Report Quality Evaluation

To our clients:
To ensure that the highest standards of report quality are maintained, INPUT would appreciate your assessment of this report. Please take a moment to provide your evaluation of the usefulness and quality of this study. When complete, simply fold, staple, and drop in the post.

Thank You.

1. Report title: ***User Satisfaction with Vendor Customer Services—Medium Systems, Western Europe, 1990*** (CEUMO)

2. Please indicate your reason for reading this report:
   - ☐ Required reading
   - ☐ Area of high interest
   - ☐ Area of general interest
   - ☐ New product development
   - ☐ Business/market planning
   - ☐ Product planning
   - ☐ Future purchase decision
   - ☐ Systems planning
   - ☐ Other ____________________

3. Please indicate extent report used and overall usefulness:

	Extent		**Usefulness (1=Low, 5=High)**				
	Read	Skimmed	1	2	3	4	5
Executive Overview	☐	☐	☐	☐	☐	☐	☐
Complete report	☐	☐	☐	☐	☐	☐	☐
Part of report (_____ %)	☐	☐	☐	☐	☐	☐	☐

4. How useful were:

Data presented	☐	☐	☐	☐	☐
Analyses	☐	☐	☐	☐	☐
Recommendations	☐	☐	☐	☐	☐

5. How useful was the report in these areas:

Alert you to new opportunities or approaches	☐	☐	☐	☐	☐
Cover new areas not covered elsewhere	☐	☐	☐	☐	☐
Confirm existing ideas	☐	☐	☐	☐	☐
Meet expectations	☐	☐	☐	☐	☐
Other ______________________________	☐	☐	☐	☐	☐

6. Which topics in the report were the most useful? Why? ______________________________

7. In what ways could the report have been improved? ______________________________

8. Other comments or suggestions: ______________________________

Name ______________________________ Title ______________________________

Department ______________________________

Company ______________________________

Address ______________________________

______________________________ Country

Telephone ______________________________ Date completed ______________________________

Thank you for your time and cooperation.

UK/M&S 633/01 12/89

INPUT

STAPLE

FOLD HERE

Please Post to:

Attention: Marketing Department
INPUT
Piccadilly House
33/37 Regent Street
London SW1Y 4NF

FOLD HERE

SEPTEMBER 1990

USER SATISFACTION WITH VENDOR CUSTOMER SERVICES

MEDIUM SYSTEMS WESTERN EUROPE

1990

INPUT®

Piccadilly House 33/37 Regent Street, London SW1Y 4NF 071-493-9335

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

Published by
INPUT
1280 Villa Street
Mountain View, CA 94041-1194
U.S.A.

Customer Service Programme in Europe (CSPE)

User Satisfaction with Vendor Customer Services—Medium Systems, Western Europe, 1990

Copyright ©1990 by INPUT. All rights reserved.
Printed in the United States of America.
No part of this publication may be reproduced or distributed in any form or by any means, or stored in a data base or retrieval system, without the prior written permission of the publisher.

CEUMO • 539 • 1990

Abstract

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

The data presented in this report has been collected by INPUT during the first half of 1990 in a survey of computer users in the following countries:

- Belgium
- France
- Italy
- The Netherlands
- Norway
- Spain
- Sweden
- Switzerland
- West Germany
- The United Kingdom

This report contains 70 pages including 72 exhibits.

Table of Contents

I Introduction 1

A. Objectives and Scope 1
B. Methodology 1
C. Report Structure 3

II Interpretation of the Data 5

A. Definitions 5
B. Statistics 5
C. Ratings and Satisfaction Index 6

III Western European Service Performance Data 9

IV Vendor Performance Data 15

A. Bull 15
B. Digital 20
C. Hewlett-Packard 25
D. IBM 30
E. ICL 35
F. NCR 40
G. Siemens 45
H. Unisys 50
I. Wang 55

A Appendix: User Questionnaire 61

Exhibits

I

-1 User Sample by Vendor 2
-2 User Sample by Country 3

III

-1 Western Europe Sample Distribution by Industry Sector—Medium Systems 9
-2 Western Europe Hardware Service Satisfaction—Medium Systems 10
-3 Western Europe Systems Software Support Satisfaction—Medium Systems 10
-4 Western Europe System Performance Data—Medium Systems 11
-5 Western Europe Service Response and Repair/Fix Time Performance—Medium Systems 12
-6 Western Europe Service Provider Data—Medium Systems 13
-7 Western Europe User Views on Current Service Performance—Medium Systems 13

IV

-1 Bull Sample Distribution by Industry Sector—Medium Systems 15
-2 Bull Hardware Service Satisfaction—Medium Systems 16
-3 Bull Systems Software Support Satisfaction—Medium Systems 16
-4 Bull System Performance Data—Medium Systems 17
-5 Bull Service Response and Repair/Fix Time Performance—Medium Systems 18
-6 Bull Service Provider Data—Medium Systems 19
-7 Bull User Views on Current Service Performance—Medium Systems 19
-8 Digital Sample Distribution by Industry Sector—Medium Systems 20
-9 Digital Hardware Service Satisfaction—Medium Systems 21
-10 Digital Systems Software Support Satisfaction—Medium Systems 21
-11 Digital System Performance Data—Medium Systems 22
-12 Digital Service Response and Repair/Fix Time Performance—Medium Systems 23

Exhibits (Continued)

