFTWARE SUPPORT	5.8	5.3	(0.5)

Sample Size: 52
Standard Error: 1.1

Exhibit V-13

France 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
92	4	2	4	0

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
83	4	4	4	60	2

Sample Size:	52
Standard Error:	0.2

Note: Multiple Responses Allowed

Exhibit V-14

France 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.2	8.0	1.2

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
8.4	7.7	0.7

Sample Size:	52
Standard Error:	0.3

Exhibit V-15

Germany 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	30
DISTRIBUTION	1
TRANSPORTATION	0
UTILITIES	0
BANKING & FINANCE	0
INSURANCE	0
GOVERNMENT	1
SERVICES	10
OTHER/DON'T KNOW	0
TOTAL SAMPLE	**42**

Exhibit V-16

Germany 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	9.8	8.2	1.6
Engineer Skills	9.9	8.4	1.5
Problem Escalation	6.8	3.2	3.6
Documentation	7.9	6.7	1.3
Remote Diagnostics	6.6	6.4	0.2
AVERAGE	8.3	7.0	1.3

Sample Size:	42
Standard Error:	0.35

Exhibit V-17

Germany 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.8	7.7	2.1
Documentation	7.8	6.8	1.0
Software Installation	9.3	7.9	1.4
Provision of Updates	9.1	7.8	1.3
Remote Diagnostics	6.2	5.5	0.7
AVERAGE	8.6	7.2	1.4

Sample Size:	42
Standard Error:	0.35

Exhibit V-18

Germany 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
1.6	69	1	1	29

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.9	9.1	0.8

Sample Size: 42
Standard Error:
  Failure Rate: 0.4
  Systems Availability: 0.35

Exhibit V-19

Germany 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	2.8	3.1	0.3
SYSTEMS SOFTWARE SUPPORT	3.8	3.8	0.0

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	4.2	5.7	1.5
SYSTEMS SOFTWARE SUPPORT	6.1	6.5	0.4

Sample Size:	42
Standard Error:	1.2

Exhibit V-20

Germany 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
98	0	2	2	0

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
86	10	0	0	14	0

Sample Size:	42
Standard Error:	0.25

Note: Multiple Responses Allowed

Exhibit V-21

Germany 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.6	7.7	1.9

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.8	7.4	2.4

Sample Size:	42
Standard Error:	0.35

Exhibit V-22

Italy 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	18
DISTRIBUTION	2
TRANSPORTATION	0
UTILITIES	2
BANKING & FINANCE	2
INSURANCE	0
GOVERNMENT	3
SERVICES	6
OTHER/DON'T KNOW	2
TOTAL SAMPLE	**35**

Exhibit V-23

Italy 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	8.7	8.0	0.7
Engineer Skills	8.4	7.9	0.5
Problem Escalation	8.4	7.6	0.8
Documentation	7.4	7.6	(0.2)
Remote Diagnostics	8.0	7.0	1.0
AVERAGE	8.2	7.7	0.5

Sample Size: 35
Standard Error: 0.35

Exhibit V-24

Italy 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.1	7.7	1.4
Documentation	8.7	7.1	1.6
Software Installation	8.6	7.7	0.9
Provision of Updates	8.6	7.4	1.2
Remote Diagnostics	8.0	7.0	1.0
AVERAGE	8.6	7.4	1.2

Sample Size: 35
Standard Error: 0.35

Exhibit V-25

Italy 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
1.3	75	16	0	9

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.1	8.5	0.6

Sample Size: 35
Standard Error:
- Failure Rate: 0.45
- Systems Availability: 0.35

Exhibit V-26

Italy 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	3.8	4.5	0.7
SYSTEMS SOFTWARE SUPPORT	10.6	12.5	1.9

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	4.2	5.1	0.9
SYSTEMS SOFTWARE SUPPORT	7.2	10.0	2.8

Sample Size: 35
Standard Error: 1.4

Exhibit V-27

Italy 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
100	3	0	0	0

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
77	20	3	0	9	0

Sample Size: 35
Standard Error: 0.25

Note: Multiple Responses Allowed

Exhibit V-28

Italy 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
8.9	8.2	0.7

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
8.8	7.4	1.4

Sample Size:	35
Standard Error:	0.35

Exhibit V-29

Scandinavia 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	13
DISTRIBUTION	5
TRANSPORTATION	0
UTILITIES	2
BANKING & FINANCE	5
INSURANCE	2
GOVERNMENT	0
SERVICES	5
OTHER/DON'T KNOW	1
TOTAL SAMPLE	**33**

Exhibit V-30

Scandinavia 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	8.9	8.8	0.1
Engineer Skills	9.4	9.2	0.1
Problem Escalation	5.0	8.9	(4.9)
Documentation	4.6	8.6	(4.0)
Remote Diagnostics	-	-	-
AVERAGE	7.0	9.0	(2.0)

Sample Size:	33
Standard Error:	0.4

Exhibit V-31

Scandinavia 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.3	8.7	0.6
Documentation	4.9	8.1	(3.2)
Software Installation	8.9	8.8	0.1
Provision of Updates	9.0	8.8	0.2
Remote Diagnostics	-	-	-
AVERAGE	8.0	8.6	(0.6)

Sample Size:	33
Standard Error:	0.4

Exhibit V-32

Scandinavia 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
0.8	68	10	9	13

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.4	9.0	0.4

Sample Size: 33

Standard Error:

- Failure Rate: 0.45
- Systems Availability: 0.4

Exhibit V-33

Scandinavia 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	5.6	2.9	(2.7)
SYSTEMS SOFTWARE SUPPORT	5.6	3.3	(2.3)