IV

-13 Digital Service Provider Data—Medium Systems 24
-14 Digital User Views on Current Service Performance—Medium Systems 24
-15 Hewlett-Packard Sample Distribution by Industry Sector—Medium Systems 25
-16 Hewlett-Packard Hardware Service Satisfaction—Medium Systems 26
-17 Hewlett-Packard Systems Software Support Satisfaction—Medium Systems 26
-18 Hewlett-Packard System Performance Data—Medium Systems 27
-19 Hewlett-Packard Service Response and Repair/Fix Time Performance—Medium Systems 28
-20 Hewlett-Packard Service Provider Data—Medium Systems 29
-21 Hewlett-Packard User Views on Current Service Performance—Medium Systems 29
-22 IBM Sample Distribution by Industry Sector—Medium Systems 30
-23 IBM Hardware Service Satisfaction—Medium Systems 31
-24 IBM Systems Software Support Satisfaction—Medium Systems 31
-25 IBM System Performance Data—Medium Systems 32
-26 IBM Service Response and Repair/Fix Time Performance—Medium Systems 33
-27 IBM Service Provider Data—Medium Systems 34
-28 IBM User Views on Current Service Performance—Medium Systems 34
-29 ICL Sample Distribution by Industry Sector—Medium Systems 35
-30 ICL Hardware Service Satisfaction—Medium Systems 36
-31 ICL Systems Software Support Satisfaction—Medium Systems 36
-32 ICL System Performance Data—Medium Systems 37
-33 ICL Service Response and Repair/Fix Time Performance—Medium Systems 38
-34 ICL Service Provider Data—Medium Systems 39
-35 ICL User Views on Current Service Performance—Medium Systems 39
-36 NCR Sample Distribution by Industry Sector—Medium Systems 40
-37 NCR Hardware Service Satisfaction—Medium Systems 41
-38 NCR Systems Software Support Satisfaction—Medium Systems 41

Exhibits (Continued)

IV

-39 NCR System Performance Data—Medium Systems 42
-40 NCR Service Response and Repair/Fix Time Performance—Medium Systems 43
-41 NCR Service Provider Data—Medium Systems 44
-42 NCR User Views on Current Service Performance—Medium Systems 44
-43 Siemens Sample Distribution by Industry Sector—Medium Systems 45
-44 Siemens Hardware Service Satisfaction—Medium Systems 46
-45 Siemens Systems Software Support Satisfaction—Medium Systems 46
-46 Siemens System Performance Data—Medium Systems 47
-47 Siemens Service Response and Repair/Fix Time Performance—Medium Systems 48
-48 Siemens Service Provider Data—Medium Systems 49
-49 Siemens User Views on Current Service Performance—Medium Systems 49
-50 Unisys Sample Distribution by Industry Sector—Medium Systems 50
-51 Unisys Hardware Service Satisfaction—Medium Systems 51
-52 Unisys Systems Software Support Satisfaction—Medium Systems 51
-53 Unisys System Performance Data—Medium Systems 52
-54 Unisys Service Response and Repair/Fix Time Performance—Medium Systems 53
-55 Unisys Service Provider Data—Medium Systems 54
-56 Unisys User Views on Current Service Performance—Medium Systems 54
-57 Wang Sample Distribution by Industry Sector—Medium Systems 55
-58 Wang Hardware Service Satisfaction—Medium Systems 56
-59 Wang Systems Software Support Satisfaction—Medium Systems 56
-60 Wang System Performance Data—Medium Systems 57
-61 Wang Service Response and Repair/Fix Time Performance—Medium Systems 58
-62 Wang Service Provider Data—Medium Systems 59
-63 Wang User Views on Current Service Performance—Medium Systems 59

I

Introduction

I

Introduction

A

Objectives and Scope

This INPUT 1990 interim report 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 provide data to enable service vendors to assess the service performance levels achieved by their organisations in 1990. Data which relates to user perception of major vendor service performance is presented in simple tabulated form. Trends relating to service performance can be assessed by comparing the data contained in this report with previous INPUT reports.

The report also contains tabulated data relating to the Western European user population overall, to enable vendors to compare their performance with overall mean values of Western European vendor performance.

B

Methodology

The data presented in this interim report was compiled from interviews with 447 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.

Analysis contained within this report is focused on major equipment vendors.

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

EXHIBIT I-1

User Sample by Vendor

Vendor	System Range			Total
	Large	Medium	Small	
Bull	7	34	36	77
Digital	27	27	24	78
Hewlett-Packard	-	59	10	69
IBM	43	118	40	201
ICL	30	44	26	100
NCR	6	17	-	23
Siemens	5	15	3	23
Unisys	17	41	15	73
Wang	20	28	30	78
Other Vendors	3	64	21	88
Total	158	447	205	810

EXHIBIT I-2

User Sample by Country

Country	System Range			Total
	Large	Medium	Small	
Belgium	4	7	3	14
France	19	85	53	157
Germany	21	82	22	125
Italy	31	46	23	100
Netherlands	5	41	15	61
Norway	4	10	6	20
Spain	22	49	16	87
Sweden	8	24	8	40
Switzerland	4	17	6	27
United Kingdom	40	86	53	179
Total	158	447	205	810

C
Report Structure

The remaining chapters of this report 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 contains tabulated data and mean values relating to user perception of service performance overall in Western Europe.
- Chapter IV contains tabulated data relating to user perception of major equipment vendors' service performance.
- Appendix A contains the questionnaire used for user interviews.

II

Interpretation of the Data

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 individual vendor data has been estimated for each set of tabulated data, calculation of the estimated standard error being based on the standard error for the overall sample across all ranges of system size. In general, the collective values from a large sample follow a normal distribution; readers of this report can accept that a deviation of individual vendor sample means of more than four times the standard error from the population sample mean is very unlikely. Hence the deviation would indicate a significant difference. In statistical terms, the probability of the mean for the total of all users in Europe being more than three times the standard error of the mean of the sample (total user sample is 810 for all system ranges) away from the sample mean, is about 0.4%.

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. Although in the interests of completeness INPUT has included data relating to small samples, since these form part of a larger overall vendor sample, caution is recommended in assessing data from these small samples. A sample size of 20 should be considered the minimum to produce a statistically valid result.