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	6.8	3.2	(3.6)
SYSTEMS SOFTWARE SUPPORT	7.9	4.1	(3.8)

Sample Size:	33
Standard Error:	1.4

Exhibit V-34

Scandinavia 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
100	0	3	0	0

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
97	0	3	0	6	0

Sample Size:	33
Standard Error:	0.3

Note: Multiple Responses Allowed

Exhibit V-35

Scandinavia 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.5	9.0	0.5

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.7	8.9	0.8

Sample Size:	33
Standard Error:	0.4

Exhibit V-36

Spain 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	15
DISTRIBUTION	7
TRANSPORTATION	1
UTILITIES	0
BANKING & FINANCE	7
INSURANCE	0
GOVERNMENT	0
SERVICES	8
OTHER/DON'T KNOW	0
TOTAL SAMPLE	**38**

Exhibit V-37

Spain 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	8.7	7.4	1.3
Engineer Skills	8.7	7.8	0.9
Problem Escalation	8.1	7.2	0.9
Documentation	8.2	7.3	0.9
Remote Diagnostics	8.0	6.7	1.3
AVERAGE	8.3	7.3	1.0

Sample Size: 38
Standard Error: 0.35

Exhibit V-38

Spain 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	8.7	7.5	1.2
Documentation	8.3	7.2	1.1
Software Installation	8.2	7.1	1.1
Provision of Updates	7.9	6.8	1.1
Remote Diagnostics	8.1	6.7	1.4
AVERAGE	8.2	7.1	1.1

Sample Size: 38
Standard Error: 0.35

Exhibit V-39

Spain 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
4.8	54	6	3	37

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.0	8.0	1.0

Sample Size: 38
Standard Error:
Failure Rate: 0.45
Systems Availability: 0.35

Exhibit V-40

Spain 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	3.7	4.7	1.0
SYSTEMS SOFTWARE SUPPORT	4.5	7.3	2.8

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	3.1	5.0	1.9
SYSTEMS SOFTWARE SUPPORT	2.8	3.9	1.1

Sample Size: 38
Standard Error: 1.3

[illegible]

Exhibit V-41

Spain 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
97	3	8	8	0

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
74	13	0	0	53	0

Sample Size: 38
Standard Error: 0.25

Note: Multiple Responses Allowed

Exhibit V-42

Spain 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
8.9	7.8	1.1

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
8.7	7.3	1.4

Sample Size:	38
Standard Error:	0.35

Exhibit V-43

United Kingdom 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	40
DISTRIBUTION	11
TRANSPORTATION	5
UTILITIES	1
BANKING & FINANCE	19
INSURANCE	3
GOVERNMENT	10
SERVICES	21
OTHER/DON'T KNOW	13
TOTAL SAMPLE	**123**

Exhibit V-44

United Kingdom 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	8.5	8.7	(0.2)
Engineer Skills	9.0	9.2	(0.2)
Problem Escalation	5.6	8.5	(2.9)
Documentation	6.7	8.1	(1.4)
Remote Diagnostics	7.8	9.0	(1.2)
AVERAGE	7.5	8.7	(1.2)

Sample Size:	123
Standard Error:	0.2

Exhibit V-45

United Kingdom 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.0	8.9	0.1
Documentation	6.8	7.8	(1.0)
Software Installation	8.9	9.0	(0.1)
Provision of Updates	8.6	8.9	(0.3)
Remote Diagnostics	7.7	8.4	(0.7)
AVERAGE	8.3	8.6	(0.3)

Sample Size:	123
Standard Error:	0.2

Exhibit V-46

United Kingdom 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
3.5	46	10	6	38

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.2	9.0	0.2

Sample Size: 123
Standard Error:
    Failure Rate: 0.25
    Systems Availability: 0.2

Exhibit V-47

United Kingdom 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	4.5	2.3	(2.2)
SYSTEMS SOFTWARE SUPPORT	4.6	3.0	(1.6)

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	7.6	3.0	(4.6)
SYSTEMS SOFTWARE SUPPORT	8.7	4.1	(4.6)

Sample Size:	123
Standard Error:	0.7

Exhibit V-48

United Kingdom 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
88	1	8	2	1

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
86	3	0	1	22	3

Sample Size:	123
Standard Error:	0.15

Note: Multiple Responses Allowed

Exhibit V-49

United Kingdom 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.3	9.1	0.2

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.2	8.8	0.4

Sample Size:	123
Standard Error:	0.2

VI Vendor Service Performance Data - Medium Systems

A
Introduction

Data presented in this section of the study provides a measure of the service performance of key mid-range systems vendors. Data analysed forms part of INPUT's 1991 computer user survey and represents the results of interviews with 377 mid-range computer systems users.

Analysis is presented in the form of tabulated data and refers to the user base of the following vendors:

- Data relating to the responses of the Bull user base is presented by Exhibits VI-1 to VI-7.
- Data relating to the responses of the Digital user base is presented by Exhibits VI-8 to VI-14.
- Data relating to the responses of the Hewlett-Packard user base is presented by Exhibits VI-15 to VI-21.
- Data relating to the responses of the IBM user base is presented by Exhibits VI-22 to VI-28.
- Data relating to the responses of the ICL user base is presented by Exhibits VI-29 to VI-35.
- Data relating to the responses of the NCR user base is presented by Exhibits VI-36 to VI-42.
- Data relating to the responses of the Stratus user base is presented by Exhibits VI-43 to VI-49.
- Data relating to the responses of the Unisys user base is presented by Exhibits VI-50 to VI-56.

Data analysed in this chapter of the study is restricted to those vendor user samples that are considered by INPUT to provide a statistically valid sample size (ie the user sample is larger than 20).

Each individual exhibit contains an estimate for the standard error of the sample analysed.

Samples on which analysis of user responses is based relates primarily to the service provided by vendors on the following models of computer systems.

- Bull; DPS 7 and DPS 7000 series
- Digital; VAX 6XXX, VAX 11-730, VAX 11-740, VAX 11-750
- Hewlett-Packard; 3000 series, 925, 935, 960
- IBM; AS400, 43 XX, S38
- ICL; ME29 up to level 60, S39 up to level 35, DRS 400, DRS 6000
- NCR; 9000 series, 32/600, 32/500
- Stratus; XA 2000 series, XA 250, XA 400
- Unisys; 2200/200, 2IV User Satisfaction in Western Europe 200/400, A10, A12.

Exhibit VI-1

Bull 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	14
DISTRIBUTION	6
TRANSPORTATION	0
UTILITIES	1
BANKING & FINANCE	0
INSURANCE	2
GOVERNMENT	4
SERVICES	0
OTHER/DON'T KNOW	0
TOTAL SAMPLE	**27**

Exhibit VI-2

Bull 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	8.5	8.2	0.3
Engineer Skills	9.1	8.5	0.6
Problem Escalation	6.9	7.8	(0.9)
Documentation	6.8	7.5	(0.7)
Remote Diagnostics	8.4	7.4	1.0
AVERAGE	7.9	8.0	(0.1)

Sample Size:	27
Standard Error:	0.4

Exhibit VI-3

Bull 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.3	8.2	1.1
Documentation	7.6	7.3	0.3
Software Installation	8.5	8.0	0.5
Provision of Updates	8.4	7.7	0.7
Remote Diagnostics	7.9	5.7	2.2
AVERAGE	8.4	7.6	0.8

Sample Size:	27
Standard Error:	0.4

Exhibit VI-4

Bull 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
1.3	67	9	0	24

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.3	8.6	0.6

Sample Size: 27
Standard Error:
Failure Rate: 0.5
Systems Availability: 0.4

Exhibit VI-5

Bull 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	3.2	3.3	0.1
SYSTEMS SOFTWARE SUPPORT	6.1	4.3	(1.8)

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	5.3	3.3	(2.0)
SYSTEMS SOFTWARE SUPPORT	6.1	4.2	(1.9)

Sample Size:	27
Standard Error:	1.5

Exhibit VI-6

Bull 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
100	0	0	0	0

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
93	4	4	0	37	0

Sample Size: 27
Standard Error: 0.3

Note: Multiple Responses Allowed

Exhibit VI-7

Bull 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.1	8.3	0.8

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.1	8.2	0.9

Sample Size:	27
Standard Error:	0.4

Exhibit VI-8

Digital 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	9
DISTRIBUTION	3
TRANSPORTATION	1
UTILITIES	3
BANKING & FINANCE	6
INSURANCE	0
GOVERNMENT	2
SERVICES	4
OTHER/DON'T KNOW	2
TOTAL SAMPLE	**30**

Exhibit VI-9

Digital 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	8.9	8.6	0.3
Engineer Skills	9.1	8.9	0.2
Problem Escalation	6.1	7.5	(1.4)
Documentation	6.2	7.8	(1.6)
Remote Diagnostics	6.6	5.5	1.0
AVERAGE	7.5	7.9	(0.4)

Sample Size: 30
Standard Error: 0.4

Exhibit VI-10

Digital 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.0	8.3	0.7
Documentation	6.3	7.7	(1.4)
Software Installation	8.6	8.3	0.3
Provision of Updates	8.4	8.5	(0.1)
Remote Diagnostics	6.5	5.5	1.0
AVERAGE	7.9	7.9	0.0

Sample Size: 30
Standard Error: 0.4

Exhibit VI-11

Digital 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
2.5	71	7	3	19

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.5	8.8	0.8

Sample Size: 30
Standard Error:
    Failure Rate: 0.5
    Systems Availability: 0.4

Exhibit VI-12

Digital 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	4.0	2.7	(1.3)
SYSTEMS SOFTWARE SUPPORT	4.9	3.6	(1.3)

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	6.3	4.1	(2.2)
SYSTEMS SOFTWARE SUPPORT	6.6	4.3	(2.3)

Sample Size:	30
Standard Error:	1.5

Exhibit VI-13

Digital 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
87	0	7	7	0

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
83	10	0	0	23	0

Sample Size:	30
Standard Error:	0.3

Note: Multiple Responses Allowed

Exhibit VI-14

Digital 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.4	8.5	0.9

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.6	8.5	1.1

Sample Size: 30
Standard Error: 0.4

Exhibit VI-15

Hewlett-Packard 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	30
DISTRIBUTION	4
TRANSPORTATION	0
UTILITIES	0
BANKING & FINANCE	1
INSURANCE	1
GOVERNMENT	1
SERVICES	10
OTHER/DON'T KNOW	3
TOTAL SAMPLE	**50**

Exhibit VI-16

Hewlett-Packard 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	9.1	8.7	0.4
Engineer Skills	9.2	8.7	0.5
Problem Escalation	6.2	7.6	(1.4)
Documentation	6.5	7.6	(1.1)
Remote Diagnostics	7.8	7.6	0.2
AVERAGE	7.8	8.1	(0.3)

Sample Size:	50
Standard Error:	0.3

Exhibit VI-17

Hewlett-Packard 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.5	8.6	0.9
Documentation	7.6	7.6	0.0
Software Installation	8.5	8.4	0.1
Provision of Updates	8.4	7.9	0.5
Remote Diagnostics	8.1	7.7	0.4
AVERAGE	8.5	8.1	0.4