C

Ratings and Satisfaction 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 judgment 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 overfulfillment of the importance needs, and would give a satisfaction index of -1. In INPUT's analysis, overfulfillment of -1 is represented as (1).
- Ratings of importance 6 and satisfaction 5 indicate underfulfillment of the importance needs and would give a satisfaction index of 1, the degree of underfulfillment being related to the magnitude of this difference.
- Satisfaction index can thus be interpreted as follows:
    - (1) = overfulfilled or oversatisfied
    - 0 = completely satisfied
    - 1 = concerns and worries
    - 2 = real dissatisfaction
    - 3 = pain level

III

Western European Service Performance Data

III

Western European Service Performance Data

EXHIBIT III-1

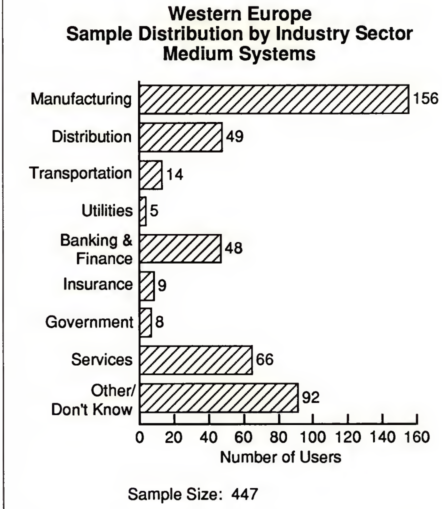


EXHIBIT III-2

Western Europe
Hardware Service Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Spares Availability	8.8	7.6	1.2
Engineer Skills	9.0	8.1	0.9
Problem Escalation	8.4	7.5	0.9
Documentation	8.0	6.8	1.2
Remote Diagnostics	8.3	7.2	1.1
Average	8.5	7.5	1.0

Sample Size: 447

Standard Error: 0.1

EXHIBIT III-3

Western Europe
Systems Software Support Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Engineer Skills	8.9	7.7	1.2
Documentation	8.5	7.0	1.5
Software Installation	8.4	7.6	0.8
Provision of Updates	8.5	7.3	1.2
Remote Diagnostics	8.4	7.1	1.3
Average	8.6	7.4	1.2

Sample Size: 447

Standard Error: 0.1

EXHIBIT III-4

Western Europe
System Performance Data
Medium Systems

System Failure Rates				
	Cause of Failure (Percent)			
Failures Per Annum	Hardware	Systems Software	Applications Software	Other
2.9	68	9	5	18

Satisfaction with System Availability		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.1	8.2	0.9

Sample Size: 447

Standard Error: Failure Rate: 0.15

System Availability: 0.1

EXHIBIT III-5

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

Hardware Service Response/Repair Times								
Response Time (Hours)			Repair Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
4.0	4.3	0.3	3.7	4.2	0.5	7.7	8.5	0.8

Systems Software Support Response/Fix Times								
Response Time (Hours)			Fix Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
6.4	8.7	2.3	5.4	7.5	2.1	11.8	16.2	4.4

Sample Size: 447

Standard Error: 0.6

EXHIBIT III-6

Western Europe
Service Provider Data
Medium Systems

Percent Hardware Service Provided By				
Equipment Manufacturer	Dealer/ Distributor	Independent Maintainer	Self	Other
89	1	9	2	1

Percent Systems Software Support Provided By					
Equipment Manufacturer	Software House	Software Product Vendor	VAR	Self	Other
77	8	2	1	17	2

Sample Size: 447 Note: Multiple Responses Allowed

Standard Error: 0.08

EXHIBIT III-7

Western Europe
User Views on
Current Service Performance
Medium Systems

Hardware Service		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.1	8.2	0.9

Systems Software Support		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.1	7.9	1.2

Sample Size: 447

Standard Error: 0.1

IV

Vendor Performance Data

IV

Vendor Performance Data

A

Bull

EXHIBIT IV-1

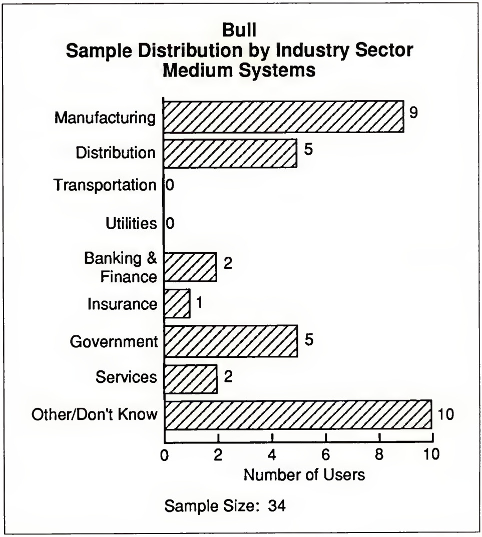


EXHIBIT IV-2

Bull
Hardware Service Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Spares Availability	8.4	7.7	0.7
Engineer Skills	8.8	8.2	0.6
Problem Escalation	8.5	8.0	0.5
Documentation	7.9	6.8	1.1
Remote Diagnostics	7.4	7.4	0.0
Average	8.3	7.6	0.7

Sample Size: 34

Standard Error: 0.4

EXHIBIT IV-3

Bull
Systems Software Support Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Engineer Skills	8.8	7.6	1.2
Documentation	8.3	6.8	1.5
Software Installation	8.2	7.3	0.9
Provision of Updates	8.4	6.6	1.8
Remote Diagnostics	7.4	6.8	0.6
Average	8.3	7.0	1.3

Sample Size: 34

Standard Error: 0.4

EXHIBIT IV-4

Bull
System Performance Data
Medium Systems

System Failure Rates				
	Cause of Failure (Percent)			
Failures Per Annum	Hardware	Systems Software	Applications Software	Other
2.7	74	9	1	16

Satisfaction with System Availability		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.3	8.6	0.7