Sample Size:	50
Standard Error:	0.3

Exhibit VI-18

Hewlett-Packard 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
1.4	69	9	5	17

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.4	9.1	0.3

Sample Size: 50
Standard Error:
    Failure Rate: 0.4
    Systems Availability: 0.3

Exhibit VI-19

Hewlett-Packard 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	4.5	3.6	(0.9)
SYSTEMS SOFTWARE SUPPORT	6.2	6.9	0.7

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	6.3	4.3	(2.0)
SYSTEMS SOFTWARE SUPPORT	8.1	6.3	(1.8)

Sample Size:	50
Standard Error:	1.1

Exhibit VI-20

Hewlett-Packard 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
96	2	2	6	0

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
70	18	0	0	32	0

Sample Size:	50
Standard Error:	0.25

Note: Multiple Responses Allowed

Exhibit VI-21

Hewlett-Packard 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.4	8.7	0.7

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.2	8.0	1.2

Sample Size:	50
Standard Error:	0.3

Exhibit VI-22

IBM 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	32
DISTRIBUTION	12
TRANSPORTATION	2
UTILITIES	1
BANKING & FINANCE	11
INSURANCE	0
GOVERNMENT	3
SERVICES	13
OTHER/DON'T KNOW	3
TOTAL SAMPLE	**77**

Exhibit VI-23

IBM 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	9.0	8.5	0.5
Engineer Skills	9.1	8.7	0.4
Problem Escalation	7.5	8.0	(0.5)
Documentation	7.2	7.6	(0.4)
Remote Diagnostics	7.9	6.9	1.0
AVERAGE	8.2	8.0	0.2

Sample Size:	77
Standard Error:	0.25

Exhibit VI-24

IBM 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.1	7.8	1.3
Documentation	7.6	7.3	0.3
Software Installation	8.5	7.7	0.8
Provision of Updates	8.3	7.4	0.9
Remote Diagnostics	8.0	6.6	1.4
AVERAGE	8.3	7.4	0.9

Sample Size:	77
Standard Error:	0.25

Exhibit VI-25

IBM 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
2.3	65	7	0	28

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.4	8.9	0.5

Sample Size: 77
Standard Error:
Failure Rate: 0.3
Systems Availability: 0.25

Exhibit VI-26

IBM 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	3.4	2.8	(0.6)
SYSTEMS SOFTWARE SUPPORT	5.2	5.6	0.4

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	4.7	3.9	(0.8)
SYSTEMS SOFTWARE SUPPORT	5.6	4.8	(0.8)

Sample Size:	77
Standard Error:	1.0

Exhibit VI-27

IBM 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
92	1	10	1	0

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
90	7	1	3	26	1

Sample Size: 77
Standard Error: 0.2

Note: Multiple Responses Allowed

Exhibit VI-28

IBM 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.2	8.3	0.9

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.1	7.8	1.3

Sample Size:	77
Standard Error:	0.25

Exhibit VI-29

ICL 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	15
DISTRIBUTION	12
TRANSPORTATION	1
UTILITIES	0
BANKING & FINANCE	1
INSURANCE	1
GOVERNMENT	5
SERVICES	11
OTHER/DON'T KNOW	3
TOTAL SAMPLE	**49**

Exhibit VI-30

ICL 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	8.9	8.5	0.4
Engineer Skills	9.3	8.7	0.6
Problem Escalation	6.5	8.3	(1.8)
Documentation	5.5	6.9	(1.4)
Remote Diagnostics	8.6	8.0	0.6
AVERAGE	7.7	8.2	(0.5)

Sample Size:	49
Standard Error:	0.3

Exhibit VI-31

ICL 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.3	8.7	0.6
Documentation	6.9	6.5	0.4
Software Installation	8.8	8.4	0.4
Provision of Updates	8.2	8.1	0.1
Remote Diagnostics	8.0	7.4	0.6
AVERAGE	8.3	7.9	0.4

Sample Size:	49
Standard Error:	0.3

Exhibit VI-32

ICL 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
1.9	77	5	5	13

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.3	9.0	0.3

Sample Size: 49
Standard Error:
Failure Rate: 0.4
Systems Availability: 0.3

Exhibit VI-33

ICL 1991
Service Response and Repair/Fix Time Performance Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	4.2	3.1	(1.1)
SYSTEMS SOFTWARE SUPPORT	5.8	4.5	(1.3)

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	5.3	3.5	(1.8)
SYSTEMS SOFTWARE SUPPORT	6.2	4.5	(1.7)

Sample Size: 49
Standard Error: 1.1

Exhibit VI-34

ICL 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
100	0	0	2	0

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
94	4	2	0	27	0

Sample Size:	49
Standard Error:	0.25

Note: Multiple Responses Allowed

Exhibit VI-35

ICL 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.1	8.5	0.6

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
8.9	8.2	0.7

Sample Size:	49
Standard Error:	0.3

Exhibit VI-36

NCR 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	14
DISTRIBUTION	2
TRANSPORTATION	3
UTILITIES	0
BANKING & FINANCE	1
INSURANCE	0
GOVERNMENT	1
SERVICES	8
OTHER/DON'T KNOW	0
TOTAL SAMPLE	29

Exhibit VI-37

NCR 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	9.3	8.1	1.2
Engineer Skills	9.5	8.7	0.8
Problem Escalation	6.3	6.0	0.3
Documentation	7.7	7.3	0.4
Remote Diagnostics	7.6	7.0	0.6
AVERAGE	8.2	7.6	0.6