Sample Size: 34

Standard Error: Failure Rate: 0.45

System Availability: 0.4

EXHIBIT IV-5

Bull
Service Response and Repair/Fix Time Performance
Medium Systems

Hardware Service Response/Repair Times								
Response Time (Hours)			Repair Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
2.8	2.9	0.1	4.4	4.1	(0.3)	7.2	7.0	(0.2)

Systems Software Support Response/Fix Times								
Response Time (Hours)			Fix Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
7.7	11.1	3.4	4.9	7.6	2.7	12.6	18.7	6.1

Sample Size: 34

Standard Error: 2.1

EXHIBIT IV-6

Bull
Service Provider Data
Medium Systems

Percent Hardware Service Provided By				
Equipment Manufacturer	Dealer/ Distributor	Independent Maintainer	Self	Other
97	0	0	0	3

Percent Systems Software Support Provided By					
Equipment Manufacturer	Software House	Software Product Vendor	VAR	Self	Other
97	12	0	0	0	0

Sample Size: 34 Note: Multiple Responses Allowed

Standard Error: 0.25

EXHIBIT IV-7

Bull
User Views on
Current Service Performance
Medium Systems

Hardware Service		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
8.9	8.5	0.4

Systems Software Support		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.3	7.9	1.4

Sample Size: 34

Standard Error: 0.4

B
Digital

EXHIBIT IV-8

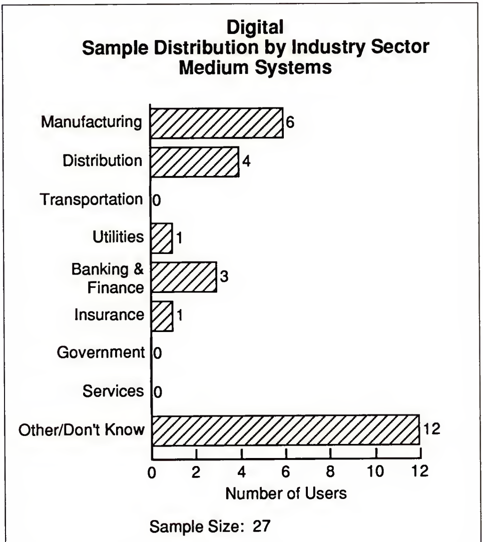


EXHIBIT IV-9

Digital
Hardware Service Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Spares Availability	8.9	7.8	1.1
Engineer Skills	9.1	8.4	0.7
Problem Escalation	8.6	7.6	1.0
Documentation	8.4	7.6	0.8
Remote Diagnostics	7.8	7.9	(0.1)
Average	8.6	7.9	0.7

Sample Size: 27

Standard Error: 0.4

EXHIBIT IV-10

Digital
Systems Software Support Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Engineer Skills	9.0	7.9	1.1
Documentation	8.8	7.7	1.1
Software Installation	8.5	8.0	0.5
Provision of Updates	8.7	8.1	0.6
Remote Diagnostics	8.6	7.7	0.9
Average	8.7	7.9	0.8

Sample Size: 27

Standard Error: 0.4

EXHIBIT IV-11

Digital System Performance Data Medium Systems

System Failure Rates				
	Cause of Failure (Percent)			
Failures Per Annum	Hardware	Systems Software	Applications Software	Other
2.3	75	6	0	19

Satisfaction with System Availability		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.2	8.8	0.4

Sample Size: 27

Standard Error: Failure Rate: 0.5

System Availability: 0.4

EXHIBIT IV-12

Digital
Service Response and Repair/Fix Time Performance
Medium Systems

Hardware Service Response/Repair Times								
Response Time (Hours)			Repair Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
3.4	2.8	(0.6)	3.0	3.2	0.2	6.4	6.0	(0.4)

Systems Software Support Response/Fix Times								
Response Time (Hours)			Fix Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
5.7	5.5	(0.2)	4.3	4.9	0.6	10.0	10.4	0.4

Sample Size: 27

Standard Error: 2.3

EXHIBIT IV-13

Digital
Service Provider Data
Medium Systems

Percent Hardware Service Provided By				
Equipment Manufacturer	Dealer/ Distributor	Independent Maintainer	Self	Other
74	0	26	4	4

Percent Systems Software Support Provided By					
Equipment Manufacturer	Software House	Software Product Vendor	VAR	Self	Other
78	7	4	4	15	4

Sample Size: 27

Standard Error: 0.3

Note: Multiple Responses Allowed

EXHIBIT IV-14

Digital
User Views on
Current Service Performance
Medium Systems

Hardware Service		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.4	8.8	0.6

Systems Software Support		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.3	8.3	1.0

Sample Size: 27

Standard Error: 0.4

C

Hewlett-Packard

EXHIBIT IV-15

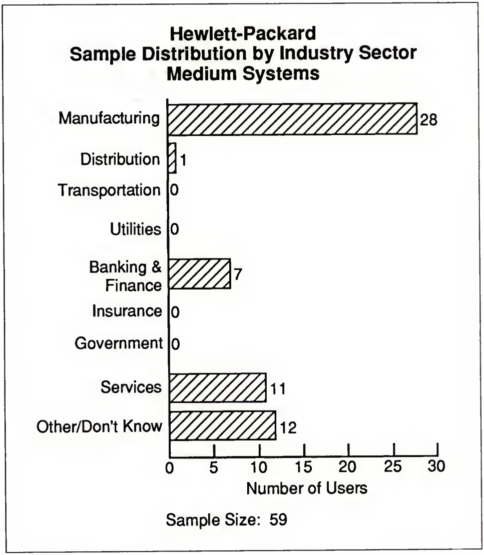


EXHIBIT IV-16

Hewlett-Packard
Hardware Service Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Spares Availability	8.4	8.0	0.4
Engineer Skills	8.8	8.3	0.5
Problem Escalation	8.2	8.1	0.1
Documentation	8.0	7.2	0.8
Remote Diagnostics	8.4	7.8	0.6
Average	8.4	7.9	0.5

Sample Size: 59

Standard Error: 0.3

EXHIBIT IV-17

Hewlett-Packard
Systems Software Support Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Engineer Skills	8.7	7.9	0.8
Documentation	8.1	6.9	1.2
Software Installation	8.2	7.6	0.6
Provision of Updates	8.3	7.5	0.8
Remote Diagnostics	8.7	7.9	0.8
Average	8.4	7.5	0.9

Sample Size: 59

Standard Error: 0.3

EXHIBIT IV-18

Hewlett-Packard System Performance Data Medium Systems

System Failure Rates				
	Cause of Failure (Percent)			
Failures Per Annum	Hardware	Systems Software	Applications Software	Other
1.7	54	17	2	27

Satisfaction with System Availability		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.0	8.4	0.6

Sample Size: 59

Standard Error: Failure Rate: 0.35

System Availability: 0.3

EXHIBIT IV-19

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

Hardware Service Response/Repair Times								
Response Time (Hours)			Repair Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
5.0	5.4	0.4	3.6	4.8	1.2	8.6	10.2	1.6

Systems Software Support Response/Fix Times								
Response Time (Hours)			Fix Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
6.6	10.3	3.7	5.6	10.5	4.9	12.2	20.8	8.6

Sample Size: 59

Standard Error: 1.6

EXHIBIT IV-20

Hewlett-Packard Service Provider Data Medium Systems

Percent Hardware Service Provided By				
Equipment Manufacturer	Dealer/ Distributor	Independent Maintainer	Self	Other
95	2	8	2	0

Percent Systems Software Support Provided By					
Equipment Manufacturer	Software House	Software Product Vendor	VAR	Self	Other
71	14	3	2	22	2

Sample Size: 59

Note: Multiple Responses Allowed

Standard Error: 0.2

EXHIBIT IV-21

Hewlett-Packard User Views on Current Service Performance Medium Systems

Hardware Service		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.3	8.7	0.6

Systems Software Support		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.1	8.2	0.9

Sample Size: 59

Standard Error: 0.3

D

IBM

EXHIBIT IV-22

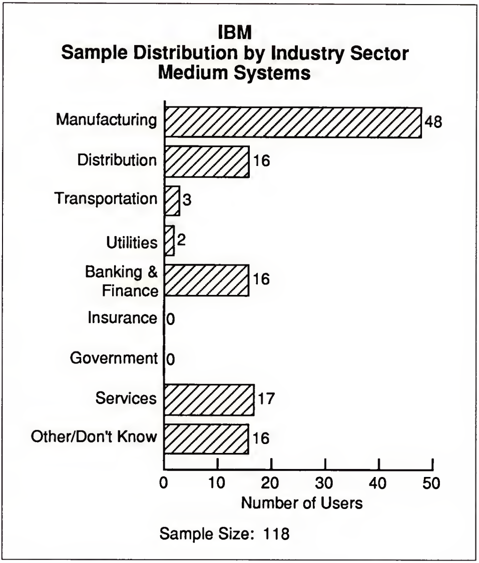


EXHIBIT IV-23

IBM
Hardware Service Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Spares Availability	8.8	7.9	0.9
Engineer Skills	8.9	8.3	0.6
Problem Escalation	8.3	7.7	0.6
Documentation	8.1	7.2	0.9
Remote Diagnostics	8.1	7.2	0.9
Average	8.5	7.7	0.8

Sample Size: 118

Standard Error: 0.2

EXHIBIT IV-24

IBM
Systems Software Support Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Engineer Skills	9.0	8.0	1.0
Documentation	8.9	7.3	1.6
Software Installation	8.5	7.7	0.8
Provision of Updates	8.5	7.4	1.1
Remote Diagnostics	8.0	6.9	1.1
Average	8.6	7.5	1.1

Sample Size: 118

Standard Error: 0.2

EXHIBIT IV-25

IBM
System Performance Data
Medium Systems

System Failure Rates				
	Cause of Failure (Percent)			
Failures Per Annum	Hardware	Systems Software	Applications Software	Other
2.6	71	7	3	19

Satisfaction with System Availability		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.0	8.7	0.3

Sample Size: 118

Standard Error: Failure Rate: 0.25

System Availability: 0.2

EXHIBIT IV-26

IBM
Service Response and Repair/Fix Time Performance
Medium Systems

Hardware Service Response/Repair Times								
Response Time (Hours)			Repair Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
4.0	4.1	0.1	3.6	4.0	0.4	7.6	8.1	0.5

Systems Software Support Response/Fix Times								
Response Time (Hours)			Fix Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
6.9	8.8	1.9	5.3	5.2	(0.1)	12.2	14.0	1.8

Sample Size: 118

Standard Error: 1.1

EXHIBIT IV-27

IBM
Service Provider Data
Medium Systems

Percent Hardware Service Provided By				
Equipment Manufacturer	Dealer/ Distributor	Independent Maintainer	Self	Other
89	1	17	1	0

Percent Systems Software Support Provided By					
Equipment Manufacturer	Software House	Software Product Vendor	VAR	Self	Other
85	6	2	0	22	3

Sample Size: 118 Note: Multiple Responses Allowed

Standard Error: 0.15

EXHIBIT IV-28

IBM
User Views on Current Service Performance
Medium Systems

Hardware Service		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.1	8.4	0.7

Systems Software Support		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.2	8.0	1.2