Sample Size:	29
Standard Error:	0.4

Exhibit VI-38

NCR 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.2	8.2	1.0
Documentation	7.6	7.7	(0.1)
Software Installation	8.9	7.8	1.1
Provision of Updates	8.9	7.5	1.4
Remote Diagnostics	7.8	6.4	1.4
AVERAGE	8.5	7.6	0.9

Sample Size:	29
Standard Error:	0.4

Exhibit VI-39

NCR 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
1.9	39	14	6	41

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.4	8.7	0.8

Sample Size: 29
Standard Error:
Failure Rate: 0.5
Systems Availability: 0.4

Exhibit VI-40

NCR 1991
Service Response and Repair/Fix Time Performance Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	4.1	4.3	0.2
SYSTEMS SOFTWARE SUPPORT	4.7	4.2	(0.5)

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	5.8	5.6	(0.2)
SYSTEMS SOFTWARE SUPPORT	6.3	6.4	0.1

Sample Size:	29
Standard Error:	1.5

Exhibit VI-41

NCR 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
96	4	0	0	0

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
67	7	7	3	38	3

Sample Size: 29
Standard Error: 0.3

Note: Multiple Responses Allowed

Exhibit VI-42

NCR 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.3	8.3	1.0

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.3	8.0	1.3

Sample Size:	29
Standard Error:	0.4

Exhibit VI-43

Stratus 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	5
DISTRIBUTION	3
TRANSPORTATION	1
UTILITIES	0
BANKING & FINANCE	19
INSURANCE	1
GOVERNMENT	1
SERVICES	10
OTHER/DON'T KNOW	13
TOTAL SAMPLE	**53**

Exhibit VI-44

Stratus 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	8.2	9.4	(1.2)
Engineer Skills	8.9	9.4	(0.5)
Problem Escalation	6.4	8.9	(2.5)
Documentation	7.1	8.4	(1.3)
Remote Diagnostics	8.0	9.5	(1.5)
AVERAGE	7.7	9.1	(1.4)

Sample Size:	53
Standard Error:	0.3

Exhibit VI-45

Stratus 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.0	9.3	(0.3)
Documentation	7.0	8.2	(1.2)
Software Installation	8.6	9.2	(0.6)
Provision of Updates	8.7	9.2	(0.5)
Remote Diagnostics	8.1	9.3	(1.2)
AVERAGE	8.3	9.1	(0.8)

Sample Size:	53
Standard Error:	0.3

Exhibit VI-46

Stratus 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
1.4	32	20	15	33

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.0	9.6	0.6

Sample Size: 53
Standard Error:
Failure Rate: 0.4
Systems Availability: 0.3

Exhibit VI-47

Stratus 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	6.3	3.1	(3.2)
SYSTEMS SOFTWARE SUPPORT	6.4	3.7	(2.7)

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	6.5	2.7	(3.8)
SYSTEMS SOFTWARE SUPPORT	7.6	2.7	(4.9)

Sample Size:	53
Standard Error:	1.1

Exhibit VI-48

Stratus 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
87	4	2	8	0

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
85	8	2	2	30	2

Sample Size:	53
Standard Error:	0.2

Note: Multiple Responses Allowed

Exhibit VI-49

Stratus 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.0	9.4	(0.4)

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
8.9	9.1	(0.2)

Sample Size:	53
Standard Error:	0.3

Exhibit VI-50

Unisys 1991
Sample Distribution by Industry Sector
Medium Systems

INDUSTRY SECTOR	NUMBER OF RESPONDENTS
MANUFACTURING	26
DISTRIBUTION	2
TRANSPORTATION	2
UTILITIES	0
BANKING & FINANCE	3
INSURANCE	3
GOVERNMENT	2
SERVICES	13
OTHER/DON'T KNOW	4
TOTAL SAMPLE	55

Exhibit VI-51

Unisys 1991
User Satisfaction with Hardware Services
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Spares Availability	9.0	7.6	1.4
Engineer Skills	9.2	8.2	1.0
Problem Escalation	7.4	7.1	0.3
Documentation	6.7	7.5	(0.8)
Remote Diagnostics	7.0	7.4	(0.4)
AVERAGE	8.0	7.6	0.4

Sample Size:	55
Standard Error:	0.3

Exhibit VI-52

Unisys 1991
User Satisfaction with Systems Software Support
Medium Systems

SERVICE ASPECT	IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
Engineer Skills	9.3	8.1	1.2
Documentation	7.4	7.4	0.0
Software Installation	8.8	8.4	0.4
Provision of Updates	8.8	8.4	0.4
Remote Diagnostics	7.7	6.8	0.9
AVERAGE	8.5	8.0	0.5

Sample Size:	55
Standard Error:	0.3

Exhibit VI-53

Unisys 1991
System Performance Data
Medium Systems

SYSTEM FAILURE RATES				
FAILURES PER ANNUM	CAUSE OF FAILURE (PERCENT)			
	HARDWARE	SYSTEMS SOFTWARE	APPLICATIONS	OTHER
2.9	48	13	5	34

SATISFACTION WITH SYSTEMS AVAILABILITY		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.3	8.5	0.8

Sample Size: 55
Standard Error:
- Failure Rate: 0.4
- Systems Availability: 0.3

Exhibit VI-54

Unisys 1991
Service Response and Repair/Fix Time Performance
Medium Systems

RESPONSE TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	3.7	2.7	(1.0)
SYSTEMS SOFTWARE SUPPORT	4.4	4.4	0.0

REPAIR/FIX TIME (HOURS)			
SERVICE ASPECT	ACCEPTABLE TIME	EXPERIENCED TIME	DIFFERENCE
HARDWARE SERVICE	5.9	4.2	(1.7)
SYSTEMS SOFTWARE SUPPORT	8.2	7.0	(1.2)

Sample Size:	55
Standard Error:	1.1

Exhibit VI-55

Unisys 1991
Service Provider Data
Medium Systems

PERCENT HARDWARE SERVICE PROVIDED BY				
EQUIPMENT MANUFACTURER	DEALER/ DISTRIBUTOR	INDEPENDENT MAINTAINER	IN-HOUSE RESOURCES	OTHER
95	0	6	0	2

PERCENT SYSTEMS SOFTWARE SUPPORT PROVIDED BY					
EQUIPMENT MANUFACTURER	SOFTWARE HOUSE	SOFTWARE PRODUCT VENDOR	VAR	IN-HOUSE RESOURCES	OTHER
93	4	0	0	31	4

Sample Size:	55
Standard Error:	0.2

Note: Multiple Responses Allowed

Exhibit VI-56

Unisys 1991
Users Views on Current Service Performance
Medium Systems

HARDWARE SERVICE		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.2	8.4	0.8

SYSTEMS SOFTWARE SUPPORT		
IMPORTANCE RATING	SATISFACTION RATING	SATISFACTION INDEX
9.3	8.0	1.3

Sample Size:	55
Standard Error:	0.3

Appendix A

INPUT 1991 Computer User Survey Questionnaire

A General

1. What is the make and model number of the main computer on your site and how many do you have?

- Make ☐
- Model ☐ (CRITICAL INFORMATION)
- Units ☐

2. Are you the person who is knowledgeable on the servicing of this system?

- ☐ Yes ☐ No

(If not then obtain the name of the correct person and start again.)

Name of person responsible ____________________

3. Do you have another system? What is the make and model number of that system and how many do you have?

- Make ☐
- Model ☐ (CRITICAL INFORMATION)
- Units ☐

All of the following questions that I am going to ask you are related to your ____________ system. (Write in system type.)

(To confirm, read out the make and model number.)

4. So that we can ensure that we get a proper cross- section of industry and commerce, can you tell me, what is the main business sector of your company?

(Read out the list - to allow for best choice. Then circle appropriate answer.)

Business sector

•	Manufacturing	1
•	Distribution	1
•	Transportation	1
•	Utilities	1
•	Banking and Finance	1
•	Insurance	1
•	Government (including education)	1
•	Services	1
•	Other/Don't Know	1

B Service Vendor Selection

I would like to ask you some questions relating to the vendor that services your computer system.

5. Could you please rate the **importance** of the following criteria in selecting your service vendor, on a scale of 0 to 10 (0 = low, 10 = high).

	Criteria	**Rating**
a)	Price	☐
b)	Quality of service	☐
c)	Guaranteed system availability level	☐
d)	Guaranteed availability of spare parts	☐
e)	Technical expertise	☐
f)	Fast response time	☐
g)	Availability of software support	☐
h)	Ability to provide other services	☐
i)	Contract flexibility	☐
j)	Ability to service other products	☐
k)	Vendor reputation	☐

6a) Would you please tell me who services your computer system hardware? (Remind the user _________ System)

(Please circle appropriate vendor type; multiple answers are allowed.)

• Manufacturer	1
• Dealer/distributor	1
• Third party maintenance company	1
• Own company	1
• Other	1

(If the respondent answered **YES** to third-party maintenance, ask the following question. If not, go to question 7.)

b) I notice that your system, or part of it, is serviced by a third-party maintenance company. Could you tell me the reason why you use third-party maintenance?

(Please circle appropriate answer; multiple answers allowed.)

• Lower cost	1
• Local service	1
• Single-source service	1
• TPM service higher quality	1
• More flexible contract	1
• Other/Don't know	9

7a) I notice that you **DO NOT** use a third party maintenance company; is there a reason for this?

(Please circle appropriate answer; multiple answers allowed.)

•	Satisfied with manufacturer	1
•	Manufacturer has an advantage	1
•	TPM cannot support software	1
•	Tied to manufacturer with contract	1
•	Fear of system supplier response	1
•	Considered and rejected TPM	1
•	TPM financial weakness	1
•	Unaware of TPM	1
•	Other/Don't know	9

b) Assuming you were approached by a TPM company, at what level of price reduction would you consider using a TPM vendor to service your computer hardware?

(Please circle appropriate answer. Only **ONE** answer allowed.)

•	1% - 10%	1
•	11% - 20%	1
•	21% - 30%	1
•	31% - 40%	1
•	41% - 50%	1
•	50% +	1
•	Unwilling at any price	1
•	Don't know/other	9

8. How important is it that your service vendor **COMMUNICATES** with you regularly and effectively to advise you of, for example:

- The status of your system >
- Possible problems >
- Repair plans >
- Availability of spare parts >
- Routine visits >
- Hardware and software changes >

INTERVIEWER

PROMPTS

Could you please provide an **IMPORTANCE** and **SATISFACTION** rating on a scale of 0 to 10, where 0 is of no importance or indicates total dissatisfaction, and 10 is at top importance or indicates that you are fully satisfied.

- Importance ☐
- Satisfaction ☐

9a) Would you prefer all hardware maintenance and systems software support to be provided by one service vendor at each site? If yes, what would your interest level be on a scale of 0 to 10 (0 = Low, 10 = High)

(Circle answer)

• Yes	1
• No	1
• Don't know	9
• Level of interest	☐

(If the respondent answered YES, ask:)

b) Who would you prefer that vendor to be?