Sample Size: 118

Standard Error: 0.2

E

ICL

EXHIBIT IV-29

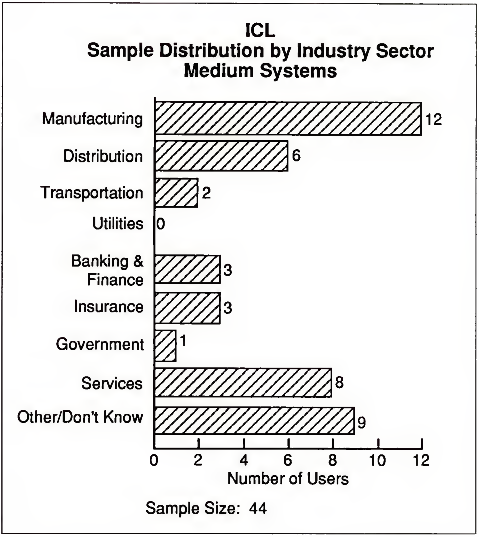


EXHIBIT IV-30

ICL
Hardware Service Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Spares Availability	8.1	7.1	1.0
Engineer Skills	8.7	7.7	1.0
Problem Escalation	8.4	6.9	1.5
Documentation	7.4	5.2	2.2
Remote Diagnostics	7.9	6.4	1.5
Average	8.1	6.8	1.3

Sample Size: 44

Standard Error: 0.35

EXHIBIT IV-31

ICL
Systems Software Support Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Engineer Skills	8.4	7.6	0.8
Documentation	8.3	6.1	2.2
Software Installation	8.2	7.1	1.1
Provision of Updates	8.0	7.1	0.9
Remote Diagnostics	8.4	6.8	1.6
Average	8.2	7.0	1.2

Sample Size: 44

Standard Error: 0.35

EXHIBIT IV-32

ICL
System Performance Data
Medium Systems

System Failure Rates				
	Cause of Failure (Percent)			
Failures Per Annum	Hardware	Systems Software	Applications Software	Other
2.7	67	14	2	17

Satisfaction with System Availability		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
8.3	7.2	1.1

Sample Size: 44

Standard Error: Failure Rate: 0.4

System Availability: 0.35

EXHIBIT IV-33

ICL
Service Response and Repair/Fix Time Performance
Medium Systems

Hardware Service Response/Repair Times								
Response Time (Hours)			Repair Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
3.1	5.2	2.1	3.1	4.9	1.8	6.2	10.1	3.9

Systems Software Support Response/Fix Times								
Response Time (Hours)			Fix Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
4.3	7.3	3.0	4.4	8.7	4.3	8.7	16.0	7.3

Sample Size: 44

Standard Error: 1.8

EXHIBIT IV-34

ICL
Service Provider Data
Medium Systems

Percent Hardware Service Provided By				
Equipment Manufacturer	Dealer/ Distributor	Independent Maintainer	Self	Other
98	0	2	0	0

Percent Systems Software Support Provided By					
Equipment Manufacturer	Software House	Software Product Vendor	VAR	Self	Other
93	7	2	0	32	0

Sample Size: 44

Note: Multiple Responses Allowed

Standard Error: 0.25

EXHIBIT IV-35

ICL
User Views on
Current Service Performance
Medium Systems

Hardware Service		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
8.3	7.4	0.9

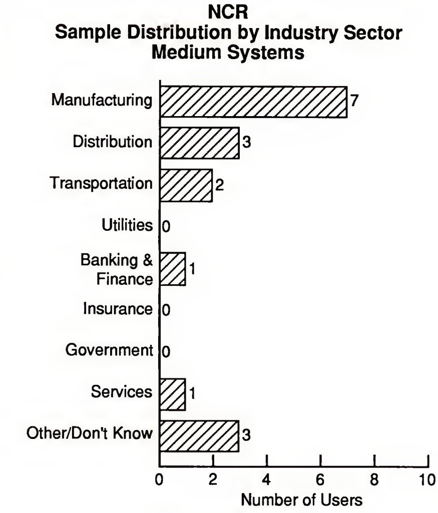
Systems Software Support		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
8.6	7.2	1.4

Sample Size: 44

Standard Error: 0.35

F
NCR

EXHIBIT IV-36



Sample Size: 17

EXHIBIT IV-37

NCR
Hardware Service Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Spares Availability	9.0	7.6	1.4
Engineer Skills	9.2	7.9	1.3
Problem Escalation	8.7	7.6	1.1
Documentation	8.6	5.8	2.8
Remote Diagnostics	9.0	7.8	1.2
Average	8.9	7.3	1.6

Sample Size: 17

Standard Error: 0.55

EXHIBIT IV-38

NCR
Systems Software Support Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Engineer Skills	8.9	7.9	1.0
Documentation	8.9	6.5	2.4
Software Installation	8.7	7.3	1.4
Provision of Updates	8.4	7.3	1.1
Remote Diagnostics	9.0	7.0	2.0
Average	8.8	7.2	1.6

Sample Size: 17

Standard Error: 0.55

EXHIBIT IV-39

NCR
System Performance Data
Medium Systems

System Failure Rates				
	Cause of Failure (Percent)			
Failures Per Annum	Hardware	Systems Software	Applications Software	Other
1.1	34	33	0	33

Satisfaction with System Availability		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
8.1	7.3	0.8

Sample Size: 17

Standard Error: Failure Rate: 0.65

System Availability: 0.55

EXHIBIT IV-40

NCR
Service Response and Repair/Fix Time Performance
Medium Systems

Hardware Service Response/Repair Times								
Response Time (Hours)			Repair Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
3.2	3.3	0.1	3.9	3.7	(0.2)	7.1	7.0	(0.1)

Systems Software Support Response/Fix Times								
Response Time (Hours)			Fix Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
7.7	10.1	2.4	5.1	13.4	8.3	12.8	23.5	10.7

Sample Size: 17

Standard Error: 2.9

EXHIBIT IV-41

NCR
Service Provider Data
Medium Systems

Percent Hardware Service Provided By				
Equipment Manufacturer	Dealer/ Distributor	Independent Maintainer	Self	Other
100	0	0	0	0

Percent Systems Software Support Provided By					
Equipment Manufacturer	Software House	Software Product Vendor	VAR	Self	Other
88	18	6	0	18	0