(Please circle appropriate answer; multiple answers allowed.)

• The manufacturer of your main hardware	1
• Dealer/distributor/VAR	1
• TPM company	1
• One of your hardware manufacturers	1
• Don't know/other	9

Note: VAR is a Value Added Reseller.

C Hardware Maintenance

I would now like to ask you some questions about the **HARDWARE MAINTENANCE** of your computer system. (Reaffirm the system type ....)

Some of the questions are scaled with ratings from 0 to 10. Zero (0) represents zero importance or satisfaction, 5 is average, and 10 represents top importance or full satisfaction.

10. What is you rating for the importance of hardware maintenance to your business and how satisfied are you with your service vendor's performance.

    - Importance rating ☐
    - Satisfaction rating ☐

11. If we define **SYSTEMS AVAILABILITY** as the percentage of your normal working hours that the system is operational (disregarding non-critical peripheral breaks), what percentage has that been for your system over the last twelve months?

    - Percentage ☐ %

12. How many times each year does your system fail completely for a period of greater than one hour?

- Failures per year ☐

And what percentage of these system failures are due to:

Hardware ☐ %

Systems software ☐ %

Applications software ☐ %

Other (ie, power failure) ☐ %

(Please check that percentages add up to 100.)

13. What is your rating for the importance of **SYSTEMS AVAILABILITY** (scale 0-10), and what is your level of satisfaction?

- Importance rating ☐
- Satisfaction rating ☐

14. Defining **HARDWARE RESPONSE TIME** as the time it takes between reporting a fault and the arrival of the service engineer on site (in working hours, that is to say 8 hours = 1 working day), what response time (in hours) do you find acceptable and what did you actually experience as an average over the last twelve months?

- Acceptable ☐ Hours
- Experienced ☐ Hours

15. If **HARDWARE REPAIR TIME** is defined as the time taken to get the system fully operational from the time the engineer arrives on site, then what time do you find acceptable (in working hours) and what time did you experience in the last twelve months?

(Note: 8 hours = 1 working day/shift)

• Acceptable		Hours
• Experienced		Hours

16. I would now like go through a list of five aspects of hardware maintenance and ask you to give both an **IMPORTANCE** and a **SATISFACTION** rating for each (scale 0-10, 0 = Low, 10 = High).

	Importance	Satisfaction
• Spares availability		
• Engineer skills		
• Problem escalation		
• Documentation		
• Remote diagnostics		

17. How important is it that your system supplier provides a hardware **CONSULTANCY/PLANNING** service to support your operations and how satisfied are you with the service provided? (Scale 0-10, 0 = Low, 10 = High).

• Importance	
• Satisfaction	

18. If possible, I would like you to provide some information on **HARDWARE MAINTENANCE PRICING.**

a) What percentage price **INCREASE** or **DECREASE** did you pay for hardware maintenance in the year 1990?

- Increase ☐ %
- Decrease ☐ %
- No change 1 (circle)

b) What do you expect the **PRICE CHANGES FOR HARDWARE MAINTENANCE** to be in the future, in percentage terms per annum?

- Increase ☐ %
- Decrease ☐ %
- No change 1 (circle)

c) How important do you rate **HARDWARE MAINTENANCE PRICING** and how satisfied are you with the price you currently pay? (scale 0 - 10, 0 = Low, 10 = High)

- Importance rating ☐
- Satisfaction rating ☐

19. Which type of **HARDWARE MAINTENANCE CONTRACT** do you currently have on the main part of your system?

(Please circle appropriate answer; only ONE answer allowed.)

- Warranty 1
- Three-year 1
- One-year 1
- Time and materials 1
- None 1

D Systems Software Support

I would like to ask you some questions relating to the service you get from your software support vendor.

These questions relate to **SYSTEMS SOFTWARE** - Not Applications.

As before, some of the questions are scaled with ratings from 0 to 10. Zero (0) represents zero importance or satisfaction, 5 is average and 10 is top importance or full satisfaction.

20. Who supports your **SYSTEMS SOFTWARE**?

(Please circle appropriate answer; multiple answers allowed.)

• Hardware Manufacturer	1
• Software House	1
• Software Product vendor	1
• Value-added Reseller (VAR)	1
• In-house	1
• Don't know/other	9

21. What is your rating for the **IMPORTANCE** of systems software support to your business and what is your satisfaction with your vendors systems support activities? (Scale 0-10)

- Importance rating ☐
- Satisfaction Rating ☐

22. What percentage of systems software problems are **SOLVED BY TELEPHONE**, and how long does this take in elapsed time from the time it is alerted to the service engineer?

- Solved by phone ☐ %
- Elapsed time ☐ Hours

23. For those problems **NOT** possible to solve over the telephone, what **RESPONSE TIME** would you find acceptable, and what time (on average and in working hours) have you experienced over the last twelve months? (Take RESPONSE TIME to mean from the time the problem is reported to the arrival of the engineer on site.)

- Acceptable ☐ **Hours**
- Experienced ☐ **Hours**

24. If **FIX TIME** is defined as the time taken to get the system fully operational from the arrival of the engineer on site, then what time (in working hours) do you find acceptable, and what did you experience over the last twelve months?