Sample Size: 17 Note: Multiple Responses Allowed

Standard Error: 0.4

EXHIBIT IV-42

NCR
User Views on
Current Service Performance
Medium Systems

Hardware Service		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.3	8.2	1.1

Systems Software Support		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.4	7.4	2.0

Sample Size: 17

Standard Error: 0.55

G

Siemens

EXHIBIT IV-43

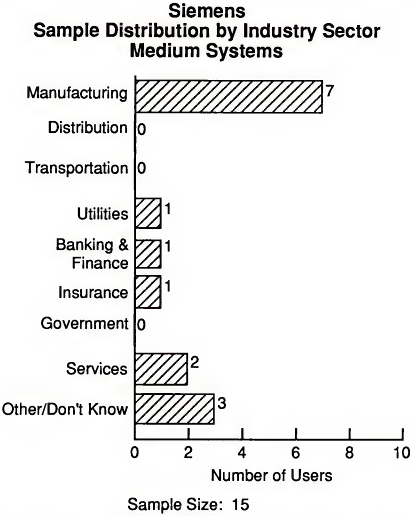


EXHIBIT IV-44

Siemens
Hardware Service Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Spares Availability	9.5	8.1	1.4
Engineer Skills	9.3	8.1	1.2
Problem Escalation	9.1	7.6	1.5
Documentation	8.7	7.7	1.0
Remote Diagnostics	9.5	8.4	1.1
Average	9.2	8.0	1.2

Sample Size: 15

Standard Error: 0.55

EXHIBIT IV-45

Siemens
Systems Software Support Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Engineer Skills	9.3	8.1	1.2
Documentation	9.1	7.5	1.6
Software Installation	8.9	8.1	0.8
Provision of Updates	9.1	7.6	1.5
Remote Diagnostics	8.9	7.4	1.5
Average	9.1	7.8	1.3

Sample Size: 15

Standard Error: 0.55

EXHIBIT IV-46

Siemens
System Performance Data
Medium Systems

System Failure Rates				
	Cause of Failure (Percent)			
Failures Per Annum	Hardware	Systems Software	Applications Software	Other
2.5	73	15	10	2

Satisfaction with System Availability		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.6	8.5	1.1

Sample Size: 15

Standard Error: Failure Rate: 0.7

System Availability: 0.55

EXHIBIT IV-47

Siemens
Service Response and Repair/Fix Time Performance
Medium Systems

Hardware Service Response/Repair Times								
Response Time (Hours)			Repair Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
1.7	2.1	0.4	2.4	2.6	0.2	4.1	4.7	0.6

Systems Software Support Response/Fix Times								
Response Time (Hours)			Fix Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
7.6	8.5	0.9	10.7	12.9	2.2	18.3	21.4	3.1

Sample Size: 15

Standard Error: 3.1

EXHIBIT IV-48

Siemens
Service Provider Data
Medium Systems

Percent Hardware Service Provided By				
Equipment Manufacturer	Dealer/ Distributor	Independent Maintainer	Self	Other
93	0	0	7	0

Percent Systems Software Support Provided By					
Equipment Manufacturer	Software House	Software Product Vendor	VAR	Self	Other
87	13	7	0	7	0

Sample Size: 15 Note: Multiple Responses Allowed

Standard Error: 0.4

EXHIBIT IV-49

Siemens
User Views on
Current Service Performance
Medium Systems

Hardware Service		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.4	8.2	1.2

Systems Software Support		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.0	7.9	1.1

Sample Size: 15

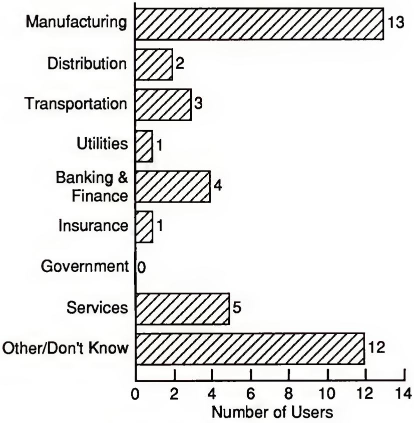
Standard Error: 0.55

H

Unisys

EXHIBIT IV-50

Unisys
Sample Distribution by Industry Sector
Medium Systems



Sample Size: 41

EXHIBIT IV-51

Unisys
Hardware Service Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Spares Availability	8.5	7.2	1.3
Engineer Skills	9.1	8.0	1.1
Problem Escalation	8.3	7.5	0.8
Documentation	7.4	6.6	0.8
Remote Diagnostics	8.1	6.1	2.0
Average	8.3	7.2	1.1

Sample Size: 41

Standard Error: 0.35

EXHIBIT IV-52

Unisys
Systems Software Support Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Engineer Skills	8.9	7.5	1.4
Documentation	8.2	6.7	1.5
Software Installation	8.2	7.4	0.8
Provision of Updates	8.3	7.1	1.2
Remote Diagnostics	7.6	6.3	1.3
Average	8.3	7.1	1.2

Sample Size: 41

Standard Error: 0.35

EXHIBIT IV-53

Unisys
System Performance Data
Medium Systems

System Failure Rates

Failures Per Annum	Cause of Failure (Percent)			
	Hardware	Systems Software	Applications Software	Other
2.6	74	1	12	13

Satisfaction with System Availability

Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.1	8.3	0.8

Sample Size: 41

Standard Error: Failure Rate: 0.4

System Availability: 0.35

EXHIBIT IV-54

Unisys
Service Response and Repair/Fix Time Performance
Medium Systems

Hardware Service Response/Repair Times								
Response Time (Hours)			Repair Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
3.2	2.9	(0.3)	3.5	3.4	(0.1)	6.7	6.3	(0.4)

Systems Software Support Response/Fix Times								
Response Time (Hours)			Fix Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
5.5	7.4	1.9	5.4	6.2	0.8	10.9	13.6	2.7

Sample Size: 41

Standard Error: 1.9

EXHIBIT IV-55

Unisys
Service Provider Data
Medium Systems

Percent Hardware Service Provided By				
Equipment Manufacturer	Dealer/ Distributor	Independent Maintainer	Self	Other
98	0	0	3	0

Percent Systems Software Support Provided By					
Equipment Manufacturer	Software House	Software Product Vendor	VAR	Self	Other
95	5	0	0	13	0

Sample Size: 41

Note: Multiple Responses Allowed

Standard Error: 0.25

EXHIBIT IV-56

Unisys
User Views on
Current Service Performance
Medium Systems

Hardware Service		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
8.9	7.9	1.0

Systems Software Support		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.0	7.7	1.3

Sample Size: 41

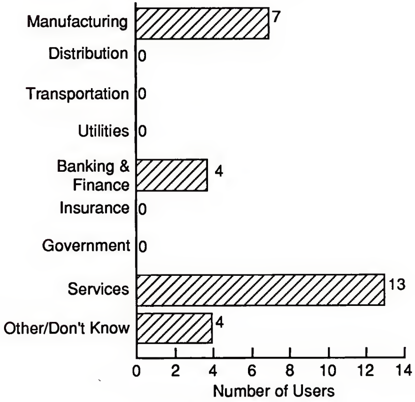
Standard Error: 0.35

I

Wang

EXHIBIT IV-57

Wang
Sample Distribution by Industry Sector
Medium Systems



Sample Size: 28

EXHIBIT IV-58

Wang
Hardware Service Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Spares Availability	9.6	6.7	2.9
Engineer Skills	9.4	7.4	2.0
Problem Escalation	9.2	6.4	2.8
Documentation	8.1	6.0	2.1
Remote Diagnostics	9.2	6.1	3.1
Average	9.1	6.6	2.5

Sample Size: 28

Standard Error: 0.4

EXHIBIT IV-59

Wang
Systems Software Support Satisfaction
Medium Systems

Service Aspect	Importance	Satisfaction	Satisfaction Index Δ SI
Engineer Skills	9.0	6.9	2.1
Documentation	8.6	6.1	2.5
Software Installation	8.8	7.7	1.1
Provision of Updates	8.3	7.0	1.3
Remote Diagnostics	9.2	6.7	2.5
Average	8.8	6.8	2.0

Sample Size: 28

Standard Error: 0.4

EXHIBIT IV-60

Wang
System Performance Data
Medium Systems

System Failure Rates				
	Cause of Failure (Percent)			
Failures Per Annum	Hardware	Systems Software	Applications Software	Other
5.0	76	24	NA	NA

Satisfaction with System Availability		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.2	8.0	1.2

NA = Data not available for Wang sample.

Sample Size: 28

Standard Error: Failure Rate: 0.5

System Availability: 0.4

EXHIBIT IV-61

Wang
Service Response and Repair/Fix Time Performance
Medium Systems

Hardware Service Response/Repair Times								
Response Time (Hours)			Repair Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
5.5	7.2	1.7	4.7	6.4	1.7	10.2	13.6	3.4

Systems Software Support Response/Fix Times								
Response Time (Hours)			Fix Time (Hours)			Total Time (Hours)		
Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ	Acceptable Time	Experienced Time	Δ
7.2	15.2	8.0	6.4	11.9	5.5	13.6	27.1	13.5

Sample Size: 28

Standard Error: 2.3

EXHIBIT IV-62

Wang
Service Provider Data
Medium Systems

Percent Hardware Service Provided By				
Equipment Manufacturer	Dealer/ Distributor	Independent Maintainer	Self	Other
89	-	11	-	-

Percent Systems Software Support Provided By					
Equipment Manufacturer	Software House	Software Product Vendor	VAR	Self	Other
75	11	4	-	7	4

Sample Size: 28 Note: Multiple Responses Allowed

Standard Error: 0.3

EXHIBIT IV-63

Wang
User Views on
Current Service Performance
Medium Systems

Hardware Service		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.1	7.6	1.5

Systems Software Support		
Importance Rating	Satisfaction Rating	Satisfaction Index Δ SI
9.5	8.1	1.4

Sample Size: 28

Standard Error: 0.4

Appendix

A

Appendix: User 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	2
• Transportation	3
• Utilities	4
• Banking and Finance	5
• Insurance	6
• Government	7
• Services	8
• Other/Don't Know	9

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.)

6b. 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

7b. 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
• Other/Don't know	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 software support to be provided by one service vendor at each site? If yes, what would your interest level be?

Level of interest: (please circle)

Low Medium High

(Circle answer.)

Yes	1
No	1
Don't know	9

(If the respondent answered YES, ask:)

9b. 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
• Other/Don't know	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 your 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?

    - Per year ____________

    And what percentage of these system failures are due to:

    Hardware ________%
    Systems software ________%
    Applications software ________%
    Other (i.e., 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 **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 to go through a list of five aspects of hardware maintenance and ask you to give an importance and satisfaction rating for each (scale 0 - 10).

	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)

- 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 1989?

- Increase ________%
- Decrease ________%

- No change 1 (circle)

b. What do you expect the price changes for **hardware maintenance** to be in thefuture, 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)

- 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

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 vendor's 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 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)

	Importance	Satisfaction
• Engineer skills	_____	_____
• Documentation	_____	_____
• Software installation	_____	_____
• 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 rating _____
- Satisfaction rating _____

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 1989?

- 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)

- 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. To conclude this questionnaire, 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	LOI
• 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	_____

29. (cont.)

	Currently Contracted	Require	LOI
• Network management	1	1	_____
• Disaster recovery	1	1	_____
• Facilities management	1	1	_____
• Problems management	1	1	_____
• Applications software support	1	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 containing a summary of the results from our survey.

Again, thank you for your time.