- Acceptable ☐ **Hours**
- Experienced ☐ **Hours**

25. I would now like to go through a list of five aspects of **SYSTEMS SOFTWARE SUPPORT** and ask you to give an **IMPORTANCE** and a **SATISFACTION** rating for each. (Scale 0 - 10, 10=High)

	Importance	Satisfaction
• Engineer Skills	☐	☐
• Documentation	☐	☐
• Software Installations	☐	☐
• Provision of Updates	☐	☐
• Remote diagnostics	☐	☐

26. How important is it that your system supplier provides a systems software **CONSULTANCY/PLANNING** service to support your operations and how satisfied are you with the service provided? (Scale 0 - 10)

- Importance ☐
- Satisfaction ☐

27. If possible I would like you to provide some information on **SYSTEMS SOFTWARE SUPPORT PRICING.**

a) What **PERCENTAGE PRICE INCREASE** or decrease did you pay for systems software support in the year 1990?

- Increase ☐ %
- Decrease ☐ %
- No change 1 (circle)

b) What do you expect the **PRICE CHANGES FOR SYSTEMS SOFTWARE SUPPORT** to be in the future, in percentage terms per annum?

- Increase ☐ %
- Decrease ☐ %
- No change 1 (circle)

c) How important do you rate **SYSTEMS SOFTWARE SUPPORT PRICING** and how satisfied are you with the price you currently pay? (Scale 0 - 10, 10=High)

- Importance Rating ☐
- Satisfaction Rating ☐

28. Which type of **SYSTEMS SOFTWARE SUPPORT CONTRACT** do you currently have?

(Please circle appropriate answer. Only ONE answer allowed.)

• Support included in software license fee	1
• Three-year contract	1
• One-year contract	1
• Ad hoc	1
• None	1

E Other Services

29. I am particularly interested in obtaining your views on other services or modified current service offerings that your service suppliers could provide that would help to improve the running of your computer systems.

Could you say which of the following services your service vendor is **CURRENTLY CONTRACTED** to supply and which you would like your service vendor to provide? Also, could you give a level of interest rating against each in the range 0 to 10 where 0 = no interest, 5 = average interest and 10 = must have.
(Please circle appropriate answer and give LOI rating.)

	Currently Contracted	**Require**	**LO1**
• Configuration Planning	1	1	☐
• Capacity Planning	1	1	☐
• Environmental Planning	1	1	☐
• Cabling	1	1	☐
• Software Evaluation	1	1	☐
• Consultancy	1	1	☐
• Network Planning	1	1	☐
• Network Management	1	1	☐
• Disaster Recovery	1	1	☐
• Facilities Management	1	1	☐
• Problems Management	1	1	☐
• Applications Software Support	1	1	☐

F Networks

30. a) Does your company currently have a network installed. (Please circle appropriate answers).

• Yes	1
• No	1

b) If you do not currently have a network installed do you intent to install one in the future, and in what time frame will this most likely take place (please circle appropriate answers).

• Intent:	Yes	1
	No	1
• Time Frame:	1 year	1
	2 years	1
	3 years	1
	4 years	1
	5 years	1

If the respondent answered YES to question 30 a) proceed, if not thank them for their time and conclude the interview.

The following section of the questionnaire applies to **CURRENT USERS OF NETWORKS ONLY.** Are you the correct person to answer these questions or should we approach one of your colleges?

Name of colleague: ______________________________

Telephone No: ____________________

31. a) Which type of network do you have installed? (Please circle appropriate answers multiple answers are allowed).

LAN (Local area network)	1
WAN (Wide area network)	1
Propriety (ie IBM, DEC)	1
Standard open network	1

b) How many **TERMINALS** are connected to your network and how many **USERS** do you have. (Please circle appropriate answer.)

No of Terminals		**No of Users**
• 1-10	1	1
• 11-100	1	1
• 101-500	1	1
• 501-1,000	1	1
• 1,000+	1	1

c) Which type of **OPERATING SYSTEMS SOFTWARE** does your network use? (Please circle appropriate answers, multiple answers are allowed.)

Novell	1
3 Com	1
Propriety (IBM, DEC etc)	1
Other/don't know	1

32. **WHO SERVICES** the various parts of your network? (Please circle appropriate answers.)

a) Network Equipment (multiple answers allowed)

Service Vendor	**File Server Equipment**	**Terminals**	**Communications Equipment**
Hardware Manufacture	1	1	1
TPM	1	1	1
Dealer/ Distributor	1	1	1
Own Company	1	1	1
Other/ Don't Know	1	1	1

b) Network Software (multiple answers allowed)

Service Vendors	Operating Systems Software	Applications Software
Hardware Manufacturer	1	1
Software Product Vendor	1	1
Value-Added Reseller (VAR)	1	1
Own Company	1	1
Other/Don't Know	1	1

c) Who **MANAGES** your network operations?

• Own Company	1
• Hardware Manufacturer	1
• Independent Service Vendor	1
• Other/don't know	1

33. I would now like to go through a list of five aspects of network service or performance and ask you to give both an **IMPORTANCE** and **SATISFACTION** rating for each on a scale of 0-10 (10 = High).

	Importance	Satisfaction
• Network Equipment Maintenance	☐	☐
• Network Operating Systems Software Support	☐	☐
• Network Applications Installations	☐	☐
• Network Up-time	☐	☐
• Network User Response Time	☐	☐

34. What sort of **APPLICATION** is your network used for and what is the extent of the network? (Please circle appropriate answers, multiple answers allowed.)

• Electronic Mailing/Messaging	1
• Financial Transactions	1
• Video Text	1
• Voice Communications	1
• On Line Transaction Processing (OLTP)	1
• File Transfer	1
• Access to Managed Network Services (MNS)	1
• Inter Company Level	1
• Pan European Level	1
• Global Level	1
• Other	1

These last questions complete the questionnaire. I would like to thank you on behalf of INPUT for helping us to complete this survey. To express our appreciation for your time, we will be sending you a "thank you" package.

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